Understanding the dynamics of organisational culture change: creating safe places for patients and staff

Report for the National Institute for Health Research Service Delivery and Organisation programme

February 2010

Professor Lorna McKee
- Health Services Research Unit, University of Aberdeen

Professor Michael West
- Aston Business School, Aston University

Professor Rhona Flin
- School of Psychology, University of Aberdeen

Professor Adrian Grant
- Health Services Research, University of Aberdeen

Professor Derek Johnston
- School of Psychology, University of Aberdeen

Dr Martyn Jones
- School of Nursing and Midwifery, Dundee University

Christine Miles
- East Lancashire Hospital NHS Trust

Kathryn Charles
- Health Services Research Unit, University of Aberdeen
Jeremy Dawson
  • Aston Business School, Aston University

Dr Sharon McCann
  • Health Services Research Unit, University of Aberdeen

Dr Steven Yule
  • School of Psychology, University of Aberdeen

Address for correspondence
Health Services Research Unit
University of Aberdeen
3rd Floor Health Sciences Building
Foresterhill
Aberdeen
AB25 2ZD

Lead researcher
Professor Lorna McKee
Health Services Research Unit
University of Aberdeen
3rd Floor Health Sciences Building
Foresterhill
Aberdeen
AB25 2ZD

Lead researcher email
l.mckee@abdn.ac.uk
Contents

Acknowledgements ..................................................................................7

List of Appendices ...................................................................................9
List of Tables ..........................................................................................11
List of Figures .......................................................................................14
Glossary .................................................................................................16

Section 1 Introduction .............................................................................18
  1.1 Introduction ....................................................................................18
  1.2 Aims and objectives of the study ...................................................18
  1.3 Why patient safety and staff well-being? .......................................19
  1.4 The multidisciplinary team and key strands of work .................20
  1.5 Study research design ..................................................................22
    1.5.1 Trust selection .....................................................................23
    1.5.2 Description of Selected Trusts ............................................25
    1.5.3 Gaining access .....................................................................26
  1.6 Project timeline ............................................................................26
  1.7 Engagement with key stakeholders .............................................27
    1.7.1 Project team .........................................................................28
    1.7.2 Advisory team .......................................................................28
    1.7.3 Participant Trust representatives .........................................28
    1.7.4 Action workshop ‘intervention’ ...........................................28
  1.8 Organisation of the report ............................................................29

Section 2 Organisational Strand .............................................................30
  2.1 Introduction ...................................................................................30
  2.2 Research context ..........................................................................30
    2.2.1 What is organisational culture? ............................................30
    2.2.2 Organisational culture: can it be moulded to drive performance? ..................................................................32
    2.2.3 Developing safe cultures .....................................................34
  2.3 Methodology ..................................................................................43
    2.3.1 The research strategy ..........................................................43
  2.4 Findings ........................................................................................51
    2.4.1 Commonly perceived barriers to patient safety .................52
    2.4.2 Links between patient safety and staff well-being .............61
    2.4.3 Environmental ‘shocks’: comparing Trusts’ capacity to change ..........................................................................65
    2.4.4 Comparative cross-case analysis ........................................68
    2.4.5 Characteristics of Trust typology .......................................71
    2.4.6 Discussion .............................................................................92
Section 3 Leadership strand ........................................... 100

3.1 Introduction ................................................................. 100

3.2 Introduction and literature review .............................. 100

3.2.1 Senior managers and safety in industry ................. 100

3.2.2 Transformational/transactional leadership and safety... 103

3.2.3 Health care senior managers and patient safety ....... 106

3.3 Aim ............................................................................. 108

3.4 Method ........................................................................ 108

3.4.1 Organisational setting and participants .................. 108

3.4.2 Measures ................................................................ 109

3.5 Results ........................................................................ 112

3.5.1 Leadership survey ................................................. 112

3.5.2 Leadership interviews - results .............................. 119

3.6 Discussion ................................................................... 122

3.7 Limitations ................................................................. 124

3.8 Policy and practical implications ............................... 125

3.9 Future research ........................................................... 125

Section 4 Staff well-being strand ............................... 128

4.1 Introduction ................................................................. 128

4.2 Literature Review ......................................................... 128

4.2.1 Nature and impact of work stress in the general workforce ......................................................... 128

4.2.2 Nature and impact of work stress within health care .... 129

4.2.3 Effects on mood and behaviour ............................... 130

4.2.4 Impact of the work environment, staff well-being on patient safety ........................................... 130

4.2.5 Theoretical approaches linking work environment, well-being and performance .......................... 132

4.2.6 Influence of shift climate and incidents on well-being and performance ...................................... 135

4.2.7 Capturing variation in perceptions of linking work environment, well-being and performance .......... 136

4.2.8 Benefits of the EMA approach ................................. 137

4.3 Aim ............................................................................. 138

4.3.1 Objective: Work environment and well-being ........ 138

4.3.2 Objective: incident characteristics, well-being and performance ................................................. 138

4.4 Methods ..................................................................... 138

4.4.1 Design ..................................................................... 138

4.4.2 Selection of Trusts .................................................. 139

4.4.3 Participants ............................................................ 139

4.4.4 Procedure .............................................................. 139

4.4.5 Questionnaires ........................................................ 140
4.4.6 Materials ...............................................................140
4.4.7 Statistical analysis ..................................................142
4.5 Results .......................................................................... 143
4.5.1 Return rates ..........................................................143
4.5.2 Are the high scoring and low scoring Trusts comparable?145
4.5.3 Testing the demand control and effort reward imbalance models using questionnaire assessment …………….148
4.5.4 Ecological Momentary Assessment using the PDA-based diaries...............................................151
4.5.5 Testing the demand control and effort reward imbalance models in real life ….................................156
4.5.6 Differences between the low scoring and high scoring Trusts on EMA measures.................................160
4.5.7 Effect of incident characteristics on nurse well-being (negative and positive affect) ……………..162
4.5.8 What is the nature of end of shift incidents? ……………171
4.5.9 Do averaged values of the work environment (shift climate) predict nurse performance following the worst incident?........................177
4.5.10 Who is involved, colleagues or patients, and what is the effect on performance?............................180
4.6 Conclusion ..................................................................... 183

Section 5 Integrated strand analysis.........................185
5.1 Introduction ................................................................... 185
5.2 Integrating primary data strands.................................186
  5.2.1 Cross-cutting themes between the Organisational and Leadership strands........................................186
  5.2.2 Cross-cutting themes between the Organisational and staff well-being strands............................187
5.3 Tests of relationships in the NHS National Staff Survey data and the primary data strands ....................... 189
  5.3.1 Links between the Organisational strand and the NHS Staff Survey.................................................189
  5.3.2 Links between the Leadership strand and the NHS National Staff Survey .......................................192
  5.3.3 Links between the staff well-being strand and the NHS Staff Survey...............................................193
5.4 Comparing categorisations of Trusts ...............................195
5.5 Conclusions .....................................................................196

Section 6 Delivering on the study aims......................200
6.1 Introduction .................................................................200
6.2 Reflections on the study..................................................201
  6.2.1 Implementing the study: innovations and strengths ....201
  6.2.2 Limitations of the study and considerations .........202
6.3 Key messages from the study .........................................203
  6.3.1 Adding to the evidence base.................................204
  6.3.2 Complexity of meaning, organisation and processes ....205
6.3.3 Priorities, values and leadership.................................206
6.3.4 The role of context, systems and organisational capacity207
6.3.5 Clinical realities and staffing......................................209
6.4 Implications of the study.................................................210
  6.4.1 Practice and policy implications...............................210
6.5 Future research ..........................................................215

References .............................................................................218
Acknowledgements

This study was funded by NIHR SDO (grant number SDO/92/2005) and was made possible by the support of many individuals and organisations. We thank our NIHR Commissioning managers, Barbara Langridge and Chris Langridge and our advisory group for their valued contributions and advice.

Advisory group

- Professor Ewan Ferlie, Professor of Public Services Management and Head of the Department of Management, Kings College London.
- Ms Jenny Ingram, Risk Management Advisor (Patient Safety) & Team Leader-Acute Sector Risk Management Support Unit, NHS Grampian.
- Mrs Susan Kinsey, Patient Representative
- Professor Richard Lilford, Professor of Clinical Epidemiology, Head of the School of Health and Population Sciences Director of Birmingham Clinical Research Academy
- Dr Jennifer Martin, Human Factors Lead, National Reporting and Learning Service National Patient Safety Agency
- Dr Beverley Norris, Human Factors Specialist, National Reporting and Learning Service, National Patient Safety Agency.
- Dr Caroline Shuldham Director of Nursing Quality, Director of Nursing, Governance & Informatics, Royal Brompton and Harefield NHS Trust, London.
- Professor Jenny Simpson, Chief Executive, the British Association of Medical Managers
- Professor Richard Thomson, Professor of Epidemiology & Public Health, School of Population and Health Sciences, University of Newcastle upon Tyne.

Without the support of the Chief Executive, managerial and clinical staff in the eight participating NHS Trusts this study would not have been possible. We thank them for their insights, perceptions and contributions. We are particularly indebted to the qualified nurses who generously took time in their busy work schedules to participate in our research.

We are also grateful to our research assistants, and for the secretarial and data management support provided by staff at the University’s of Aberdeen, Dundee and Aston. In particular, we thank our research assistants: Isabella Roger; Sara-Jane Peddler; Tina Eilett; Sara Walker, Saima Ali, Margaret Martell who ensured the success of the project. We also express our gratitude to Kathleen McIntosh and Cecilia Lee for secretarial support in producing the report.
Ethical and NHS R&D Approvals

The prospective study was approved by the North West Manchester Research Ethics Committee (06/MRE08/35), and by the appropriate NHS R&D authorities for each of the eight participating NHS Trusts.
List of Appendices

Appendix 1
  Broad descriptors of Trusts .................................. 240
Appendix 2
  Timeline and activities ..................................... 242
Appendix 3
  Research protocol ............................................. 244
Appendix 3.1
  Project timetable .............................................. 265
Appendix 3.2
  Access letter to depth Trusts ................................. 266
Appendix 3.3
  Access letters for mini-case studies ......................... 268
Appendix 3.4
  Participant Information Sheet (In-depth cases) .................. 270
Appendix 3.5
  In-depth cases consent form ................................ 274
Appendix 3.6
  In-depth case studies interview schedule ..................... 276
Appendix 3.7
  Senior managers’ leadership participant information sheet ............................................. 280
Appendix 3.8
  Senior managers’ leadership participant consent form ............................................. 284
Appendix 3.9
  Senior managers’ Leadership Participant Interview Schedule ............................................. 285
Appendix 3.10
  Senior managers’ leadership questionnaire .......................... 286
Appendix 3.11
  Senior managers’ leadership upward appraisal questionnaire ............................................. 293
Appendix 3.12
  Best Practice Guidelines ................................... 297
Appendix 3.13
  Staff well-being access letter ................................ 320
Appendix 3.14
  Staff well-being participant information sheet .................. 321
Appendix 3.15
  Staff well-being participant consent form ...................... 329
Appendix 3.16  
Staff well-being questionnaire pack…………… 330

Appendix 3.17  
Staff well-being participant information sheet  
.................................................................................. 331

Appendix 4  
MREC ethics approval........................................... 336

Appendix 5  
Analysis of Action Workshop feedback........... 339

Appendix 6  
Breakdown of Organisational strand  
participants per Trust.............................................. 344

Appendix 7  
Comparative case study analysis summaries  
.................................................................................. 351

Appendix 8  
NPSA Advice.......................................................... 372

Appendix 9  
Upward appraisal questionnaire......................373

Appendix 10  
Coding Framework (1)........................................... 374

Appendix 11  
Coding Framework (2)........................................... 375

Appendix 12  
Integrated results of the leadership interviews  
.................................................................................. 376

Appendix 13  
Responses to key questions by leaders in ‘high’  
Trusts.............................................................................. 379

Appendix 14  
Responses to key questions by leaders in  
'low' Trusts.................................................................. 381

Appendix 15  
Interview coding according to the NPSA (2004)  
guidance on NHS Chief Executives’ personal  
contribution to delivering safety healthcare... 383

Appendix 16  
Staff well-being strand Tables (1-35)......... 387

Appendix 17  
The Healthcare Commission NHS National Staff  
Survey 2006................................................................. 398

Appendix 18  
Project team dissemination........................... 421
List of Tables

Table 1.1 Study research design and data sources ... 22
Table 2.1 Data collection sources: Organisational strand ........................................................................................................... 46
Table 2.2 Trust staff role groupings .............................................. 47
Table 2.3 Respondents' perceived barriers to patient safety across Trusts ................................................................. 59
Table 2.4 Perceived links between staff well-being and patient safety .................................................................................. 61
Table 2.5 Examples of perceived environmental 'shocks' ..................................................................................................................... 65
Table 2.6 Types of environmental 'shocks' experienced by Trusts ...................................................................................... 67
Table 2.7 The interpretative schema used to group the Trusts .............................................................................................. 69
Table 2.8 Comparative analysis of Trust change receptive factors .......................................................................................... 92
Table 3.1 Incident reports from industry - comments regarding senior management .................................. 101
Table 3.2 Transactional and transformational styles (Bass and Avolio, 1990) .......................................................... 103
Table 3.3 Example MLQ items from the self and upward versions of the questionnaire ................................ 109
Table 3.4 Differences between leaders' ratings and raters' rating ..................................................................................... 114
Table 3.5 Bivariate correlations between variables measured at the individual level from upward ratings (n=23 executive directors) .......................................................... 117
Table 3.6 Bivariate correlations between variables measured at the organisational level (rater averages for each leader, n=7) ........................................................................... 118
Table 3.7 Inter-rater reliability ......................................................... 121
Table 3.8 Results of hypothesis testing ........................................ 124
Table 4.1 Demographic details of sample across the four settings .................................................................................. 144
Table 4.2  Errors, near misses affecting patients seen in last month .................................................. 144
Table 4.3  Errors, near misses affecting staff seen in last month .......................................................... 144
Table 4.4  Questionnaire and diary scores from total sample .................................................................. 145
Table 4.5  Shift characteristics in ‘high’ and ‘low’ scoring Trusts .......................................................... 145
Table 4.6  Between setting differences in reports of errors or near misses affecting patients in last month ............................................................................................................. 145
Table 4.7  Between setting differences in work environment and mood .................................................... 146
Table 4.8  Data for high and low scoring sites ......................................................................................... 147
Table 4.9  Testing the effects of demand, control and demand by control interaction ............................... 148
Table 4.10  Testing demand/effort, reward and demand/effort by reward interaction ............................... 149
Table 4.11  Means and standard deviations of EMA measures of affect and perception of the work environment .................................................................................................................. 154
Table 4.12  Means and SD for high scoring and low scoring Trusts on EMA measures of Affect and job characteristics ............................................................................................................. 160
Table 4.13  Comparison of high scoring and low scoring Trusts on EMA measures of affect and job characteristics ............................................................................................................. 161
Table 4.14  Means and standard deviations for all four Trusts on measures that differed within trust category (high versus low scoring) ................................................................. 161
Table 4.15  Demographic details of nurses providing end of shift data .................................................. 162
Table 4.16  Percentage of staff reporting seeing errors or near misses affecting patients in past month ................................................................................................................................. 163
Table 4.17  Percentage of staff reporting seeing errors or near misses affecting patients in past month ................................................................................................................................. 163
Table 4.18  Age and work environment outcomes for those providing and not providing end of shift data 164
Table 4.19 Frequency of errors and near misses affecting patients reported by nurses giving end of shift reports ........................................................... 164

Table 4.20 Frequency of errors and near Misses affecting staff reported by nurses giving end of shift reports ........................................................... 164

Table 4.21 Frequency of end of shift reports between high and low scoring Trusts ..................... 165

Table 4.22 Textual accounts of the worst events of shift from nurses reporting managerial support receipt ........................................................................ 167

Tables 4.23a-f Coding framework employed on end of shift 30 word accounts ......................... 172

Table 4.24 Examples of supportive and unsupportive colleague behaviour .................................. 181

Table 5.1 Relationships between survey variables and safety outcomes ........................................ 197

Table 5.2 Effects of demand, control, support and reward on nurse stress ........................................ 197

Table 5.3 Effects of demand, control, support and reward on nurse satisfaction ............................. 197

Table 5.3 Effects of demand, control, support and reward on nurse satisfaction ............................. 198

Table 5.4 Effects of demand, control, support and reward on nurse intention to leave ...................... 198

Table 5.5 Effects of demand, control, support and reward on nurses’ witnessing of errors .............. 198

Table 5.5 Effects of demand, control, support and reward on nurses’ witnessing of errors .............. 199
# List of Figures

**Figure 1.1** Project team composition and work strands ................................................................. 21  
**Figure 1.2** NHS acute Trusts sampling frame ................. 24  
**Figure 1.3** Sampling frame Trust descriptors ............... 25  
**Figure 2.1** Cultural typology derived from the competing values framework (Cameron and Freeman, 1993) and sourced from Scott et al. (2003a: 112) ................................................................. 33  
**Figure 2.2** Receptive contexts for change (Pettigrew et al., 1992: 274) ........................................ 42  
**Figure 2.3** Conceptual framework .......................... 45  
**Figure 2.4** Assessment framework to assess environmental pressures, cultural attributes and organisational capabilities ................................................................. 98  
**Figure 2.5** The distribution of Trusts according to magnitude of environmental pressure and staff engagement ........................................................................... 99  
**Figure 3.1** The augmentation effect of transformational on transactional leadership (adapted from Bass and Avolio, 1990: 237) ................. 105  
**Figure 4.1** The Psychological demand/decision latitude model, after Karasek and Theorell (1990). 132  
**Figure 4.2** Effort-reward imbalance model (Siegrist 1996) .................................................................. 134  
**Figure 4.3** The nine analogue mood scales as displayed in the PDA. Participants indicate their current position on the scales by tapping on the screen with a stylus ............................................. 141  
**Figure 4.4** Participant PDA screens for assessing demand (working hard plus working fast), control, reward (appreciation scale) and an aspect of overcommitment (desire for ‘more control’) .......... 141  
**Figure 4.5** Interaction of effort and reward ............. 149  
**Figure 4.6** Happiness ratings from one nurse over three shifts ......................................................... 151
Figure 4.7  Sadness ratings for one nurse over three shifts......................................................................152
Figure 4.8  Self-ratings of how hard one nurse worked over 3 shifts..................................................152
Figure 4.9  Ratings of tiredness from one nurse over three shifts.............................................................153
Figure 4.10  Ratings of stress experienced by one nurse over three shifts ...........................................153
Figure 4.11  Relationship between demand, control and negative affect (NA) ........................................157
Figure 4.12  Relationship between demand/effort, reward and negative affect (NA) ............................158
Figure 4.13  Relationship between control, desire for control and negative affect (NA) ............................158
Figure 4.14  The interaction between incident-rest of shift and seriousness on negative affect ..........166
Figure 4.15  The interaction of managerial support and incident-rest of shift........................................166
Figure 4.16  The interaction of effort x reward on NA in the worst incident on shift.................................169
Figure 4.17  The interaction of recovery and managerial support .............................................................170
Figure 4.18  The interaction of shift DxC interaction on work performance following the worst incident 178
Figure 4.19  The interaction of shift Effort and Reward on work performance following the worst incident .........................................................................................179
Figure 4.20  The interaction of NA and colleague as support on work performance .............................180
Figure 4.21  The effect of colleague as problem and PA on nurse performance ........................................181
Figure 5.1  Nature of interaction H 5.13 .......................195
# Glossary

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>Abdominal Aortic Aneurysm</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>CPD</td>
<td>Continuing Professional Development</td>
</tr>
<tr>
<td>CS</td>
<td>Colleague Support</td>
</tr>
<tr>
<td>CT</td>
<td>Computerised Tomography scan</td>
</tr>
<tr>
<td>CxDfC</td>
<td>Control x Desire for more Control</td>
</tr>
<tr>
<td>D/E x R</td>
<td>Demand/Effort x Reward</td>
</tr>
<tr>
<td>DABS</td>
<td>Diary of Ambulatory Behavioural States</td>
</tr>
<tr>
<td>DC</td>
<td>Demand Control model</td>
</tr>
<tr>
<td>DxC</td>
<td>Demand x Control</td>
</tr>
<tr>
<td>ED</td>
<td>Emergency Department</td>
</tr>
<tr>
<td>EMA</td>
<td>Ecological Momentary Assessment</td>
</tr>
<tr>
<td>EMD</td>
<td>Electro Mechanical Dissociation</td>
</tr>
<tr>
<td>EOSD</td>
<td>End of shift data</td>
</tr>
<tr>
<td>ERCP</td>
<td>Endoscopic Retrograde Cholangio-Pancreatography</td>
</tr>
<tr>
<td>ERI</td>
<td>Effort Reward Imbalance</td>
</tr>
<tr>
<td>ERIQ</td>
<td>Effort Reward Imbalance questionnaire</td>
</tr>
<tr>
<td>FT</td>
<td>Foundation Trust</td>
</tr>
<tr>
<td>GCS</td>
<td>Glasgow Coma Scale</td>
</tr>
<tr>
<td>GHQ12</td>
<td>General Health Questionnaire 12</td>
</tr>
<tr>
<td>GhQ30</td>
<td>General Health Questionnaire 30</td>
</tr>
<tr>
<td>GI</td>
<td>Gastro Intestinal</td>
</tr>
<tr>
<td>HAI</td>
<td>Hospital Acquired Infection</td>
</tr>
<tr>
<td>HCC</td>
<td>Healthcare Commission</td>
</tr>
<tr>
<td>JCQ</td>
<td>Job Control Questionnaire</td>
</tr>
<tr>
<td>KC</td>
<td>Kathryn Charles</td>
</tr>
<tr>
<td>LMcK</td>
<td>Lorna McKee</td>
</tr>
<tr>
<td>MLM</td>
<td>Multi-Level Modelling</td>
</tr>
<tr>
<td>MLQ</td>
<td>Multi-factor Leadership Questionnaire</td>
</tr>
<tr>
<td>MLwiN</td>
<td>Multi-level Modelling for Windows</td>
</tr>
</tbody>
</table>
**MS** Managerial support  
**MSRA** Methicillin-Resistant Staphylococcus Aureus  
**NA** Negative Affect  
**NHS** National Health Service  
**NPSA** National Patient Safety Agency  
**NSS** National Staff Survey  
**Obs** Observation  
**PA** Positive affect  
**PANAS** Positive and Negative Affect Scale  
**PCA** Principal Components Analysis  
**PCT** Primary care trust  
**PDAs** Personal Digital Assistants  
**PI** Principal Investigator  
**QI** Quality Improvement  
**RA** Research assistant  
**RIP** Raised Intracranial Pressure  
**SCL-90** Symptom Checklist 90  
**SD** Standard deviation  
**SHA** Strategic Health Authority  
**SMcC** Sharon McCann  
**SPSS** Statistics Package for Social Scientists (SPSS)  
**SUI** Serious Untoward Incidents  
**US** United States of America  
**WHO** World Health Organisation  
**WTEs** Whole Time Equivalents
**Section 1  Introduction**

**1.1 Introduction**

This report explores the characteristics of organisational culture in eight English NHS acute Trusts and how these link to outcomes affecting patient safety and staff well-being. It also goes one step further to access understanding of possible relationships between staff well-being and patient safety and the impact of external and internal contextual influences on NHS Trusts. In this regard external influences may relate to: re-configuration of primary care trust (PCT) catchment areas; changes in demand for commissioned services; changes in government policy; technological innovation; demographic changes; Trust merger; societal change and legislative change. Internal influences may relate to Trust culture, structures, processes, leadership and history. Findings are presented from a multi-disciplinary study funded by the National Institute for Health Research Service Delivery and Organisation Programme, Department of Health (UK) undertaken by a consortium of researchers based at the Health Services Research Unit and the School of Psychology at the University of Aberdeen, the School of Nursing and Midwifery at the University of Dundee and the Aston Business School (University of Aston). This research is justified by its significant public and policy relevance due to high levels of adverse events, growing rates of hospital infection, and established links between patient mortality and employee management (West et al., 2002; 2006) and between styles of leadership, professional cultures, staff morale, team climate and organisational and individual performance (see e.g. DoH 2000a, 2001a; Iles and Sutherland, 2001; Vincent, 2001; Vincent, 2006; NHS Confederation, 2003; Michie and West, 2004; West and Spendlove, 2005; West et al., 2006; Ovretveit, 2008; Mannion et al., 2008).

**1.2 Aims and objectives of the study**

The study aimed to shed light on how organisational cultural dimensions and staff perceptions of staff well-being and patient safety affect patient care and on what improvements are needed to create safer and satisfying workplaces. The focus was on different levels within organisations, both senior as well as middle management and on clinical managers as well as frontline health professionals. Questions were raised about the interaction between organisational change and the role of organisational contextual influences on implementation of patient safety and staff well-being strategies. The precise project aims are expanded below:

- To extend the evidence base on organisational culture change and organisational performance: exploiting the Healthcare Commission NHS National Staff Survey (NSS) database, documenting any marked variation over time, across and within
NHS settings, generating extended data and measurement in selected Trusts, and developing depth case studies.

- To research key measurement issues: identifying high/low performance in domains of patient safety and staff well-being; tracking impacts of policy change over time; and linking organisational culture to care across settings and professional groups.

- To define and identify policy and environmental change context issues: focusing on the separation of ‘change-receptive’ from intransigent contexts and their links to culture, leadership, performance, patient safety and staff well-being; addressing the role of internal as well as external contexts in failures and turnarounds and in sustaining high performance.

- To pilot and assess interventions: working in partnership with selected Trusts, tailored to local contexts and sensitive to local cultures, the project informs the development of pilot programmes for purposive cultural change to improve patient safety and staff well-being.

1.3 Why patient safety and staff well-being?

The project draws together several major strands of academic analysis which are often separated by disciplinary boundaries. Both patient safety issues and staff well-being are challenging which present a range of challenges complex and enduring for the NHS. While the links between staff well-being and patient safety are implicit within a range of Department of Health and Health and Safety Executive targets and initiatives aimed at making the NHS a safer place to work (DoH 2001b; DoETR 2001; HSE 2004) there is still limited academic research designed to tackle these strands within a single study.

This research programme helps to build and develop multidisciplinary knowledge and understanding of how these two priorities are tackled in a sample of NHS acute Trusts. The study is informed by a range of key academic literatures where extant research has focused on the following critical relationships and perspectives:

- Aspects of organisational change in health care, where culture, leadership and receptivity to change are recognised as central issues (see e.g., Pettigrew et al., 1992; Dopson, et al., 2002; Bate et al., 2002; Greenhalgh et al., 2004; 2008; Morath and Turnbull, 2006; Ovretveit, 2008).

- Measurement and analysis of organisational culture, climate and performance: a complex and challenging field where the applicants are research leaders (see e.g., Michie and West, 2004; West and Spendlove, 2005; Flin et al., 2004; Mannion et al., 2008).

- Culture, climate and leadership in safety-critical organisations (see e.g., Flin et al., 2004, 2006; Vincent, 2006).

- Measurement of health care technologies, professional behaviour, work stress and occupational health, using developments in analysis, methodologies and tools of measurement (see e.g.,
Jones and Johnston, 2004; Jones et al., 2005; Johnston et al., 2006.

By combining expertise and academic approaches, the ambition has been to overcome some of the limitations of previous research. The different study strands have tackled some commonly identified conceptual and methodological shortcomings: for example, around the lack of theoretical clarity and multiplicity of definitions of culture, of patient safety, and of staff well-being; the persistent failure of much research to capture cultural or structural change or policy impacts in relation to patient safety; a lack of consensus about what is being measured (climate or culture, but with a bias to climate and effect); poorly specified or validated tools; and oversimplification or rigidity of cultural typologies. Added to this is the frequent failure in academic research to capture improvement or deterioration in performance and how this links with culture (see e.g., Ashkanasy et al., 2000; Flin et al., 2004; Mannion et al., 2003; Patterson et al., 2005; Scott et al., 2003a, 2003b; West and Spendlove, 2005).

The study has been able to incorporate a number of conceptual approaches and employ robust methodologies and validated tools within distinctive strands. It has been possible to approach organisational culture from the 'inside out' and generate the views and understandings of different groups of NHS staff (both managerial and clinical) capturing their perspectives on organisational culture and the perceived interplay between patient safety, staff well-being and performance. It has also been possible to provide depth case studies where contextual and performance data can be interrogated together and where Trusts’ response to changes in the environment are explicitly analysed. The project has aimed to correct an enduring bias in the literature towards managerial perspectives and the resultant omission of research on professionals’ performance related to culture. This project has managed to access real-time data from nursing staff across consecutive shifts to counterbalance insights drawn from other staff and tiers in the organisation. (Further development of the theoretical, methodological and policy frameworks underpinning this study are explored in depth in Sections 2, 3 and 4).

1.4 The multidisciplinary team and key strands of work

The multidisciplinary team included expertise in sociology; organisational behaviour; human resources management and workforce, health care and change management; statistics; organisational and health psychology; health services research; and nursing. The consortium of researchers comprised a number of working teams, each tackling different but related sub-themes and focusing on differing levels of analysis and data sets gleaned from the same organisation (see Figure 1.1).
There were three substantive empirical strands which informed the study and these are referred to throughout the report as follows: Organisational (referred to as the In Depth strand in study protocols); Leadership and Staff well-being strands. Each strand drew from individual academic disciplines with the ambition that multiple data sets could eventually be accessed, synthesised and compared. The Organisational strand focused on taking a whole organisation perspective and accessed a wide range of respondents’ perspectives on structural, cultural, environmental, policy and historical factors and their interaction with patient safety and staff well-being. The Leadership strand was directed at capturing insights about Chief Executives’ (CEOs’) leadership styles and how this linked to patient safety, drawing from previous research in industry. The Staff well-being strand provided a micro-analysis of very localised ward and shift based data, concerning the working conditions for nursing staff.

A fourth cross-cutting strand of secondary data has informed the study at all stages, referred to as the Comparative National Data strand. Comparative data derived from the Healthcare Commission NHS National Staff Survey (NSS) (Healthcare Commission, 2005) has been used to provide the base line data. This strand was especially powerful at the early sampling stage of the project and later at the comparative analytical stages (especially as deployed in relation to the Leadership and Staff well-being strands). Culture factors identified in the case studies were also determined from the NSS data and analysed for their relationships with staff well-being and patient safety (see Section 5).
1.5 Study research design

The study collected extensive and multiple data for eight NHS acute Trusts in England (labelled A-H). Four of the Trusts (A, B, C and D) generated data for all three strands: the Organisational; Leadership; and Staff well-being strands. The remaining four Trusts (E, F, G and H) provided data for two strands: the Organisational and Leadership strands. As shown in Table 1 different data collection methods and approaches were employed within and across strands. (The methodologies for each of the study strands will be detailed and explained in each of the strand Sections, 2, 3 and 4). In four of the Trusts (A, B, C, D) there was extensive data collection involving all strands. In the Organisational strand, the emphasis was on producing detailed comparative case studies using a mix of interview, observational and documentary sources with different levels of staff and including different professional and managerial constituencies.

Table 1.1 Study research design and data sources

<table>
<thead>
<tr>
<th>Strand</th>
<th>Trust identifiers</th>
<th>Data sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational Strand</td>
<td>4 Depth case studies</td>
<td>100 semi-structured interviews</td>
</tr>
<tr>
<td></td>
<td>Trusts A, B, C and D.</td>
<td>Observation of five meetings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trust and Healthcare Commission Documents</td>
</tr>
<tr>
<td></td>
<td>4 Mini-case studies</td>
<td>44 semi-structured interviews</td>
</tr>
<tr>
<td></td>
<td>Trusts E, F G and H</td>
<td>Observation of four meetings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trust and Healthcare Commission Documents</td>
</tr>
<tr>
<td>Leadership Strand</td>
<td>Trusts A, B, C, D, E, F, G, and H.</td>
<td>Seven semi structured interviews conducted with trust CEOs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>completion of online self report and appraisal by members of Trust senior</td>
</tr>
<tr>
<td></td>
<td></td>
<td>executive teams</td>
</tr>
<tr>
<td>Staff well-being Strand</td>
<td>Trusts A, B, C, and D.</td>
<td>233 self completed questionnaires by nurses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>248 hand held diaries completed by nurses covering three consecutive shifts</td>
</tr>
</tbody>
</table>
In the Leadership strand, interviews with CEOs were combined with an upward appraisal tool to assess corporate perspectives on the leadership styles of CEOs. In the Staff well-being strand, a combination of questionnaire and real time data was gathered using hand held diaries completed by nurses over three consecutive shifts.

1.5.1 Trust selection

The selection of eight acute NHS Trusts was informed by our fourth strand the ‘Comparative National Data’ strand led by researchers at Aston University. Acute Trusts were identified using the Healthcare Commission’s National Staff Survey (NSS) (Healthcare Commission, 2005). This was a heuristic and systematic method for accessing a range of Trusts. This survey has been run annually since 2003, and measures a wide variety of factors concerning NHS employees’ experiences at work, including factors relating to patient safety and staff well-being.

The NSS (now run by the Care Quality Commission, the successor to the Healthcare Commission) has quickly become embedded in the NHS culture and regulatory framework in England, providing a substantial amount of data for the Annual Health Check, the official performance management mechanism for NHS Trusts. It is therefore compulsory for all Trusts to take part, and the survey is designed to cover all types of staff employed by all Trusts. The types of questions included are therefore not as detailed as they might be in a survey targeted at particular occupational groups or departments, but instead covers broader aspects of staff experience. Response rates have varied over time and for the Trusts in this study varied between 47 percent and 62 percent.

Nevertheless, there are some questions that provided useful and relevant data for selection purposes for this project. Data from the 2003 and 2004 surveys (the only two survey samples to have been completed at that time) were used; these included data from 203,911 respondents in 572 Trusts in 2003, and 217,968 respondents in 570 Trusts in 2004.

From the total sample of 151 non-specialist acute Trusts, four groups of Trusts were identified: 1) Trusts that were stable and performing well; 2) Trusts that were unstable but improving; 3) Trusts that were unstable and worsening in performance terms or improving less than most; and 4) stable, poor performing Trusts. Two key variables were used to assess performance relating to the study: for patient safety the variable used was the percentage of ‘staff witnessing errors or near misses that could harm patients’; and for staff well-being it was the percentage of ‘staff suffering illness or injury as a result of work related stress’. For both of these variables, ‘high performing’ means those where fewer employees respond affirmatively – i.e. a higher performing Trust is one with fewer staff witnessing errors or near misses, and fewer staff suffering illness or injury as a result of work-related stress. High stability Trusts were those where there was a change from 2003 to 2004 of no more than one percent (well-being) or two percent (patient safety). The highest and lowest performing
Trusts were selected from each of these categories. Low stability Trusts were those where the total change in both scores (when standardised) was particularly high. Short lists were produced for ‘high’ and ‘low’ performance, and consideration was also given to their levels of high and low stability of performance based on the 2004 data.

A short list of 16 Trusts along the dimensions of patient safety and staff well-being was drawn up using these criteria. Using this list, local knowledge and insights about Trusts were also gathered discreetly from NHS management and patient safety experts, as well as from colleagues at Aston University and the National Patient Safety Agency (NPSA) and from other project teams in the SDO Organisational Culture Programme. These steps were taken to ensure minimum conflict in Trust selection with other major ongoing research, and to seek guidance and advice on how best to direct access requests to the key people in Trusts. Issues of Trust status and location, including geography, accessibility and population served, as well as foundation or non-foundation status, were also assessed to ensure the final sample of eight displayed appropriate diversity as well as comparability. Eight acute Trusts were subsequently short listed and approached. (For broad descriptors of Trusts in the final sample see Appendix 1). Figure 1.2 identifies the criteria for the sampling frame for the study.

**Figure 1.2  NHS acute Trusts sampling frame**
1.5.2 Description of Selected Trusts

The eight Trusts selected had a broad range of performance, not just in terms of the staff survey questions, but also other performance indicators such as the Annual Health Check, patient satisfaction, patient mortality, and infection rates. Figure 1.3 gives descriptions of each of these Trusts in terms of these performance criteria during the course of the project itself, as well as response rates from the 2004 staff survey that was used for selection.

The Annual Health Check data shown are the ‘Use of resources’ and ‘Quality of services’ ratings respectively from the 2007/8 health check; with the exception of response rates, the other performance indicators are shown in approximate terms to protect the anonymity of the Trusts.

For further detail see Appendix 1 which provides more contextual detail while protecting the anonymity of the Trusts.

At the time of the study Trust B was a participant in the Health Foundation’s Safer Patients Initiative. The influence of broader quality improvement and awareness of patient safety improvement was emerging across the NHS but still embryonic. Emphasis was placed on the value of improving incident
reporting systems/ culture and analysis of adverse events and ‘near misses’. Across all Trusts engagement with the National Patient Safety Agency was in evidence but to varying degrees.

1.5.3 Gaining access

A flexible and staggered approach to gaining access to Trusts was adopted and advice taken from NHS senior staff on the favoured approach. For each Trust the relevant Chief Executives were approached via a personal letter and this was also sent to Directors of Nursing and Human Resources in each of the target sites. Face-to-face meetings were then undertaken by the Principal Investigator (PI) and the full time Research Fellow with key personnel in each location to discuss Trust participation ‘in principle’ and to explain the aims and conduct of the study. In all Trusts the aim was to identify local ‘project facilitators’ or ‘champions.’ For the conduct of the Staff well-being strand further steps were taken to find a local ‘Nurse Advocate’ to assist with the implementation of the survey questionnaires and diary instruments (see Section 4). Of the eight Trusts approached all but one agreed to participate. Securing a replacement for this Trust (a mini case) proved more problematic and two further Trusts in this target grouping also declined before a third agreed. Reasons for refusal included issues to do with financial and staffing constraints, or preparation of foundation status. At a very late stage, just before fieldwork was due to commence, one of the original eight Trusts had to withdraw and this was related to the occurrence of a recent serious incident and departure of the project ‘facilitator’, who was the Director of Nursing. However, we are confident and the data attests that we did not gain access to only those Trusts wanting to showcase a ‘good news story’. However, all the study findings relate to a small purposive group of Trusts and this must be flagged at the outset.

1.6 Project timeline

The study commenced in October 2005 and was completed in January 2009 (see Appendix 2 for detailed identification of activities). The project timeline comprised seven phases which focused on the following activities:

- **Phase 1** Meeting of project team to clarify the parameters of the study. Setting of sampling criteria and lists for Trust selection. Involvement of external advisors and building key project networks/links.
- **Phase 2** Selection, recruitment of Trusts and desk research.
- **Phase 3** Production of research protocols (see Appendix 3) and recruitment of seven Trusts.
- **Phase 4** Ethics approval by the North West Multi-centre Research Ethics Committee (MREC) (see Appendix 4), Trusts R&D approval in six Trusts, piloting of interviews.
- **Phase 5** Data collection and preliminary analysis (early dissemination).
- **Phase 6** Recruitment of replacement Trust and final data collection.
• **Phase 7** Final data collection, Aston Workshop, analysis, writing up and dissemination.

Early phases focused on formulating the research parameters; establishing working practices for the team, designing a project management and implementation structure. This was followed by setting the sample criteria, selecting, recruiting suitable Trusts, producing research instruments and protocols, and then gaining MREC ethics approvals and R&D approvals from the Trusts. Following this a lengthy data collection phase occurred which was progressed very smoothly. Some challenges occurred in securing nurse participation in the Staff well-being strand in two Trusts but these were resolved by active involvement of the team in face-to-face meetings with senior personnel. The late and unexpected withdrawal of one Trust from the study (mentioned earlier) and the postponement of data collection in Trust C (this was requested as the Trust was experiencing financial problems and recruiting a new Chief Executive) did cause some delays to the schedule. It is noted that during the data collection phase much attention was focused on retaining all Trusts’ participation in the study and that this involved constant active engagement of the Principal Investigator (PI) and members of the project team through visits to the Trust sites to bolster support for the study. A further minor disruption to the project timeline resulted when the full time Research Fellow (Sharon McCann) took a period of maternity leave and a replacement was recruited (Kathryn Charles). Any disruption was minimised and handover was smooth. In the light of these exigencies a ‘no-cost’ extension was granted giving a revised project end date (from 30th September 2008 to 31st January 2009). The final phase of activity focused on analysis of data, data sharing across strands and iterations of analyses, dissemination of preliminary findings through an ‘Action Workshop’ conducted with Trust participants and writing of the project report (see Appendix 2 for illustration of project timeline and activities).

The analysis and approach to data handling and synthesis is discussed in detail in the individual strand sections (see Sections 2, 3, 4, 5). Direct links and integration of strands have been close at all stages and hence informed the ability to build cumulative insights and reflect on the complementary data. Frequent interactions and communications ensured the project achieved economies of time, depth and scope. Discussions with other project strands led to a full comparative analysis and triangulation of all case study data findings.

### 1.7 Engagement with key stakeholders

An innovative feature of this study was the cross fertilisation of insights across all strands and involvement of a range of stakeholders at project design, implementation, data analysis and dissemination stages. These stakeholders include: the project team; advisory team; Trust representatives; academic researchers and patient safety practitioners.
1.7.1 Project team

The project team have met regularly to discuss problems and preliminary findings. This has served to mobilise collective support in improving access to Trust participants. Likewise dissemination of preliminary findings has enabled a cross fertilisation of ideas and identified further interrogation of the individual strand data findings. The project team has benefited from having a senior NHS manager embedded within the project, who has been actively involved from the design stage and throughout the implementation and delivery stages of the project.

1.7.2 Advisory team

An advisory team comprising a range of NHS health care clinicians, managers, eminent public health researchers and representatives from the National Patient Safety Agency (NPSA) and patient organisations has met with the project team at regular intervals to advise concerning a range of issues. These issues have included the range of study participants, how to recruit and access the participant Trusts, and advice concerning the appropriate design of an interactive workshop aimed at accessing feedback.

1.7.3 Participant Trust representatives

Contact with Trusts has been maintained throughout the study by dissemination of reports outlining the progress of the fieldwork and analysis generated from the National Staff Survey.

1.7.4 Action workshop ‘intervention’

In April 2008 an ‘action workshop’ took place at the Aston Business School. This event focused on delivering study findings and was structured to facilitate knowledge sharing and learning to improve patient safety and staff well-being performance. Participants included twenty representatives from seven Trusts, the project team and representatives from NIHR SDO (Stephen Davies and Professor Huw Davies). Chief Executives from the eight Trusts were asked to nominate three Trust staff to attend. Trust participants included four Chief Executives and interim Chief Executives, members of the Trusts senior executive teams and managers responsible for risk, patient safety strategy and clinical governance. This workshop was designed in consultation with the study participants. It aimed to communicate general state of the art knowledge about patient safety and staff well-being as well as direct feedback on the study findings. The overall aim was to stimulate knowledge sharing and learning in the following ways:

- Formal presentation of study findings.
- Master class presentations by Professor Rhona Flin (Patient safety in a wider context of safety at work) and Professor Michael West (Human resource management in health care: why it matters).
• Structured interactive sessions in which Trust representatives could share and exchange knowledge and expertise in tackling problems associated with patient safety and staff well-being.

• Creation of an environment to enable personal networks between Trust representatives to ensure continued sharing and transfer of knowledge.

The report outlining the action workshop and is included in the Appendices (see Appendix 5, Analysis and Discussion of Workshop). A survey questionnaire completed on the day of the workshop and a follow up questionnaire both indicated that the ‘action Workshop’ was highly valued, helped to validate research findings and identified useful dissemination methods.

The study research design was also informed by engagement with academic research users. A range of specialist research networks has served to enrich the project team’s knowledge of current research concerning organisational culture change in health care and the complex relationships between organisational culture, patient safety and staff well-being.

1.8 Organisation of the report

The report has been purposively organised into reporting of the distinctive strands: Organisational (see Section 2), Leadership (see Section 3) and Staff well-being (see Section 4). This is pragmatic and dictated by the volume of data and its complexity. Each strand provides detail on relevant literatures, theoretical underpinnings, rationale, key research questions, emphases and approach. The use of separate sections to encompass the different strands helps to locate the work in its distinct philosophical and disciplinary paradigms, and traditions.

However, in line with one of the primary aims of securing unique advantage through multidisciplinarity, aspects of the data are also brought together and synthesised in Section 5. This presented a number of predictable challenges which are aired in the section. It is demonstrated that cautious ‘cross–strand’ analysis in this study was fruitful and that it was productive to attempt to integrate, reconcile and locate comparable themes and insights. Section 6 develops detailed conclusions and serves to identify the study implications for future research practice and policy.
Section 2 Organisational Strand

2.1 Introduction

The Organisational strand adopts a comparative case study research design and employs a qualitative methodology to access rich understanding of the cultural attributes that influence patient safety and staff well-being outcomes within eight NHS acute Trusts. It provides a holistic and dynamic understanding of how broader internal and external contextual influences serve to shape both patient safety and staff well-being and focuses on multiple levels within an organisation. This section commences by examining the research background literature and policy drivers relevant to the study. It then describes the research methodology and identifies the key themes and implications generated from comparative data analysis of the eight case studies.

2.2 Research context

Cultural change in health care is recognised as a focus of UK policy makers in their quest to improve the effectiveness and quality of service delivery. It is generally accepted that both cultural and structural changes need to work together to improve the performance outcomes for health care (Scott et al., 2001; 2003a). This brief review draws from recent reviews of organisational culture and measures which focus on health care (Scott et al., 2001:2003a; 2003b; 2003c; Mannion et al., 2008), and examines what is understood by the term organisational culture and assesses the drivers, key contextual dimensions, change receptive factors, the trajectory of cultural changes in hand and how they impact on outcomes affecting patient safety and staff well-being.

2.2.1 What is organisational culture?

Organisational culture adopts an anthropological perspective to access outsider’s views of the deep seated, taken for granted and unconscious assumptions which guide norms, values and behaviours and is distinct from the concept of organisational climate which serves solely to access the perceptions of organisational members. A universally accepted definition of organisational culture is difficult to access. Much of the literature sets out to list the dimensions or properties of culture, for example van der Post et al., (1997) refer to over 100 dimensions while Kroeber and Kluckhohn (1963) highlight 164 definitions. However, the typology of culture put forwarded by Schein (1985) usefully allows the many dimensions of culture to be clustered according to three levels. These levels relate to artefacts, values, and basic assumptions. Artefacts represent the visible manifestations of organisational culture such as the physical environment, technology.
patterns of behaviour, symbolic manifestations and the use of language. Values include philosophies, morals and ideologies which serve to underlie and influence behaviour, while basic assumptions and enshrined beliefs underlie and drive these unconscious and internalised values and behaviours.

Much of the literature locates the various dimensions of organisational culture within these levels. Ott (1989) goes one step further by subdividing the artefact level into visible and behavioural manifestations and similarly Hawkins (1995) extends organisational culture to include five levels which include: artefacts; behaviour; mindset; emotional ground and motivational acts. Thus we contend that Schein’s definition of organisational culture usefully identifies the observable and symbolic nature of organisational culture while also taking account of the shared cognitive mindset and tacit shared knowledge also implicit within the concept as:

*The pattern of shared basic assumptions—invited discovered or developed by a given group as it learns to cope with the problems of external adaption and internal integration— that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems (Schein, 1995:6).*

Some authors note that dividing organisational culture into levels implies the existence of an overarching culture and argue that this typology fails to account for the existence of sub cultures which may work alongside or co-exist with the organisational culture. Hofstede (1980) in particular identifies a range of sub-cultures that may exist and Scott *et al.*, (2003c) in particular, identify the diverse sub cultures within the NHS which are characterised according to: ethnicity; religion; class; occupation; technology; and gender. Viewed in this way organisational culture comprises a dynamic interweaving of subcultures composed of diverse levels and properties which may extend beyond the organisational to a larger set of supra cultures.

Drawing from this, organisational culture reflects a plurality of definitions and meanings. Difficulties arise from either a narrow definitional approach or following a broad holistic understanding. Some authors have even concluded that there will never be an accepted overriding definition of organisational culture (Ott, 1989; Jordan, 1994). Despite this, the literature offers some guidance on how to analyse and understand the nature of organisational culture. Alvesson (2002) offers a useful strategy for understanding organisational culture by adopting eight distinctive metaphors. These regard organisational culture as: an exchange regulator or control mechanism; a compass that guides the organisational strategy; social glue or common ideas, values and symbols that provide cohesion; a sacred cow or basic core assumptions; an affect regulator which gives guideline and scripts for emotional expression; disorder; blinders or unconscious aspects of culture which to the uninitiated may provide blind spots; world closure where the organisational culture constrains the development of actions, behaviours and ideas which prevents critical evaluation and exploration of established norms. These metaphors aid in
grasping a tangible meaning of what is understood by organisational culture but difficulty still lies in whether organisational culture is viewed a variable which may be manipulated and fashioned or whether organisational culture is a ‘root metaphor’ irreducible, interweaved and permeating all aspects of organisational existence.

2.2.2 Organisational culture: can it be moulded to drive performance?

Within the literature two views exist as to whether organisational culture is a variable or a ‘root’ metaphor. Smirchich (1983) contends organisational culture can be harnessed to transmit knowledge, build commitment and shape behaviours. In contrast the ‘root metaphor’ view sees organisational culture as a ‘non concrete’ and all pervasive which affects every level of the organisation and as a result, managerial influence and manipulation are unlikely to change basic assumptions held by organisational members (Huczynski and Buchanan, 2001). These viewpoints have directed a range of approaches which focus on integration, differentiation and fragmentation perspectives (Martin, 1992). Within an integrated perspective a unified organisational culture provides greater clarity, commitment and control. In contrast, differentiation perspectives focus on differences in norms, values and behaviours and as such have a greater affinity to root metaphor idea’s of organisational culture. Fragmentation perspectives reject that organisational culture can be viewed as consistent or inconsistent and attention focuses on identifying complexity and recognising subjective interpretation.

Study of organisational culture has been a dominant preoccupation for organisational research with attention focused on establishing links between culture and leadership (Block 2003), performance, learning job satisfaction, staff recruitment, employee attitudes and behaviour. Interest in organisational culture as a driver of performance was stimulated by a range of seminal publications. These include Ouchi’s Theory Z (1981); Peters and Waterman’s (1982) ‘In Search of Excellence’ and in Deal and Kennedy’s (1982) ‘Corporate Cultures’. These publications offered a strategy to improve business performance by engineering a collaborative, flexible, adaptable and supportive organisational culture, more capable of competing with Japanese firms. As a result culture changing strategies such as ‘Total Quality Management’ were developed to involve the workforce in designing and participating in the development of strategy to improve quality. In contrast, some authors contest that organisational culture can be linked to performance. Wilderom et al., (2000) in a review of ten major quantitative studies raises concerns as to the linkage of organisational culture to performance. These concerns relate to methodological difficulties and even suggest that performance determines cultural traits rather than the opposite.

Limited research has been conducted in health care contexts that link organisational culture and performance. The review conducted by Scott et al., (2003a) which examined the linkage between organisational culture and
performance contended that four out of the ten studies reviewed claimed to have identified a relationship and the other studies despite failing to uncover a clear relationship had not found contrary evidence. This review also identified difficulties in assessing and defining performance which is described as ‘nebulous, elusive and complex as culture’ (Scott et al., 2003a). It examines the critical role of patients in shaping organisational culture and the likelihood of organisational culture and performance possessing an ongoing recursive relationship.

Studies of organisational culture have used a range of frameworks to identify elements and characteristics of the organisational culture and some studies have focused on assessing the dimension of organisational climate. (Organisational climate is defined as a meteorological term which accesses organisational member perceptions which relate to surface experiences and perceptions. It can be differentiated from the term organisational culture which adopts an anthropological perspective to access an outsider’s view of the deep seated, taken for granted and unconscious assumptions which guide norms, values and behaviours.)

Scott et al., (2003a) have usefully synthesised an overarching typology of organisational cultures which although based on the Competing Values framework (Cameron and Quinn, 1999; Cameron and Freeman, 1991) also account for organisation ‘type’ labels used in a range of empirical studies. The following diagram illustrates and explains the classifications given to organisational cultures.

**Figure 2.1 Cultural typology derived from the competing values framework (Cameron and Freeman, 1993) and sourced from Scott et al. (2003a: 112)**

<table>
<thead>
<tr>
<th>Clan / group</th>
<th>Adhocracy / open / developmental</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dominant attributes:</strong> cohesiveness, participation, team work, sense of family.</td>
<td><strong>Dominant attributes:</strong> creativity, entrepreneurship; adaptability; dynamism.</td>
</tr>
<tr>
<td><strong>Leader Style:</strong> mentor, facilitator, parent figure.</td>
<td><strong>Leader style:</strong> entrepreneur, innovator, risk-taker.</td>
</tr>
<tr>
<td><strong>Bonding:</strong> loyalty, tradition, interpersonal cohesion.</td>
<td><strong>Bonding:</strong> entrepreneurship, flexibility, risk.</td>
</tr>
<tr>
<td><strong>Strategic emphases:</strong> towards developing human resources, commitment, morale.</td>
<td><strong>Strategic emphases:</strong> towards innovation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hierarchy / empirical</th>
<th>Market / rational</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dominant attributes:</strong> order, rules, and regulations, uniformity, efficiency.</td>
<td><strong>Dominant attributes:</strong> competiveness, goal achievement, environment exchange</td>
</tr>
<tr>
<td><strong>Leader Style:</strong> co-ordinator, organiser, administrator.</td>
<td><strong>Leader style:</strong> decisive, production and achievement orientated.</td>
</tr>
<tr>
<td><strong>Bonding:</strong> policies and procedures, clear expectations.</td>
<td><strong>Bonding:</strong> goal orientation, production, competition.</td>
</tr>
<tr>
<td><strong>Strategic emphases:</strong> towards stability, predictability, smooth operations.</td>
<td><strong>Strategic emphases:</strong> towards competitive advantage and market superiority</td>
</tr>
</tbody>
</table>
In this way organisational cultures have been characterised as: clan; adhocracy; hierarchical and rational. In studies conducted by Gerowitz et al., (1996) in 345 Canadian hospitals, 100 UK hospitals and 120 US hospitals indicated that the dominant culture was significantly related to performance but only that type of performance that was valued by the organisation. Clan cultures displayed higher employee loyalty; hierarchical cultures exhibited higher standardisation of actions and open cultures had more satisfied external stakeholders. Likewise a study conducted by Mannion et al., (2004) of 899 UK managers in 189 acute Trusts demonstrated a relationship between Trust leadership and performance. High performing Trusts were characterised by top down ‘command and control’ styles of leadership where the senior management team set clear performance objectives and possessed robust internal performance management monitoring. High performing Trusts also had clear accountabilities, were focused on developing and training staff and also deliberately set put to recruit and retain staff with high commitment to the corporate agenda. Cultural characteristics of low performing Trusts included: charismatic Chief Executives who possessed limited transactional skills which impacted on the limited development of administrative systems and processes. In low performing Trusts, Chief Executives and their senior management team were viewed as remote, lacking in transactional skills and less able to institute robust management systems and processes. Middle management was also perceived to be less engaged and human resource policies undeveloped. Low performing Trusts were also less adept at engaging with external stakeholders.

Research has also demonstrated positive links between human resource practices and firm performance. It is viewed that certain individual practices or bundles of practices contribute to higher levels of firm productivity (Arthur, 1994; Guest and Hoque, 1999; Youndt et al., 1996). Practices identified include: staffing; training; performance appraisal and job design. Health care studies by West et al., (2002) identified the specific practices which affected performance outcomes. Their research findings also indicated a significant association between the sophistication of appraisal systems, training and the percentage of staff working in teams were all associated with measures of patient mortality.

Overall, it is conceded that culture may influence organisational performance in health care settings however, detailed examination of which aspects of culture or climate link to specific aspects of performance still (need) identification. In the last decade much attention has focused on patient safety performance and the development of ‘safe cultures’.

2.2.3 Developing safe cultures

Catastrophic failures in safety such as the capsize of the ferry ‘Herald of Free Enterprise’, and the Chernobyl and Piper Alpha disasters have driven interest in uncovering and understanding complex system failures (Reason, 1990). Prior to this much focus was placed on the technical and human drivers of safety breaches. Consequently, designers and engineers tackled
incident causation and developed a range of tools (for example Hazard and Operability Studies (Kletz, 1974); Probabalistic Risk Assessment and Failure Mode and Effects Analysis) to monitor systems technical performance. Likewise psychologists have examined the human side of safety and analysed why safety breaches occur (Flin et al., 2003, 2004) and diverse models of human behaviour have been developed: for example Rasmussen’s (1983), ‘Skill, Rule and Knowledge-based Behaviour Model’ and Reason’s (1990) ‘Generic Error-Modelling System’ (see Leadership strand in Section 3 for further elaboration).

Although organisational systemic causes of safety failures have received limited attention, Reason (1990) has distinguished between latent conditions and active failures. Active failures occur at the level of front line workers and are often termed the ‘short end’ of the error which often results in immediate failure. Latent conditions are described as factors in organisational systems or processes that are not under the direct control of front line workers. These factors include: poor design of work environment or equipment; inadequate training; gaps in supervision; and inadequate personnel deployment (Reason, 1990). Latent conditions have been identified as the greatest risk to safety in complex systems as they are likely to cause multiple failures and may remain dormant in the system for a long period, only to become active when other failure factors occur. Reason (2000:769) suggests that more focus should be given to discovering and fixing latent system conditions than to minimise active errors. He uses the following analogy to make this point:

Active failures are like mosquitoes. They can be swatted one by one, but they still keep coming…the best strategy is to develop strategies which prevent the conditions in which they breed’ (Reason, 2000:769).

Weigmann et al., (2002) identify the key dimensions of a safety culture as including: shared values; with a focus on formal safety issues and related management and supervisory systems; having an emphasis on the contribution from all staff at all levels and impacting on all workplace behaviours. They also highlight the need for a link between reward systems and safety performance; the organisation’s willingness to develop and learn from errors, incidents and accidents and a degree of organisational stability.

Recent ideas with regard to developing a ‘safe’ culture focus on developing organisational resilience (Woods et al., 2006). Here the notion is developed that suggests that resilience needs to be generated so as to give organisations the intrinsic ability to absorb changes and disturbances and as a result allows the system to continue operating even after a major mishap or in the presence of continuous stress. Engineering resilience into organisations changes the safety focus from a reliance on analysis and monitoring techniques to the development of a range of adaptive and co-adaptive measures and models. Thus the organisation develops an ability to continuously recognise where and when failures are likely (working conditions); identify how couplings can arise (functional resonance); find ways of monitoring and damping resonance; and identify types of normal performance variability (or ‘smart’ work).
Culture change: driving and engineering patient safety

In the UK, major cases of untoward deaths have drawn attention to failures in patient safety (for example, in the treatment of children at the Bristol Royal Infirmary (2001); the Harold Shipman Inquiry (2005); outbreaks of Clostridium Difficile at Maidstone and Tunbridge Wells NHS Trust (2007); or the Scottish Government’s Independent Review (2008) of Clostridium Difficile at the Vale of Leven Hospital). The Department of Health (England) has set up the National Patient Safety Agency (NPSA) to co-ordinate and facilitate the spread of organisational learning to improve patient safety and other safety initiatives have been stimulated in Scotland and elsewhere with a global leading role being played by the World Health Organisation. Many national and international level initiatives have focused on providing a range of practical diagnostic tools and intervention methodologies which analyse the typology and dimensions of patient safety within health care contexts. For example some of those developed by the NPSA include:

- Manchester Patient Safety Assessment Tool.
- Checklist for Assessing Institutional Resilience (CAIR).
- Safety Attitudes Questionnaire.
- Stanford Patient Safety Trust.
- Inquiry Culture Survey.
- Advancing Health in America (AHA) and Veterans Health Association (VHA):

We note a concomitant and increasing focus on and proliferation in the design and use of organisational diagnostic tools as an analytical approach to identify patient safety problems and solutions (for a comprehensive review of these and their implementation and limitations see Mannion et al., 2008).

In addition, UK government white papers have identified key strategies to address patient safety failures: including: An Organisation With A Memory: Report of an Expert Group on Learning from Adverse Events in The NHS (DoH, 2000a); Safety First; A Report for Patients, Clinicians and Healthcare Managers (DoH, 2006); and Lord Darzi’s High Quality Care for All: NHS Next Stage Review Final Report (DoH, 2008c). These investigations and white papers have also drawn attention to individual, cultural, structural and systemic barriers to patient safety which include: poor transmission of organisational learning, failures in incident reporting; status differentials and ‘blame cultures’ which hamper communication and effective working.

Beyond the UK, the Canadian Institute of Health Research and the Canadian Institute for Health Information have sponsored investigations into the nature of hospital adverse incidents. Similarly, the Canadian Royal College of Physicians and Surgeons have assembled a National Steering Committee on patient safety (NSCPS) which has identified 19 recommendations for a national strategy which also concurred with the systematic review and report to Health Canada by Baker et al., (2004). In 1994 the Australian
Commonwealth Department of Health funded ‘The Quality in Australian Health Care Study’ (McL Wilson et al., 1995), which detailed the level of adverse incidents in Australian Hospitals. This indicated that 16.6 percent of admissions experienced adverse incidents of which 51 percent were preventable. Subsequently the National Expert Advisory Group on Safety and Quality in Healthcare led to the establishment of the Australian Council for safety and quality in health care and the Australian Patient Safety Foundation.

Similarly, in the US the Institute of Medicine’s report ‘To Err is Human: Building a Safer Healthcare system’ (Kohn et al., 2000) identified that death from medical error in the US was at 44,000 to 98,000 cases per annum, with 7000 of these resulting from medication errors. As a result of this the Quality Inter Agency Co-ordination Force recommended 100 actions to improve patient safety. The Agency for Healthcare Research and Quality (AHRQ) has also sponsored appraisal of evidence regarding safety procedures and produced a range of patient safety indicators (McDonald et al., 2002). The development and use of indicators are seen as effective ways in which national governments have attempted to drive the patient safety agenda. Critiques of the role and performance of national patient safety agencies have focused on how adverse incident reporting systems are too narrow, vague, threatened by medical practice environments and are also too optimistic (Arah and Klazinga, 2004).

Some authors have identified how an organisational culture which focuses on ‘quality improvement’ also links to patient safety. Övretveit and Klazinger (2008) in their World Health Organization (WHO) guidance document propose a framework to help national policy advisors develop and implement a national quality strategy aimed at improving healthcare outcomes and patient safety. They suggest that a quality improvement strategy enables healthcare providers to improve quality of services by mobilising and coordinating participation in strategy development, creating enabling structures and processes to develop skills and employing ‘Lean’ management tools (Womack and Jones, 1996). Övretveit (2008) also highlights the importance of leadership involvement in quality improvement and identifies the need to develop greater understanding of how leadership behaviours are shaped by the local health care context and how multi-levels of leadership are coordinated throughout health care organisations.

Analysis has focused on identifying a patient safe culture as comprising the following dimensions:

- 1. A shared priority for the safety of patients (Kennedy, 2001).
- 2. An open and non punitive environment where staff feel safe to report incidents (ibid).
- 3. Adverse events are seen as opportunities for learning and to make changes (ibid).
- 4. Establishing a reporting culture and risk analysis culture for incidents and near misses (Reason, 1997).
5. Existence of a just culture where trust is well established and there is a well established collective understanding of accountability for actions (Marx, 1999).

6. Effective health care teams buffer health professionals from the stresses associated with team work (Carter and West, 1999)

Facilitating and implementing organisational cultural change in health care contexts

Although consideration has been given to identifying the dimensions of patient safety cultures limited attention is given to implementation and facilitation of cultural change in health care contexts. Patient safety has seldom been viewed through the lens of organisational change and this study aims to address this gap. In examining cultural change, the change management literatures distinguish between incremental, planned slow change; continuous slow emergent change; planned episodic fast change and continuous change. Slow emergent changes in behaviour may evolve slowly and naturally within the organisation as a product of continuous learning and hence the concept of continuous change is useful as it characterizes change as ongoing, evolving and emergent where micro-level improvisation (Orlikowski, 1996), translation (Sahlin-Andersson, 1996; Moorman and Miner, 1998b), reaction and proactivity can cumulatively result in substantial change. Orlikowski defines it as:

The realization of a new pattern of organizing in the absence of explicit a priori intention, (Orlikowski, 1996: 650).

Much attention also focuses on how organisational learning may be facilitated so as to enable continuous organisational adaptation and responsiveness (Senge et al., 1999). Senge emphasises the development of mentoring, coaching roles and investment in new infrastructure for learning, which may be performed by support and inquiry and on the job training. Change agent roles during continuous change appear critical and involve making sense of the organisational dynamics (Weick and Quinn 1999). In this way, change agents acting as managers identify and promote adaptive change, and through their organisational experience create dialogue or conversations to facilitate a shared meaning capable of interpretation by organisational members (Bate, 1990; Barrett et al., 1995; Dixon, 1997). Orlikowski also highlights how organisational change is:

Grounded in the ongoing practices of organisational actors, and (emerging out of their tacit and not so tacit), accommodations to and experiments with everyday contingencies, breakdowns, exceptions, opportunities and unintended consequences that they encounter (Orlikowski, 1996:65).

Improvisation appears central to an understanding of continuous change as it occurs when the time gap between the planning and execution of activities is very narrow, and at its most improvisational becomes simultaneous (Moorman and Milner, 1998a). The iterative interpretation, adoption, modification and application of prior ideas, activities and decisions to match new situations demonstrate the socially interactive process of translation. This translation process (Czarniawska and Joerges, 1992;
Sahlin-Andersson, 1996; Czarniawska et al., 1996) is implicit in the conception of continuous change. It is suggested that inherent within such improvisational and translation processes which enable continuous transformation is organisational learning. This results from the interaction between organisational action and knowledge (Sitkin et al., 1998). Moreover, this implies that changes in organisational competences effect change processes and that change can also be a product of retained, embedded knowledge rather than just a substitution of existing organisational competency and knowledge.

Incremental cultural change is also achieved by employing ‘Organisational Development’ practices. This approach advocates the use of behavioural science techniques and knowledge to systematically plan ‘top down’ interventions in order to promote slow improvement to the organisations health and effectiveness. Improvisation is also relevant to the uncertainties and complexities of radical fast paced change projects which require iterative redefinition. This second order change often occurs in response to a crisis which requires a major shift in organisational culture. As a result, strategy is reassessed, augmented and adapted in response to new objectives and resource constraints (Buchanan and Badam, 1999).

Bate (1999) draws from these approaches to managing cultural change and usefully highlights the key dimensions of cultural change strategies, which reflect structural, process and contextual issues. Structural dimensions follow the prescriptive organisational development approaches to change. Bate acknowledges the criticality of initially undertaking a cultural audit to identify the characteristics of the organisational culture by administering a range of cultural assessment tools. Only then, once a diagnosis of the organisational culture is made can an appropriate change strategy be deployed. Continuous monitoring and evaluation of the change strategy then enables further refinement. Useful diagnostic tools have been developed to aid in the analysis of health care culture. These include: The Competing Values Framework; Critical Incident Technique; Organisational Culture Survey and the Ward Organisational Feature Scale.

Process dimensions address how change strategy may ‘ride the wave’ or attempt to turn the tide of spontaneous emergent change. Bate suggests if emergent change is moving in the desired direction then it is possible to use the energy of the organisation to ‘ride the wave’ and deliver change. If emergent change is moving towards an undesired cultural orientation then three alternative strategies may be applied. These include: deflecting the energy of the organisation by adopting ‘reframing strategies’; waiting for the cultural wave to subside and then developing a new strategy; or following an opportunistic strategy by hitching a ride on a new cultural wave.

Contextual dimensions relate to how the organisation must assess how the external environmental societal cultural trends and attributes fit with the internal organisational culture. Much criticism of health care culture has
reflected a ‘cultural lag’ or inability of health care to adapt and accommodate to cultural changes in the broader environment (Bate, 1999).

Barriers to planned, purposeful, cultural change are clearly accentuated in the literature (Scott et al., 2003c) and form an approach that will be used in this Report. ‘Barriers to Change’ are identified in the literature as follows:

- **Lack of ownership (Marris, 1986):** Change requires a critical mass of support from staff. Failure to achieve this may mean that disaffected staff display negative behaviours and de-rail change.

- **Complexity (Scott et al., 2003c):** Insufficient time and range of strategies, procedures, practices and behaviours to embed change. As cultural change requires multi-level changes in behaviours, norms, values and beliefs, complex, synergist strategies need to be developed to engineer cultural change within a realistic long term time frame.

- **External influence (Degeling et al., 1998):** External vested interests may conflict with organisational cultural change. For example, external professional organisations such as the UK’s Royal Colleges have a part to play in staff training and the development of core professional values. Australian studies have demonstrated that professional values and beliefs have hampered performance management (Degeling et al., 1998); the Romanow Commission highlighted that reform should not conflict with core professional values (Romanow, 2002).

- **Lack of appropriate leadership (Schein, 1995):** Failure to integrate transactional and transformational styles is critical in affecting cultural change. Transactional leadership styles are based on devising structural processes and concrete strategies and systems to support organisational goals; transformational leadership styles inspire cognitive change and apprehension of the status and relationships of all participants. ‘WalkRounds’ (Frankel et al., 2003), newsletters, and team briefs provide examples of how transformational leadership may be manifested.

- **Cultural diversity (Scott et al., 2003c):** Cultural change may impact differentially on professional groups in health care organisations and change strategies need to take account of this. Attention also needs to be given to the interactions between impacts on groups. Some authors have addressed the difficulty of designing culture change strategies which take account of cultural diversity (for example, Child and Faulkner, 1998, or Tung, 1993, whose work provides assessment tools to guide cultural change within organisational contexts of diverse sub cultures). This framework considers two dimensions: whether one sub-group culture should dominate, whether sub group cultures should be integrated or be allowed to remain differentiated: offering four strategic outcomes of synergy, segregation, domination and breakdown.

- **Dysfunctional consequences (Harris and Ogbonna, 2002):** Unintended dysfunctional consequences of culture change strategies may arise, and the capacity to identify and react to these consequences is seen as imperative in managing change. Increased emphasis for performance management has been
shown to generate a host of unintended consequences (Mannion et al., 2002). The organisational literature also identifies key factors which enable cultural change. Pettigrew, Ferlie and McKee (1992) in their processual and contextual analysis of strategic change within a range of health care organisations developed their ‘Receptive Contexts for Change’ model (Pettigrew et al., 1992: hereafter ‘Receptive Contexts’), which identified eight factors which facilitate organisational change. Emphasis was placed on how these factors represented patterns of association rather than simple lines of causation. This strand employs the ‘Receptive Contexts’ framework in the analysis of the case material. We summarise the factors here (for more detail, see Pettigrew et al., 1992).

- **Quality and coherence of policy**: Critical here is a broad strategic vision enabling commitment building and production of a framework which links strategic goals to operational action.

- **Key people leading change**: Referring to availability of key people leading change, with emphasis on the dispersed and collective nature of these roles. Stability of leadership is important and personal skills were perceived as more important than rank or status.

- **Long term environmental pressure - intensity and scale**: Change in the NHS was viewed as complex and likely to drain energy out of organisational change processes. Financial pressures were shown to have negative impacts or pathological impacts on morale, energy and managers.

- **A supportive organisational culture**: Although the NHS comprised different subcultures, it was recognised that certain practices generated a more or less supportive organisational culture.

- **Effective managerial–clinical relationships**: Involvement of clinicians in management and the development of methods to find common ground were seen as critical.

- **Co-operative inter-organisational networks**: Informal and purposeful networks provide opportunities for training, education; building commitment and the drawing together of top down and bottom up concerns.

- **Simplicity and clarity of goals**: The ability of managers to narrow the change agenda into key priorities and prevent other organisational pressures to deflect attention from these priorities was seen as critical to maintaining the change.

- **The fit between the organisation’s change agenda and its locale**: Features of the locale for change implementation, which may inhibit or accelerate change.

The interaction of factors can be captured diagrammatically, as in Figure 2.2.
A review conducted by Greenhalgh et al., (2004) linked the ‘Receptive Contexts’ of Pettigrew et al., (1992) to the shaping of organisational capabilities that support innovation and knowledge management. They suggest that ‘Absorptive Capacity’ (see Cohen and Levinthal, 1990) facilitates transfer of knowledge across the organisation or between its sub units; and that linkage between the organisation and external entities is a product of organisational capabilities associated with communication structures and levels of expertise.

Dopson et al., (2002) in their secondary meta-analysis of seven studies completed by Fitzgerald et al. (1999, 2006); Dopson et al., (1999, 2001); Locock et al., (1999); Dopson and Gabbay (1995); Wood et al., (1998); Dawson et al., (1998); and Gabbay (1998) emphasised the importance of a receptive context for change for the effective diffusion of research evidence and identified a range of characteristics of ‘Receptive Contexts’ (Dopson et al., 2002: 45). These included:

- A favourable history of relationships between professional and managerial groups and between professional groups.
- Sustained political and managerial support and pressure for clearly defined change at a local level.
- The creation of a supportive local organisational culture, clear goals for change, appropriate infra-structure and resources are critical.
- Effective and good quality relationships within among local groups.
• Access to opportunities to share information and idea’s within the local context.
• The introduction of organisational innovations to foster improved and effective interchanges among groups.

Further examination of the applicability of ‘Receptive Contexts’ was undertaken by Newton et al., (2003), in their study within the NHS primary health care sector. Namely, they indicate that two factors namely: ‘long term environmental pressure’ and ‘fit between the change agenda and the locale’ had weak or no influence and they question the theoretical assumption that all eight factors are related to each other. However, the authors did confirm that the most significant pattern of association existed between quality and coherence of policy, key people leading the change, supportive organisational culture and effective managerial clinical relations. They also identified that there was a temporal ordering of factors in that as the salience of policy reduced (factor 1) the importance of networks increased (factor 6) due to the impact of this on key personnel and the resulting affect on clinical relationships.

This review of the literatures on organisational culture change, organisational health care, safety, patient safety and staff well-being has established that organisational culture is linked to improved levels of performance in all types of organisation and focuses on how it may be linked to improved levels performance in health care organisations. Specific consideration was given to problems of patient safety and identification was made of the established cultural barriers and drivers of safety, patient safety and staff well-being. Cultural change strategies were explored and examination was made of how patient safety and staff well-being outcomes may also be affected by wider contextual factors. Identification was made of the ‘Receptive Contexts’ framework which accesses a dynamic understanding of the range of cultural and wider contextual factors that enable cultural change in health care contexts. In summary we have established that patient safety is a problem in health care organisations and that culture change may improve outcomes affecting patient safety and staff well-being. This study now identifies the selected methodology which explores those cultural and broader contextual factors that drive patient safety and staff well-being outcomes and also assesses whether patient safety and staff well-being are linked.

2.3 Methodology

2.3.1 The research strategy

This strand follows a theoretical framework where matched comparative cases were assessed, and which explored processual issues of structure as well as action. This involved accessing historical as well as policy environments and the local contexts which constrain actors (Pettigrew et al., 1992). Longitudinal case studies employing qualitative methods were developed in eight acute NHS Trusts. These explored the views of
managers, clinicians and support staff at all levels of the organisation and aimed to uncover features of organisational culture or,

*The deeper level of basic assumptions and beliefs.... shared by members of an organisation, that operate unconsciously and that define in a basic, taken-for granted fashion an organisation’s view of itself and its environment* (Schein, 1985:6)

and identify how these link to organisational outcomes related to patient safety and staff well-being.

Use of a case study research design provides for the investigation of the dynamics of complex research settings (Eisenhardt and Tabrizi, 1995) and is useful to uncover the unfolding nature of change processes (Gummesson, 2000). It accesses rich descriptions of the phenomenon of interest, and involves employing a range of data collection methods and provides for an inductive and deductive interplay within the research strategy. It also uses a pre-structured conceptual framework to guide, inform and support the research process (Maxwell, 1996). A conceptual framework is defined by Miles and Huberman, (1994:18) as:

*A conceptual framework explains, either graphically or in narrative form the main things to be studied – the key factors, constructs or variables and the presumed relationships among them. Frameworks can be rudimentary or elaborate, theory driven or commonsensical, descriptive or causal.*

Such a framework allows for clarity, focus and prevents overload (Miles and Huberman, 1994). Wolcott (1982:157) argues that it is:

‘Impossible to embark upon research without some idea of what one is looking for and foolish not to make that quest explicit’.

It should be noted that whilst such constructs are useful, they only served to guide the research process and were not guaranteed a place in the final analysis (Eisenhardt and Tabrizi, 1995).

The ‘Receptive Contexts’ and ‘Barriers to Change’ approaches to the discourse of organisational change have been outlined in the discussion of the literature, in the previous section. They form the basis of case analysis of the data reported here. Figure 2.3 illustrates the conceptual framework as it is applied to these cases studies and identifies the focus of interview questions. The figure illustrates how the conceptual framework linked existing theory with regard to organisational culture measures, safety culture measures and established measures of staff well-being, also providing the basis for interview topics and structures.

### 2.3.2 Operationalising the research strategy

The research process commenced with preparation of a detailed research design, embodied in a research protocol (see Appendix 3) which was granted ethics approval by the Multi-Centre Research Ethics Committee (MREC) North West. Eight comparative case studies of NHS acute Trusts formed the basis for this strand of work (see Section 1). The data collection methods included semi-structured interviews, formal and informal non-
Figure 2.3 Conceptual framework

Conceptual framework

Content issues:
- Patient safety - perception of incidents, scale and scope and character of patient safety, priority for patient safety, threats to patient safety
- Staff well-being - perception of staff well-being, morale, turnover, sickness, absenteeism, training and development, violence towards staff, rewards, counselling support, satisfaction, and priority for staff well-being.

Contextual issues:

Perceptions of internal context
- Culture
  1. Relationship norms – teamwork, communication, status, patient relationships, level of clinical involvement
  2. Priorities – patient safety, staff well-being, patients, quality services
  3. Organisational learning – accessing feedback, training, accessing external learning, transmission channels.
  4. Attitudes to organisational change – conservative, innovative
  5. Leadership – styles, stability, tenure, transactional / transformational styles, clarity of goals
- Internal Politics
- Structures
- History
- Workforce competency

Perceptions of external context
- Media – relationships
- Influence of local culture
- Competition
- Government policy – pressure for performance
- External governance
- Extra-organisational relationships -professional bodies.
- Legislation
- Demographics
- Lifestyle trends
- Technological innovation
- Extra- organisational links

Perceptions of Trust processes
- Patient safety processes – reporting, analysis
- Governance processes
- Translating policy into processes
- Staff support processes

participant observation and analysis of Trust documents and Healthcare Commission reports. A breakdown of interview and observation data collection sources for each of the Trusts is illustrated in Table 2.1. Trusts
and interviewees have been anonymised and Trusts will be referred to alphabetically throughout the report (A-H). Broad job titles are used to accompany illustrative quotes and these are not linked to particular Trusts, to further conserve anonymity. Direct quotes have been drawn from across all Trusts but we have not used the alphabetical identifiers to ensure confidentiality.

**Table 2.1 Data collection sources: Organisational strand**

<table>
<thead>
<tr>
<th>Trust</th>
<th>Dates in Trust</th>
<th>Number of interviews</th>
<th>Number of formal meetings attended</th>
<th>Documents assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth case studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Oct 06 - March 07</td>
<td>19</td>
<td>2</td>
<td>Trust annual reports, strategy plans, infection control reports, patient safety strategies, NHS National Staff Survey, HCC Trust reports.</td>
</tr>
<tr>
<td>B</td>
<td>Nov 06 - Feb 07</td>
<td>33</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Aug 06 – Dec 07</td>
<td>26</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>March 06 – Aug 07</td>
<td>22</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mini-case studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Nov 06 – Feb 07</td>
<td>10</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>May 07 – Aug 07</td>
<td>11</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>May 07 – Aug 07</td>
<td>9</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Nov 07 – Feb 08</td>
<td>14</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>144</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

**Interviews**

In depth interviews with key informants were an important part of data collection. An interview is defined as ‘an interchange of views between two persons conversing about a theme of mutual interest’ (Kvale, 1996). The aim of using such a method was to gain understanding of the subject’s view and experience of the world. Meaning is derived from the verbal content of the conversation and how it is delivered (Kvale, 1996). This method was deemed suitable as it gave the opportunity to explore the complex issues involved in implementing organisational change. Face-to-face interviews provided flexibility to follow up interesting responses (Robson, 2002), to probe deeply, to uncover new clues and provide insights into the meanings of the complex interactions, motivations, parties and politics involved in the design and implementation of organisational change processes (Burgess, 1982).

A purposive sampling approach was adopted to recruit interviewees from a range of organisational levels and professional groups. A gatekeeper in each Trust site assisted in accessing five groups of staff:

- Members of the Trust senior executive team (Chief Executives, Medical Directors, Nursing Directors, Human Resources Directors, Financial Directors and Operations Directors)
- Front line clinical and support staff (consultants, senior and junior doctors, matrons, ward managers, nursing staff and allied health care professionals). Middle managers (Directorate managers, performance managers which included nursing and medically qualified staff).
Staff directly engaged with risk management, clinical governance, health and safety management, Patient Advice and Liaison (PALS), litigation and complaints management.

Staff engaged with managing human resources and occupational health support systems

Initially thirty interviews were targeted from the above categories in Trusts A, B, C and D and ten interviews in Trusts E, F, G and H. Appendix 6 identifies the roles of interview participants from each Trust. In each Trust once the above groups had agreed to participate, a pragmatic judgement was made in consultation with the gatekeeper as to whether there were any further participants or groups of participants, who might provide additional insight. This led to some variation in sample size which took into account overall Trust size. All those targeted to participate agreed to do so. However, in some cases due to staff turnover an acting or deputy was nominated. Table 2.2 identifies the number and grouping of Trust staff interviewed:

Table 2.2 Trust staff role groupings

<table>
<thead>
<tr>
<th>ROLES</th>
<th>TRUSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>*SL</td>
<td>4</td>
</tr>
<tr>
<td>*RISK</td>
<td>6</td>
</tr>
<tr>
<td>*OH</td>
<td>3</td>
</tr>
<tr>
<td>*FL/MM</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
</tr>
</tbody>
</table>

*SL= Senior Executive Team, *RISK= Risk analysis, incident reporting, clinical governance, litigation, PALS, complaints.*OH=Occupational Health Support, HR Director, *FL= Front line workers, *MM=Middle managers

An interview aide memoire helped focus the interview questions and allowed for a comprehensive collection of views and description of the change process (see Appendix 3.6).This method also allows a mechanism for meta-comparison of description, explanation, and interpretation of the change process between both similar and different groups of individuals at differing temporal points and thus, provides excellent opportunities for studying processes over time. This facilitated the inductive development of new categories and emergent themes from the data and the initial conceptual framework evolved as part of the ongoing research process.

Interview questions focused on issues related to the ‘content’, ‘context’ and ‘process’ issues affecting patient safety and staff well being, following the processual framework (Pettigrew et al., 1992). Patient safety ‘content’ issues related to the scale and scope and character of patient safety, priority for patient safety, threats to patient safety and respondent perceptions of incidents. Staff well-being ‘content’ issues focused on
respondent perceptions of staff well-being, morale, turnover, sickness, absenteeism, training and development, violence towards staff, rewards, counselling support, satisfaction, commitment and priority for staff well-being. Questions also focused on the internal and external ‘context’ and influences on patient safety and staff well-being. Understanding of ‘internal context’ was explored by questions focused on respondent interpretations of organisational culture, structures, history, levels of staff competency, workload, physical environment, patient and staff relationships and temporal influences. Understanding of external ‘contextual’ influences on staff well-being and patients was explored by questions which considered the influences of technological innovation, government policy, legislation, media relationships, local culture, service competition, demographics, professional colleges and external support networks. Similarly, understanding of Trust support ‘processes’ for patient safety and staff well-being was explored by questions that considered incident reporting, clinical governance, risk management, patient complaints, occupational support and training systems and processes.

The interviews focused on participant’s perceptions and experiences of patient safety and staff well-being and understandings of Trust culture. Participants were also asked to give concrete examples or illustrations. In summary, the aide memoire covered the following broad issues (See aide memoire Appendix 3.6 for examples of detailed questions):

- **Overview of policies, procedures and systems in relation to patient safety and staff well-being** (local priorities, management systems and strategies and identification of who is involved and strengths and weaknesses of local policies and structures).

- **Local data and performance in relation to patient safety and staff well-being** (current evidence on safety and staff well-being at a local level, perceptions of quality and accuracy of data, perception of current resources performance and handling of organisational change, dominant issues for the Trust and prioritisation of patient safety and staff well-being).

- **Patient focus and patient safety** (patient engagement and access to patient views on patient safety).

- **Professional roles and responsibilities** (who is involved, roles and accountabilities, clinical governance and reporting mechanisms).

- **Culture, leadership and patient safety** (how things are done in the Trust – general ethos, stability of management, tenure of key people, perceptions of performance, pace of change and responsiveness to change, relationships between professional groups, styles and characteristics of communication and interaction).

- **Handling of critical incidents** (types of reporting systems, handling of critical incidents, risk management, organisational processes in relation to breaches of safety, threats to patient safety).

- **Systems to support staff well-being** (HR and Occupational Health)
• **Links between patient safety and staff well-being** (working environment in the Trust, pressures and challenges, relationship between staff well-being and patient care).

• **Training professional development and organisational learning** (level of engagement with external agencies, use of research evidence, levels of innovation and good practice).

Prior to each interview, respondents were given a handout which provided an introductory explanation of the researcher’s independent status, the research objectives, and topic guide and confidentiality statement. This was also re-iterated verbally. The respondent was asked if both note taking and the electronic recording of the interview were permitted and participant consent was granted. Questions formulated in the interview protocol followed the ‘aide memoire’, throughout the interview. Such questions comprised of mainly open questions. Open questions allowed further probing of important issues to gain valuable insights. Questions were formulated not to lead the interviewee. Interviews were piloted and in one setting and adjustments made to the aide memoire. Respondent bias was addressed by asking for an example of a situation which supports a point of view. At intervals, the researcher reiterated her interpretation of the respondent’s answers, as reflective questions. The topic schedule was used in all groups of interviews in order to compare opinions of the different groups of respondents to aid in the validity and reliability of findings. Participant information sheets were issued and written consents received from all participants. Observational and documentary data were used in combination with the interview data.

Interviews were digitally recorded and subsequently transcribed. All names were removed from recorded data and numerical identifiers attached. Data was then stored securely, with only dedicated access granted to named researchers.

**Observation**

Limited non-participant observation, both formal and informal, was undertaken. A total of nine meetings were observed, across six of the Trusts; and these included Trust Executive Boards, Governance, Risk and Legal Services, Health and Safety and Senior Management Team meetings. The researchers were provided with a work base in each Trust and that also provided opportunities for informal observations and extended interaction with key personnel, especially in the ‘depth’ Trusts where data was collected over an extended period of time.

Observational data collection was undertaken by recording experiences in a diary and in contemporaneous notes. The advantage of this method was that it gave a rich qualitative picture of the researchers’ view of the actions, interactions, roles, motives and perspectives of participants in this change process and allowed for a rich picture to be constructed of the research setting (Easterby-Smith et al., 1991). These observations were used to validate and interpret the interview data and to penetrate what people actually do, rather than what they claim to do (Mintzberg, 1973). This
method was useful in identifying ‘misinformation’, inconsistencies and ‘corporate speak’ (Douglas, 1976). It was especially beneficial in understanding the power dynamics of the research contexts and the political influences on the change process. It is accepted that observations were shaped by the researcher’s attitudes and prior experiences. To mitigate this bias data collection also included the official reports of these meetings and when two researchers were able to attend the same meeting notes were compared and observations cross checked.

**Documentary analysis**

Documentary analysis also served to enrich understanding of the Trusts’ internal and external context and validate interview and observational data. Analysis of the internal organisational context involved accessing of documents from Trust sources (Scott, 1990). Trust documentary data includes: annual reports, Executive Trust Board minutes, policy documents, incident reports, complaints reports, health and safety reports, infection control reports et cetera. In terms of national data, a range of data was collected such as health care Commission Annual Health Check information, NHS National Staff and Patient Survey information. The comprehensive analysis of these data sources served to identify diverse contextual factors affecting the organisation and thus improved evaluation of meaning (Bryman, 2001).

**Analysis**

It is important to note that data collection and analysis were concurrent. In order to improve validity three researchers (SMcC, KC, LMcK) were involved in data collection and also independently involved in the analysis, cross-checking and comparing interpretations and emerging themes. Preliminary analysis of data sources for each Trust was undertaken (SMcC) and a narrative prepared highlighting key emergent themes. Transcribed and documentary data were then made ready for input into the NVivo 7 qualitative software package (KC). Preliminary analysis of documents resulted in the extraction of sections of documentary data into a manageable format for future input into the NVivo 7 software. The processual framework and the ‘Receptive Change Contexts for Change Model’ (Pettigrew, 1985; Pettigrew et al., 1992) described earlier (see page 44) provided the sensitising conceptual framework to guide analysis. Building on the earlier narrative analysis, data input and analysis of one mini-case study (Trust G) using the NVivo 7 software then served as a pilot for the next stage of analysis (KC). Key categories were interactively derived from the conceptual framework and emerging themes generated by the data (KC, LMcK). Examples of the key categories developed across the cases can be found in Appendix 7.

**From anecdote to explanation**

Silverman (2000) asserts that qualitative methods might be dismissed as ‘anecdotal’. In order to ensure this study fulfils the requirement of validity
and reliability imposed by a social constructionist ontology and interpretative epistemology, Silverman’s principles are applied to this research. The analysis involves searching for examples that disconfirm current beliefs, the constant comparison of data, comprehensive and rigorous data treatment and full evidence of transparency. ‘Trustworthiness’ and ‘authenticity’ were achieved by establishing credibility, transferability, dependability and confirmation. Authenticity refers to the fair representation of different view points of members of the research setting. In this respect, attempts have been made to establish authenticity (Lincoln and Guba, 1985). The data analysis involved ‘decoupling, classifying and recombining data to develop, refine and create concepts that enable the presentation of new accounts’ (Dawson, 2003: 114). This was facilitated by the triangulation of multiple data sources and a search for alternative explanations to explain unexpected outcomes. Analytical generalisation of study findings was facilitated by the comparison of interview data against existing theory.

Direct links and integration with other strands were maintained at data collection and analysis stages and hence built cumulative insights and complementary data and achieved economies of time, depth and scope. Discussions with other project strands led to a full comparative analysis and triangulation of all case study data findings (see Sections 5 and 6).

It is noted that the study data collection is time bounded from 1 January 2007 to 1 February 2008 and the process of aggregating Trust findings does not seek to belie the unique nuances and differences identified in each Trust. It is also recognised that the field of patient safety in particular is fast moving with multiple initiatives and shifts in priority since the data was collected. The following sections provide the aggregated findings generated from the eight Trusts and case study summaries are provided in Appendix 7.

### 2.4 Findings

The Organisational strand set out to gather qualitative data from all levels of staff within all eight Trusts, so as to provide a holistic and rich understanding of the key organisational factors influencing patient safety and staff well-being. In interpreting the results of the qualitative enquiry it is emphasised that the study provides in-depth context specific, case based information. This data provides a depth of detail and examples of interesting associations and processes, but cannot supply inferences regarding the extent to which these observations and their associated themes generalise.

Study findings focus on the core themes derived from data analysis. First, attention focuses on consistent perceptions of patient safety and staff well-being. Second, the commonly perceived barriers will be described; followed by perceived links between staff well-being and patient safety. The notion of environmental pressures and their effects on patient staff well-being and patient safety will then be discussed and finally, we develop a cross case comparative analysis of the eight NHS Trusts.
Comparative analysis indicated that Trust staff held common viewpoints with regard to staff well-being, patient safety and environmental pressures. All staff reported wanting to do ‘their best’ to provide quality and safe care: what differed was the perceived priority attached to safety, when assessed among other competing priorities (see Section 6). Staff well-being was consistently reported as being negatively affected by increased work loads, fears for job security and stress induced by violence and abuse of staff, poor skill mixes on wards and staff displacement to unfamiliar roles and locations. Analysis highlighted that reported perceptions for staff well-being generally correlated with performance measure data referred to in Section 1. A notable exception was the very poor perception of staff well-being reported in Trust B which was described by some as a ‘toxic Trust’. Patient safety priorities across all Trusts were perceived as increasing, although many Trusts set achievement of performance targets as the overriding priority, the most notable being Trusts B and G. Likewise Trust staff also identified the following commonly acknowledged barriers to patient safety.

2.4.1 Commonly perceived barriers to patient safety

Across all the Trusts there were a number of commonly perceived barriers to securing patient safety: heavy workloads; staff communication failures; failure to follow and document procedures; poor staffing levels; limited awareness of risk; and priority to achieve performance targets. This section emphasises the barriers commonly identified by all organisational levels and professional groups. While, there were some subtle differences, what was striking was the high degree of consensus across organisational levels and professional groups. Only Trust B revealed a marked difference in the views of senior executives from the views of frontline staff. (This observation will be addressed in Section 2.4.4.) Frontline operational staff indicated that their heavy workload resulted in them having to make compromises on patient care which left them frustrated and stressed. A Matron illustrates this in the comment below:

I think the thing that upsets the people that I work with the most, we can’t give the standard of care that we want because there’s too much activities, it’s too pressurised, it’s too quick. Matron

Busy wards were linked to a range of factors such as: the length of stay of patients in hospital; increased workload and time pressures due to the emphasis on meeting performance targets for treatment of patients and failures in continuity of care. These viewpoints were reported across a range of Trusts:

I suppose in no particular order, capacity, just the sheer busyness of the hospital. To some people I think length of stay is a definite issue in terms of hospital infections. Head of Risk Management

And the point is the target is to get these patients through the system and get them their operation but the point is, can we do that safely? And that’s the point, and I know and I feel that there are days when we run the gauntlet and we run it very, very closely. Matron

Queen’s Printer and Controller of HMSO 2010
A focus on performance and achievement of targets were also linked to the development of tightly coupled processes which often meant that there was limited redundancy or slack in the system when peaks in activity occurred: and consequently staff frequently noted that there was little time for reflection and communication. Staff involved in infection control, analysing incidents and dealing with complaints within Trusts struggling to meet performance targets expressed this notion in the following remarks:

We are the hamster on the wheel because you know clinical areas are very busy and corporately there’s lots to do, so we’ve stripped out as many of the inefficiencies or cushions that we can, to be a much more sleek efficient organisation which is right and good, but then there’s no room for, there’s no slack in the system. So sometimes you get on doing, instead of saying right let’s stop and let’s take a step back and let’s think right, if we really want to solve this problem what are the real issues here and how are we going to attack it? You sort of get onto the little bits, sort of taking the step back approach, because, I suppose I am coming down to time. Corporate and Legal Affairs Officer

I know everyone in the organisation is severely challenged …you are never allowed to settle, it’s a constant fluid state, but the fluidness, it isn’t a stream, it feels like a rapid all the time and every day you’re in a boat riding the rapids. Infection Control Manager

Where the system is working at full capacity, when for example, you have to admit a patient from A&E to avoid a waiting time breach, and you admit them into whichever bed becomes available very often. Which again doesn’t link well with patient safety in terms of putting patients into the right bed. Deputy Chief Executive

The four hour waiting target for A&E and the requirement to reduce the bed base to save money resulted in the number of medical patients that out lied into surgical beds and at one point in time we were in the situation where we put in extra beds in the wards to accommodate patients – there were clear patient safety issues associated with those practices. Director of Nursing

Some staff directly linked the busy hospital environment and failures in staff handovers and the continuity of care, as contributing to failures in patient safety.

Because you are running in and out. So therefore you lose the continuity if you are not careful, and the women lose their confidence in what’s happening which I think is difficult. Head of Midwifery

I think one of the most challenging things that hospital services have to deal with, ... is the problem of continuity of care and care goes beyond one person’s shift. Even if the patient is only in hospital for 24 hours. Anything that goes beyond one shift to another one, means there is an automatic deficit there because no matter how well person A has the handover to person B, inevitably there is a small percentage gap in terms of knowledge. Director of Personnel

Much attention focused on staff perceiving that failures in communication between professionals led to patient safety failures. The following examples drawn from three different Trusts capture the types of communication challenges that arise:

Failure to pass appropriate communication between professionals so that things get missed, it falls through cracks. Directorate Manager
I think one of the biggest things that I have said earlier is communication, poor communication is a big barrier and it is something that’s so easy to put right. We don’t always do that well. And, what other barriers? You see everything I think of in my head, all links to communication. Matron

A huge issue, because it is part of communication and I honestly believe that communication in any large organisation is one of the single biggest risk factors, because professionals know what they are talking about, they presume that everybody else does, but you see even midwives and general nurses talk a slightly different language, allied health professionals and nurses and midwives all talk slightly, and doctors, wow, you know, they presume everybody has got ESP a lot of the time and therefore don’t clearly communicate, even though they are highly intelligent people with fantastic communication skills, between each other, doesn’t necessarily translate to how they communicate with their colleagues and the other clinical staff including nurses or the patients. Risk Manager

Handovers in particular were felt to be a key issue as failure to communicate minor concerns could lead to escalation of a problem. This is illustrated in the following quote:

So handover between doctors, between nurses, between shifts, so I think that is another one, a biggie. Linked into that and probably linked into the communication is escalation, so you know, the nurse is there, something is maybe not quite right, it will escalate, it is your professional responsibility, nobody is going to criticise you for it, you are not getting anybody into trouble, you know, go to the junior doctor, go to a senior, you know, so one of the things is around, but I don’t think it has done, you know, it almost gets, you get to crisis point and you needn’t get there. Director of Governance

Communication failures were attributed to both verbal and written forms of communication with patients. The sheer volume of reporting and producing documentation often meant that Trust staff felt overwhelmed by information. Staff reported this across all levels and Trusts:

That’s a big challenge, has great tendency for people who write beautiful documents and protocols and for them to appear in a folder near you but not get into your head. One of the challenges is actually finding a way of intervening in somebody’s thought process but you’ve got to do that over a large number of people. Clinical Director

I mean an organisation of 4,000 staff, we have one central intranet that has an awful lot of ‘must dos’ on there, how many staff actually take the time to read it, and it is the old chestnut of we have them in place, are they invented, are they actually used.? Deputy Director of Nursing

So you’ve got a trolley with all the notes from the patients who have been in the night before, with probably three or four sets of the eight o’clock admissions and then you’ve like got to chase everyone to find, and I think that’s when things can get mixed up or, and not, although they will be missed. Staff Nurse

Oh, far too much. Even for the shortest of stay, you’re looking at something like 17 pieces of documentation that will pass through your hands. Patient Advice and Liaison Manager

Complaints procedures across the Trusts indicated that ‘poor communication’ and ‘staff attitudes’ featured among the top causes for complaint. In our data, communication failures were often attributed to staff failing to ‘speak up’ and engage with other staff, especially those from other professional groups or of higher status. The way these professional
boundaries and/or hierarchies inhibit proactive communication is captured in a variety of reflections:

No-one speaks up. I think the obstetricians would say that midwives could speak up whereas in other areas nursing staff speaking to the juniors certainly wouldn’t, the junior doctors certainly wouldn’t. They just want to keep their nose down, get their six months done and get the reference. **Legal Services Manager**

And you’ve got your nurses, your doctors, your OT’s, your physios’, your managers, everybody you know, medical records, you know, we are all very different cliques and we all work very differently but they all need to work together. **Ward Sister**

They [junior doctors] don’t necessarily like to be seen to be asking their immediate superiors for clarity or for clarification if they don’t quite understand something, because they worry people above them might perceive that they are weak, do you see what I mean? **Clinical Director Critical Care**

It was suggested by many interviewees that Trusts need to develop cultures where questioning and permission to speak out are the norm. A Matron draws attention to this need to create a ‘safe’, ‘permissive’ environment on wards:

So it’s actually that embracing, people questioning, people wanting to change and creating an environment whereby people can change things without having to go through an elaborate permission system… which is about making people feel safe to – so it is about empowerment really, to do things to improve patient care and not feeling the need to get permission, because people’s perceptions of needing permission block things. **Matron**

Failures to document procedures were commonly identified. This point is reinforced by a range of respondents as follows:

And also my great gran has been treated here and it was fine, and what I would say about her care was is that her care was fine but none of it was documented. So when I opened her records it looked like she hadn’t eaten or drunk anything for a week which is a load of rubbish but again another really big issue around time to document. **Governance Manager**

I will tell you what in terms of nursing… documentation, nursing documentation this organisation is awful. ..it’s all fairly poor, but we could go on to a number of wards now and ask to look at patient’s care plans and they probably don’t exist. **Deputy Director of Nursing**

But you know whenever we do an investigation we will find that record keeping is not what it should be, record keeping is fundamental to safety. **Chief Executive**

Similarly, it was reported that failure to follow set procedures was not uncommon and that changing established sub-optimum clinical practice or habits was challenging. The following examples highlight how difficulties arise from staff failing to follow anti-biotic prescribing policy and identification of blood samples: the comments reveal how policing and monitoring of procedures is difficult:

Yes, well, what it is, we have always been quite strict about antibiotics, the problem is policing it. I mean you might have written policies and what have you but actually getting people to actually conform to that is difficult,…I think most of the consultants now are aware and much more cautious in their prescribing. **Consultant Microbiologist**
Taking samples, putting the labels on, what tends to happen is they don’t do that, they take the blood, come back, print the labels there is other stuff lying around and it gets clapped on. Or, the blood samples are then passed to a second or third party to be labelled. We have had one incident which became an SUI as a result of that and despite it happening time and time again, people don’t seem to want to follow a procedure. **Clinical Risk Coordinator**

*I think the whole point is that it is not improving, and in fact people have done audits recently where shockingly it was the more senior sort of staff who were worse at things like hand washing, rather than the sort of new people and sort of trainee nurses and what have you.** Consultant Micro-biologist*

Lack of standardisation of practices across Trusts was highlighted by a Director of Critical Care as a problem for junior doctors. This was especially related to their mobility across specialities and to custom and practice across different settings:

*One of my old trainees was there, and I watched him just walk up to the patient while I was putting my gown and gloves on. And he just, you could see he started, and then he thought, oh, and he went off to go and get it. And he completely lost that habit because that wasn’t the habit of everybody in that environment.** Critical Care Director*

Overwhelmingly, staffing-related issues were identified by all respondents as a major cause of patient safety breaches. These often emerged as central to many incidents recorded through patient safety incident reporting systems:

*I think if you spoke to any of the staff within the clinical areas and certainly again, feedback from the data that we get from the reporting system, I think staffing is the big issue.** Safety Manager

*We get a fair amount of staffing incidents reported, probably oh about ten a month. It’s quite a lot.** Clinical Midwifery Manager

If I could knit them half a dozen nurses I would sit and knit some. But I can’t, and I would have to say from my point of view that staffing has to probably be the biggest single threat. **Risk Manager**

Respondents across the Trusts also drew attention to recurrent concerns about staffing resources. These included issues associated with staffing shortages, skill mixes and funded establishment levels failing to match activity. Trusts reporting vacancy freezes, financial deficits and low staff morale emphasised these concerns as follows:

*So one of the biggest stresses, is that we have got low skill mix, somebody goes off sick, it’s difficult to cover, and the best that we sometimes come up with is a sharing arrangement which is we will pinch the second nurse from another ward to lend the odd hour here and there.** Directorate Manager.

You know, to do no harm by either act or omission, but if you know you are running a ward with 27 patients and you are the only trained member of staff on and you are working a 12 hour night shift with no break, then clearly you are not doing your best for the patients or for yourself….and it is a major, major risk, leaving one trained member of staff and a health care support worker on for 27 patients for a 12 hour nightshift. **Risk Manager**
I think the skill mix is wrong and I think with the changes that are happening in the NHS at the moment, reducing the length of stay obviously means the client group changes as well and their dependency changes as a result. It’s the whole thing, it’s the 360, I mean, where do you start. Not only does the skill mix need to change in order to meet that demand in the dependency, but it’s also the technological advances, so we’ve got a training issue. It’s the whole HR remit. Matron of Surgery

I’ve been going along talking about patient safety last year and they were great and they wanted to listen and they wanted to deliver but they’re saying, “I’m already running on minimum staffing establishment wise, I can’t pull in any extras, how are we going to make this work?” because to do anything you’ve got to actually start going through some process mapping, so small steps of change about how you make stuff safe. Patient Safety Lead.

I am up to establishment so I haven’t got a shortage on my funded establishment at the moment. But my funded establishment doesn’t match the activity - the Trust will report to people, oh maternity is up to establishment, they’re fully staffed. I am but not for the amount of deliveries I’ve got going through, I should have a lot more - what’s funded but that was set 30 or 40 odd years ago. Midwifery Department Manager

A range of staff, again from various Trusts, reported that staffing problems arose due to changes in patient needs and status over time, for example: the ratio of dependency on wards, and for example, the proportion of ‘sicker’ patients, having intensified over time:

But the dependency of the patients is changing so the patients are more dependent than they used to be but you’ve only got the same numbers of staff, so they are still rushed off their feet because they’ve got more patients, the type of patient that they’ve got. Health and Safety Lead Manager

Cut-backs on training and the inability to ensure appropriate balance of trained to untrained staff was also cited as problematic and as impacting on patient safety. This was reflected in the following comments:

But staff on the ward weren’t trained and it is a recognised problem and they can’t train everybody in everything but at least you should be able to call on somebody who can if you need to … It has a long term negative effect on this patient as well as it being a relatively high risk situation because the staff on the ward didn’t know how to clear the tube, they didn’t know how to use suction. Lead Patient Safety

We did have our hiatus last year because we put all but mandatory training on pause for a period of time as a cost saving measure because we had to make just a phenomenal and fabulous cost saving which was almost impossible to do. Corporate and Legal Affairs Officer

Because you’re so short staffed releasing people, giving them the time to go off and undertake this training is not always possible and so I do feel that there is an aspect that patients are not as safe as they could be. Ward Manager

The appropriateness of staff training, as well as its adequacy, was cited as creating concern:

I think we do quite a lot of training but a lot of training gets eaten up by just mandatory training, you know, fire safety, manual handling, all those… infection control, all those sort of real basic stuff that you get prosecuted if you don’t do. And that leaves us less room for the stuff that really we should be doing to move it on to that next level. Divisional Manager
Limited awareness of patient safety issues, lack of clarity over what constitutes an ‘incident’ and issues of individual responsibility were themes highlighted by a range of Trust personnel:

But not knowing - knowing what you don’t know - is the hardest thing. Chief Executive

But the theatre staff can’t see it at all, they think it is almost like, well it’s an expected, sometimes things go wrong. I say yes, but that makes them an incident, and so that area particularly, I am not saying that they are the only ones, I think things like outpatients that may not come to light that something has gone wrong until they’ve gone home, things like that may not get reported. Risk Manager

I suppose the staff attitude and awareness, you know but going back to that ingrained culture, we are not quite there yet but we will be there. Director of Facilities

We have to deal with a not insignificant number of incidents where the blame, even within a fair blame culture comes down to a member of staff, either that they didn’t know what they should be doing and they didn’t bother to ask, they’ve made a mistake, they just weren’t being good at their job and that sort of thing happens. Director of Human Resources.

Junior doctors’ limited awareness of patient safety and levels of knowledge were consistently highlighted by a range of interviewees. There was a perception of a deteriorating situation: linked to changes in training procedures and reduced continuity of ward-level relationships:

They are coming through and obviously they are much more junior than the doctors that we used to get. And they don’t have the level of expertise and I suppose the nurses are expecting them to have the same level. Matron

Junior doctors for me, probably in the last year gives me serious anxiety, because what we are finding is that they are coming out with less and less skills. Directorate Manager Orthopaedics

There is a major safety problem, we think, in the more systematised NHS, which is the turnover of junior doctors, which is inevitable. And as they rotate between different sites within a few months they are here, how they learn the different systems and I think that’s a fundamental problem for the NHS. There’s so much care that is driven by actions of relatively junior staff. Chief Executive

From the working patterns of junior doctors, they don’t provide the kind of continuity of cover that they used to do from the medical perspective, you get less actual physical continuity of contact from day to day between patient A and their ‘doctoring’ support. Director of Personnel

Considerable attention was drawn to inadequacies in incident reporting in a number of Trusts, which limited the generation and transmission of organisational learning across Trusts. Many participants contended that weaknesses in incident reporting related to: a persistent ‘blame culture’; the reluctance of doctors to engage in incident reporting; and reluctance of staff to spot or report ‘near misses’. A range of respondents from different Trusts highlight these enduring concerns:

No I have never seen a doctor fill one out, never. Never. Staff Nurse

I think nurses are better than doctors, aren’t they, generally speaking, despite the fact that I think they have much stricter ‘punishment’ for doing things wrong than we do? Consultant
It probably still holds people back from reporting because they think that they could get into trouble or someone else would get into trouble or they don’t want to, and interesting, they don’t want to cause a fuss. **Legal Services Manager**

Where we are not good and we need to improve, is ‘near miss’ reporting. And I know that’s across the NHS, people aren’t very good, because they don’t think that could have been something, so ‘near miss’ reporting isn’t that good. **Director of Governance**

I think the staff probably genuinely think that unless it actually affects patients we really don’t need to report that. It is certainly something that we address throughout all of our training is that ‘near misses’ are important, learning opportunities that we shouldn’t be missing. But I think again coming back to previous discussion when you know, you are stretched for time, staff will prioritise what they do and don’t report. **Safety Manager**

This issue of the handling and management of incident reporting and feedback was raised. Some staff members were sceptical as to the likelihood of such reports leading to change. While nurses tended to cooperate and comply with incident reporting there was variation in its perceived usefulness and effectiveness. Some nurses were reported as engaging defensively with incident reporting so as to protect themselves from blame. The following tables summarise the nature and diversity of issues raised by respondents as threatening patient safety and quality of care across the Trusts (Table 2.2). The table does not quantify how many ‘hits’ each issue received, but whether it was raised in any interview(s).

**Table 2.3 Respondents’ perceived barriers to patient safety across Trusts**

<table>
<thead>
<tr>
<th>Perceived barriers to patient safety</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Priority</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty translating policy into practice</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Heavy workload</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rushed busy staff</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No slack in system</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Poor staffing levels</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor skill mixes</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No beds –limited Trust capacity</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Failure of Trust leadership to prioritise patient safety</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lack of awareness of risk</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Failures in reporting incidents</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existence of a blame culture</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Problems with medical school training</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Patient expectations of services</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time pressures</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Staff communication failures</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Patient / staff communication failures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of supervision</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Failure to document procedures</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This table demonstrates that interviewees reported a wide range of patient safety barriers and emphasised different combinations of, and volume of barriers. As can be seen, Trusts B, E and F demonstrate the highest awareness of patient safety barriers. Explanation for this high level of patient safety awareness may be attributable to three different causes:

- Personal experience of high numbers of patient safety incidents
- High levels of risk awareness training
- Good systems for feedback and high levels of staff communication and engagement in organisational learning.

Although Trust participants identified a wide range of barriers to patient safety it was noted that, in accessing their interpretation of patient safety performance, most reflected that patient safety related to fragmented strategies or work organisation and to issues such as specific risks, incidents and incident reporting. For most interviewees patient safety was reported as elusive and difficult to conceptualise into a single framework. It tended to straddle organisational levels and was difficult to embody as a holistic strategy covering clinical governance, incident reporting, risk analysis and training. Only Trust C reported that it possessed a joined-up patient safety strategy, while Trust H reported that patient safety would at some future point have an explicit strategy. Evidence of the complexity of refining such a strategy is demonstrated in the following comments:

**Nursing Director**

I just don’t think we’ve used the words ‘patient safety’ in a regular and repetitive way. I think it’s a bit like the word ‘hygiene’, ‘hygiene’ never featured in any documentation, we talked about Infection Control, and Infection Control Team will have talked about the problems that they had encountered in getting it high on Agenda, but we didn’t talk about ‘hygiene’, we didn’t really talk about cleanliness, that word that I can’t get my tongue around, but it was always there and it was implied but we are changing what we say, we are changing the words we use and ‘patient safety’, the word ‘safety’ we consciously included in our plan for the year, our Patient Services Plan.

Because I don’t believe that (patient safety), it is not just the clinical governance, it is the organisational governance that needs to go with that and I don’t believe we’ve got that within the structure. **Clinical Director**

Patient safety was also consistently linked to providing quality care and sometimes linked to ‘Lean Management’ practices. The interrelationship between safety and quality arose and this could add to complexity when the words were used interchangeably, as reflected in the following comment:
Well I think people see the issues of quality, i.e. I want to do this procedure or use this drug or this kind of intervention but they don’t, we don’t translate that into some of the mundane routines that are about safety, about checking and having the systems that are fail safe. **Chief Executive**

Likewise, the understanding and interpretation of patient safety incidents lacked consensus across interviewees and across Trusts. Tolerance of risk and calculations of risk were not necessarily commonly defined or shared. For example, doctors could perceive that complications inevitably arose from time to time in medical practice, while patients reflected that these complications were patient safety incidents. This opaqueness in what is acceptable or constitutes ‘normal’ risk; alongside the complexity of different meanings and the labelling of incidents are revealed below:

_Because, let’s say somebody goes to theatre and they’re going to have, I don’t know, their appendix out or something and during theatre, you know, something goes wrong, maybe the appendix is very stuck to the bowel and therefore they can’t get it off, you know they can’t make a clean excision, it’s stuck to everything, so they have to (unclear) and actually they nick the bowel while they’re doing it so they have to over sew the bowel and maybe do a de-functioning colostomy, now they wouldn’t see that as an incident. Risk Manager_

Clinical staff referred to how they often failed to understand risk and safety as they often failed to perceive or track the direct consequences of their actions due to limitations in the continuity of care, or in the number of steps and stakeholders in the care process – the ‘long chains of consequences’. Thus the diffuse nature of care and the engagement of multiple actors across a care pathway could confound matters and create real barriers to patient safety. This is explained clearly below:

_And secondly I think that genuinely some people come to work even in health cultures where they are completely oblivious to the consequence of what they do because they only see themselves in the context of what they do and not in the context of what they do and the impact it has on others, and they don’t understand the chain of consequence. Chief Executive_

### 2.4.2 Links between patient safety and staff well-being

The study specifically asked participants whether they perceived any links between staff well-being and patient safety. The following section presents analysis of their viewpoints. The following Table 2.3 illustrates interviewee perceptions of the links between patient safety and staff well-being. We have attempted to summarise these data in terms of perceptions of these issues and where they arose: again, the table does not quantify the frequency of observation, but rather the spread of responses.

<table>
<thead>
<tr>
<th>Links patient safety and staff well-being</th>
<th>Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>G</td>
</tr>
<tr>
<td></td>
<td>H</td>
</tr>
<tr>
<td><strong>Staffing shortages and patient safety</strong></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Stress and failure to follow procedures</strong></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Busy and distracted</strong></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Staff exhausted with change and stressed</strong></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Low staff morale and lack of concentration</strong></td>
<td>✓</td>
</tr>
</tbody>
</table>
Busy and unable to control work load ✓ ✓ ✓ ✓
Displacement of staff and lack of control over work environment ✓
Busy and no reflective time ✓ ✓
Uncertainty and job security limits staff engagement ✓
Time pressures limit communication ✓ ✓
Busy and missing behaviour cues ✓ ✓ ✓ ✓
Pressure and stress from re-working actions ✓
Pressured staff prone to making errors ✓ ✓ ✓
Limitations in training affect skills and awareness of safety ✓ ✓ ✓
Busy and poor motivation ✓ ✓ ✓
Stress and poor level of care ✓ ✓
Stress and violent patients ✓ ✓
Staff displacement, stress and loss of control ✓
Funded establishment levels not match activity ✓ ✓
Involvement in patient safety incidents and guilt ✓
Motivated staff engage more ✓ ✓ ✓ ✓ ✓
Motivated staff communicate more ✓ ✓ ✓
Supported staff more vigilant ✓
Job insecurity and vigilance ✓
Tackling patient safety gives high morale ✓

<table>
<thead>
<tr>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>6</th>
<th>6</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data analysis suggested links between staff well-being and patient safety outcomes. The complex association, mediation and direction of linkages between the two concepts were highlighted. Indirect linkages between the concepts were suggested when staff articulated how common causes, such as under staffing, appeared to affect staff well-being and patient safety. Direct linkages between the concepts were also indicated by references to staff member’s experiences of adverse incidents and how this could impact on their well-being. Likewise, direct linkages were highlighted in the accounts between poor staff morale and how this may affect engagement with patients and colleagues.

The link most consistently perceived between staff well-being and patient safety related to staffing resources and shortages. This appears to suggest that the relationship between patient safety and staff well-being is a resource-based model of association. Interviewees repeatedly drew attention to the negative safety implications of staff ‘stretch’, stress and overload. They linked this to resultant failures to attend to detail, miss behavioural cues, ignore procedural guidelines and communicate poorly, both with one another and with patients and their representatives. The following accounts, from a number interviewees from a range of Trusts express these views:
I'm sure there are. I mean, the mere fact that some of the staff well-being is related to them being stressed out because there aren't enough staff, and clearly is going to immediately going to link into patient safety on two grounds, a), the staff are stressed and may not pay attention so much to what they're doing and b), there's not enough of them, so I'm quite sure they are linked but at the same time, it's very easy to hide behind that kind of analogy, isn't it, so you've got to be careful, careful how much credence you put to it. I'm sure there are links, yeah.

**Medical Director**

I think the other issue is around there are definitely times when these staff on the wards, actually they are very oppressed, are running around and are working very hard and I think that's quite stressful. **Chief Operating and Nursing Officer**

I understand it and I have no doubt that they are overly pressurised which then you are more prone to error, but on the other side of the equation I think that culturally most staff, including me, most of us are not prepared to work in a systematic way, but actually if you look at what's happening on wards or in theatres most of the time, the pressure is time spent in re-working things that haven't gone well or dealing with problems in the system. **Chief Executive**

Across the Trusts, limitations in ward skill mixes were perceived as resulting in trained staff being overworked; unable to take breaks; and having difficulty in maintaining control of their work. This led to staff failing to maintain focus on their tasks and make mistakes. Tiredness; stress; low morale; and high demands including the managing of challenging patients were all cited as critical risk factors. These themes are identified across a range of staff at varied levels:

I think the biggest thing that we fall down is the stress that we put on our staff to achieve the things that we need to achieve and to keep the patient safe. **Health and Safety Risk Advisor**

If you are the only person, the trained person on, you've contacted on site, they said there is no additional members of staff and you've explained you can't have a break, then where do you go, what do you do, you can't walk off the ward and leave them with nobody? **Risk Manager**

There could be an associated link between whether people were tired at work, whether they were under pressure at work, what shifts they were working and nervous about the long shifts seeing the staff like, and you can think it can't you that people are tired and fed up, de-motivated stressed that they potentially may not be fully on the job they are doing. So you could understand why there could be a link between the two yes I can see that. **Director of Nursing**

And I think, I think if the more stressed staff are then they are not going to function you know in their work as well as they should do and I think that, you know that is going to lead to more incidents. We have had incidents reported, you know, where staff have felt you know stressed with the staffing levels. **Clinical Risk Co-ordinator**

You know, when you've got low morale, either they are moaning to patients perhaps or you know, they are not taking their time to do things properly, there's not enough time to go around with the doctors on their ward rounds and so there's that information between all multi-disciplinary teams is not getting through to those staff. Handovers are sometimes quite poor so you are missing important information there, and so, I mean I think there's more process problems really I think. **Governance Manager**

Staff also reported how low morale generated by fears for job security can be linked to poor staff vigilance and failures to communicate and engage with other staff. Examples of this are illustrated as follows:
The stability of the workforce in a particular area which is the most telling sign of high quality actually. **Director of Operations**

So if you come in and you are feeling really low and feeling, you know I have got hundreds of things to do you don’t necessarily pay the same attention to the things that you would if you came in very motivated and optimistic about things. **Director of Human Resources**

Staff involvement in an adverse incident was reported as creating stress and self-blame for staff. This was reflected in the following comment from a Nursing Director:

*I make a mistake I would sit down and think why did I do that, how did that happen, could I have done that better? And people will bring guilt on themselves. That is difficult, that’s just human nature I think.*  **Nursing Director**

In contrast, participants suggested that motivated and empowered staff were more likely to question actions, be responsive and approachable and to engage with patients, and hence derive greater knowledge and awareness of patient safety:

*There’s the other link between just this well-being, this happiness factor of how well you are regarded, how well you are respected, whether you feel that you are being valued, whether, what you are doing when you are at work is a valuable contribution, and all of that, is to do with staff well-being and inevitably of course, it has an affect on how well do you look after your patients.* **Head of Occupational Health**

*I think so because I think a very happy member of staff, somebody who is happy in their work, they have got job satisfaction, gives a better service to the patient. The patient feels a lot better because people are happier around them, they’re smiling and you know they are more likely to ask a nurse or point out that something is not right so if they feel unwell or anything like that, any of those complications they may pick up earlier because they feel that the nurse is quite approachable and things like that happen. And if perhaps they were given the wrong medication they would be more likely to say “well can I just ask you about this?”* **Deputy Director of Nursing**

If staff feel good about their employer, if they feel positive about coming to work, if they feel rewarded for the job they do, it seems to me that they’re going to be more positive and motivated in their interactions with patients. **Divisional Manager**

Trust interviewees reported that their goodwill to perform beyond what was expected was linked to feelings of being valued and respected by Trust management. Evidence of this willingness to exceed the norm is illustrated in the extracts below:

*I think there’s a sense of, you know, people maybe sometimes go that extra mile to finish off but there’s a feeling now that I am only getting Band three or whatever, and I just do what my job is and then go off.* **Director of Operations**

But certainly in terms of quality of care, you know, staff being hacked off and therefore are not prepared to go that extra mile anymore and so patient satisfaction is perhaps losing out because of staff satisfaction with their lot at the moment. **Senior Safety Manager**

In particular, nurses also identified how displacement or relocation of nursing staff to unfamiliar roles and activities created stress; reduced nurses’ confidence; reduced their sense of control over their work; and resulted in reduced awareness of safety:
The only thing I will sometimes find a bit is when they come on and they say “can you move to another ward?” which I find sometimes, you know, I work on surgery and yes okay, they are only moving me to surgery but I don’t know the running of the ward, I don’t know any of the staff. **Staff Nurse**

Moving to another surgical ward but it is probably more like an orthopaedic ward. The other two surgical wards are a lot more dependent patients, a lot more major surgery than what we have really….. Yes, then I really haven’t got a clue. **Staff Nurse**

### 2.4.3 Environmental ‘shocks’: comparing Trusts’ capacity to change

A dominant theme identified in the study was how Trust staff reported the influence of extreme environmental pressures or ‘shocks’ and how this affected patient safety and staff well-being. Interviewees routinely acknowledged a range of internal and external ‘environmental’ pressures, which related to the following issues: disputes and negotiations with local primary care trusts concerning the reduction of Trust commissioned services; government policy initiatives focused on shifting care to the community; changes in the training of medical staff and meeting government imposed performance targets. We use the term environmental ‘shocks’ to describe extreme forms of organisational pressures. These environmental ‘shocks’ can be defined as comprising:

- One large scale and high magnitude environmental pressure, derived from a single source and which impacts severely on organisational and individual employee outcomes.
- A combination of several environmental pressures, which in combination generate a severe impact on organisational and employee outcomes.

Examples of severe environmental pressure or ‘shocks’ are illustrated by reported comments in Table 2.4; and the range of such ‘shocks’ experienced by each Trust is indicated in Table 2.5. These ‘shocks’ were viewed as affecting both patient safety and staff well-being. For example, external ‘shocks’ came from the reconfiguration of external relationships (with PCTs), or from government policy directed at shifting care from the acute sector to the community. Trust priorities in achieving government targets and achieving financial balance were seen to limit priority and resource allocation for supporting patient safety. Internal ‘shocks’ reported as impacting on the Trusts included disruption caused by infection control outbreaks, changes in Trust leadership and physical infrastructure (for example, problems with buildings in terms of location, suitability and accessibility).

<table>
<thead>
<tr>
<th><strong>Table 2.5 Examples of perceived environmental ‘shocks’</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of ‘Shock’</strong></td>
</tr>
<tr>
<td>PCT re-organisation</td>
</tr>
</tbody>
</table>

Queen’s Printer and Controller of HMSO 2010
**PCT cuts commissioning of service**

*I think the big challenge for the organisation is to downsize our capacity to meet the PCT requirement and to try and bring in some work from elsewhere if you like.* *Director of Finance and Performance*

*It is nevertheless against a backdrop of a lot of necessary change in the Trust as we respond to the fact that our commissioners want us to treat fewer patients. We are having to reduce our capacity in terms of closing wards and we are having to employ fewer people.* *Corporate and Legal Affairs Officer*

**Perceived PCT financial deficit**

*I think what people struggle with is the figures and the size of what does the XXXX PCT being £X million overspend mean. It just seems like a number doesn’t it? There’s this great analogy, if you owe your bank £5,000 you’ve got a problem, if you owe the bank £5 million the bank’s got a problem.* *Medical Director*

**Financial problems**

*But it does mean the organisation possibly facing a £X million deficit, but still hoping to go forward to Foundation Trust. That’s looking okay at the moment because I think we are able to, I think from what the Finance Director tells me, we are managing to come to some sort of agreement with the PCT which will be based on us taking a loss this year and monitoring and allowing us to become an FT, carrying a deficit.* *Legal Services Manager*

*I think it’s very much an organisation in transition...and the Trust was seen as something of a basket case really in terms of, it didn’t know where it was going. It had huge financial problems. Its reputation was a bit flaky. And I think it was sort of... it really was its last chance to pull itself together.* *Divisional Manager*

**Examples of perceived environmental ‘shocks’ (2)**

<table>
<thead>
<tr>
<th>Type of ‘shock’</th>
<th>Examples drawn from data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infection control outbreak</td>
<td>We saw a sharp increase and it got to a stage where we didn’t have the facilities like side rooms to isolate patients in and it was gosh we can’t cope with this operationally. <em>Head of Nursing</em></td>
</tr>
<tr>
<td>PFI project shelved</td>
<td>We’ve just had a PFI project here that’s stopped and we have very clear patient safety issues that we thought were being solved by the physical environment. So the patient safety issues, clinical standards, were being addressed by a physical new building. <em>Finance</em></td>
</tr>
</tbody>
</table>
Leadership instability

Clearly our biggest problem was the new management team sorting themselves out and once they go themselves sorted, most of our clinical and non-clinical policies were out of date if you like, because we worked in such a way that they imprint on the management structure, so if they change the management structure then it affects everything. **Head of Health and Safety**

There has just been absolutely no stability. All the Directors have changed, all the non-exec directors have also changed in the past couple of years. There really hasn’t been any stability at the top. **Governance Manager**

I think generally staff are shocked that XXX has left and at such short notice, XXX has been here and been a very successful Chief Executive for XX years and is very well respected and has got great support internally, so people are shocked at the pace at which he has left. **Finance Director**

Improvement notices served

It was served Improvement Notices by the Health and Safety Executive a few years ago, so it has undergone massive trauma and uncertainty about whether it as an organisation would survive as a legal entity in it’s own right or whether it would be merged with another large acute Trust just down the road. **Director of Corporate Affairs**

<table>
<thead>
<tr>
<th>Environmental ‘shocks’</th>
<th>TRUSTS</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCT reconfiguration and loss of Services</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial deficit</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFI bid shelved</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changes in Chief Executive</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changes in senior executive team</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major infection control outbreak</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merger</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical relocation of Trust Sites</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total ‘shocks’</td>
<td></td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>
Analysis indicated that the capability of Trusts to cope with environmental ‘shocks’ varied and seemed to be dependent on the presence of four criteria:

- Cultural attributes which facilitated organisational learning;
- Staff empowerment and staff engagement in decision making;
- The existence of structures and processes which enabled staff involvement; and
- Broader contextual factors, such as organisational history and socio-economic factors affecting the locale or catchment of the Trust.

2.4.4 Comparative cross-case analysis

Comparative analysis of the eight case studies resulted in the development an interpretative schema which was then used to further interrogate the data. This schema was derived from the conceptual framework and combined with recurrent themes drawn from the initial analysis of the empirical data. It comprised ‘content’, ‘context’ and ‘process’ themes. ‘Content’ themes relate to perceptions of patient safety and staff well-being. ‘Contextual’ themes relate to internal contextual factors which focus on the perceived characteristics of the organisational culture, structure and Trust history. External contextual themes relate to external environmental pressures and ‘process’ themes relate to the reported perceptions of patient safety and staff well-being support processes and leadership. Each of these content, context and process themes mapped on to the following dimensions/characteristics:

- Perceptions of patient safety (‘content issues’)
- Perceptions of staff well-being (‘content issues’)
- Evidence of extreme environmental pressures or ‘shocks’ derived from a range of data sources (‘context issues’).
- Trust cultural attributes (‘context issues’).
- Trust organisational capabilities such as staff competency and structures and processes supportive of patient safety and staff well-being (‘process issues’).
- Senior leadership style (‘process issues’).

Table 2.6 identifies the interpretative schema and its component characteristics. It also analyses each Trust in terms of this interpretative schema and demonstrates how the Trusts were grouped according to Trust types. These groupings fell into four Trust types which were identified as: ‘Resilient’, ‘Adaptive’, ‘In Recovery’ and ‘Conservative and Passive’. This fourfold typology is a heuristic way of surfacing the complex and detailed cross case analysis of the individual Trusts. It emphasises similarity between Trusts rather than differences and is a snapshot in time. Importantly, these Trust types serve to discriminate between Trusts along a range of emergent dimensions and attempt to capture the dynamism of Trust reality within the time scale of the study.
### Table 2.7 The interpretative schema used to group the Trusts

<table>
<thead>
<tr>
<th>COMPONENT CHARACTERISTICS</th>
<th>IDENTIFICATION OF TRUST TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RESILIENT (A&amp;H)</td>
</tr>
<tr>
<td><strong>MAGNITUDE OF ENVIRONMENTAL ‘SHOCKS’</strong></td>
<td>Low</td>
</tr>
<tr>
<td><strong>RECEPTIVITY TO ORGANISATIONAL CHANGE</strong></td>
<td>Open and receptive</td>
</tr>
<tr>
<td><strong>ORGANISATIONAL LEARNING</strong></td>
<td>High levels of organisational learning</td>
</tr>
<tr>
<td><strong>CLINICAL PARTICIPATION IN DECISION-MAKING</strong></td>
<td>High levels of Clinical participation in decision-making</td>
</tr>
<tr>
<td><strong>MODES AND CHANNELS OF COMMUNICATION</strong></td>
<td>Multiple modes and channels of communication, matrons key communicators</td>
</tr>
<tr>
<td><strong>PRIORITY FOR PERFORMANCE - FOCUS ON MEETING TARGETS</strong></td>
<td>High priority for performance</td>
</tr>
<tr>
<td><strong>PERCEPTION OF STAFF WELL-BEING</strong></td>
<td>Positive perception of staff well-being</td>
</tr>
</tbody>
</table>
Negative perception of patient safety performance – breaches, under reporting, patient safety an emerging priority. |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCEPTION OF ORGANISATIONAL CAPABILITIES - PATIENT SAFETY</td>
<td>Positive perception organisational capabilities – Patient safety an integrated system.</td>
<td>Highly developed systems to support patient safety.</td>
<td>Blame culture exists, failures in incident reporting. Improvements in patient safety by adopting 'lean’ thinking. A blame culture was reported.</td>
</tr>
<tr>
<td>PERCEPTION OF ORGANISATIONAL CAPABILITIES – STAFF WELL-BEING</td>
<td>Supportive occupational health systems</td>
<td>Improvements in occupational health systems</td>
<td>Supportive occupational health systems</td>
</tr>
<tr>
<td>CONTINUITY OF LEADERSHIP</td>
<td>High continuity of leadership team.</td>
<td>Low continuity of leadership team.</td>
<td>High continuity of leadership but recent loss of CEO.</td>
</tr>
</tbody>
</table>

anxiety and stress. anxiety, stress and pressured. stress and overloaded
2.4.5 Characteristics of Trust typology

The following section provides detailed analysis of the characteristics of each Trust type commencing with ‘Resilient’ Trusts and then progressing to ‘Adaptive’, ‘In-Recovery and then ‘Conservative and Passive Trusts’.

'Resilient' Trusts (Trusts A and H)

From the comparative cross-case analysis centres A and H are characterised as ‘Resilient’ Trusts, most capable of buffering external and internal ‘shocks’. Commonalities existed across Trust A and H with regard to broader contextual influences. Both Trusts reported that they consistently achieved a financial surplus and performed well with regard to national performance targets. External relationships with their PCTs were perceived as good and supportive. Trust A reported the existence of good relationships with its PCTs, although it was also acknowledged that the Trust would make a significant contribution to its PCT financial deficit. Government policy for achieving targets was also seen as a Trust priority. Trust A’s senior management team perceived targets as a valuable way of ‘taking the pulse of the organisation’. The findings also suggested that Trust staff had longstanding tenure and affinity with the local community which created a strong uniform cultural identity for Trust staff.

Similarly, Trust H reported that it possessed a ‘good and open relationship’ with its local PCTs and was engaged in accessing external knowledge and evidence to develop new practices. The findings also suggested that many of the Trust staff possessed longstanding tenure which was reinforced by the strong local community culture resulting in cohesive and trusting relationships. Evidence of this is illustrated in the following comment from a senior manager:

We have to have a healthy relationship with them, that doesn’t need to be, it’s not a relationship where we bend the knee to them, but it is a mutually dependent relationship ... I mean we do pick up the phone to the Chief Executive at the PCT daily, we have a natter about something, they phone up and they talk to me about something social as well. Chief Executive

Despite a generalised sense from the interviewees that media influences created a ‘climate of fear’ and sensationalised patient safety breaches and infection outbreaks, this Trust had been proactive in building links with local media organisations. They had proactively used the mass media to educate patients regarding Hospital Acquired Infections (HAI) and thus reduce their level of anxiety.

Both Trusts A and H acknowledged patient safety breaches but perceived that their performance for patient safety and infection control was high when compared with other English acute Trusts. These Trusts were reported as organisationally stable, in that the senior executive leadership team had been in place for many years and the Trusts reported that they possessed highly developed processes to support staff well-being and patient safety. These Trusts’ high levels of stability was also reported as linked to their
relatively higher performance ratings for both patient safety and staff well being. It is also noted that these were both foundation Trusts. This stability of personnel and its link to performance was alluded to often and was reflected in the following remarks:

_The other five members of the team were already there when I arrived X years ago._

**Chief Executive**

_The personnel are stable, the resource, the physical resource around the organisation is stable._ **Governance Manager**

Perception of patient safety performance in these Trusts was reported as progressing fast. Trust H identified patient safety as a high priority, and viewed staff as ‘not complacent regarding patient safety’, and as having ‘a proactive approach where there is ‘much risk assessment’. However it was noted that this priority was calculated against competing priorities:

_It is a priority, but one has to, one would never sacrifice safety for another objective, so I used the phrase earlier on, deliberately fail safe and I want the organisation to fail safe._ **Chief Executive**

Trust A respondents also reported that their organisation ‘performs highly on patient safety’ and ‘governance has a high profile’. Some attention was given to staff well-being, as staff dissatisfaction was attributed to difficulties in the implementation of the Agenda for Change and fears for future job security. However, staff did report that they felt ‘valued’, ‘respected’ and ‘are consulted with’ regarding Trust strategy.

**Cultural attributes influencing staff engagement and empowerment**

Analysis of Trusts A and H demonstrated that they possessed organisational cultures that supported staff empowerment and engagement in decision making. Interviewees characterised their organisations as having a focus on team working, open communication and devolved Trust leadership; and a style which served to maximise staff consultation and participation. Cultural characteristics of these Trusts related to the following perceived norms: leadership, relationships, attitudes to organisational change, levels of organisational learning and Trust priorities. Senior leadership within these Trusts was characterised as ‘participative’, ‘inclusive’, ‘cohesive’ and ‘consensual’. Trust A interviewees reported that the senior team was ‘collaborative’, ‘strongly exhibiting respect’, ‘able to work well together’ and able to create a ‘safe environment’ where decision making could be ‘hashed out’. These sentiments are reflected in the quote:

_Hands on, no ivory towers, they don’t exist. An open door policy for most places you just wander in and have a chat about something and go back, ‘can do’ action attitude is my way of doing things. If we have got a problem, we recognise there is a problem, let’s not just bury our heads in the sand let’s succeed and make it work and constantly looking for innovation._ **Governance Manager**

Similarly, the Chief Executive in Trust A was viewed as ‘respectful’, ‘empowering staff to make positive changes’, ‘incisive’ and ‘problem solving’. The Chief Executive viewed that a function of the role was to ‘keep an umbrella over the organisation and buffer it from the real world’, while also ‘listening to noise in the corridors’ so as to identify emerging problems.
Interviewees from Trusts A and H also reported that the senior leadership devolved decision making as much as possible. The Chief Executives in both Trusts were reported to have an ‘odd’ style of leadership which was ‘situational’, democratic, consensual and at times also directive. The Chief Executives themselves reflected on having these composite styles:

It is quite an odd mixture. In some respects quite democratic in the sense that I like to hear what people have to think, the advice they have to give and I value that. Though I don’t always necessarily tell them I value that. So there’s an element of the democratic listening bit. There is to some extent, an instructive or directive relationship and leadership style but not too often. So I try and make my leadership as inclusive as possible so that people actually believe they are part of what I am doing rather than something I am doing to them. Chief Executive

I think it’s that mixture between it is democratic but not to the extent that you use that. There’s a balance – there’s a fine line between democracy and doing nothing, that some organisations can get constrained by forgetting that there’s a hard edge to what’s going to be delivered. So yes, there’s democracy and there’s engagement, but there are decisions that have to be made. Chief Executive

Within each of these Trusts a positive, open and collaborative culture was described within the senior team; and both possessed highly stable senior teams with long tenure. In both Trusts, the Chief Executives had been in place for more than five years and high levels of trust in relationships were reported to have been forged within the senior team.

Relationships within both of these Trusts were characterised as having strong and positive involvement of clinicians in management. Trust H staff reported that ‘clinicians were enthusiastic to take on management roles’. Trust A staff also reported that ‘the top team had a strong relationship with clinical teams’ and that ‘they were able to work together’. They explained that ‘everyone has a contribution to make’. Examples of clinical involvement in management are illustrated in the extracts below:

I mean you have to balance your working week in sort of spending, say for example 60 percent clinical and 40 percent managerial, it could easily be reversed because we do an awful lot more after your working day or at home that you can’t fit into your working week. Ward Sister

There’s no question that we have to have some influence in the way the hospital is being run. Because if we don’t it will be anarchy. There’s an awful lot of people who don’t recognise the pressures and the problems and they’re very quick to try and hide behind the “well you said it was okay” routine when anything starts going wrong so it’s the doctor’s fault, and that puts a lot of pressure on us, and I think we have to be involved in the decision making of the organisation to make sure that we are not doing anything stupid. After all, the whole purpose of it is to try and fix people. Clinical Director

Examination of Trust relationships also reflected how communication was cascaded throughout the Trusts and appeared to influence staff members’ positive attitude to team working. One clinician explains:

I think the emphasis on team working in medical, nursing, another speciality, education has been pretty good over the last few years. Clinical Director

Trust H staff also referred to how communication was characterised by ‘multi-level marketing’ whereby a variety of communications media was
used to convey information to staff. Patient safety changes were communicated by team briefs; staff safety bulletins; posters; informal meetings; and interaction with patient forums. Examples of communication tools and channels are illustrated as follows:

*We have an official newsletter which has got an absolutely scurrilous back page and it is deliberately written in a sort of Private Eye style specifically, because we know that people want to get a copy of it and they will read everything trying to find out what’s where and what’s written, but it is a way of getting information out. And it is a way of trying to make people feel that they can send contributions into the departmental newsletter and they send things and they are put in and people can recognise their own bits in there and they look at everybody’s. I think the word might be infamous actually......Yes it is, humour is a very useful tool actually in getting your message across and it is, and catching people’s interest and awareness and that’s, I don’t think that that’s done well across the NHS as a whole.*  

**Clinical Director**

We don’t really discuss the way, it’s become a habit if you see what I mean. We’ve been doing it for long enough now for it to become a habit. You can learn an awful lot by just sitting down talking to somebody. Whatever grade they are, sit in the coffee room. It’s a great place to learn things. It really is. Sit in a coffee room for ten minutes and make somebody a coffee and have a chat with them.  

**Clinical Director**

Simply by visibility, corridor conversations are always quite an important thing, I always take advantage of anybody I bump into, I always engineer a conversation, particularly with clinicians. But also to, some of the fairly traditional approaches where people say if they want to see me then they get to see me straight away because I regard, if they regard it is important enough to see me then they get to see me straight away because I regard, if they regard it is important enough to see me then I let them see me.  

**Chief Executive**

Trust A reported that ‘open communication existed’ and that much communication was ‘informal’ as most staff had long established relationships. Overall, communication was characterised within both Trusts as employing a diverse range of media and with a strong emphasis on informal communication. Attitudes to organisational change across both Trusts appeared to be generally positive. Trust H interviewees reported that a ‘gradualist’ approach to change existed. The Chief Executive perceived that ‘it’s about chipping away and you can only get the ice shavings off one at a time’. Here it was perceived by the Chief Executive that organisational change could be achieved by targeting specific behaviours in a piecemeal fashion, as all encompassing grand visions and engineering transformational fast cultural change were unrealistic:

*You can’t announce a culture, you have to believe it. I just don’t believe these Chief Executives who come in and say “in the next six months I am going to change the culture of the organisation”, because I say to them, very robust bollocks, it’s just not true, because you don’t. Culture, if it is a true culture is so deeply engrained, behaviourally and otherwise, the best you can do is modify certain behaviour, value certain behaviours and you can ignore others and that gradually produce culture shift.*  

**Chief Executive**

This CEO reflects on the room for manoeuvrability and small efforts to achieve and sustain cultural change:

*Sometimes it can purchase some culture shifts rapidly, people who talk grandly about changing the culture of an organisation are actually just chipping away and they are sort of getting ice shavings off the one that sunk the Titanic and not actually moving the*
whole of the iceberg. And I simply don’t believe people who say to me they can change the whole culture because I don’t believe that’s doable. Chief Executive

They continue:

And I think that selecting an emphasis, being a gradualist, concentrating on those things moves them and of course in any kind of change, you don’t always necessarily tackle the change you want head on or even announce the change that you want, you might actually announce something else that you want to achieve and via process of resistance and conversions you actually achieve the change that you want because people are coming at it from different directions. And that has happened in this organisation. Chief Executive

Trust H interviewees explained that changes in patient safety could be achieved by communicating change effectively via a range of media tools which ‘intervened in staff thought processes’. A further device was the use of ‘storytelling as a means of identifying risk and awareness of safety’. Stories of serious untoward incidents (SUIs) or past ‘shocks’ (SUIs) were recounted to staff at induction events. The accounts also highlighted that nurses and midwives were seen as championing changes in nurses’ new codes of conduct. In Trust H, Matrons were generally acknowledged as key ‘change agents’ and role models, raising awareness of patient safety and galvanising the organisation to take ownership of new practices. It was pointed out that there had been an emphasis on training nursing staff to take on leadership roles and to facilitate devolution of leadership across the organisation:

Over the last two years on strengthening leadership for Matrons and Ward Sisters and Charge Nurses, and one of the things that I recognised was that there had not been much investment directly in those professional groups, over the preceding few years. Director of Nursing

Trust A was perceived as ‘creating an environment where people can change things’ and where ‘staff were empowered to make positive change’ and again, as in Trust H, matrons were perceived as ‘role models’ to enable change. Organisational learning across both Trusts was generally perceived as highly developed and it was recognised that the Trusts needed to focus on innovation and new ideas as the stability of the Trusts’ leadership could lead to complacency: there was a need to avoid stasis:

So it can also become quite static in terms of innovation and receptiveness to new ideas and new objectives. Chief Executive

In Trust H it was frequently mentioned by respondents that Matrons were driving organisational learning. They were portrayed as ‘sense makers’, ‘sense givers’ and ‘problem solvers’. Likewise attention was drawn to the importance of safety awareness training, the use of analytical cultural tools to identify problems, and engagement with external organisations to access best practices to improve patient safety and staff engagement in decision making. Trust H had developed strong links with the National Patient Safety Agency (NPSA) and health care organisations in the US and elsewhere, to improve the engagement of nursing staff in Trust leadership.

Trust A also was perceived to have accessed much ‘extra-organisational’ learning and employed a range of analysis tools to identify the nature and
cause of patient safety incidents. The accounts also indicated that the Trust had developed keen problem solving capabilities as it had identified problems with patient safety and had successfully piloted and assessed new practices to improve patient safety. It was perceived that ‘the Trust had learnt lessons (from a C-Difficile outbreak)’ and it was perceived that ‘the use of monitoring now could detect C-Difficile much earlier’.

**Trust processes**

Processes to support patient safety and staff well-being within Trusts A and H were described as highly developed and efficient. Engagement of staff with incident reporting was considered good and improving. However, as in other Trusts, nurses were seen as engaging well in incident reporting while doctors were perceived as ‘not so good at reporting’. Incident reporting systems were considered as strong and effective, while much emphasis was given to risk awareness training. Within Trust H incident identifier codes were rationalised from 7000 to 300 and thus incident reporting was made simpler for staff to engage with. Likewise, clinical governance processes were well integrated between corporate and directorate levels and audits, risk review committees, clinical governance committees all worked together to identify problems, assess solutions and develop new practices. Overall, it was considered that the Trusts were closing the loop between analysis, feedback and practice. Patient input was seen as a vital part of risk analysis and learning. Trust A also reported a priority for risk awareness training, use of incident analysis and regarded that high levels of feedback from this analysis were given to staff.

In summary, Trusts A and H were highly stable Trusts which appeared to have supportive cultures encouraging the engagement of staff in decision making. The findings suggest that they mobilised and developed supportive organisational processes where clinical governance, risk management and analysis of patient complaints were integrated. It appears that the relatively low levels of environmental ‘shocks’ experienced by Trusts A and H gave them time and resources to develop supportive processes, which in turn enabled both organisations to buffer and respond flexibly and rapidly to environmental pressures. Hence periods of environmental stability enable Trusts to develop cultural capacity for change which enables greater reliance. In contrast other Trusts in the study experienced more instability and varied degrees of environmental ‘shocks’. In the following cases (C, D and F) we will discuss how this required significant effort and foresight.

**‘Adaptive’ Trusts (Trusts C, D and F)**

Trusts C, D and F are identified as ‘Adaptive’ Trusts and were perceived as experiencing major environmental pressures which were tackled creatively and promptly. The Trusts C, D and F will be discussed in order of the magnitude of the environmental pressure they experienced. Trust D was experiencing the highest level of environmental trauma and pressure in this group. It was a newly merged Trust which was also planning to relocate its services from three sites to a newly constructed single site. Trust D also had
experienced high leadership turnover, with a reported ‘seven Chief Executives in six years’. Likewise, Senior Executive Team members were perceived to be largely new and untried and it was frequently suggested in interviews that ‘changes in management had caused disruption to the operation of the Trust’. Trust C was also experiencing major environmental ‘shocks’ which included: reconfiguration of its PCTs and their severe reduction in commissioned services; the shelving of a PFI project which had intended to construct a new Trust hospital site; major financial shortfalls and instigation of a major cost cutting programme; the Trust Chief Executive had recently resigned which left the Trust staff feeling uncertain and fearful for the future and the Trust had experienced a major C-Difficile outbreak which led to the Healthcare Commission instituting an audit of Trust processes. Examples of environmental pressures experienced by these Trusts are illustrated in the following excerpts:

*It is nevertheless against a backdrop of a lot of necessary change in the Trust as we respond to the fact that our commissioners want us to treat fewer patients. We are having to reduce our capacity in terms of closing wards and we are having to employ fewer people, so there is a feeling of pressure I think within the organisation and the fact that the organisation is happy to change to respond to its commissioner’s requirements is actually quite painful.*  
**Corporate and Legal Affairs Officer**

*Well I think it is the fact that it brings potentially extra resources to address the sort of issues. As you are probably aware and no doubt you are talking to other colleagues, that we are facing an extremely challenging financial position, a £XX million cost improvements on top of £XX million last year, so we live in the sort of climate where sort of resources are being examined and questioned constantly.*  
**Director of Facilities.**

*I think there would be issues that arise of a strategic long term direction, for example we’ve just had a PFI project here that’s stopped and we have very clear patient safety issues that we thought were being solved by the physical environment.*  
**Finance Director**

*I think everything is a little bit wobbly at the moment because we are going to be getting a new, well an interim Chief Executive…..So yes quite shocked and I suppose people don’t quite know what’s happened and what’s happening.*  
**Chief Pharmacist.**

Trust F was also experiencing major and large scale change, as its local PCT was regarded as ‘challenging’ and much organisational change was anticipated with re-configuration of both the SHA and PCT. Likewise C-Difficile and Legionella outbreaks were also reported as major causes of concern.

Perceptions of patient safety performance indicated that Trust F was ‘getting a grip on infection control’. It was described as having the capacity to undertake robust analysis ‘to identify measurement problems’ and patient safety was perceived to be a ‘high priority’. Staff well-being in Trust F was reported as poor and this was attributed to a number of factors: dissatisfaction with the implementation of the Agenda for Change; poor skill mixes in maternity services; increased activity; and heavy workload demands. In Trust C, patient safety was perceived as improving as a severe C-Difficile outbreak had led to prioritisation of patient safety and the instigation of senior management led initiatives (for example setting up
patient safety and infection control teams). The Director of Operations reflects on the significant learning derived from this outbreak:

*We had a significant rise in some health care associated infections which is MRSA and C-diff and as an organisation we have targeted it as our number one clinical priority for this year. Our XXX (a senior clinical director) is seconded full time to address this ... so on the one hand if there is something which is significant enough to us all including our patients I guess we will invest some very significant authority into it to try and address it.* **Director of Operations**

Perceptions of staff well-being in Trust C were coloured by the combination of high volume organisational changes, job insecurity and job uncertainty experienced by the Trust staff. Many staff members mentioned that they were worried about job security, some referred to increased levels of verbal abuse perpetrated against staff and many were also concerned regarding their inability to access training so as to develop their skills and knowledge. **Cultural attributes influencing staff engagement and empowerment**

Analysis of Trusts C, D and F revealed that they displayed many similar cultural attributes. Examination of these attributes focuses on: Trust leadership, relationships, organisational learning, priorities and attitudes to organisational change. Leadership within the senior management team was characterised as 'consensual', open, encouraging of clinical involvement, respectful, inclusive and democratic. Similarly the Chief Executives’ leadership styles were consistently reported as being: approachable, visible, participative, trusted, and supportive. Trust F differed slightly in that many staff viewed that the physical location of the senior team meant that management was remote. Here the senior management team were of relatively short tenure, when compared with Trusts C and D. Yet despite this, they were described as being able to develop cohesive, productive relationships. The analysis also identified how management/clinician relationships within each of these Trusts were viewed as: friendly; informal; and co-operative. Clinical relationships in particular were reported as supportive and clinicians were perceived as involved in decision making. Examples of these themes of consensus building, high clinical engagement, and of maturity and stability of top teams are reflected in the following comments derived from across all three Trusts:

*We have good clinical engagement I think because we have Clinical Directors whom we meet with formally every fortnight so it is very much not a top down management approach.* **Corporate and Legal Affairs Officer**

*I think the CEO tends to be, use that word again, consensus, they do sort of take everybody’s views and then look for, you know, things to, within the debate work itself to a conclusion. If not, they will, you know, sort of form a view and gain support for that. So it is sort of taking people with they rather than sort of dictating the outcome at first sort of stance.* **Director of Facilities**

*Every one of them and they were all stable, I was the newest person to the team and that was sort of after four years.* **Finance Director**

But I have to say I have worked in many different Trusts and the top team is a very cultured team, some of them have been together for quite a while now, for six years or so and so it has matured over the time. **Corporate and Legal Affairs Officer**
The philosophy is a team of equals ……The whole thing is equal; we have a team meeting on a Thursday. Everybody can put anything they want on the agenda, so it’s very much a team based approach, where I think, and everybody’s view counts, like you say. Director of Facilities

There were complexities and contradictions in the responses. The interviewees in Trusts C and D also alluded to differing sub-cultures, which hampered communication. For example in Trust D, two contrasting sub-cultures were differentiated by physical location: a cohesive, supportive culture presided in one site while in the larger site a more competitive, formal and hierarchical culture presided. In Trust C differing sub-cultures were attributed to each of the Clinical Directorates and nurses and doctors were perceived as having separate communication structures and norms. The Corporate and Legal Affairs Officer in one Trust illustrates this:

There are 12 clinical directorates and there are eight corporate directorates. And because everything is so intensely directorate driven, that’s where the differences are, but I genuinely would say that now by site I notice little different in the culture, it is more by directorate. Corporate and Legal Affairs Officer

Team working was perceived as mainly highly productive within Trust C and F but not reported in Trust D. Communication failures were widely reported in the latter. In Trust D staff reported problems with staff handovers, failure to record patient information and minor concerns, problems accessing computers, too much paper work, and nurses difficulties in effectively communicating with patients. Trust C respondents also confirmed that they were largely overwhelmed with communications media while in Trust F it was highlighted that although they had developed a communications strategy, subtle messages often failed to be transmitted. Failure to communicate with patients was confirmed as a major reason for patient complaints and some staff alluded to difficulties in effective transmission of succinct, relevant information to staff with little time to digest lengthy protocols.

Analysis of Trust priorities in Trusts C, D and F indicated that patient safety was an emerging priority, driven by the growing awareness of the public with regard to patient safety problems. It is also noteworthy that achieving government targets and financial performance targets were reported as dominant priority.

I would say the priority seems to me to be quite high with having good Clinical Governance lead within the Trust. Matron

The Chairman of our Patient Forum here in XXX sits on our Board, which is not a model that all Trusts adopt. They have an equal voice and come with very specific questions to each Board meeting about our performance and our delivery based on feedback from patients and peers that are also patient advocates. Finance Director

Yes I think priority is given, I mean the fact we’ve, you know recently had risk management review and the clinical governance manager role has in the main remained within that structure, you know it would have been quite an easy hit to take that role out of director and to give it to someone else but I think the Directorates have recognised and corporately we’ve recognised those posts are key to driving that Agenda. So, and those posts sit within the top management team of the directorate so you know I think, the priority is there. Director Clinical Governance
Senior leadership was seen to take operational control for patient safety initiatives. This is illustrated in the following comment from a Chief Executive:

In the last financial year we’ve just finished I took a lead personally on effective control issues because our MRSA rates were drifting up too high and weren’t on target and I was getting a lot of grief and, you know, and the whole subsidiaries and so I sort of gave myself executive leadership of that. Chief Executive

Despite the emerging priority given to patient safety, many interviewees in these Trusts identified tensions with a performance and target focused culture. Examples were given of how some targets created bottlenecks in patient processes, led to escalation of patient safety incidents and created ‘Cinderella’ services. Cinderella services were identified as those with few performance targets which influenced allocation of Trust resources (for example, services for older people).

Similarities also existed in Trusts C, D and F regarding attitudes to organisational change as they reported that the pace of organisational change was bewildering and destabilising and that consulting and communicating with staff the urgency and nature of the change process was a major issue.

Which is you try and keep people motivated and people find that very professional, in the main they do but it can be quite, you know disabling to the Trust when there is that level of change. Acting Director of Clinical Governance

Trusts D and F reported that Agenda for Change had been implemented well and that these Trusts had been successful in managing and consulting with staff to gain their ‘buy in’ to the change effort. In Trust D an example was given of the massive consultation exercise to design the service reconfiguration for a new hospital site and how the project management process used for implementing the Agenda for Change was good at ‘picking up anomalies’. In contrast, Trust C staff were critical of how the Agenda for Change was implemented and Trust F staff members reported that it was good at publicising success but less good at ‘handling negative results’ and creating urgency for change:

The CEO invites lots of participation and engagement, invites lots of questions. One of XXX standards is that if you’re asked a question you must always answer it even when the answer is not going to be popular. And that’s reflected in, you know, your right to be heard. Director of Human Resources

They do all the right things, I think; this is the senior management team. They signpost it early on, they give the message out that this is on the cards, it’s going to happen soon and this is when it’s going to happen. They start the consultation period; get the unions involved pretty early. They sent out messages through a newsletter, email and the pay slips. The signposting is very important, gives people a heads up. Head of Health and Safety

Organisational learning within Trusts C, D and F were also similar. It was reported that infection control out breaks in Trusts C and F had stimulated a high awareness of safety, made staff more accountable for their actions, gave staff confidence to question practices and led to the production of a range of communications aimed at transmitting awareness and knowledge.
of best practices. In Trust C these media included safety bulletins, safety alerts, reconstruction of events and a web-based patient safety forum. The reconstruction of patient safety severe incidents was reported as follows:

*I am going to do a couple of, a reconstruction of a critical patient safety incident, because I think bringing the patient into the Board Room actually, wheel them in there in a bed, you know the things that went wrong and what we did and safety solutions that we've implemented is the way to really try and engage some people who don’t have.* — Legal Affairs Officer

In Trust F, staff participation was encouraged in the ‘look back investigations’ (special investigative review of incidents by a range of staff including senior personnel) and ‘check lists’ were regularly used by staff. In Trust D, ‘table top investigations’ (again a mechanism for bringing a range of expertise together to analyse safety incidents) were described as an innovative technique where senior staff and those involved in the incident could analyse the incident causes and recommend solutions:

*We have table top reviews and we develop action plans and we spend a lot of time giving thought to those but I still feel there are a lot of lessons that we’re missing because we don’t have enough time to think it through.* — Head of Health and Safety

This was recognised as a highly effective method of mobilising problem solving and disseminating informal feedback to a wide range of staff. Effective feedback was acknowledged across all these ‘Adaptive’ Trusts as essential in promoting and reinforcing a good reporting culture. Electronic reporting had been instituted in Trust C and was shown to improve the level of incident reporting especially from doctors:

*I think so more now, I say at one time people weren’t reporting things but even ‘near misses’ now people are more inclined to report and I think because it is easier to fill them in online, the forms, that people do more readily do it.* — Head of Nursing

Trusts C and F were keenly focused on developing and analysing methods to improve patient safety processes. Senior doctors were also seen as extremely active in developing new practices to improve infection control and electronic reporting of incidents was seen as the next step. Risk managers perceived that ‘you have to make it easy for staff to do the right thing’ and the integration of clinical governance and risk reporting was perceived as developing a mindset of ‘closing the loop’. Examples of processes to support organisational learning are illustrated in the following comments:

*We have improved on it in recent months actually because we now get quarterly reports of our areas on our DATEX to see what’s going on. I get every DATEX sent through to me from all of my areas so that I can see that there might be an issue that at night I am having patients failing in bathrooms and those sort of things, so I will then communicate with my ward sisters “what’s going on? I am here”, “do we need to do this?”* — Acting Matron

*I think some things we do learn, I mean there’s, you know when, if there’s something that we tend to go away and then maybe do an Action Plan and say look we now need to do this, this and this. And then that is put into action. You know sometimes it takes a while if I am honest for these things to be put into place …. We had an issue a while back, so now the colour of the syringes have changed, so to ensure that if you were*
going to be giving it NG or orally, then you will give it with a certain colour syringe.

Matron

Attempts to measure levels of patient safety were seen as complex and difficult. Comparison of patient complaints against incidents raised by incident reporting was perceived as a litmus test for measuring the effectiveness of incident reporting and organisational learning from patient safety. An example of this is reflected in the comment below:

And there may be a number of reasons for that, but my constant litmus test if you like, does what we do or what we change make the difference in either reducing the severity of incidents or reducing, you know, the complaints? Risk Manager

Likewise, Risk Managers in these Trusts also suggested that comparisons were made of patient safety reported incidents with staff and other surveys. In Trust D they reported a corporate, proactive approach to patient safety which was facilitated by the transmission of patient safety learning:

We’ve recently done a retrospective, I wrote a report on red incidents. At the same time, we had a draft of the staff opinion survey, now if we’re to believe what people tell you or if you were to believe what people are going to tell you over the course of your work, then just looking at incidents. This is monthly, for all the people that are asked, 31 per cent of the people asked in 2006. Head of Health and Safety

We’ve got a good proactive Health and Safety Department which we learn from everything, I mean with any serious incident that we’ve had, the whole Trust has learnt from it, it is not just an individual Directorate or an individual Ward. Matron

But each Directorate at the moment within the Trust has got Risk Managers and they are closing that loop. I mean our Directorate is pretty good. She is sitting next to me, we share an office. But yes it is closing the loops and the wards are getting the feedback and they are passing it on in the ward meetings and things like that. And the feedback is given via like a business meeting or a head of department meeting as well, so we learn from each other as much as anything. Matron

Overall, Trusts C, D and F reflected that they were beginning to use data, becoming more analytical and aiming to ‘close the loop’; and were starting to access and transmit organisational learning. These three Trusts appeared to be accessing external networks to gain knowledge of best practices to promote patient safety. Some examples of how these Trusts attempted to access external resources and transmit learning are illustrated in the following comments:

Our track record, clearly I’m seeing it from a position where I want to say, I think it’s particularly good. We were probably front runners in taking and investigating incidents formally, front runners as far as that was concerned. We came up with the methodology and we came up with a grading grid before the NPSA had come out with their grading grid. We used obviously information probably, the Australia New Zealand standard so we graded them and really our grading was around who was going to manage that particular incident. Deputy Director of Nursing

I say we have a very good reporting culture, so incidents certainly are being reported and we’ve identified trends and we’ve gone in and we’ve looked at where they are in a very supportive kind of way... where we are not good and we need to improve, is near miss reporting. And I know that’s across the NHS, people aren’t very good, because
they don’t think that could have been something, so near miss reporting isn’t that good.

**Director of Governance**

These Trusts, through their in-depth analysis of patient safety incidents, also identified an extensive range of inhibitors to patient safety which related to: difficulties in translating information to ‘other worlds’, or communicating across professional domains; how high volumes of incident reporting limit learning and feedback; challenges in arranging investigations in a timely manner; failures in identifying near miss incidents due to workload and time constraints; and failures of directorates to share good practice across Trusts. This intensive focus on analysis and problem solving is illustrated by the following comments from staff, showing the emphasis on ‘improving’ and shifting or adapting priorities toward patient safety:

"We are literally doing some work at the moment, in fact we are meeting about it at lunchtime, and part of that, the problem that we have is that we think that patients potentially come into harm because of a lack of continuity ... very early on we had a real problem about issues around handover between teams. And we did quite a bit of work on that in a particular department and also in other, and did that, and we felt that that actually had been very positive. But actually the problem I think is shifting, is that the teams that we thought existed six or seven years ago, actually don’t really exist, you know there are, the teams have become much less defined. Clinical Director Surgery"

"I try where I can to role model good communication when something goes wrong and I’ll sit down with a complainant and their family. Often it’s a situation where people are dying or have died or where some really gross things have happened. Matron"

"They are constantly checking out the systems we use to make sure people know about things. And they are constantly bringing up well how do we close the loop, it’s a sort of mindset, you know, how do we learn. Head of Risk Management"

Accessing knowledge from external agencies was accepted as necessary in development of improved practice. In these three Trusts, examples were given of accessing risk analysis tools, developing links with the NPSA and through involvement with the King’s Fund research into patient safety and other agencies.

**Processes supporting patient safety and staff well-being**

Processes to support patient safety in Trusts C, D and F appeared to be highly developed. Analysis and reporting of patient safety incidents was considered good and linked to the design of new practices or improvements. Trust C had instituted electronic reporting and Trust F had developed processes whereby analysis of patient safety incidents and patient complaints took place at both directorate and corporate level. In Trust D, it was acknowledged that although nurses were active in risk assessing patients, improvements were needed in reporting of near misses and that patient safety incidents were often up-graded by the corporate risk management team. It appeared that it was sometimes difficult for nursing staff to assess the level of severity of an incident. The interviewees cited adoption of a range of tools to improve quality and an impression was given of active experimentation, problem-sensing and problem-solving through the use of Lean management tools. (Lean management methods are
derived from the industrial sector and have focussed on improving performance, quality and process efficiency, (Womack and Jones, 1996).

Trusts C, D and F also highlighted the roles of occupational support systems. Trust F demonstrated that they had focused on both understanding and reducing work place stress. Their research had linked workplace stress to staff harassment, bullying and poor communication between work colleagues. This had resulted in the development of a training programme to enable managers to recognise stress in their staff and then provide effective support. Selected quotes illustrate various initiatives across these three Trusts:

_If the issue that’s causing the absence is due to what we perceive as stress related issues there’s an immediate referral because we understand that the sooner those things get managed the more likely they are to be dealt with successfully. We have a rehabilitation policy which could be better but nonetheless it’s there. It has some inherent difficulties with it. So there’s an awful lot done to keep people at work._

_Director of Human Resources_

_We’re probably a bit better on employee health and safety type issues. I think we’ve got a slightly better developed system. They’ve got more infrastructure around it and I’d be a bit more comfortable about that._

_Chief Executive_

In summary, analysis of cultural attributes, broader contextual influences and organisational processes in Trusts C, D and F suggests that these Trusts were able to adapt in a timely way to environmental pressures and were able to develop processes and structures to support patient safety and staff well-being. Key elements in achieving this were Trust organisational capabilities to engage with staff to: consult, communicate, and mobilise organisational learning and awareness of patient safety. Communication was mobilised through the use of diverse communication channels, such as: team briefs (ward level); newsletters; internet forums; posters; staff forums, core brief and staff induction.

**‘In Recovery’ Trusts (Trusts B and G)**

Trusts B and G are characterised as in ‘In Recovery’ and just starting to cope with patient safety and performance priorities. These Trusts were reported as focusing on performance target priorities and experiencing severe external ‘shocks’ associated with financial performance. Trusts B and G were described as having fairly recent and serious disputes with their PCTs, and/or experiencing reconfiguration of PCTs which had resulted in having to reduce Trust services and incur large staff reductions. Trust G had also experienced a combination of challenges regarding poor infection control performance, poor standardised mortality ratings and a major financial deficit. This led to the replacement of the Chief Executive and senior management team. The following examples reflect the complementary environmental ‘shocks’ experienced by these Trusts:

_I know that they (PCT) were very, very poor indeed over the past few years and it is now starting some significant bridges now being built and I have a feeling that that’s what the person who has been appointed for marketing must be spending a lot of time doing._

_Risk Manager_
[We] Are a bit in limbo because they [PCTs] have now been amalgamated. **Risk Manager**

And we have simply been undermined by the difficulty of the PCT. **Director of Finance and Performance.**

And one of the big challenges will be in the short term as saying that nobody really believes that work will reduce by ten percent. We now have a plan on the table and doing it is going to get a reaction yes, that is just natural but its going to have go happen quickly we are going to have to lance it quickly and then live with it in the short term. **Director Finance and Performance**

Across these two Trusts, staff perceptions of patient safety indicated that they were feeling disillusioned, ‘numbed to safety’, ‘lip service was paid to patient safety’, a ‘blame culture’ existed, medical staff were ‘risk averse’ and that patient safety was not recognised as an explicit strategy. There was a strong sense of the force of ‘legacy issues’ of past poor performance and of staff inertia around patient safety:

I think they are very much a perception within the organisation that there has been a very strong ‘blame culture’ throughout the organisation, primarily because in, I think it was about 200X we had an inspection by the Health and Safety Executive where the Trust was served with Improvement Notices. **Risk Manager**

Frequently they don’t get feedback on what action has been taken, if any, as a result of any incident they’ve reported and I suppose again staffing becomes one of those chronic issues that they keep reporting and they keep reporting but nothing ever seems to change, so staffing levels are not improved, so then it gets to be learnt doesn’t it, why bother reporting and taking that if nothing ever changes. **Risk Manager**

I mean we are very culturally numbed to the safety issue and we are deeply tolerant of failures in safety that should not be tolerable. And I have reached the stage where I can see them and I am working hard to change myself and to help others to change but we still don’t care enough about safety. **Chief Executive**

I think our conservatism; I think we are a bit conservative. I think we have become better but we were always, we have been and to a certain extent the culture of the organisation is risk averse. **Director of Nursing**

In Trust G, it was noted that focus on patient safety was rising, coupled with quality interventions such as ‘Lean Thinking Management Practices’.

However, for many interviewees, the priority of resolving Trust G’s financial problems was considered to be the overriding Trust priority:

The driving force has been the traditional, let’s get our money sorted out, how we manage it and that’s our focus. It is now, the driving force is becoming patient safety so when we are looking at our cost management strategies for five years, actually I’d have said patient safety as a core to the service hasn’t been the driving force, what we are looking at is failure and actually saying, if we move patient safety to the core and do the right thing right first time, actually we will improve the outcome and the experience for the patient and manage our money very effectively. So that’s the fundamental shift that we’re going through now. **Chief Executive**

The focus very much was around targets and finance etc but we have seen a very big change in that with the new Trust Board around patient safety and quality, still obviously importance on targets and achievements but at the same time quality is an equal factor in that and safety, and there’s a much more robustness now around I think investigations, around standardising outcomes or being clear about our
expectations throughout the team, cascade it through the organisation of what the expectations are. **Deputy Director of Nursing**

We don’t, you know we haven’t got a strategy, we haven’t got, we haven’t identified I am going to use the word strategic not because it sits with me in terms of my strategy hat. **Business Development Manager**

A Clinical Risk Co-ordinator captures the way in which patient safety is balanced within a portfolio of other issues:

*I think it up to a certain level there is a lot of commitment, I think beyond that, I think there is a glass ceiling whereby, above which patient safety is seen as a part of a portfolio of issues have to be addressed and I suppose, if you wanted to be fair about it you would have to balance all these issues.* **Clinical Risk Co-ordinator**

Staff well-being within both these Trusts was described using the following terms: ‘poor morale’, ‘stressed’ and ‘anxious’, ‘uncertain of their future job security’, ‘pressured and overworked’ and ‘unhappy with implementation of Agenda for Change’. Similarly, displacement of staff to unfamiliar roles and wards made them anxious and stressed as they lacked confidence and control in performance of these new roles. Low levels of staff morale are typified in the following reflections from Trust staff:

*The biggest battle that myself and the Matrons fight on a daily basis is around nurses becoming very tired and finding that very stressful. Elderly has always been, and my clinical background a lot of it is within elderly services, it’s always been a Cinderella service.* **Directorate Manager**

*It’s pretty low (morale) with the Agenda for Change, you must have heard of the Agenda for Change. Me personally I feel quite undervalued because I have been on pay grade X now for five years so my job was graded lower.* **Director of Operations**

*I think it’s toxic and that’s why I don’t take a permanent job with the NHS usually, I just do short term contacts or I do tender for stuff and then in and out and you don’t have to make political relationships with people. If you don’t like them you don’t have to go back.* **Patient Safety Officer**

Problems for staff in gaining access to training were also reported as preventing them from developing their skills. Yet, despite many staff expressing extreme dissatisfaction, nursing staff from both Trusts identified how cohesive, supportive, longstanding relationships within teams of clinical staff and staff goodwill often mitigated stresses and pressures. The role of collegiality and peer support was captured thus:

*And I think staff morale is generally okay if you judge it by how people behave rather than what they say. Okay, so if you went round and said how was morale, they would say it was crap but the fact that they actually still go the extra mile and do the additional shift and stop over at the end of the shift and look after each other tends to suggest to me that morale is okay actually.* **Director of Nursing**

Cultural influences on staff well-being and patient safety

Cultural characteristics covered norms concerning Trust leadership, relationships, priorities, attitudes to organisational change and organisational learning. Trust B and Trust G both experienced a high turnover in Chief Executives. The new Chief Executives in both Trusts were perceived by interviewees as: respected; flexible; approachable; engaging well with all levels of staff; and possessing strong competencies in
communicating with staff. In contrast, both senior management teams were reported to have shortcomings. In Trust G the senior team was newly formed and although it was conceded that the team was highly experienced and skilled, staff also expressed that the senior team had still to win staff trust. The Trust B senior team was perceived as comprising both new and longstanding members and many staff were critical of the senior team as it was viewed as non-cohesive, dysfunctional and tolerant of ‘bad behaviours’. A small faction was perceived as directing decision making and it was reported that difficulties arose in their ability to translate policy into operational strategy. Clinical relationships in both Trusts were described as longstanding and supportive and providing continuity.

Well culturally [place] is a fairly warm and open community. So it has got good people and generally enjoys good working relationship. It’s a good size for that, so it’s not too small but our viability is not so big that you can’t know people as individuals. **Chief Executive**

Strong medical and consultant power bases existed that historically had clashed with management. (However, Trust B interviewees reported that this power base was starting to erode and senior nurses and Matrons were taking a stronger leadership role).

*Nursing is strong but not really been recognised, so very kind of medically led, very, a lot of power held in the consultant base, but I think in some ways there are some difficulties for the organisation because when you talk to individual clinicians they don’t feel that they have that power and for me that always spells a bit of danger for an organisation where a group of staff might be perceived as being quite powerful.**

**Directorate Manager**

The professional groups tend to operate in silos even when you work them through corporate teams and we have executive leads on each. There still is, oh well, that’s the nursing side or that’s the medical side or that’s management or something like that I see it, a club or a group and they’ll do their own things. I mean this is tribal isn’t it?

**Internal Auditor**

Junior doctors were also described as embracing a team orientated approach. However, junior nurses in both Trust B and G reported that they could feel intimidated by medical staff and sometimes found it difficult to engage in and question decision making. A ‘blame culture’ was identified as limiting staff engagement in incident reporting and organisational learning. Trust B staff referred to ‘a culture of secrecy’ within the clinical directorates and Trust G staff reported that the clinical directorates controlled risk analysis and failed to share learning from patient safety incidents across the Trust. An example of this viewpoint is indicated as follows:

*I think if people had more knowledge of what happens in their own Trust, in their own areas, I think that would probably. Yes, more information and knowledge about what happens and as I say we do the quarterly report but I don’t know how, people get very twitchy about people knowing about things that have happened and I am not quite sure why really.**

**Manager for Legal Services**

The massive uncertainty, disruption and cumulative changes experienced by Trust G were described as creating a ‘loss of corporate memory’. It was also felt that greater attention needed to be given to incident reporting, robust analysis and consultation with patients to identify patient safety
short comings. Analysis of the data also indicated that the levels of change and financial challenge had led both Trusts to prioritise achievement of performance targets and financial targets over and above patient safety priorities. Examples of this included reported failures to address risks placed on its risk register; a directorate manager’s failure to meet deadlines for risk reporting; and the overall Trust leadership being unable to tackle staffing shortages which were repeatedly reported as patient safety incidents. Attitudes to organisational change were described in both Trusts as: ‘closed’; ‘apathetic’; ‘resistant’; ‘conservative’; and having a parochial attitude to change which was coloured by the conservative character and culture of the Trusts’ locale. This is indicated in the following interview extracts:

*There are and I think areas where you are concerned about the relatively bunker ethos. Well I think the Emergency Department is one but the view that we have to be open all the time, patients present here, this is the level of staffing we must have, and this is the way we deal with things. It is fairly entrenched and it becomes a self-fulfilled in prophecy when I take that view and don’t integrate or explore as much as they might.*  

*Medical Director*

*I think [Trust B] is insular and it’s negative. I have worked here a long time.*  

*Lead Patient Safety and Public Involvement*

*It has the ability to suck you in and I have to also be careful as well myself because I kind of, I want to keep my kind of independent thinking.*  

*Directorate Manager*

Trust B was widely perceived, by many interviewees, to have a top down approach to managing change which had generated massive dissatisfaction and considerable ‘trauma’ in the implementation of the Agenda for Change. In Trust G it was acknowledged that staff were overwhelmed by change but it was felt that the adoption of ‘Lean management tools’ were enabling the Trust to build its confidence in managing change.

**Processes to support patient safety and staff well-being**

Trust B reported that vacancy control measures were in operation and that establishment levels for ward staff were lacking and needed revision, as ward capacity, length of patient stay and workloads had substantially changed. Little mention was made of occupational support processes although it was acknowledged that levels of work pressure and incidents of bullying and abuse of staff had increased (including incidents involving other staff and /or patients).

Within Trust G training and development was considered difficult to access and security of staff within the hospital sites were considered inadequate. In Trust G patient safety initiatives were viewed as a major transformational change which encompassed a wide range of initiatives which were perceived as ‘feeding a monster’. In Trust B the clinical directorates dominated control of incident reporting, analysis, investigation and feedback. Systems were viewed as convoluted and lacking rigour as incidents were often perceived as incorrectly graded in terms of severity.
Analysis of Trusts B and G demonstrates that severe environmental ‘shocks’ and challenges have affected these Trusts and that the cultural attributes and processes of each Trust have hampered their rapid recovery. Leadership in both Trusts is perceived as distrusted which has affected staff participation in patient safety initiatives. Many staff appeared unsettled, fearful and overwhelmed by change and relationships between directorates and the Trust leadership are characterised as ‘closed’ and unwilling to share learning. New Trust leaders were beginning to stimulate cultural change in both Trusts: however, this was proving difficult, due to historic low staff morale and the legacy of past management failures. Low levels of staff well-being were described as affecting patient safety, because some staff members were said to be apathetic and de-motivated. Feedback from incident reporting was viewed as flawed or limited; and this weakness in systems also affected staff awareness of, or confidence in, initiatives for patient safety. The accounts draw attention to how leadership in both Trusts has taken remedial action and prioritised major financial problems. Senior leadership themselves accepted that they had been distracted from attending to patient safety issues and now felt that they were actively refocusing on and becoming engaged with targeting strategies aimed at improving patient safety. This is why we use the term ‘In Recovery’ for these Trusts. Cultural change was being driven in Trust G as nursing staff were taking on leadership roles and were becoming more active in reporting incidents. Likewise a more collaborative team working culture was also developing and the new senior team was bedding down.

‘Conservative and Passive’ Trust (Trust E)

Trust E failed to fit neatly into the aforementioned core categories and is characterised as ‘Conservative’ and ‘Passive’. It exhibited both positive and negative cultural attributes which were viewed as both supportive and yet imposing some barriers to patient safety and staff well-being performance outcomes. This Trust had been forced to reduce its commissioned services and had experienced some external ‘shocks’. It had also consistently performed well both for patient safety outcomes and financial performance. Trust staff were proud of their high performance as they viewed themselves as much ‘safer’ than other Trusts, by this they implied they had higher performance in terms of patient safety. However, staff well-being was described as: ‘pressured’, ‘challenged’ and ‘stressed’. The following comment attributed generically, to preserve respondent/Trust anonymity illustrates this:

We were at loggerheads with the PCT and it nearly went to arbitration, all this kind of stuff, so the relationship’s not been good it’s supposed to be getting better but it’s been dismal by all accounts. I’ve really not been involved in last year but I’m sure as you maybe know from other interviews, the contract still isn’t signed from last year.

Member of the Senior Management Team
Cultural attributes affecting patient safety and staff well-being.

Trust relationships were positively characterised as longstanding, high-trust, as ‘committed’, with strong community affiliations and exhibiting strong clinical involvement in management:

_I think overall, it’s a very, very dedicated hospital, staff whether they’re clinicians, consultants, they’re very dedicated indeed and that’s partly due to the position that [place] hospital has within the community which other people might refer to. I’m a complete outsider, I live in leafy [place 30 miles distant] and travel here every day but [place] hospital is significant in terms of the number of people who are employed here and the number of families who are employed and the whole thing from the birth, the childhood illnesses, to death going on here._ **Manager**

We are taking people out of the clinical area to do management jobs – but we have got rid of a lot of managers – so we are just creating mini-managers underneath. We need a strong Executive who’s prepared to challenge the order of things and not be frightened to say to a consultant well I ‘m sorry but you are not going to charge me three times as much as anyone else to do this job. **Manager**

As in other Trusts these relationships provided a means whereby the Trust could buffer stress and organisational turbulence: for example, staffing limitations and pressure. However Trust leadership was characterised by many interviewees as bureaucratic and remote, as slow in reaching decisions, which limited the capability of the Trust to respond effectively and rapidly to environmental pressures. The Trust was also awaiting replacement/appointment of its CEO. These characteristics of Trust E relationships were described as follows:

_I believe our senior management team and our board are far, far, removed from what is really happening out there on the ground and we have to find a way of reengaging with them. Decision making is appallingly slow; I’m amazed regularly at how slow it is._ **Manager**

Attention was also drawn by a number of interviewees to the confusion of clear goals. Senior leaders were perceived as ‘trying to move forward on too many fronts’; and as good at drawing up plans but weak on action or implementation of organisational strategy. One nurse manager reflects on this:

_It feels very difficult to do anything on a planned, systematic type process to actually move an agenda forward so you move things forward by dealt of, something’s happened, that’s the lever for moving that and that’s perfectly legitimate, but I think you also need some ability to actually have a plan. it feels like we’re scatter gunned so we end up trying to deal with and move on too many fronts and therefore something comes through and hits you and react to it, and I’m absolutely clear, this is normal in lots of way._ **Senior Nurse**

The loss of the Trust CEO had also had an impact on the Trust’s direction:

_I think we’re in a bit of a hiatus at the moment because obviously we’re without a Chief Executive and so there’s a sense of the uncertainty and obviously you all have your own individual leadership style but you have the corporate leadership style, which has to dovetail with your Chief Exec, so I think we probably feel a little bit like we’re in limbo._ **Senior Nurse**
Directorates added to this lack of cohesion as they were described as working in 'silos' and communication across the Trust was reported as poorly cascaded:

We’ve got the hospital divided into clinical management teams of variable size and variable efficiency, of variable function levels, I think various levels of concern about governance and how we deal with it. We need a system that’s much more global and we need to give people enough time to be able to do these things that we want done. **Clinician**

Organisational learning appeared to be well supported and a formal Trust strategy for training was developed. Staff perceived that training was relatively easy to access:

*I think we’re very good, I mean, there’s no restriction on training and development but what we have developed and again, this is going live on the 1st April 'cause this has taken some pulling together. We’ve developed a corporate training strategy so what that is that when you think of all the statutory and mandatory training that staff need in this organisation, we’ve built that into a, I suppose a programme. Senior Manager*

Similarly a positive ‘fair blame’ culture was perceived to exist which supported incident reporting however, poor feedback and poor staff communication hampered the transmission of organisational learning. Most staff also reported that the Trust was a ‘resource led organisation’ which prioritised and focused on the achievement of performance targets and that patient safety was low on the agenda. For many it was perceived that this performance focus potentially compromised patient safety.

*It is a fundamentally resource- led organisation, profit-led organisation, it doesn’t run on thinking about patient care first and how do we make the resources stack up for that. It’s these are the resources that we’ve got, how can we make patient care fit into that? Senior Nurse*

Attitudes to organisational change also reflected a beleaguered and reactive ‘fire fighting’ organisational culture which was interested in maintaining continuity rather than innovation.

**Processes enabling patient safety and staff well-being**

Supportive occupational health processes were reported and there was evidence of increased involvement in incident reporting, especially by doctors. However, nurses were described as scared of the consequences of ‘not reporting’. A climate of pressure, blame and fear was said to exist and incident reporting was not used in the spirit of learning and improvement. One clinician explains this:

*I think it’s really interesting because we do stacks around feedback but it just doesn’t seem to hit the mark a lot of the time, ...I think the nursing staff, they’re more scared of the consequences of not reporting than the consequences of reporting, I think that’s perhaps the difference. Clinician*
Analysis of Trust E demonstrated that strong, supportive, longstanding relationships existed within this Trust, especially amongst front-line staff, which mitigated low staff morale. However many staff members appeared generally disengaged with organisational learning. They were instead focused on achieving financial and performance target priorities and on reactive, defensive, incident reporting.

2.4.6 Discussion

The analysis identifies that a range of contextual factors influence patient safety and staff well-being. This follows the assumptions put forward in ‘The Receptive Contexts for Change Theory’ (Pettigrew et al., 1992) which highlights eight factors which accompany and drive organisational change receptivity. These comprise organisational cultural properties, the existence of supportive organisational processes and structures and also accounts for the influence of external environmental factors. The following Table 2.7 provides comparative analysis of the ‘change receptive factors’ found in each of the eight Trusts in the study.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Trusts A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long term environmental pressure</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Quality and coherence of policy</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Managerial and clinical involvement</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Co-operative intra-organisational networks</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Simplicity and clarity of goals</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Key people leading change</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Change agenda and locale convergence</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive organisational culture</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Positive self Image</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Flexible working</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Purposive designed structures</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Role models</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Non-representative modes of working and a focus on skill rather than rank or status</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>An open risk taking approach / enterprising</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Openness to research and evaluation</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>A strong value base</td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Analysis of the ‘Resilient’ Trusts (Trusts A and H) demonstrated that they possessed the highest number of ‘change receptive’ factors which also may link to their relatively high performance for patient safety and staff well-being indicated in performance ratings of each Trust referred to in Section 1 and Trust perceptions reported in this analysis.

The organisational cultures within Trusts A and H were perceived as ‘consultative, participative, democratic’ and encouraging of staff engagement. This confirms existing theory that some cultural attributes may link to higher levels of performance (Scott et al., 2003a; Kotter and Hesketh, 1992). Leadership in both Trusts was also reported as highly
stable as turnover of the senior management team and the Chief Executives were perceived as low. We suggest that this stability generated predictability of behaviours, high trust and effective relationships. Drawing from the documentary data both Trusts had been exposed to some environmental pressure as Trust H had experienced a merger and Trust A had experienced a re-configuration of its PCTs. However, Trust staff failed to emphasise these environmental issues during their interviews which indicated that the leadership had managed to buffer or manage the major negative effects of such environmental pressures.

Chief Executive leadership styles were also characterised as an ‘odd’ mixture of democratic and directive styles and reflected elements of both transactional and transformational leadership styles (Bass and Avolio, 1995), which have been linked to higher levels of performance (Mannion et al., 2004; Schein, 1995). Trusts A and H also reflected a mix of the Clan and Group cultures put forward by Cameron and Quinn (1999) and Cameron and Freeman (1991).

The findings suggested that the receptiveness of these Trusts to change was linked to organisational capabilities which support innovation and knowledge management (Greehalgh et al., 2004). Trust A and H possessed complex, efficient and integrated support processes covering clinical governance, risk management and complaints analysis. Likewise diffusion knowledge and organisational learning across these Trusts was facilitated by open, multi-level communication and feedback channels, staff participation in decision making and incident reporting, good quality relationships, leadership support and good clinical and managerial relationships. This confirms the proposition forwarded by Dopson et al., (2002) that links communication, training and participation to improved performance.

Analysis of Trusts C, D and F - the ‘Adaptive Trusts’ - demonstrates how strong environmental pressures stimulated the Trust leadership to become operationally involved in patient safety and infection control strategy. As a consequence, innovative strategies were developed to analyse, investigate incidents and transmit best practice across the Trusts. This confirms the links posited between innovation and extreme environmental pressures (Greehalgh et al., 2004) and major environmental pressures on radical change (Pettigrew et al., 1992). Trusts C, D and F also exhibited transformational behaviours such as involvement in team briefs and ‘walkarounds’ (Frankel et al., 2003). Cultural norms indicated a shared and increasing priority for patient safety and an emphasis on organisational learning (Kennedy, 2001). Thus these Trusts were able to learn from errors (Weignam et al., 2002) and effectively cascade learning via innovative practices such as ‘table top’ investigations. These ‘Adaptive Trusts’ also demonstrated attributes of the ‘Adhocracy culture’ due to their innovative practices to improve patient safety but also they also reflected attributes such as participation, cohesion more related to a ‘Clan culture’. Thus they reflect a hybrid ‘Clan’ / ‘Adhocracy’ culture (Cameron and Quinn, 1999; Cameron and Freeman, 1991).
Trusts B and G, ('In Recovery'), experienced major environmental pressure and confirm the proposition put forward by Pettigrew et al., (1992) that such extreme pressures can severely distract Trust leadership and limit their ability to respond to problems and change. Likewise, distrust between clinicians and senior management resulted in limited staff engagement in incident reporting. Similarly, environmental ‘shocks’ arising from reconfiguration of PCT services (Trust B) and severe financial and infection control problems (Trust G) resulted in poor staff morale and affected their engagement in reporting patient safety incidents. This influenced poor performance of patient safety as some staff were regarded as ‘tolerant of errors’ and ‘risk averse’. Likewise, low perceived priority for patient safety also links to low performance outcomes for patient safety (Kennedy et al., 2001).

Leadership was also perceived as failing to operationalise policy as the Trusts were overwhelmed by externally imposed change and staff members were busy, dissatisfied and unable to access training which would have improved their competency and awareness of patient safety. Failure to access training also appeared to link to reduced awareness of patient safety breaches and to limit performance with regard to patient safety. This confirms established links between performance and training (West et al., 2002; 2003). Trusts ‘In Recovery’ reflected the ‘Hierarchy culture’ derived from the ‘Competing Values Frameworks Model’ (Cameron and Freeman, 1993), which is characterised by bureaucratic administrative structures. Trust Chief Executive leadership styles reflected transformational styles (Bass and Avolio, 1995) of behaviour as the Chief Executives were active in communicating and visibly engaging with Trust staff. Relationships within the Trust reflected strong demarcations and a strong medical power base.

The ‘Conservative and Passive’ Trust also reflected the ‘Hierarchy culture model’ (Cameron and Freeman, 1993) as the Trusts focused on performance priorities and achievement of government targets. The high level of stability of this Trust reflects the enduring and consistent performance culture which was perceived to be resistant to change. This characterises the ‘safe culture’ posited by Wiegmann et al., (2002). Strong longstanding relationships provided a buffer for stress and pressure. This Trust was also viewed as bureaucratic and slow in decision making which further substantiates the preference for continuity over innovation and change. It was demonstrated that this Trust was overwhelmed by change on all fronts and was seen to be unable to clarify goals and translate policy into operational strategy, a prerequisite for receptivity to change forwarded in the ‘Receptive Contexts for Change Theory’ (Pettigrew et al., 1992). This preference for continuity over innovation and change was also reflected in its failure to develop new practices and effectively transmit knowledge across the Trust (Greehalgh et al., 2004).
This analysis identifies a range of factors which support high performance for patient safety. These factors can be grouped into supportive cultural factors, leadership factors, expertise, and processes. Cultural factors relate to relationships which encourage collaboration and engagement at all levels of the organisation and which are mobilised by behaviours which encourage staff to question, and senior staff to develop ‘permission behaviours’ which encourage dialogue with junior staff. The data indicated that open communication and ‘fair blame’ should also be demonstrated visibly to staff and priority given to patient safety, learning and development and staff well-being. Clear accountabilities and goals should be articulated. Thus it is important to use signalling behaviours to foster awareness of safety. Team working and collaboration to identify and meet common goals should also be an organisational norm. A gradualist approach to organisational change was also reflected as full scale cultural transformation in a short time was not realistic and the organisational cultural changes related to patient safety could only be adjusted by adopting a range of micro but complementary strategies. Insights from the comparative cases also suggest that Trust leadership which adopts a hybrid transformational/transactional style may be desirable; and devolution of leadership to all levels appears to encourage participation in decision making. Leadership transformational behaviours which galvanise Trust staff also appear important in signalling patient safety and staff well-being priorities. Use of role models in championing patient safety and staff well-being, such as senior clinical and management staff, were all found to signal to the organisation key organisational values and norms which are viewed as desirable.

Change agents, such as Matrons, also play an important part in making sense of patient safety problems, and identify these problems to senior management. They also mobilise resources, design solutions and operationalise them within their Trusts. In this way Matrons possessed absorptive capacity (Cohen and Levanthal, 1990) to make sense of patient safety problems, mobilise problem solving and then give sense or translate solutions effectively back to staff. They operated as ‘sense makers’ and ‘sense givers’ (Weick and Quinn, 1999), ‘boundary spanners’ (Balogun et al., 2005), and key communicators, advocates and architects of patient safety strategy. Organisational processes were also seen to support staff engagement and improve performance for patient safety and staff well-being. These processes included: integration and standardisation of clinical governance, incident reporting, risk management and complaints procedures.

Emphasis was drawn to the importance of the involvement of staff at all levels in analysis of patient safety incidents and the use of ‘table top’ investigations which included senior clinical and management staff, as well as those involved in the incident. This focuses on formal discussion and analysis of the incidents and then requires that participants’ feedback informally to their colleagues and subordinates. Our analysis suggested that
a formal explicit strategy for patient safety also highlighted priorities for patient safety as a coherent strategy, encompassing clinical governance, risk management, infection control, complaints management and risk reporting. Diverse and targeted communications methods were also valued, where information was imparted in a succinct manner to the appropriate staff. Such communications channels also needed to facilitate two way communications, so as to transmit knowledge and learning. Staff team briefs, internet e-mail, training, induction, posters, newsletters and internet blogs and bulletin boards all served to transmit information through varied channels.

In developing contexts that encourage engagement and collaboration between staff and patients, the cross-case analysis suggests that high morale and staff satisfaction encourage staff engagement, communication and awareness, fostering improved knowledge sharing and awareness of safety. In contrast, high levels of stress were frequently linked to staff displacement, poor skill mixes and limited access to training which impacted negatively on staff awareness and engagement in safety practices.

Practical implications of this study include the design of a management tool to aid senior management in the evaluation of the Trust internal and external environment. This framework identifies the key factors for assessment of their Trust environment. It includes assessment criteria related to both the external pressures and the internal factors linked to desired cultural attributes, practices and processes to support patient safety and staff well-being. Key to this is the promotion of staff engagement in learning and decision-making. Figure 2.4 identifies the parameters of this proposed framework. In identifying the limited consensus concerning interpretations of what patient safety means to Trust staff the study also highlights how practical policies need to be developed to achieve common understanding. We suggest that a key element in this is the development of an explicit and communicated patient safety strategy which integrates incident reporting: risk management; clinical governance; complaints analysis and patient consultation.

This study extends theoretical understanding of the barriers to patient safety and establishes links to staff well-being. Attention was drawn to how severe environmental pressures can affect and threaten patient safety and staff well-being outcomes. It emphasises how organisational cultural attributes and stability of Trust staff tenure can mitigate these problems especially when supported by a collaborative culture focused on innovation and learning. Stability without these positive attributes was seen to have a negative effect on patient safety and staff well-being outcomes. Figure 2.5 is a further summary of the characteristics of the Trust types and demonstrates the consistent messages inherent in the data. Two dominant dimensions are related to level of organisational stability (i) presence and magnitude of environmental shocks and stability of tenure of senior personnel; staff and staff engagement; (ii) cultural attributes supportive of engagement (e.g. team working; high trust relationship. (See Figure 2.5 for
a graphical representation of how different cultures link to environmental stability.)

Future research opportunities include the further examination of the relationships identified in this study, with regard to environmental pressures and Trust cultures and organisational capabilities to support improved patient safety and staff well-being outcomes. In Section 5, some emergent issues triggered by this data are interrogated within the NHS National Staff Survey.

It is accepted that this strand has some limitations (also see Section 6). The total number of acute Trusts was small and it only captured staff perceptions of patient safety and staff well-being, and not those of patients. An attempt to mitigate this was undertaken by interviewing representatives tasked with patient advice and liaison services.
Figure 2.4  Assessment framework to assess environmental pressures, cultural attributes and organisational capabilities

**Processes**
- Integration of clinical governance, risk management, complaints processes and patient liaison
- Multiple types of targeted communication
- Supportive occupational health processes
- Explicit strategy for patient safety and staff well-being
- Timely incident investigation
- Simplification of reporting systems
- Appropriate and timely feedback
- Violence and abuse reported to
- Senior executive team
- Training accessible
- Training provided in local setting to support dispersed/devolved leadership

**Cultural Attributes and behaviours**
- Relationships – Good clinical management involvement, high trust relationships, team working.
- Strong corporate and directorate collaboration
- Attitudes to change – open, innovative, proactive
- Organisational Learning – questioning behaviour
- Priority for training and development
- Fair blame culture
- Open communication
- Permission behaviours, participation in analysis and investigations
- Priority for safety
- Emphasis on problem solving
- Emphasis on experimentation
- Focus on risk awareness and ‘Doing it right first time’

**Leadership**
- Mix of transactional and transformational styles
- Consensual, participative and clear communication of goals and accountabilities
- Dispersed/devolved leadership
- Champions
- Role models
- Importance of boundary spanners/sense makers and sense givers
- Operational involvement in patient safety and staff ‘well-being’

**Environmental Shocks:**
- **Internal Shocks:**
  - Hospital Acquired Infection outbreaks
  - Loss of CEO
  - Instability in the senior executive team
  - Financial Deficit
  - Reduction in Services
  - Training of doctors
- **External Shocks:**
  - PCT deficit
  - PCT reconfiguration
  - Failure of PFI initiatives
  - Changes in Government Policy
  - Impacts of shifting the boundaries of care
  - Local population demographics
Figure 2.5 The distribution of Trusts according to magnitude of environmental pressure and staff engagement

- **Resilient Trusts A and H**
  - **Cultural attributes:**
    - Good relationships embrace change
    - Clinical involvement, learning culture
  - **Leadership:** Directive/Consensual
  - **Processes:** Highly developed
  - **Staff well-being:** High performance
  - **Patient safety:** High performance

- **Adaptive Trusts C, D and F**
  - **Cultural attributes:**
    - Good relationships, embraces change
    - Clinical involvement, learning culture
  - **Leadership:** Consensual, Democratic
  - **Processes:** Highly developed and improving
  - **Staff well-being:** Low performance
  - **Patient Safety:** Improving performance

- **Conservative/Passive Trust E**
  - **Cultural attributes:**
    - Closed, not open to change, Performance focused, community affiliation, strong relationships
  - **Leadership:** Bureaucratic and remote
  - **Processes:** Slow, blame culture exists
  - **Staff well-being:** Negative perceptions
  - **Patient safety:** High performance, Positive perception

- **In Recovery Trusts B and G**
  - **Cultural attributes:** Performance priority, clinical relationships strong, Leadership not cohesive
  - **Leadership:** Transformational
  - **Processes:** Reporting improving, blame culture, adoption of 'lean thinking'
  - **Staff well-being:** Low performance, negative perceptions
  - **Patient safety:** Low performance

---

Cultural attributes:
- **Good relationships**
  - Embraces change
- **Clinical involvement, learning culture**
- **Leadership:** Directive/Consensual
- **Processes:** Highly developed
- **Staff well-being:** High performance
- **Patient safety:** High performance

Cultural attributes:
- **Good relationships, embraces change**
- **Clinical involvement, learning culture**
- **Leadership:** Consensual, Democratic
- **Processes:** Highly developed and improving
- **Staff well-being:** Low performance
- **Patient Safety:** Improving performance

Cultural attributes:
- **Closed, not open to change, Performance focused, community affiliation, strong relationships**
- **Leadership:** Bureaucratic and remote
- **Processes:** Slow, blame culture exists
- **Staff well-being:** Negative perceptions
- **Patient safety:** High performance, Positive perception

Cultural attributes:
- **Performance priority, clinical relationships strong, Leadership not cohesive**
- **Leadership:** Transformational
- **Processes:** Reporting improving, blame culture, adoption of 'lean thinking'
- **Staff well-being:** Low performance, negative perceptions
- **Patient safety:** Low performance
Section 3  Leadership strand

3.1 Introduction

The aim of the Senior Managers’ Leadership strand within the SDO Safe Places project was to identify CEO leadership styles and managerial behaviours related to safety management performance indicators, in the eight acute NHS Trusts being studied. The research question for this strand is whether NHS Trusts where CEOs show a more transformational style and engage in recommended safety actions are in fact safer places for patients and staff (as measured by the NHS Staff Survey (Aston University) performance indicators). This section presents a summary of the background literature on senior managers’ leadership and safety, drawn from both industry and health care. This is followed by a description of the method for this strand (which involved both interviews and questionnaires), then a description of the results and their discussion. Senior managers are defined as CEOs and the executive board members who report to them. In health care, the senior managers would include the Medical and Nursing Directors, and Directors of other functions, e.g. Finance, HR, Estates.

3.2 Introduction and literature review

Health care in developed countries is now organisationally, clinically and technically complex and is delivering considerable benefit for patient diagnosis and treatment. However, there has been a slow but growing awareness, fuelled by high profile cases, that modern medicine should be regarded as a hazardous domain, with significant risks to patients, as well as to staff. In the UK, 10.8 percent of acute hospital patients were found to have suffered an adverse event (injury as a result of treatment, unrelated to the original condition) in retrospective case review (Vincent et al., 2001). Following the publication of these and other similar statistics in other countries (e.g. Baker et al., 2004), health care organisations were encouraged to learn from the safety methods employed by high risk industries (IOM, 1999; DoH, 2000a). In industrial settings, there has been an emerging realisation that senior executives play a critical role in the management of organisational safety (Flin, 2003). Before discussing senior leaders in health care, we examine what is known about senior managers and safety in industry.

3.2.1 Senior managers and safety in industry

Strategic level leaders are the most senior managers in an organisation, (e.g. CEOs, Vice Presidents, Executive Board members). Workers at the ‘sharp-end’ may think that because these leaders are removed from the day-to-day running of the facilities, that their influence on front-line operations is similarly diffuse. However, these senior leaders have a unique
role – they must set strategic goals and establish the value system in the organisation, provide resources to support operations and enable multi-professional teams to work together. While there are many investigations into their influence on financial success, productivity and innovation (Berson et al., 2008: Jung et al., 2008), there have been few studies examining their impact on organisational safety performance. But in recent years, regulators and lawyers have turned their attention to the top managers in public investigations of major industrial or transport accidents. Table 3.1 (from Reid et al., 2008) provides an illustration from a number of these reports.

**Table 3.1 Incident reports from industry - comments regarding senior management**

<table>
<thead>
<tr>
<th>Incident</th>
<th>Comment on senior management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Mile Island reactor explosion (USA)</td>
<td>‘We found serious managerial problems within the organization [NRC]. These problems start at the very top.’ (Kemeny, 1979)</td>
</tr>
<tr>
<td>Clapham Junction rail crash (UK)</td>
<td>‘Reliance on lateral management is bound to produce a lack of teeth in getting to grips with problems and getting them sorted out. Large schemes need firm, positive and sufficiently senior control in order that they are carried through properly, which means safely, efficiently and economically.’ (Hidden, 1989:161)</td>
</tr>
<tr>
<td>Herald of Free Enterprise sinking (UK)</td>
<td>‘But a full investigation into the circumstances of the disaster leads inexorably to the conclusion that the underlying or cardinal faults lay higher up in the company... From top to bottom the body corporate was infected with the disease of sloppiness.’ (Sheen, 1987: 14)</td>
</tr>
<tr>
<td>King’s Cross fire (UK)</td>
<td>‘There had been a collective failure from the most senior management level downwards over many years to minimise the outbreak of fire, and more importantly to foresee and to plan for an uncontrolled outbreak of fire at an underground station with a real potential for large-scale loss of life.’ (Fennell, 1988,: 230)</td>
</tr>
<tr>
<td>Piper Alpha fire (UK)</td>
<td>‘The quality of safety management by operators is fundamental to offshore safety. No amount of detailed regulations for safety improvements could make up for deficiencies in the way that safety is managed by operators.’ (Cullen, 1990: 301),</td>
</tr>
<tr>
<td>Ladbrooke Grove rail crash (UK)</td>
<td>‘The impression given by the evidence was that senior management were content to wait till proposals had been put up to them, and failed to give and maintain the lead in seeking solutions and ensuring a response.’ (Cullen, 2000: 3)</td>
</tr>
<tr>
<td>BP Texas City Refinery explosion (USA)</td>
<td>‘BP has not provided effective leadership on or established appropriate operational expectations regarding process safety performance at its U.S. refineries [and] the panel believes that the lack of effective leadership is systemic, touching all levels of BP’s corporate management having responsibility for BP’s U.S. refineries (Baker, 2007: 66).</td>
</tr>
</tbody>
</table>

The above comments reveal not only a legal spotlight on strategic-level managers but also suggest an underlying belief in a causal relationship between senior managers’ leadership and safety performance. The most
senior managers of an organization tend to be located away from operational activities; their responsibilities are at a strategic level, such as long range planning. However they are ultimately accountable for their organization’s safety performance, with increasing legal consequences in the UK for proven failure, for example, the new legislation in the Corporate Manslaughter and Corporate Homicide Act 2007 (Forlin, 2008; Forlin and Appleby, 2003). The higher individuals are in an organisation, the greater their potential to influence organisational outcomes. Decisions made at senior levels affect the priorities, attitudes and behaviours of managers and employees lower down the organisational hierarchy, and are a critical driver on the emphasis that first-line managers place on the competing values of safety and productivity. ‘Senior management commitment is crucial to a positive health and safety culture. It is best indicated by the proportion of resources (time, money, people) and support allocated to health and safety management and by the status given to health and safety’ (HSE, 1999: 46).

The nuclear industry advises that senior managers should frequently emphasise the importance of safety. ‘On a personal basis, managers at the most senior level should demonstrate their commitment by their attention to, and regular review of the processes that bear on nuclear safety, by taking direct interest in the more significant questions of nuclear safety or product quality as they arise, and by frequent citation of the importance of safety and quality in communications to staff’ (IAEA, 1997: 10).

While the safety regulators promote the value of senior management commitment to safety in reducing accidents, and case studies (e.g. Carroll and Hatakenaka, 2001; Hopkins, 2000) have often revealed senior mismanagement of safety, there is limited evidence to show exactly which behaviours are most effective. Senior managers have been described as a ‘neglected species’ in safety research (Flin, 2003) as they have been rarely studied, however accumulating research findings, underline the important influence that senior management have on safety performance. The evidence suggests that senior managers can demonstrate their commitment to safety by developing and providing resources for a comprehensive safety programme, showing concern for people, encouraging participatory styles in middle managers and supervisors, being clear and consistent in their support for safety, and displaying transformational leadership behaviours.

Senior managers’ prioritisation of safety against other business drivers is clearly important. A survey of 70 European chemical and petrochemical companies (Keller and Huwaishel, 1993) found that only 23 percent reported that top management placed safety as a first consideration against other managerial responsibilities. Surveys of senior managers in industry reveal that regulatory compliance is a primary concern (Ashby and Diacon, 1996), although workplace safety programmes are thought to improve productivity and lower cost (Huang et al., 2007).

Evidence from Canada suggests that in top performing firms, occupational health and safety are not viewed as separate functions but as an integral part of productivity, competitiveness and profitability. Safety and profit are therefore not incompatible goals but are seen in some companies as complementary, as they share similar drivers, and integration is the key
(Warrack and Sinah, 1999). In contrast, in the majority of companies, managers see themselves as having to balance the competing requirements of safety and productivity/profitability which means that ‘trade off’ decisions may be required (Dawson et al., 1998). This view is endorsed by major accident case studies which reveal that pressure to maintain production was implicated in the causation chain (Flin, 2001; Vaughan, 1996). If leaders do not value safety highly then they may tacitly encourage dangerous practices which contradict formal safety policies (Cutler and James, 1996; Nichols and Armstrong, 1973). In order to improve the standard of corporate responsibility for safety, it is necessary to raise the level of safety awareness of those who are in positions to give greater prominence to the place of safety on the corporate agenda. Managerial attitudes such as low fatalism, high safety priority, and high risk-awareness have also been shown to be particularly important (Rundmo and Hale, 2003).

From the limited empirical evidence, it is known that ‘command and control’ leadership methods are associated with higher accident rates (McKeown-Eysen and Hoffman, 1980) and that senior managers motivate the workforce to behave safely by directly influencing supervisors’ attitudes (Andreissen, 1978). Leader attributes such as trustworthiness have been associated with positive workforce perceptions of safety (Kivimaki et al., 1995) and clearly leadership style has a key role to play in how senior managers are perceived by more junior managers and by the workforce.

One leadership theory, namely transformational leadership (Bass and Avolio, 1995) is not only the most popular theory for management scientists (Judge and Bono, 2000) but it now dominates the safety research literature. As this is the theoretical basis for the questionnaire used in the present study, it is explained below.

### 3.2.2 Transformational/transactional leadership and safety

Leaders are often perceived as being inspirational or charismatic figures, who can unite and motivate followers by offering shared visions and goals. A more recent version of this approach is embodied in the multifactor leadership theory (Bass, 1990; Bass and Riggio, 2006) which encompasses three styles of leadership, called transactional, transformational and laissez faire. The components of the transactional and transformational styles are shown in Table 3.2. The laissez faire leadership style is where the leader abdicates responsibilities and avoids making decisions and while this has been looked at for junior leaders it is likely to be less relevant for those managers to have been promoted to the most senior positions.

#### Table 3.2 Transactional and transformational styles (Bass and Avolio, 1990)

<table>
<thead>
<tr>
<th>Transactional leadership</th>
<th>Transformational leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contingent reward: Contracts exchange of rewards for effort, promises rewards for good performance, recognises accomplishments</td>
<td>Charisma: Provides vision and sense of mission, instils pride, gains respect and trust</td>
</tr>
<tr>
<td>Management by exception (active): Watches and searches for</td>
<td>Inspiration: Communicates high expectations, uses symbols to focus</td>
</tr>
</tbody>
</table>
deviations from rules and standards, takes corrective action | efforts, expresses important purposes in simple ways
---|---
**Management by exception (passive):** Intervenes only if standards are not met | **Intellectual stimulation:** Promotes intelligence, rationality, and careful problem solving
| **Individualised consideration:** Treats employees individually, coaches, advises

The model for the multifactor theory conceptualizes the basis of all leadership as a transactional relationship between leader and follower – primarily a method of controlling followers’ behaviours by offering incentives to meet agreed standards and using corrective action when agreed goals and standards are not met. The transactional leadership produces an expected level of performance from subordinates. Through a number of additional transformational mechanisms, including effective use of charisma, inspiration, stimulation, and consideration, leaders can motivate their staff to performing at a higher level (that is, beyond expectations). For example, they can do this by communicating their vision and inspiring followers to move beyond self-interests and subscribe to group goals and values. The two styles are not mutually exclusive, and Bass (1990) argues that leaders should use a combination of both styles. Transactional leadership is the basis of all management and results in expected levels of performance. Transformational leadership builds on this foundation to achieve increased motivation and performance beyond expectations (see Figure 3.1).

Transformational, transactional and laissez faire leadership can be measured using the Multifactor Leadership Questionnaire (MLQ, Bass and Avolio, 1995) which offers both self-rating and subordinate rating forms. There is evidence that transformational leaders move followers to extra levels of effort which result in performance beyond expectations, greater commitment, and higher levels of satisfaction in military and industrial contexts (see Bass and Riggio, 2006). It has been shown in meta-analytic reviews at supervisory and middle manager levels to be effective in relation to subordinate satisfaction, motivation, and performance (Lowe et al., 1996; Yukl, 2005). Transformational leadership has been measured in several studies with senior managers and CEOs (De Hoogh et al., 2005; Jung et al., 2008; Zhu et al., 2005).
Systematic research on transformational leadership and safety performance has mainly been conducted with front-line supervisors and middle managers, with studies consistently indicating that transformational leadership is significantly related to safety climate, workers’ rule compliance, safety motivation (Barling et al., 2002), fewer unsafe behaviours (Zohar, 2003) and lower industrial injury rates (Zohar, 2002). O’Dea and Flin (2001) found that transformational behaviours in offshore site managers were associated with better site safety records.

Conceptually, transformational leadership behaviours are visionary, influential, and concerned with future states and development needs of others (Bass, 1998). These behaviours are clearly relevant for senior managers who have less direct influence on the safety behaviours of the workforce but more functional influence on the vision, strategic direction and goals of the organisation. Senior managers also have direct influence on the middle managers who report to them. The relationship between transformational leadership and safety performance has not yet been established for senior managers despite the fact that their functional role affords them the opportunity to transform organizational safety performance and is highly congruent with transformational leadership theory. Transformational leaders are actively concerned with the wellbeing
and development of employees as a means of encouraging them to adopt organizational goals, so it is plausible that the concern for well-being extends to their protection from physical injury at work.

Studies of transformational leadership in senior managers and safety outcomes are beginning to emerge. Yule (2003) found that more transformational senior managers in the UK energy sector (rated by their subordinates) led business units with significantly lower injury rates. He argued that stimulating, individually considerate, and rewarding styles were particularly influential for safety. Using an interview study, he identified critical senior management behaviours for safety. These included articulating an attainable vision of future safety performance; demonstrating personal commitment to safety symbolically; engaging everyone with relevant experience in decision making, and being clear and transparent when dealing with safety issues. Similarly, appraisals of transformational leadership in senior managers in an oil company were associated with stronger perceptions by their subordinates of senior management commitment to safety (Bryden et al., 2006). These perceptions of the leader’s safety commitment can be regarded as a measure of safety climate at the Board level (executive safety climate). Adaptations of the transformational model have been used previously in SDO-funded studies of leadership in the NHS mental health crisis resolution teams although not with a specific focus on safety (e.g. Alimo-Metcalfe et al., 2007). Conceptually, transactional and transformational leadership has been shown to be a suitable framework for understanding leadership in health care (Flin and Yule, 2004).

3.2.3 Health care senior managers and patient safety

Effective leadership has been shown to have a significant impact on safety performance in industry and now the behaviours and style of senior managers in health care organisations with respect to patient safety are beginning to receive increasing scrutiny. The Public Inquiry into children’s heart surgery at Bristol Royal Infirmary revealed that senior managers prioritised fiscal balance over patient safety and presided over a ‘clubby’ culture that did not encourage speaking up about safety (Kennedy, 2001). The investigation into outbreaks of Clostridium Difficile at Stoke Mandeville Hospital revealed that at least 33 patients died because senior managers failed to follow advice on stopping the spread of infection and failed to implement lessons from the first outbreak of the infection because they prioritised other objectives such as the achievement of government targets, reconfiguration of services and control of finances (Kennedy, 2006). In response to these infection problems, English Health Minister Lord Darzi said ‘There has been poor leadership in some of the organizations that have had significant outbreaks’ (BBC News, 2007). It is worth noting that NHS senior managers are covered by the UK legislation on corporate manslaughter which means that organisations can be prosecuted if managers were knowledgeable about safety lapses but failed to take action to rectify them, resulting in harm to patients (Home Office, 2007).
There is a leadership qualities framework for NHS leadership focusing on setting direction and delivering the service (NHS NIII, 2006) but this makes little explicit reference to patient safety. Senior managers and CEOs in English NHS Trusts have been the subject of a number of studies (e.g. Caulkin, 1998; Sausman, 2001) usually demonstrating that CEOs are under considerable pressure, demoralised and struggling to cope with performance targets, continual audits and their own job insecurity (Blackler, 2006), but these do not tend to focus on safety outcomes. For example, Shipton et al., (2008) found that in NHS Trusts, higher ratings of leadership effectiveness were associated with better organisational ratings and fewer complaints. Hendy et al., (2007) interviewed senior managers including the CEO in four NHS Trusts regarding progress in the implementation of a new information technology programme. They found that managers were continually distracted from implementing the programme due to competing priorities and that there was a growing risk to patient safety due to delays in implementation of the system. In another study, senior managers’ perceptions of action taken as a result of safety alerts was measured (Lankshear et al., 2008). There are reports of particular safety initiatives involving senior managers. For example, visibility of managers is one way to demonstrate commitment to safety, especially if the behaviours demonstrated by senior leaders during site walkabouts (‘WalkRounds’ in the US) are consistent with the safety policies and messages articulated, (for example on hand washing and sterility). Frankel et al., (2005) enlisted senior manager participation in their patient safety change programme because they can facilitate the resource allocation and organizational change necessary for resolving problems that cross departmental boundaries during ‘WalkRounds’. Similarly Tucker et al., (2008) report an observational study in US health care where four senior managers (the CEO, Chief Financial Officer, Chief Nursing Officer, and the Chief Medical Officer) spent 30-60 minutes observing employees and work systems in order to gather data on the challenges to patient safety in front-line operations. The lack of research into senior health care managers and safety is now being recognised. For example, the English National Patient Safety Agency (NPSA, 2004a) identified leadership as a key topic in their research strategy: ‘At NHS board and senior management level, research [is needed] to understand how safety can best be promoted through leadership’ (p12).

Despite the lack of empirical evidence, leadership advice for health care senior managers to enhance patient safety has been published by high-profile agencies on both sides of the Atlantic (Botwinick et al., 2006; NPSA, 2004a; Patient Safety First, 2008). These advisory documents outline a number of steps for the improvement of patient safety, such as promoting reporting, involving patients and sharing safety lessons (see Appendix 8 for the NPSA advice). These guidance documents imply that transformational leadership may be one way of achieving the required safety culture because this style is about the leader creating a context which values safety over other goals. If management commitment to safety, transformational leadership styles and following the NPSA guidance steps are important, then these may be more evident in NHS Trusts with better safety performance. The research question for this strand is whether NHS Trusts where CEOs
show a more transformational style and engage in such advised activities are in fact safer places for patients and staff (as measured by the Aston University indicators)?

3.3 Aim

The aim of this strand was to identify leadership styles and safety management behaviours in the sample of eight NHS Trust CEOs (differentiated on organisational indicators for patient safety and staff wellbeing from Aston University, NHS Trust Staff Survey data). Two methods were used to collect data, a semi-structured interview study and an upward appraisal questionnaire. The specific objectives of this leadership survey were to (i) examine the relationship between leadership style, executive safety climate and safety leadership behaviours, and (ii) establish if it was possible to differentiate between leaders in the ‘high’ and ‘low’ Trusts (for patient and staff safety).

Trusts A, B, E, H were in the ‘high’ safety performance category and Trusts C, D, F, G were in the ‘low’ category. – (see Section 1 for an explanation of these categories. The hypotheses under test were as follows:

- (i) CEOs who were rated higher on transformational leadership would be associated with a more positive safety climate (as rated by their executive directors).
- (ii) Leaders rated higher on transformational and transactional leadership would be associated with a safer organisation in respect standardised patient mortality; hospital-acquired infections and a more productive organisation in relation to financial performance data.
- (iii) There would be a negative relationship between passive leadership, safety climate (as rated by executive directors) and organisational outcome data.
- (iv) CEOs from the ‘high’ Trusts would be rated significantly higher than leaders from the ‘lower’ Trusts on transformational and transactional leadership.
- (v) CEOs from the ‘high’ Trusts would be rated significantly higher than leaders from the ‘lower’ Trusts on the level of priority they give to safety.
- (vi) CEOs from the ‘high’ Trusts would express different values about safety management and would mention more of NPSA advised actions when interviewed than CEOs from Trusts with lower safety ratings.

3.4 Method

3.4.1 Organisational setting and participants

Chief Executive Officers (n=8) and their executive directors (n=40, e.g. Human Resources Director, Director of Nursing, Finance Director, Medical Director) from eight NHS Trusts in England were invited to take part in a study on leadership and culture change as part of a wider NIHR SDO funded
project (see Section 1 of this report for details of the sampling strategy).

This study consisted of two parts: (i) a leadership style and executive safety climate survey and (ii) a leadership interview with the CEO. In total, seven CEOs (leaders) and 23 of their executive directors (raters) participated as it was not possible to interview the CEO of one Trust due to organisational changes. Five of the leaders were male. The mean age of leaders was 47 years (range 42 to 57) and they had been in post for a mean of 3.7 years (range one to ten years). Trusts were denoted by a letter code to protect confidentiality (see Section 1). The leaders were assigned to either a ‘high’ or ‘low’ group on the basis of the Trust selection strategy (see above).

3.4.2 Measures

Leadership style and executive safety climate survey

The survey was conducted online using SNAP software and consisted of three questionnaires which addressed leadership style, safety priorities of the CEO and safety climate of the executive level of the Trust.

Leadership - The leadership questionnaire used was the Multifactor Leadership Questionnaire (MLQ) Form 5X-Short (Bass and Avolio, 1995). It consists of 45 items relating to specific transformational, transactional and passive leadership behaviours. Participants used a five-point Likert scale (0 = not at all, 4 = always) to rate the frequency with which they (in the case of CEOs’ self-rating) or their CEO (in the case of direct reports appraising their leader) displayed those behaviours. The MLQ was purchased from the publisher (Mindgarden) for use in this study. For the purpose of this study and in line with contemporary use of the MLQ (Mindgarden, 2008), leadership was conceptualised as higher order factors of transformational, transactional or passive leadership. See Table 3.3 for a list of MLQ subscales and example items, and how those subscales relate to the higher order factors.

Table 3.3 Example MLQ items from the self and upward versions of the questionnaire

<table>
<thead>
<tr>
<th>MLQ factor</th>
<th>MLQ subscale</th>
<th>Self version</th>
<th>Upward version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealized Influence (attributed)</td>
<td>I instil pride in others for being associated with me (Q10)</td>
<td>...instils pride in me for being associated with him/her (Q10)</td>
<td></td>
</tr>
<tr>
<td>Idealized Influence (behaviour)</td>
<td>I talk about my most important values and beliefs (Q6)</td>
<td>...talks about his or her most important values and beliefs (Q6)</td>
<td></td>
</tr>
<tr>
<td>Inspirational Motivation</td>
<td>I talk optimistically about the future (Q9)</td>
<td>...talks optimistically about the future (Q9)</td>
<td></td>
</tr>
</tbody>
</table>
### Executive Safety climate

The scale used to measure senior managers’ behaviours with respect to safety, had been used previously in other industrial research studies (e.g. Bryden et al., 2006). It was amended slightly for applicability to health care and this version had previously been used with Canadian health care CEOs (Yule, 2007; Yule et al., 2008). The scale comprised six items which addressed the way in which the CEO was thought to support and enact the safety policies and practices (sample item: ‘My CEO acts promptly on patient safety concerns’). Raters’ responses were made on a five point Likert rating scale from Fully Disagree (1) to Fully Agree (5). The scores on this scale are taken to reflect the safety climate at executive board level and the item set can be found in Appendix 3.11.

### Safety leadership

This scale was used to measure three aspects of the CEO’s safety leadership behaviour: (i) Manifest safety behaviours (five items), (ii) Safety Advocacy (3 items), (iii) Safety response (3 items). Raters’ responses were made on a five point Likert rating scale from Fully Disagree (1) to Fully Agree (5). It had been used previously in other industrial research studies (e.g. Bryden et al., 2006) and was amended slightly for applicability to health care. This version had previously been used with a small sample of Canadian health care CEOs (Yule, 2007). See Appendix 3.9 for the items.

<table>
<thead>
<tr>
<th>Intellectual Stimulation</th>
<th>I get others to look at problems from many different angles (Q30)</th>
<th>…gets me to look at problems from many different angles (Q30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualized Consideration</td>
<td>I consider an individual as having different needs, abilities, and aspirations from others (Q29)</td>
<td>…considers me as having different needs, abilities, and aspirations from others (Q29)</td>
</tr>
<tr>
<td>Transcational leadership</td>
<td>I provide others with assistance in exchange for their efforts (Q1)</td>
<td>…provides me with assistance in exchange for my efforts (Q1)</td>
</tr>
<tr>
<td>Management-By-Exception-Active</td>
<td>I focus attention on irregularities, mistakes, exceptions, and deviations from standards (Q4)</td>
<td>…focuses attention on irregularities, mistakes, exceptions, and deviations from standards (Q4)</td>
</tr>
<tr>
<td>Management-By-Exception-Passive</td>
<td>I demonstrate that problems must become chronic before I take action (Q20)</td>
<td>…demonstrates that problems must become chronic before he/she takes action (Q20)</td>
</tr>
<tr>
<td>Laissez-faire</td>
<td>I am absent when needed</td>
<td>…is absent when needed</td>
</tr>
</tbody>
</table>

---

*Queen’s Printer and Controller of HMSO 2010*
Safety priorities - One question asked participants to rank the order in which failures in key areas (waiting lists, patient safety, cost, reputation) would most affect their CEO. Only the ranking for safety was analysed: a score of one meant that safety was the CEO’s top priority whereas four meant it was his or her lowest priority. This was used to determine the management priorities of the CEO and had originally been designed for use in the energy industry (Bryden et al., 2006) but had been adapted for health care (Yule et al., 2008).

‘WalkRounds’ - Participants were asked to rate their satisfaction with the extent to which their CEO emphasised safety during hospital ‘WalkRounds’ (Frankel et al., 2005) on a five point Likert rating scale from Fully Disagree (1) to Fully Agree (5).

Survey procedure - The data were collected by an online questionnaire to measure the CEOs’ and their executive directors’ (that is, raters) perceptions of their own/ their CEO’s safety behaviours and leadership style. The CEOs were asked to self rate their leadership style and safety behaviours on an online survey, provide the contact details of their subordinates (raters) and publicize the study to encourage response. Raters were contacted directly by email with an invitation to participate, instructions and a web link to a ‘rater’ version of the survey which was hosted on a University website independent of the participants’ organisational contexts. A reminder email was sent to the executive directors four weeks after the initial invitation to participate.

Leadership interview

The leadership interview consisted of a bespoke semi-structured interview. Only the Trust CEOs participated in this part of the study.

Interview questions - A semi-structured interview schedule was designed based on previous research on senior managers’ leadership style in the energy sector (Yule, 2003). The aim of the interview was to gather data on aspects of senior managers’ leadership style and patient safety management practices, specific themes were leaders’ self perceptions regarding their style of leadership; realm of influence within their Trust, visions of the future of patient care, and personal values and beliefs about patient care, adverse events, and safety culture. (See Appendix 3.9 Research Protocol for the interview schedule).

Pilot Study - A pilot study was conducted with one current NHS Trust CEO who was not part of the intended sample in order to check that the interview schedule had face and content validity. The pilot study also allowed the interviewer to gain further experience interviewing with the question-set and to check timing. On the basis of the pilot interview, one additional question was added: ‘How do you manage to balance finances, government targets and patient safety goals: they might be seen as competing to some people?’ The order of questions was also altered and minor semantic changes were made to phrasing.
Data collection - A suitable time for interview was arranged with the seven participating CEOs. Six of the interviewees were interviewed in their own office at their place of work. One interview was conducted by telephone. The interviews were confidential and only the interviewee and researcher were present. Interviewees were given an information sheet (see Research Protocol Appendix 3.7) and signed a consent form (see Appendix 3.8. This stated that participants could withdraw from the study at any time without providing a reason. The interviews were recorded using a digital recorder subject to consent from the interviewee. The decision to record the interviews was made because the proposed analysis demanded an in-depth analysis of interview content, rather than a superficial analysis of the key themes, and that a full transcript allowed inter-rater reliability checks to be conducted. When recorded, the interviews were transcribed and de-identified for analysis in line with ethical guidelines. One interviewee did not wish their interview to be recorded, so detailed notes were taken. Interviewees were then debriefed about the research project. The interviews were conducted between November 2006 and February 2008 and lasted approximately one hour each.

Ethical issues and confidentiality - Ethical approval to run the study in the UK was granted by the Multi-centre Research Ethics Committee (MREC) (see Appendix 4) and the upward appraisal was conducted in line with guidance on 360-degree appraisal from the British Psychological Society. Confidentiality and anonymity were important for the study to succeed because raters had to be confident that no-one (especially the CEO) would be able to see their individual ratings and identify them. Participants were guaranteed anonymity and were told that the data, analysis, and reports would be archived securely, and would not be seen by anyone other than the research team. They were also told that if used for research purposes, summary statistics for the entire sample only would be used and that if direct quotes were used they would be de-identified so that no individuals would be identified or identifiable in the analysis.

Outcome data

The following outcome data were collected for use in the analysis:

1. Individual (rater) level: executive safety climate; CEOs’ safety priorities, satisfaction with CEOs’ WalkRounds’.
2. Organisational level (from NHS staff survey): financial surplus (year 2006/7); standardised patient mortality (2005/6); waiting times (2006/7); MRSA infection rate (2006/7), and C-Difficile infection rate (2007/8). For further details on these outcome variables, see Section 5.

3.5 Results

3.5.1 Leadership survey

Mean scores for transformational transactional and passive leadership styles were calculated for each CEO as both a self rating and an upward rating
using the relevant MLQ subscales. These can be compared to norm data from previous Canadian sample. Mean scores were calculated for the subscales of transformational/transactional/passive leadership; executive safety climate; the three subscales of safety leadership (manifest safety behaviours, safety advocacy, safety response), and Safety ‘WalkRound’. See Table 3.4 for the mean scores and standard deviations on these scales for leaders’ self perceptions and raters’ upward perceptions.

**CEOs’ self perception (leaders) versus upward ratings (raters) and norm data**

One way analysis of variance was used to test for differences between the perceptions of CEOs and raters as unique groups. Although leaders’ self-ratings were higher for every variable apart from safety advocacy and safety response, there were no significant differences between the self and upward ratings for any of the variables in this study.

The ratings of the CEOs on MLQ were similar to the ratings of senior health care managers in Western Canada (see Yule et al., 2008), although the UK managers were rated slightly higher on transformational leadership and slightly lower on passive leadership. The leaders in the present study were rated higher than the norm data provided with the Multifactor Leadership Questionnaire (Bass and Avolio, 1995) on all three leadership aspects, although this norm sample is drawn from studies of predominantly US government and commerce middle managers, rather than senior managers working in health care. The scores (in bold) from a sample of 213 oil industry managers rating their senior manager on the safety behavior scale (Bryden and Flin, under review) show that the oil industry managers receive higher ratings on all these scales.

All analyses to follow will be based only on the upward ratings. As Table 3.4 shows, ratings of safety climate by executive directors were very high (it was on a five-point scale) and approaching ceiling with low standard deviation. The measure of satisfaction with safety was mid-range with larger standard deviation – this means that there were more varied opinions on how well the CEOs in our sample conducted ‘WalkRounds’.
### Table 3.4 Differences between leaders’ ratings and raters’ rating

<table>
<thead>
<tr>
<th>Variable</th>
<th>Subscale</th>
<th>Leaders</th>
<th>Raters</th>
<th>Anova</th>
<th>Canadian/oil benchmark</th>
<th>MLQ benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td><strong>MLQ</strong></td>
<td>Transformational leadership</td>
<td>3.26</td>
<td>.41</td>
<td>2.88</td>
<td>.75</td>
<td>1.62</td>
</tr>
<tr>
<td></td>
<td>Transactional leadership</td>
<td>2.30</td>
<td>.60</td>
<td>2.27</td>
<td>.51</td>
<td>.019</td>
</tr>
<tr>
<td></td>
<td>Passive leadership</td>
<td>1.11</td>
<td>.31</td>
<td>1.07</td>
<td>.49</td>
<td>.038</td>
</tr>
<tr>
<td><strong>Safety Climate</strong></td>
<td>Executive Safety climate</td>
<td>4.33</td>
<td>.41</td>
<td>4.42</td>
<td>.46</td>
<td>.185</td>
</tr>
<tr>
<td><strong>Safety Leadership</strong></td>
<td>Manifest safety behaviours</td>
<td>3.80</td>
<td>.64</td>
<td>3.61</td>
<td>.61</td>
<td>.182</td>
</tr>
<tr>
<td></td>
<td>Safety Advocacy</td>
<td>3.14</td>
<td>.86</td>
<td>3.24</td>
<td>.67</td>
<td>.113</td>
</tr>
<tr>
<td></td>
<td>Safety Response</td>
<td>3.76</td>
<td>.69</td>
<td>3.64</td>
<td>.64</td>
<td>.195</td>
</tr>
<tr>
<td>Safety ‘WalkRounds’</td>
<td>Safety ‘WalkRounds’</td>
<td>3.14</td>
<td>1.22</td>
<td>3.48</td>
<td>.73</td>
<td>.821</td>
</tr>
</tbody>
</table>
**Leadership style and executive safety climate**

We tested the relationship between upward ratings of leadership style and safety climate using Pearson correlations ($p$). Table 3.5 shows the bivariate correlations between the variables. In line with our hypothesis, Transformational leadership was significantly correlated with executive safety climate ($p = .44, p < .05$). There was no correlation between transactional leadership and safety climate ($p = .37, n.s.$) and a significant negative relationship between passive leadership and safety climate ($p = -.47, p < .05$).

**Leadership style and safety leadership**

Again, the relationships between leadership style and safety leadership behaviours were explored using Pearson correlations (see Table 3.5). Transformational leadership was significantly positively related to safety advocacy ($p = .44, p < .05$) and safety response ($p = .58, p < .01$), but not with manifest safety behaviours. Transactional leadership was significantly related to all three safety leadership variables. Passive leadership was significantly negatively related to manifest safety behaviours ($p = .45, p < .05$) and safety response ($p = .50, p < .05$).

**Leadership style and visibility (‘WalkRounds’)**

Transformational leadership ($p = .49, p < .05$) and transactional leadership ($p = .72, p < .01$) were significantly positively related to satisfaction with safety content on the CEOs’ hospital ‘WalkRounds’. There was no relationship between passive leadership and satisfaction with CEOs’ ‘WalkRounds’ (see Table 3.5).

**Leadership style and safety priority**

Safety priority ratings were used in two ways. Firstly, to test for the relationship between leadership style and safety priority, ratings of safety priority were reversed so higher ratings (that is, towards four) indicated increasing priority given to safety. Table 3.5 shows that there was no significant correlation between safety priority and the leadership variables of transformational, transactional, or passive style. However, safety priority was significantly related to safety climate ($p = .52, p < .05$) and some aspects of safety leadership: manifest safety behaviours ($p = .69, p < .01$) and safety advocacy ($p = .45, p < .05$).

Secondly, to test for differences between leaders, the mode rating of safety priority was calculated among raters for each leader. For this analysis it was not necessary to reverse the ratings. Four of the seven leaders were rated as having safety as their number one priority. One-way Analysis of Variance indicated that leaders in the ‘high’ group (n=3) were not thought to prioritise safety over other organizational goals significantly more than those in the ‘low’ group (n=4) [$F(1,6) = 0.13, n.s.$].
**Leadership and outcomes**

Transformational, transactional and passive leadership were not significantly related to any of the organizational outcomes relating to financial surplus, standardised patient mortality, waiting times, MRSA infection rate, or *C-Difficile* infection rate (see Table 3.6). Of the safety leadership variables, only safety advocacy was significantly related to MRSA infection rate ($p = .88$, $p < .01$).
Table 3.5  Bivariate correlations between variables measured at the individual level from upward ratings (n=23  executive directors)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>2.88</td>
<td>.75</td>
<td>(.97)</td>
<td>.518*</td>
<td>-.560**</td>
<td>.437*</td>
<td>.322</td>
<td>.435*</td>
<td>.584**</td>
<td>-.042</td>
<td>.487*</td>
<td></td>
</tr>
<tr>
<td>Transactional leadership</td>
<td>2.27</td>
<td>.51</td>
<td>(.52)</td>
<td>-.293</td>
<td>.373</td>
<td>.470*</td>
<td>.765**</td>
<td>.547**</td>
<td>.303</td>
<td>.721**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passive leadership</td>
<td>1.07</td>
<td>.49</td>
<td>(.60)</td>
<td>-.470*</td>
<td>-.450*</td>
<td>-.295</td>
<td>-.504*</td>
<td>-.334</td>
<td>-.329</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety climate</td>
<td>4.42</td>
<td>.46</td>
<td>(.75)</td>
<td>.746**</td>
<td>.395</td>
<td>.592**</td>
<td>.524*</td>
<td>.322</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manifest safety behaviours</td>
<td>3.61</td>
<td>.61</td>
<td>(.73)</td>
<td>.536**</td>
<td>.855**</td>
<td>.692**</td>
<td>.436*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety advocacy</td>
<td>3.24</td>
<td>.67</td>
<td>(.84)</td>
<td>.617**</td>
<td>.398</td>
<td>.865**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety response</td>
<td>3.64</td>
<td>.64</td>
<td>(.69)</td>
<td>.448*</td>
<td>.547***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety priority</td>
<td>3.13</td>
<td>1.01</td>
<td></td>
<td>-.342</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital WalkRounds</td>
<td>3.48</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p <0.05; **p <0.01, Cronbach alpha in parenthesis on the diagonal

* Safety priority ratings were reversed so higher scores (tending towards 4) indicated that safety is given a higher priority.
Table 3.6  Bivariate correlations between variables measured at the organisational level (rater averages for each leader, n=7)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational leadership</td>
<td>-</td>
<td>.11</td>
<td>-.48</td>
<td>.82*</td>
<td>.60</td>
<td>-.26</td>
<td>.52</td>
<td>.08</td>
<td>.41</td>
<td>.00</td>
<td>.46</td>
<td>.17</td>
<td>.03</td>
</tr>
<tr>
<td>Transactional leadership</td>
<td>-</td>
<td>.19</td>
<td>-.11</td>
<td>-.22</td>
<td>.25</td>
<td>-.23</td>
<td>.01</td>
<td>.23</td>
<td>-.27</td>
<td>-.26</td>
<td>.42</td>
<td>.41</td>
<td></td>
</tr>
<tr>
<td>Passive leadership</td>
<td>-</td>
<td>-.76**</td>
<td>-.88**</td>
<td>-.54</td>
<td>-.85</td>
<td>.40</td>
<td>-.49</td>
<td>-.64</td>
<td>-.25</td>
<td>-.64</td>
<td>-.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Climate</td>
<td>-</td>
<td>.86*</td>
<td>.16</td>
<td>.78*</td>
<td>-.21</td>
<td>.65</td>
<td>-.29</td>
<td>.72</td>
<td>.52</td>
<td>.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manifest safety behaviours</td>
<td>-</td>
<td>.41</td>
<td>-.99**</td>
<td>-.02</td>
<td>.72</td>
<td>.25</td>
<td>.48</td>
<td>.58</td>
<td>.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety advocacy</td>
<td>-</td>
<td>.46</td>
<td>-.36</td>
<td>.54</td>
<td>.38</td>
<td>-.04</td>
<td>.88**</td>
<td>.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety response</td>
<td>-</td>
<td>.06</td>
<td>.75</td>
<td>.19</td>
<td>.43</td>
<td>.58</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient satisfaction 2007</td>
<td>-</td>
<td>.19</td>
<td>.90**</td>
<td>-.02</td>
<td>-.41</td>
<td>-.82*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial surplus 06/07</td>
<td>-</td>
<td>-.18</td>
<td>.62</td>
<td>.73*</td>
<td>-.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mortality (standardised) 05/06</td>
<td>-</td>
<td>-.05</td>
<td>.35</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiting times 06/07</td>
<td>-</td>
<td>-.24</td>
<td>-.28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRSA 06/07</td>
<td>-</td>
<td>.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-diff 07/08</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.5.2 Leadership interviews - results

Analytic strategy

The aim of the interview analysis was to extract leadership behaviours and areas of leadership influence on safety from the interview transcripts. Two frameworks were selected to guide coding of the interview transcripts in order to achieve this: transformational/transactional leadership theory (Bass and Avolio, 1995) and guidance from the National Patient Safety Agency for Chief Executives (NPSA, 2004).

As there are no taxonomies of leadership behaviours for safety in the literature, transformational/transactional leadership theory was selected because it is the most widely used leadership theory at present and has been shown to be related to safety performance in a number of studies. A growing literature shows that transformational leadership is significantly related to safety climate, workers’ rule compliance and safety motivation (e.g. Barling et al., 2002), and has been shown to significantly reduce industrial injury rates (Zohar, 2002) and compliance with rules regarding personal protective equipment (PPE) use. Although these studies have focused on supervisors and middle managers rather than CEOs, the concept of transformational leadership may be most applicable to senior managers, given their visionary and strategic role in organizations. Previous research has found that senior managers who were rated higher on transformational leadership led industrial departments with lower injury rates (Yule, 2003).

The NPSA (2004b) guidance was selected because in the absence of regulatory advice on patient safety, it is taken to represent practical high-level governmental advice for English NHS Chief Executives. It is expected that this framework should reflect the practical reality of managing safety at the top level in NHS Trusts, so it should be possible to use this framework to capture aspects of the safety management system that leaders’ talk about with respect to setting up systems for monitoring and improving patient safety.

(See Appendices 10 and 11 for details of the two coding frameworks used).

Coding procedure and inter-rater reliability

The analysis was conducted in five phases as follows:

Phase 1: Interview tapes were transcribed verbatim.

Phase 2: Line-by-line coding from grounded theory (Glaser and Strauss, 1967) was used to extract relevant data codes from the interview transcripts. These were assigned to the categories in both coding frameworks. Inter-rater reliability checks were conducted at this stage. It must be stressed that grounded theory was not used as we were testing theory, but this particular technique offered an effective method of extracting codes from the interview transcripts. Line by line coding involves considering data in minutiae, by only focusing on one line at a time (in this case, one line of a typed interview transcript). Each line of data is
defined by the researcher after due consideration of the actions, beliefs, and events contained in that line. According to Charmaz (1990, 1995: 37), line-by-line coding has a number of advantages, including:

- Helping the researcher take an analytical stance regarding data.
- Keeping the researcher close to the data.
- Forcing the researcher to study data to arrive at codes.
- Avoiding researchers taking flights of fancy.
- Avoiding undue subjectivity.
- Leading the researcher to unforeseen areas and research questions.

Phase 3: Leadership behaviours and themes that were deemed to be relevant to patient safety but not easily classifiable using the selected frameworks were extracted from the transcripts and thematically sorted.

Phase 4: Using the results from the NHS Trust Staff Survey (see above), leaders were assigned to high and low-rated groups. Coded interviews were pooled within each group.

Phase 5: Behaviours and themes that were found in both high- and low-rated Trusts were extracted so that the final result table (Table 3.7) shows themes unique to leaders from high-rated Trusts, low-rated Trusts and those themes common to both groups for transformational leadership, transactional leadership, passive leadership and emergent themes.

**Inter-rater reliability**

The purpose of the inter-rater reliability study was to establish the statistical reliability of two experienced raters in extracting relevant codes from the transcripts and assigning them to categories in the selected frameworks. Reliability was calculated because it is important that biases in coding are understood early in the process and minimised. To achieve this, two coders were provided with definitions of the coding framework (see Appendix 9), and asked to read four transcripts, highlighting areas of text that related to the concepts. It was recommended that transformational/transactional leadership behaviours were coded first, then NPSA guidance for CEOs.

Cohen’s Kappa was considered as a method of calculating reliability but was deemed not suitable due to the indefinite number of potential portions of text to code that emerged from the study (that is, there was not a fixed number of behaviours in the transcripts for raters to detect). To ensure that there was an acceptable level of reliability, and to reduce bias in the results, inter-rater reliability was statistically assessed using an adapted version of the intercoder agreement formula (Miles and Huberman, 1994) for two raters (Miller, 2001). This stipulates that:

Reliability = Agreements*number of raters / (number of segments coded by rater 1) + number of segments coded by rater 2)
IIR ranges from 0 (no agreement) to 1 (perfect agreement). A level of agreement above 0.7 was deemed to indicate an acceptable level of reliability.

**Inter-rater reliability results**

The median level of inter-rater reliability across the four transcripts coded between the two researchers (SY and RF) was .73 for transformational/transactional leadership but below acceptable level for the NPSA coding. Table 3.7 shows the levels of IIR found in this study for each transcript. The two coders discussed the coded transcripts in detail, focusing on codes that they did not agree on in order to enhance a shared understanding of the frameworks and their application, and to reconcile differences. SY then proceeded to code and classify the remaining three interviews on the basis of that shared understanding.

**Table 3.7 Inter-rater reliability**

<table>
<thead>
<tr>
<th>Transcript</th>
<th>IRR – transformational/transactional leadership</th>
<th>IRR – NPSA guidance for CEOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>.59</td>
<td>.30</td>
</tr>
<tr>
<td>D</td>
<td>.70</td>
<td>.60</td>
</tr>
<tr>
<td>G</td>
<td>.75</td>
<td>.38</td>
</tr>
<tr>
<td>H</td>
<td>.87</td>
<td>-</td>
</tr>
</tbody>
</table>

**Coding results**

The results on the following pages show the leadership behaviours assigned to the coding frameworks. Appendix 12 displays the integrated analysis across all interviews, showing the leadership behaviours and management practices that were discussed uniquely by leaders in the ‘high’ Trusts (n=4) and the ‘low’ Trusts (n=3), and also aspects of leadership style that were common to both groups. The other leadership behaviours and themes that emerged from the interviews but were not easily classifiable according to the transformational/transactional leadership paradigm are also highlighted in this table as emergent leadership themes.

A tabulated presentation of the integrated results of leadership interviews (see Appendix 12) shows that both groups of leaders discussed transformational leadership behaviours and although there were common aspects of leadership style discussed by both groups, the leaders in the Trusts with lower safety scores tended to discuss transformational leadership in terms of their day-to-day actions. (that is, asking how they can help, getting ideas from people, being visible) whereas the leaders in the higher Trusts discussed transformational more as a longer-term influence (that is, breaking down hierarchy, restructuring clinical governance). More telling is that the leaders from the ‘lower’ Trusts discussed transactional leadership behaviours much more than leaders in the higher group and focused on the importance of clarity. Note that the coders were not aware of whether the leaders were from ‘high’ or ‘low’ Trusts until the coding was complete.
In addition, the summarised responses to six key questions for each leader in the ‘high’ and ‘low’ groups are presented in Appendices 13 and 14. These questions were chosen to present a snapshot of the leaders’ opinions regarding safety culture, adverse events, their own leadership style, and perceived areas of influence. There were varied opinions regarding the scope of CEO influence on safety although most agreed that they could not control the behaviour of individuals on a micro-level. Most of the leaders were doubtful if it was possible to eradicate all avoidable adverse events and views on the culture were varied. Some leaders were candid enough to admit that it did not exist whereas others described the importance of learning from incidents and having a ‘no blame culture’. It was not easy to differentiate leaders from the two groups on the basis of these individual questions which highlights the importance of coding behaviours from the entire interviews in order to compare ‘high’ and ‘low’ trusts as was done in Appendix 12.

The question related to historical leaders was included as the leaders picked a diverse range of leaders both within the NHS and beyond who they admired and usually presented a rationale for their selection. We felt that the rationale partly reflected the leaders’ own desired style of leadership and was therefore insightful for the present study. There was no pattern to the selection of leaders, although two of the leaders in the low group selected NHS managers as their historical leaders.

The coding of leadership style according to the NPSA guidance for CEOs can be found in Appendix 15. We found the application of this taxonomy difficult and the inter-rater reliability poor. One of the reasons for this could have been the unfamiliarity of the coders to that taxonomy (both coders had however used the transformational/ transactional leadership theory in previous research). However some of the categories included in this taxonomy were ill-defined and overlapping which made assigning leadership behaviours and practices at times imprecise and ambiguous. Also we found that the NPSA taxonomy did not reflect the range of CEO leadership behaviours required for safety, focusing more on a risk-management approach rather than a leadership approach to patient safety. The Leadership Checklist for Patient Safety’ (Patient Safety First, 2008) might provide an alternative method for designing interviews with NHS CEOs in future studies.

3.6 Discussion

This study was one of the first to examine health care CEOs’ leadership style and safety behaviours, using a standard leadership measure. The sample of CEOs was small as the whole study was only based on seven Trusts and each CEO was only rated by three of his or her direct reports on average, so the results need to be interpreted as indicative, as this is essentially a pilot study. The CEOs’ self assessments were close to those of their executive directors’ upward ratings. Moreover their leadership style scores were not essentially different from ratings collected of CEOs from
health care organisations in Canada (Yule et al., 2008) or from MLQ norm data. They tended to show more transformational leadership style than transactional or passive styles. Their upward ratings for safety leadership behaviours, were lower than those of a sample of managers from a multinational energy company (Bryden and Flin, under review) which may reflect differences in safety culture maturity of the organisational sectors.

We found that ratings of transformational leadership were related to perceptions of executive safety climate but there was no association between transactional leadership and safety climate. Both transformational and transactional leadership were significantly related to aspects of safety leadership behaviour.

We were not able to discriminate between the two groups of leaders (from high versus low safety Trusts) on the basis of their subordinates’ ratings of their leadership style, commitment to safety or priority given to safety. Ratings of transformational leadership were not significantly associated with objective Trust performance criteria relating to patient satisfaction, financial performance, standardised mortality, waiting times or hospital-acquired infection.

We found that four leaders in our sample were thought to prioritise safety over other business goals, but again this was not associated with the Trust performance. The priorities of senior health care managers have been questioned in public inquiries and investigations in the UK, for example senior managers were found to prioritise fiscal priorities in the both the investigation into deaths from Clostridium difficile at Stoke Mandeville hospital in 2007 and previously during the public inquiry into paediatric cardiac surgery at Bristol Royal Infirmary. There are no normative data on the safety priorities of senior health care managers yet, as this is a relatively new line of enquiry in patient safety. However, Flin et al. (2006) reported that only 42 percent of consultant surgeons (n=136) in a UK study rated their CEO as having safety as number one priority, which is close to the 50 percent found in this study.

Although there were no significant differences in ratings of leadership style between leaders in the ‘high’ and ‘low’ Trusts, there were some difference in the pattern of the CEOs’ responses from the interview data (see Appendix 12). For aspects of transformational leadership, although there were some commonalities between leaders, leaders from the ‘high’ Trusts tended to focus on longer-term goals regarding vision, development and the processes in place for change (that is, breaking down hierarchies and developing careers), whereas leaders in the ‘lower’ group focused on shorter-term aspects such as meeting standards and solving immediate problems.

In the transactional leadership category of the interview material, there were more pronounced differences between the groups. Leaders in the ‘high’ Trust group did not mention many unique behaviours. Leaders in the ‘low’ group described many more transactional behaviours and focused especially on the need for clarity, setting goals and monitoring performance.
This apparent difference may be related to the CEO’s length of tenure or other factors linked to the Trust’s performance indicators.

There were difficulties in coding some behaviours mentioned in the interviews as transformational or transactional, such as when leaders talked about ‘having a discussion with staff’ – we felt that this could have been classified as transformational or transactional depending on the content of the conversation. Other themes that emerged from the analysis included the need for adaptable leadership and conceptual issues regarding whether it was possible to influence the culture to such an extent that all incidents could be avoided.

We did not achieve acceptable reliability using the NPSA (2004b) guidance for CEOs to code the interview data. On reflection it may be because this coding framework deals mainly with reporting issues and did not in fact cover the wide breadth of safety management and other leadership behaviours that the CEOs described. If this type of guidance was to be adapted into a safety leadership research measure, it would need to be applied as an audit tool or as an interview schedule with directors or other staff. See Table 3.8 for a summary of the results hypothesis by hypothesis.

### Table 3.8 Results of hypothesis testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) CEOs who were rated higher on transformational leadership would be associated with a more positive safety climate (as rated by their executive directors)</td>
<td>Upheld</td>
</tr>
<tr>
<td>ii) Leaders rated higher on Transformational and transactional leadership would be associated with a safer organisation in respect standardised patient mortality; hospital-acquired infections and a more productive organisation in relation to financial performance data.</td>
<td>Not supported</td>
</tr>
<tr>
<td>iii) There would be a negative relationship between passive leadership, safety climate (as rated by executive directors) and organisational outcome data.</td>
<td>Partially upheld (significant negative relationship between passive leadership and safety climate)</td>
</tr>
<tr>
<td>iv) CEOs from the ‘high’ Trusts would be rated significantly higher than leaders from the ‘low’ Trusts on transformational and transactional leadership.</td>
<td>Not supported</td>
</tr>
<tr>
<td>v) CEOs from the ‘high’ Trusts would be rated significantly higher than leaders from the ‘low’ Trusts on the level of priority they give to safety.</td>
<td>Not supported</td>
</tr>
<tr>
<td>vi) CEOs from the ‘high’ Trusts would express different values about safety management compared to leaders from the ‘low Trusts</td>
<td>Supported</td>
</tr>
</tbody>
</table>

### 3.7 Limitations

The limitation of this strand is the relatively small sample size, although this is consistent with other studies of very senior managers (Reid et al., 2008) where the population is considerably smaller than that of middle managers
or supervisors, and the access for research more difficult to negotiate. The small sample size does, however, limit the power of the results and the type of analysis possible (that is, predictive or multi-level modelling is not feasible). The self-report measures and interviews may not have been sensitive enough to detect differences between the groups.

The ‘high’ and ‘low’ groups may have been selected on criteria that were not related to how the Trusts were led. A second limitation of these studies was that useful outcome data were not collected. By collecting meaningful outcome data relating to business performance and patient safety that could be directly related to CEOs’ realm of influence it would be possible to determine if the same leadership styles that were found to be associated with high safety performance were also associated with high performance on waiting lists, finance and other indicators of business performance, not related to patient safety (see also Section 6).

3.8 Policy and practical implications

Given the above limitations, it is not possible at this stage to provide definitive recommendations with regard to policy or practices, such as training of a particular leadership style, although there are indications that the transformational approach may be beneficial for safety outcomes. Further research with a larger sample and a refined method will be required before a set of safety leadership competencies for NHS senior managers can be produced as the basis for an evidence-based training and development programme. Results of this type could be fed into leadership training programmes, such as the new NHS London Chief Executive Succession Planning and Development programme for senior leaders (www.london.nhs.uk). Suggestions for further research are given next (see also Section 6).

3.9 Future research

This research strand has investigated senior management leadership style and patient safety. The results are multifaceted and complex and data took nearly two years to collect, in that time there has been research indicating additional strategic behaviours that senior managers in health care should engage in including: 1) putting in processes to enable staff to focus on safety, such as Safety Action Teams (Carayon, 2007); 2) learning from high risk industries and their built-in systems redundancy to support safety; and 3) being transparent about how safety has been considered in major financial and strategic decisions. At all times, strategic leaders should espouse personal values that emphasise the importance of safety over other organizational goals. These are behaviours that indicate to task leaders, team leaders and department managers that senior managers are committed to safety and all efforts for its establishment and enhancement (Flin and Yule, 2004).
Hofmann and Morgeson (2004) argue that the interaction between leadership and safety performance is mediated by the leader creating a context that signals a high value for safety. One way in which health care leaders can accomplish this is to engage in safety-specific behaviours when they are in clinical areas. For instance: following the same protocols as other staff, wearing appropriate protective equipment, hand washing, respecting sterility, endorsing safe behaviours such as taking time to assess risks, demonstrating that it is acceptable to stop treatment for safety reasons, and participating in mortality and morbidity meetings. This all presupposes that the leaders are occasionally present in the department or at a minimum are observers of the clinical work being performed in their facility. The ‘WalkRounds’ data in this project indicate that there were differing perceptions of executive directors in how satisfied they were with CEO visibility and action during ‘WalkRounds’, although we did not collect data specifically on CEOs behaviours from the perspective of employees working in clinical areas of the hospital. Perceptions of the staff at all levels in the hospital should be the focus of future research.

Senior leaders can therefore have a real influence on the status of safety and the manner in which safety is prioritised as a value in health care organizations. This has a direct impact on the motivation of employees to engage in behaviours that can enhance or, if leaders are not committed or display ambiguous behaviours, erode safety (Zohar, 2003). In health care, this means tackling the systematic deficiencies that undermine patient safety and articulating a vision that emphasizes staff engagement in organizational learning and a higher standard of care and safety (Henriksen, 2007).

Senior managers in health care are thought to play an important role in setting and maintaining the safety climate of their organization. This study provides results that are cautiously supportive of this theory. Finding that leaders who were found to prioritise safety and leaders who were rated as transformational were associated with higher board perceptions of their executive level safety climate gives us an indication of a possible underlying mechanism of influence. Looking at these two results together with the extant literature on leadership suggests that with an appropriate sample size and workforce data on organizational climate, it would be possible to test if the relationship between transformational leadership and safety climate was moderated by the leaders’ perceived priority for safety. If this is the case, then it would not be sufficient for leaders to be transformational in order to effect changes in safety performance, they would also have to signal that safety was of higher priority than other organisational goals, such as waiting lists and waiting times, fiscal balance and clinical targets. Although it is important to note that leaders work within a framework and climate where they must take the results of risk assessments and the position of regulatory authorities into account, when emphasising the relative importance of organisational goals, including those relating to safety. The relationship between safety climate and workers’ safety behaviours has already been established in other research in industrial settings (Clarke, 2006).
Finally, all the data presented here were collected from senior managers. The next stage of this research is to build on these findings and assess the relationship between senior managers’ leadership style and the behaviours of front-line staff with respect to patient care and quality. One issue also to consider is how priority for safety might shift over time and how leaders might alter their behaviours in relation to external organisational policy shifts; high profile enquiries or revised rewards or penalties. This study provided a snapshot at a given period and was unable to build in any comparison over time periods.
Section 4 Staff well-being strand

4.1 Introduction

An organisation’s workforce is its most important resource. The attitude, behaviour and experience of staff at work affects their performance and this in turn influences the overall productivity of the organisation. This is true both in general work and health care settings. Health care organisations face an increasing challenge in creating safe working environments for their workforce as reported incidences of stress, violence and abuse against staff and staff injury continue to grow. Concerns about patient safety are also increasing across many advanced health care systems (Agency for Healthcare Research and Quality, 2004; Department of Health, 2000a, 2001a). The National Health Service (NHS) and the acute hospital environment in particular, are recognised as especially complex environments where errors and adverse events are difficult to eliminate (Edworthy et al., 2006). It is important, therefore, to understand the determinants of staff well-being, and the relationship between nurse well-being and performance related to patient safety in such settings (Johnston et al., 2006).

4.2 Literature Review

This strand of research builds upon existing data from the national NHS staff survey, undertaken every year since 2003 (Healthcare Commission, 2008). This strand generates new data from the systematic investigation in four acute NHS Trusts selected in terms of their performance in promoting staff well-being and patient safety. Targeting self-reports of qualified nurses working in medical and surgical wards in acute care settings, this strand examines the relationship between nurse perceptions of the work environment, nurse well-being and performance related to patient safety. This strand will clarify how support from managers and colleagues influences nurse well-being and performance related to patient safety. The nature of commonly reported incidents facing practitioners in such settings will be identified. Recommendations will be set in the context of the day to day experience of qualified nursing staff.

4.2.1 Nature and impact of work stress in the general workforce

The effect of the work environment on the health, well-being and safety of workers has attracted considerable research in the last 25 years. Self reports of the prevalence of occupational disease have shown that stress and related symptoms are commonly reported, with 17 to 20 % of the
British Workforce perceiving their job to be very or extremely stressful over the period of 1998-2008 (Health and Safety Executive, 2008). Currently, only musculo-skeletal disorders are more common reported work related symptoms (Health and Safety Executive, 2008).

Prolonged exposure to stressful working conditions has been linked with negative outcomes, including physiological and behavioural consequences. Exposure to work stress is related to an increased risk of heart disease including myocardial infarction, hypertension, diabetes (Sokejima and Kagamimori, 1998, cited in Clarke and Cooper, 2004). The majority of workers experiencing heart disease, attribute its cause to work stress (Health and Safety Executive, 2008). Up to 45 percent of premature death has been attributed to stressful work conditions (Health and Safety Executive, 2008).

The cost to industry is great, with around 13 million working days are lost to work stress in 2005 (Healthcare Commission, 2006). In behavioural terms, increases in alcohol, smoking, substance abuse are commonly reported (Jex and Beehr, 1991 cited in Clarke and Cooper, 2004). Chronic headache and reduced mental health are common symptoms. In more organisational terms, work role disruption is often reported, including problem performance levels, high levels of sickness absence, strikes, job flight including turnover and early retirement. Work stress is reported to be responsible for, or at least implicated in, 60 to 80 per cent of all workplace accidents (Cooper et al., 1996; Clarke and Cooper, 2004).

There is growing epidemiological evidence that particular working conditions are associated with work stress and its consequences, these include demand, control, support, work-based reward, work relations and changes at work (van der Doef and Maes, 1998, 1999; van Vegchel et al., 2004). Such effects are likely to track through to performance in terms of sickness absence, errors and accidents, turnover et cetera. (Elfering et al., 2006; Swaen et al., 2004).

### 4.2.2 Nature and impact of work stress within health care

The UK NHS is a large, complex health care organisation (employing 240,580 in 2006) (Healthcare Commission, 2006). Occupational stress is an important health and safety issue in the NHS and there is a well established need to reduce work stress and improve staff well-being (Couzins et al., 2004; MacKay et al., 2004). Health care organisations face an increasing challenge in striving to create safe working environments for staff given that reported incidences of stress, violence and abuse against staff and staff injury remain comparatively high. In a survey by the Commission for Health Improvement of over 200,000 staff from across the NHS, preliminary results showed that 37 percent had been harassed, bullied or abused at work in the previous 12 months. The potential cost to the NHS is huge, with work stress thought to contribute to 30 percent of sickness absence at a cost of £300-400 million per year (NHS Employers, 2007). Adverse events...
arising from clinical care likely to cost the NHS in excess of £1 billion (Vincent et al., 2001).

4.2.3 Effects on mood and behaviour

Levels of stress have remained consistently high across the workforce of the UK NHS, with up to 40 percent of staff reporting significant stress (Healthcare Commission, 2003, 2004b), although this rate has recently reduced slightly to 36 percent recently (Healthcare Commission, 2008). Findings from the RCN ‘Working Well’ Survey have corroborated the findings of the NHS staff survey in qualified nurses working in the NHS (Ball and Pike, 2006). While work stress has been shown to be a problem within general industry, levels of ill health, both physical and psychological, and associated sickness absence are higher amongst those working in health care than in the rest of the UK working population. Staff working extra hours report higher levels of work related injury, bullying and harassment (Healthcare Commission, 2004a, 2005). Shift work is generally associated with negative experiences and physiological outcome (Hanson et al., 2001). Such negative effects are seen across the multi-disciplinary workforce. Many doctors report high levels of burnout (Thomas, 2004), 15 percent cease to work in the NHS two years after graduation rising to almost 25 percent after 20 years (Goldacre et al., 2001). Of those doctors planning to leave medicine, 75 percent cite working conditions, including stress, as a principal cause for their departure (Moss et al., 2004). Perhaps as a consequence of such work environment and emotional outcomes, associated sickness absence is particularly high in NHS health care workers (Michie and Williams, 2003; Williams et al., 1998).

4.2.4 Impact of the work environment, staff well-being on patient safety

Prolonged exposure of health care workers to such high levels of work stress is likely to have an impact on the health and well-being of staff and on the quality of care they provide (Aiken et al., 2002; Williams et al., 1998).

High rates of sickness absence and staff turnover are seen in registered nurses, with nurses leaving the UK NHS as a result of workload issues (Chang et al., 2006), or retiring early (Muncer et al., 2001). This is likely to impact on remaining staff and further effect patient care (Michie and Williams, 2003). A survey from 1996 in Canada, England, Germany, Scotland and US, showed that 30 to 40 per cent of qualified nurses reported significant dissatisfaction which was linked to poor patient outcomes including patient morbidity (Aiken et al., 2001; Sheward et al., 2005). The RCN ‘Working Well’ Survey (2006) has linked stress in NHS nursing staff with physiological and psychological illness and with staff injury arising from moving and handling, needlestick, trips, falls and exposure to dangerous substances (Ball and Pike, 2006).
The importance of setting

The work environment of nurses pose a threat to patient safety, via unsafe work deployment (that is, patient-nurse ratios) and job design issues (National Academy of Sciences, 2004). Staffing and job design issues have been reported to exert an effect on nurse well-being and subsequent performance related to patient safety. While work stress and its consequences on patient safety are widely reported across all advanced health care settings, there is variation between settings. Exemplary health care environments, such as magnet hospitals that retain nurses, are generally associated with better patient outcomes such as lower patient mortality rates (Aiken et al., 1994). Organisational culture, including safety climate is particularly important in influencing safety outcomes.

There is a sizable literature that examines the organisational determinants of patient safety outcomes sensitive to nursing, such as failure to rescue, patient morbidity and mortality (Aiken et al., 2002). High patient to nurse ratios are associated with high 30 day patient mortality and failure to rescue rates (Aiken et al., 2002; Sheward et al., 2005). More recent research has demonstrated that lower 30 day mortality rates in acute hospitals are predicted by higher percentages of registered nursing staff, degree prepared nurses in the workforce, higher nurse-reported staffing levels, greater use of care protocols, higher nurse-reported care quality, lower nurse-reported adequacy of manager ability and support, and higher nurse burnout (McCutcheon et al., 2006; Tourangeau et al., 2006). Conversely, low staffing levels are associated with increased length of stay, increased nosocomal infections (including urinary tract infection, post operative infection, pneumonia) and pressure ulcers (National Academy of Sciences, 2004). Nurses play a critical role in preventing medication errors reaching the patient (Leape et al., 1995).

Job design also influences nurse well-being and performance related to patient safety. Team working is associated with lower reports of work stress (Healthcare Commission, 2005) and fewer errors (Firth-Cozens, 1998, 2001). Poor team working is a predictor of sickness absence, and has been linked with reduced staff well-being, retention, patient care and innovation (Borrill et al., 2000; Kivimaki et al., 2001). Human resources practices, including appraisal, are associated with reduced patient mortality (West et al., 2002). Organisational restructuring has been associated with nurse dissatisfaction and poor patient outcomes (Aiken et al., 2001). There is a pressing need, therefore, to examine the relationships between nurse perceptions of work environment, self-reports of mood and performance relating to patient safety in settings that differ in terms of organisational culture relating to the promotion of staff well-being and patient safety (Couzins et al., 2004; MacKay et al., 2004).
4.2.5 Theoretical approaches linking work environment, well-being and performance

Work in a health care setting is often stressful (Johnston et al., 2006). There is an increasing recognition that, 'the typical work environment of nurses is characterised by many serious threats to patient safety' (National Academy of Sciences, 2004: 2). There are a range of theoretical approaches linking characteristics of the work environment to well-being and, in some instances, to performance. Many theories emphasise the central importance of perceptions of control or reward and include the following approaches:

- Transactional model (Lazarus and Folkman, 1984)
- Main effect of control (Tetrick and LaRocco, 1987),
- Low control, high demand moderated by social support (iso-strain) (Johnson and Hall, 1988).
- Imbalance between desired and actual levels of control (French et al., 1982).
- Effort-Reward model (Siegrist, 1996)

Two models of the determinants of work-related stress dominate the literature, as in Karasek’s (1979) demand control model (DC) and Siegrist’s (1996) effort reward imbalance model (ERI). Both have received considerable support (see reviews van der Doef and Maes, 1998, 1999; and van Vegchel et al., 2004).

**Figure 4.1 The Psychological demand/decision latitude model, after Karasek and Theorell (1990)**
The Demand Control (DC) model has been the dominant model in last 30 years (van der Doef and Maes, 1999), see Figure 4.1. This model contends that high demand, low control (strain) are linked with exhaustion, psychosomatic complaints, absenteeism, increased cardiovascular risk factors (Jonge et al., 1996). The strain mechanism (A) results from a lack of balance between levels of demand and control. The ‘relative excess’ of demand is associated with outcomes such as exhaustion, psychosomatic complaints, absenteeism, and increases in cardiovascular risk factors and disease expression in the longer term (Jonge et al., 1996). ‘Low strain’ jobs represent the less toxic end of the strain continuum (Karasek, 1979; Karasek and Theorell, 1990). The congruence between demand and control forms the learning mechanism (B). This may have an impact on worker well-being, with active congruence associated with high levels of motivation, job challenge, learning, job involvement and job satisfaction (de Jonge et al., 1996). The job-demand, job-control model has been extended to include social support to capture the impact of social resources at work (Karasek and Theorell, 1990). Social support and control at work are protective of mental and physical health outcomes (Godin and Kittel, 2004; Stansfeld et al., 1999), although the moderating effect of social support on the relationship between strain at work and emotional outcome is not always apparent (van der Doef and Maes, 1999).

**Demand and control in nursing**

High job strain conditions are associated with twice as many accidents at work, including accidental cuts and needle punctures (Nolting et al., 2002). Job stressors and low control are risk factors for patient safety (Elfering et al., 2006). Strain among hospital nurses has been associated with depression, low job satisfaction, raised blood pressure and cortisol levels (Fox et al., 1993) and intention to leave the profession across Europe (Hasslehorn et al., 2003). Low decision latitude and interpersonal conflict at work predict injuries in health care workers (Salminen et al., 2003). High work demand and conflict with supervisor and colleagues are associated with increased risk of work related accidents (Swaen et al., 2004). Other studies have failed to show a link between decisional control and either emotional distress or job satisfaction (Fillion et al., 2007) or between job strain and urinary catecholamine secretion (Brown et al., 2003).

Support at work can arise from several sources. Co-worker and patient support have been related to all three aspects of emotional burnout. Supervisory support has been associated with lower levels of emotional exhaustion (Sundin et al., 2007). This study did not test the interaction between demand and control or between strain and support on emotional outcome. Managerial support has been reported to have similar protective main effects on emotional exhaustion in qualified nurses (Jonge et al., 1996; Tummers et al., 2002). Within the NHS workforce, support from supervisors is generally associated with increased job satisfaction, lower levels of turnover intention and lower levels of work related stress (Healthcare Commission, 2004a).
Variables other than control may interact with demand, or effort, to influence job-related satisfaction and health outcomes. For example, psycho-social reward is important in predicting such outcomes, particularly with health service workers (Marshall and Barnett, 1993). Effort-reward imbalance discrepancies arising from the interaction between individual coping styles, work demands/pressures and organisational reward structures have also been linked to autonomic nervous system activation and levels of distress (Siegrist, 1996): see Figure 4.2.

**Figure 4.2 Effort-reward imbalance model (Siegrist 1996)**

Effort-Reward Imbalance (ERI) (Siegrist, 1996) is a model of job strain that focuses on the imbalance between effort expended and the reward received. According to this model, when individuals fail to experience reciprocity at work, in terms of reward for their efforts (money, esteem and job security), they experience emotional distress and the associated autonomic arousal. Individuals may remain in such environments for strategic career moves, or if there is a lack of alternative choice, or if they have a personal pattern of coping characterised by 'overcommitment' (Siegrist et al., 2004). Overcommitment is described as 'a set of attitudes, behaviours and emotions that reflect excessive striving in combination with a strong desire of being approved and esteemed' (Siegrist and Peter, 2000).

Effort-Reward Imbalance is a risk factor for heart disease through largely unidentified mechanisms. Work by Kivimaki et al., (2002) followed 812 clerical, administration, foundry and heavy engineering workers over 26 years, found that those with high effort reward imbalance (after adjusting for age and sex, low salary, lack of social approval, few career opportunities relative to effort at work) doubled their risk of cardiac mortality. ERI imbalance was related to increased cholesterol and BMI at follow-up. This may have reflected pathophysiological changes related to the development
of cardiovascular disease (Kivimaki et al., 2002). ERI is also a risk factor for emotional distress (Stansfeld et al., 1999), and for alcohol dependence in men (Head et al., 2004).

**Effort reward in nursing**

The literature on Effort Reward Imbalance (ERI) is far less extensive in Nursing than in the general workforce. However, ERI is predictive of a range of emotional and behavioural outcomes in this context. Both ERI and overcommitment are reported to have main effects on the outcome measures of depersonalisation and emotional exhaustion (Bakker et al., 2000). Nurses with ERI and high overcommitment had greater emotional exhaustion and reduced personal accomplishment (Bakker et al., 2000; Shamian et al., 2002). The risk of emotional exhaustion was twenty-one times higher for overcommitted individuals compared to the non-overcommitted who also reported high ERI (Jonge et al., 2000). Other studies have reported the main effect of effort and reward on job satisfaction (Fillion et al., 2007).

The relation between ERI and self reports of poor self-reported health is enhanced by nurses reporting high level of work-related overcommitment (Weyers et al., 2006). High ERI predicts intention to leave the profession (Hasselhorn et al., 2004). This last outcome, in particular, has direct relevance for patient safety.

There are few studies linking ERI to physiological outcomes. Of these, a higher heart rate frequency band was seen later in the day for those health professionals reporting effort-reward imbalance (Hanson et al., 2001).

### 4.2.6 Influence of shift climate and incidents on well-being and performance

While there is a literature examining the broad stressors generally faced by nurses in terms of demand, control and effort-reward imbalance (Bakker et al., 2000; Nolting et al., 2002), much less is known about whether the characteristics of particular shifts or whether specific stressful situations facing nurses affect consequent nurse well-being and performance. The content of daily experience of qualified nurses has been described in a range of settings (Fillion et al., 2007; Hallin and Danielson, 2007). Characteristics of the specific clinical stressful situations facing qualified nurses have been explored using qualitative interview (Taylor et al., 1999). However, little is known about effect of specific incident characteristics or shift climate on nurse well-being and performance.

Regarding shift climate, a shift may be perceived to be particularly demanding or may be characterised by a lack of decisional control (Johnston et al., 2006). The incidents a nurse faces during a shift may also vary in respect of its perceived seriousness and whether work related support was received from managerial and colleague sources. It remains to be demonstrated whether within-person variation in shift climate, incident seriousness and work-based support affect nurse well-being in specific
stressful incidents or subsequent performance of the nurse following the incident.

Of those few studies that have examined such situation-specific characteristics, the focus of enquiry has been on the perceived importance of the specific stressful situation, that is, whether the situation facing the nurse was personally meaningful, and how this influenced the situation specific coping employed. With student nurses, the perceived importance of a specific stressful situation interacted with extraversion and social support to predict the use of problem focused coping (Parkes, 1986). With qualified nurses, a scenario based study showed that nurses used more emotion focused coping strategies when situations were personally relevant rather than relating to the organisation (Becker-Carus et al., 1989; Parkes, 1986). Both studies used cross-sectional designs.

Within-person approaches have used event sampling and observational approaches. Elfering et al., (2006) gathered details of 314 daily stressful events and identified that 62 of these were related to patient safety issues including medication errors or near misses, delays in patient care, patient casualties and violent patients. On average, 20 percent of incidents reported relating to patient safety. Such safety events were more likely to be reported in high demand and low control situations, particularly if the nurse was less experienced. Trained observers have been employed to track diurnal changes in error rates in practitioners in intensive care and to rate error seriousness (Donchin et al., 2003), or have measured within-person variation in demand and linked this to the cardiac health of health care workers (Hanson et al., 2001).

To date, little research has examined the influence of all of these situational or shift related factors on the quality of care provision. A qualitative, interview based study suggests that a lack of support from nurse managers, ward colleagues, concerns regarding staffing levels and concerns for patient care may negatively influence care provision (Taylor et al., 1999).

4.2.7 Capturing variation in perceptions of linking work environment, well-being and performance

The majority of the literature examining the effect of the work environment on nurse well-being and performance relating to patient safety is gathered using questionnaire based retrospective data that requires a respondent to consider a psychological construct of interest and rate their response considering the recent past. Respondents may be asked to rate their response considering daily, weekly, monthly time periods, or report in general. This is a convenient, standardized way to collect data, and one that is not too burdensome for participants or researchers (Shiffman and Stone, 1998).

The main concepts in key theoretical models of work stress are usually measured by standardised questionnaire (Karasek, 1985; Siegrist and Marmot, 2004; Siegrist et al., 2004) that are designed to measure
individuals’ habitual perceptions of their work situation. There are inherent problems, however, with accounts of health or work-related behaviour, mental and physical well-being and their determinants that are provided retrospectively and that rely on autobiographical or semantic memory. Such measures are prone to many sources of error and bias of retrospective accounts of behaviour (Jobe et al., 1993; Kihlstrom et al., 2000). Recognising such sources of invalidity, Stone and Shiffman (1994) and others (Bolger et al., 2003), advocate Ecological Momentary Assessment (EMA) as a solution. Here, data of interest are recorded frequently in real time within the critical environment. This contrasts with standardised questionnaires which are primarily suitable for assessing generalized chronic determinants of work-related stress. However stress varies considerably within individuals across time and place. It is an open question whether such variations within individuals are determined by the same processes that determine variations between individuals.

**4.2.8 Benefits of the EMA approach**

A series of reviews have identified the benefits of using the within-person design advocated by Ecological Momentary Assessment (EMA) (Burton et al., 2007; Piasecki et al., 2007).

The key benefit of this approach lies in the capture of real time data that allows examination of reported events in natural spontaneous setting. Data collection can be scheduled to fit the respondent’s day and participant experience is gathered as it happens. This form of data collection allows data to be gathered at fixed intervals (interval contingent), at times determined by the investigation (signal contingent) or when a significant event occurs (event contingent). This approach gathers data near to the time that events happen. Data is time stamped and entered into a spreadsheet automatically, with no error. There is thought to be a dramatic reduction in likelihood of introspection as participants provide an unfiltered perspective. The EMA approach allows aggregation of data overtime, and allows the time course of the determinants of mood and behavioural outcomes to be modelled. Diary data can determine antecedents, correlates and consequences of daily experiences and such data can be linked with other forms of real time data. The EMA approach gathers data that is impossible to capture by retrospective self report, e.g. the impact of personally significant events on future mood and performance.

Johnston et al., (2006) developed a PDA based device which assesses mood and the main constructs from the DC and ERI models and tested it on a small sample of nurses. They obtained preliminary information suggesting that the device was acceptable and variations in self reported stress did relate as predicted to the occurrence of high demand and low control and high effort and low reward. However, this study was restricted to one measure of stress (a single analogue scale) and the small number of participants limited the statistical analyses to an examination of ratio scores of demand over control and effort over reward. While such scores do
capture the central concepts of the models and are widely used they are the
not most robust method of testing the predicted interactions.

4.3 Aim

To explore the effects of working in demanding health care situations on
qualified nurse well-being and performance using work-based diary on
handheld computer and self-reports of personally significant clinical
incidents. Examples of personally significant clinical incidents in previous
studies have included bed and staff shortages, working with critically ill
patients, patient and staff aggression. This research was carried out in four
selected Trusts with different cultures and degrees of performance (‘high’
performing versus ‘low’) on patient safety and staff well-being. This study
explored the effects of working in difficult health care situations on nurses
and the care they provide, as the events happened.

In this study, work environment was operationalised in terms of Demand
Control (DC) (Karasek and Theorell, 1990) and Effort Reward Imbalance
(ERI) models (Siegrist and Peter, 2000): that is, demand, control, strain,
effort, reward, ERI and overcommitment.

4.3.1 Objective: Work environment and well-being

To identify the relationship between work environment, strain outcomes
(distress/stress) and staff performance in four NHS settings using real time
and retrospective methods.

4.3.2 Objective: incident characteristics, well-being and
performance

2a To determine the effect of experiencing personally significant clinical
incidents in the work setting on nurse well-being and subsequent clinical
performance. For example, does nurse well-being suffer following reports of
a personally significant event?

2b To determine the effect of event characteristics such as incident
seriousness and work-related social support receipt on nurse well-being and
performance.

4.4 Methods

4.4.1 Design

This study employed a within-subjects and between design incorporating
both cross-sectional and longitudinal elements. Levels of stress, the
putative determinants of that stress and various demographic and other
factors were surveyed in nurses in four selected acute care trusts in
England. The measures included standardised questionnaires and
computerised work-based diaries, or Personal Digital Assistants (PDAs) used
frequently over three nursing shifts. The Trusts were selected to represent different patterns of staff well being and patient safety.

4.4.2 Selection of Trusts

Trusts were selected on the basis of staff perception of their well being and patient safety as determined by the NHS National Staff Surveys of 2003 and 2004. As described in detail earlier we wished to contrast stable high and low performing Trusts with Trusts that were unstable on perceptions of staff well being and patient safety. When the data from the 2007 National Staff Survey were taken into account it was clear that our initial categorisation was not reliable and the four Trusts consisted of two high performing Trusts and two lesser performing Trusts. The primary comparisons will therefore be between the high and lower performing Trusts.

4.4.3 Participants

We planned to test 300 nurses, 75 from medical and surgical wards in each of the four Trusts in the study. Nurses were required to work for at least 22 hours per week. All shift patterns were accepted. Approximately 16 percent of the nurses approached volunteered, 87 percent were women and 69 percent worked on medical wards.

4.4.4 Procedure

In each of the four Trusts the research assistant (RA) responsible for data collection in that Trust worked with a nurse nominated by the Trust (the ‘Nurse Advocate’) to deliver information on the project to nurses selected at random from lists provided by the Human Resources Department. Nurses were contacted by letter and returned consent forms to locally agreed collection points. Packs of questionnaires were then sent to consenting nurses and dates agreed for the completion of the diaries. Questionnaires were returned to the research assistant in envelopes provided by the research team. Diaries were delivered by the RA to the ward prior to the first shift on which diaries were to be completed, the diary demonstrated and programmed to run for the next three shifts. After the completion of the three shifts diaries were returned to the RA. An infection control procedure was agreed with each Trust prior to diaries going on the ward. This varied across Trusts but usually consisted of staff decontaminating their hands before using the diary and wiping the diary with an alcohol swap at the end of each shift. The Personal Digital Assistants (PDAs) were also wiped with alcohol swabs by the research team before they were taken on the ward.

Participants who scored higher than eight, using categorical scoring on the General Health Questionnaire 12 (GHQ12), indicating emotional distress of possible clinical significance, received a letter telling them of this high score and suggesting they consider approaching their general practitioner or the NHS Occupational Health Department.
4.4.5 Questionnaires

Demand and Control and hence Strain were assessed using the Karasek Job Control Questionnaire (JCQ) (Karasek 1985), the most widely used measure of these dimensions. Control (Decision Latitude) is the sum of Decision Authority and Skill Discretion. The JCQ to have a good psychometric profile, for example, a major cross cultural study (Karasek et al., 1998) reported average Cronbach’s alphas for the various subscales averaging over .7, a stable and predicted factor structure and the expected relationships to various occupations. In the current sample the Cronbach’s alpha was .68 for Demand and .72 for Control. Effort, Reward and Overcommitment were measured by Siegrist’s Effort Reward Imbalance questionnaire (ERIQ) (Siegrist, 1996), the standard measure of these concepts. A study in different European countries of almost 20,000 participants (Siegrist et al., 2004) confirmed the ERI questionnaire factor structure and showed Cronbach alphas to average over .7. In this sample, Cronbach’s alphas for Effort, Reward and Overcommitment were .82, .86 and .81. Distress was assessed by the GHQ12 (Goldberg and Williams, 1988) a widely used brief measure of emotional disturbance (Cronbach alpha .89). Negative and Positive activity was measured on the Positive and Negative Affect Scale (PANAS, Watson et al., 1988), with Cronbach’s alphas PA= .89, NA= .83 in this sample.

4.4.6 Materials

The format for the diary questions was very similar to that used by Johnston et al. (2006) which had been based on the Diary of Ambulatory Behavioural States (DABS) (Kamarck et al., 1998). It was operationalised using specially written software, on Dell Axim 50 PDAs. The programme consisted of three separate elements, namely ‘standard’ entries, ‘end of shift’ entries, and ‘incident reports’.

**Standard entries**

Which were prompted by an alarm occurred throughout the shift at approximately ninety-minute intervals (with a window of +/- 15 minutes, determined randomly by the programme). There were therefore usually between six and nine diary entries per shift, depending on shift length. Participants rated their mood on the nine analogue scales shown in Figure 4.3. Further questions were mapped on the constructs central to the DC and ERI models that is, demand/effort, control, reward and self-reported stress (see examples in Figure 4.4). Demand/effort was assessed by asking how hard and how fast participants had worked over the previous ten minutes. As there is some overlap between the concepts of ‘demand’ and ‘effort’ they were treated as a unitary construct in the diary, in order to reduce the measurement burden on the participants.
Figure 4.3 The nine analogue mood scales as displayed in the PDA. Participants indicate their current position on the scales by tapping on the screen with a stylus.

Figure 4.4 Participant PDA screens for assessing demand (working hard plus working fast), control, reward (appreciation scale) and an aspect of overcommitment (desire for 'more control').
End of shift

At the end of each shift participants completed the normal diary entry and also identified the worst event on that shift, entered the time of the incident and rated its seriousness on an analogue scale and completed the nine mood scales with respect to how they had felt at the time of the incident. They then rated the extent they had recovered from the incident, who was involved (nobody else, colleague, patient, relative, other, more than one category could be chosen), support received from colleagues, manager, other or no one, whether the support was emotional or practical and rated how helpful it was. The following ratings of self perceptions of work performance were obtained with four scales measuring, attending to patient and relative needs, working with other staff and organising workload. In addition, the participants could describe the incident using free text entry using the standard Windows Mobile keyboard function. Finally the participants’ recorded the number of errors or near misses the observed on the shift that could have hurt patients or staff.

Incident report

At any time the participants could enter information on clinically significant incidents. The information consisted of the nine mood rating scales, the people involved and, optionally, a free text description of the incident.

The data from each participant was downloaded to an Access database (Access, 2003) for subsequent analysis. Separate databases were constructed for standard, end of shift, and incident entries and also for missed entries. Missed entries were defined as entries that had not been completed before another entry was due. End of shift entries were deleted if they were not provided at the requested time.

4.4.7 Statistical analysis

The PDA software converted the analogue values to scores between 0 and 100 but following Johnston et al., (2006) the diary scores for demand, control, effort and reward were rescaled into a 1-5 format (0-20=1, 21-40=2, 41-60=3, 61-80=4, 81-100=5). A principal components factor analysis followed by varimax rotation of the average scores for each participant on the nine affect scales (alert, tired, happy, stressed, angry, energetic, sad, frustrated and nervous) showed there to be two clear factors. Negative affect composed of stressed, angry, sad, frustrated and nervous and Positive affect composed of alert, happy and energetic. The scale ‘tired’ loaded moderately on both factors and was not used. Scores on negative (NA) and positive affect (PA) were obtained by averaging the relevant scales.

Statistical analyses were carried out on SPSS V14,15 and 16 and MLwiN V 2.10. Hypothesis testing was based on hierarchical linear modelling (Raudenbush and Byrk, 2002) using MLwiN. For analyses that did not examine the separate effects of the four Trusts we tested 3-level models in
which the EMA measures at each observation (Level 1) were nested within shifts (Level 2 which were nested with participants). The Level 1 variables were diary captured demand/effort, reward (the ‘appreciation’ scale), NA, PA and the order of the observation in the series measured during a shift (a proxy for time at work). To test the DC and ERI models, interaction terms representing Demand/Effort by Control and Demand/Effort by reward were calculated. The Level 2 variable was shift (1 to 3) and the level 3 was participants. All analyses took the same form. The constant was always treated as a random effect at all levels. Slopes were modelled as random apart from shifts which had only three observations per participant. The variables in the main models were therefore shift, observations within a shift, demand/effort, control or reward and the interaction of Demand/effort with control or reward. We also examined the effects of Desire for More Control. When testing models of work stress all values of the predictor variables other than observation were centred within participants since we were primarily interested in the relationships over the period of real time measurement. For comparisons of the Trusts an addition forth level representing Trusts was incorporated in the model. Since many analyses were conducted on a large dataset the p<.01 was taken as indicating significance (although .05 and .001 are reported).

### 4.5 Results

#### 4.5.1 Return rates

**'High’ scoring Trusts (Trust A, B)**

**Setting 1**

We successfully collected 64 questionnaires and 69 PDA diaries from participants (a response rate of 16 percent and 17 percent respectively).

**Setting 2**

We collected 30 questionnaires, and 35 PDA diaries (a response rate of ten percent and 12 percent respectively).

**'Low’ scoring Trusts (Trusts C, D)**

**Setting 3**

We collected 67 questionnaires, and 73 PDA diaries (a response rate of 17 percent and 18 percent respectively).

**Setting 4**

We collected 72 questionnaires, and 71 PDA diaries (a response rate of 18 percent for each).

This provided a total dataset of 233 questionnaires and 250 diaries. Removal of participants with significant levels of missing data resulted in questionnaires from 229 participants remaining in the analysis. It should be
noted that some missing data remained within this data, e.g. only 227 
participants provided data on marital status.

Demographic details of participants, errors and near misses affecting 
patients and staff, and the scores from the retrospective, standardised 
questionnaires can be seen in Tables 4.1, 4.2, 4.3 and 4.4 respectively. 
Some 32.1 percent and 24.3 percent of staff scored three or more, or four 
or more on GHQ12 respectively.

Table 4.1  Demographic details of sample across the four settings

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>200</td>
<td>87.3</td>
</tr>
<tr>
<td>Male</td>
<td>29</td>
<td>12.7</td>
</tr>
</tbody>
</table>

**Marital status**

<table>
<thead>
<tr>
<th>Status</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>67</td>
<td>29.5</td>
</tr>
<tr>
<td>Married</td>
<td>124</td>
<td>54.6</td>
</tr>
<tr>
<td>Div/sep</td>
<td>18</td>
<td>7.9</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>7.9</td>
</tr>
</tbody>
</table>

**Grade**

<table>
<thead>
<tr>
<th>Grade</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>168</td>
<td>74.0</td>
</tr>
<tr>
<td>6</td>
<td>32</td>
<td>14.1</td>
</tr>
<tr>
<td>7</td>
<td>27</td>
<td>11.9</td>
</tr>
</tbody>
</table>

**Ward**

<table>
<thead>
<tr>
<th>Ward</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>164</td>
<td>69.0</td>
</tr>
<tr>
<td>Surgical</td>
<td>73</td>
<td>31.0</td>
</tr>
</tbody>
</table>

**Shift pattern**

<table>
<thead>
<tr>
<th>Shift pattern</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed days</td>
<td>20</td>
<td>8.7</td>
</tr>
<tr>
<td>Fixed nights</td>
<td>7</td>
<td>3.1</td>
</tr>
<tr>
<td>Rotating shift not nights</td>
<td>36</td>
<td>15.7</td>
</tr>
<tr>
<td>Rotating shift inc nights</td>
<td>166</td>
<td>72.5</td>
</tr>
</tbody>
</table>

Table 4.2  Errors, near misses affecting patients seen in last month

<table>
<thead>
<tr>
<th>Errors</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>91</td>
<td>40.4</td>
</tr>
<tr>
<td>1-2</td>
<td>81</td>
<td>36.0</td>
</tr>
<tr>
<td>3-5</td>
<td>41</td>
<td>18.2</td>
</tr>
<tr>
<td>6-10</td>
<td>8</td>
<td>3.6</td>
</tr>
<tr>
<td>11+</td>
<td>4</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>225</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 4.3  Errors, near misses affecting staff seen in last month

<table>
<thead>
<tr>
<th>Errors</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>112</td>
<td>50.2</td>
</tr>
<tr>
<td>1-2</td>
<td>73</td>
<td>32.7</td>
</tr>
<tr>
<td>3-5</td>
<td>25</td>
<td>11.2</td>
</tr>
<tr>
<td>6-10</td>
<td>11</td>
<td>4.9</td>
</tr>
<tr>
<td>11+</td>
<td>2</td>
<td>.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>223</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Table 4.4  Questionnaire and diary scores from total sample

<table>
<thead>
<tr>
<th></th>
<th>Quest Mean</th>
<th>Quest SD</th>
<th>Diary Mean</th>
<th>Diary SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA from PANAS</td>
<td>30.14</td>
<td>8.11</td>
<td>60.83</td>
<td>23.43</td>
</tr>
<tr>
<td>NA from PANAS</td>
<td>16.50*</td>
<td>5.93*</td>
<td>15.68</td>
<td>17.31</td>
</tr>
<tr>
<td>Decision latitude</td>
<td>66.70</td>
<td>8.89</td>
<td>3.92</td>
<td>1.39</td>
</tr>
<tr>
<td>Psych job demands</td>
<td>39.52</td>
<td>5.22</td>
<td>3.62</td>
<td>1.43</td>
</tr>
<tr>
<td>Effort scale with phys</td>
<td>15.87</td>
<td>4.39</td>
<td>3.62</td>
<td>1.43</td>
</tr>
<tr>
<td>Reward Scale</td>
<td>44.26</td>
<td>8.47</td>
<td>3.23</td>
<td>1.51</td>
</tr>
<tr>
<td>Effort-Reward-Ratio</td>
<td>.71</td>
<td>.34</td>
<td>1.35</td>
<td>1.11</td>
</tr>
<tr>
<td>GHQ 12 Likert scoring</td>
<td>12.11*</td>
<td>5.52*</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note that scores for NA and GHQ 12 Likert scoring were significantly skewed and kurtotic

4.5.2 Are the high scoring and low scoring Trusts comparable?

High and low scoring Trusts were comparable in terms of gender, marital status, staff grade, ward type and shift pattern worked. There were significant differences in the patterns of shifts worked with High scoring Trust more likely to work 12 hour shifts (Chi²=11.91, df=1, p=.003) and more likely to report seeing errors affecting patients in the last month (Chi²=15.94, df=1, p<.001) (see Tables 4.5 and 4.6). The key significant differences between settings was that greater psychological demands and reward were reported in the high scoring Trusts, Demand t(222)=2.49, p=.014; Reward t(224)=2.76, p=.006 (see Table 4.7).

Table 4.5  Shift characteristics in ‘high’ and ‘low’ scoring Trusts

<table>
<thead>
<tr>
<th></th>
<th>‘Low’ scoring</th>
<th>‘High’ scoring</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 hour shift</td>
<td>57</td>
<td>19</td>
<td>76</td>
</tr>
<tr>
<td>12 hour shift</td>
<td>32</td>
<td>35</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>137</td>
<td>92</td>
<td>229</td>
</tr>
</tbody>
</table>

Table 4.6  Between setting differences in reports of errors or near misses affecting patients in last month

<table>
<thead>
<tr>
<th>Errors affecting patients</th>
<th>Low Scoring</th>
<th>High Scoring</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>69</td>
<td>22</td>
<td>91</td>
</tr>
<tr>
<td>Some</td>
<td>66</td>
<td>68</td>
<td>134</td>
</tr>
<tr>
<td>Total</td>
<td>135</td>
<td>90</td>
<td>225</td>
</tr>
</tbody>
</table>

Setting characteristics were further examined using data from the NHS staff survey. All data are for the NHS year 2006/7 (being the central year of the study), except for mortality, where the most recent data we have is for 2005/6. High and low scoring Trusts differ with high scoring Trusts reporting more errors and near misses, greater safety culture in terms of the availability of hand washing materials. Nurses in high scoring Trusts were more likely to have received infection control training in the last 12 months, less likely to report work related stress but were less likely to
report working in well-structured teams. Standard Mortality and Methicillin-Resistant Staphylococcus Aureus (MRSA) rates were less in high-scoring settings. Settings were comparable in nurse to bed ratios (see Table 4.8).

Table 4.7  Between setting differences in work environment and mood

<table>
<thead>
<tr>
<th></th>
<th>'Low' scoring</th>
<th></th>
<th>'High' scoring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean (SD)</td>
<td>N</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>PA from PANAS</td>
<td>128</td>
<td>29.91(8.20)</td>
<td>91</td>
<td>30.45(8.02)</td>
</tr>
<tr>
<td>NA from PANAS</td>
<td>127</td>
<td>16.85(6.19)</td>
<td>91</td>
<td>16.02(5.55)</td>
</tr>
<tr>
<td>Job demand</td>
<td>133</td>
<td>38.81(5.04)</td>
<td>91</td>
<td>40.55(5.34)</td>
</tr>
<tr>
<td>Decision latitude</td>
<td>134</td>
<td>66.04(9.19)</td>
<td>92</td>
<td>67.46(8.66)</td>
</tr>
<tr>
<td>Effort scale with phys</td>
<td>136</td>
<td>15.73(4.16)</td>
<td>92</td>
<td>16.09(4.74)</td>
</tr>
<tr>
<td>Reward Scale</td>
<td>135</td>
<td>43.00(8.88)</td>
<td>91</td>
<td>46.13(7.48)</td>
</tr>
<tr>
<td>Effort-Reward-Ratio</td>
<td>135</td>
<td>0.73(0.36)</td>
<td>91</td>
<td>0.68(0.32)</td>
</tr>
<tr>
<td>GHQ 12 Likert scoring</td>
<td>134</td>
<td>12.44(6.17)</td>
<td>92</td>
<td>11.62(4.39)</td>
</tr>
<tr>
<td>Age of participants in years</td>
<td>134</td>
<td>39.04(9.05)</td>
<td>91</td>
<td>39.24(9.28)</td>
</tr>
</tbody>
</table>
### Table 4.8 Data for high and low scoring sites

<table>
<thead>
<tr>
<th>Metric</th>
<th>High Scoring Setting 1</th>
<th>High Scoring Setting 2</th>
<th>Low Scoring Setting 3</th>
<th>Low Scoring Setting 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent nurses witnessing errors or near misses that could harm patients in previous month</td>
<td>55</td>
<td>52</td>
<td>58</td>
<td>43</td>
</tr>
<tr>
<td>Percent nurses reporting errors after they are witnessed</td>
<td>93</td>
<td>92</td>
<td>94</td>
<td>97</td>
</tr>
<tr>
<td>Percent nurses agreeing that hand washing materials are always available</td>
<td>80</td>
<td>87</td>
<td>72</td>
<td>67</td>
</tr>
<tr>
<td>Percent nurses receiving some training in previous 12 months</td>
<td>99</td>
<td>99</td>
<td>99</td>
<td>99</td>
</tr>
<tr>
<td>Percent nurses receiving training in infection control in previous 12 months</td>
<td>76</td>
<td>77</td>
<td>74</td>
<td>60</td>
</tr>
<tr>
<td>Support from immediate managers</td>
<td>3.46</td>
<td>3.44</td>
<td>3.49</td>
<td>3.50</td>
</tr>
<tr>
<td>Percent nurses suffering work-related injury</td>
<td>22</td>
<td>25</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>3.41</td>
<td>3.42</td>
<td>3.40</td>
<td>3.40</td>
</tr>
<tr>
<td>Percent nurses suffering work-related stress</td>
<td>34</td>
<td>36</td>
<td>32</td>
<td>47</td>
</tr>
<tr>
<td>Percent nurses working in well-structured teams</td>
<td>25</td>
<td>23</td>
<td>27</td>
<td>39</td>
</tr>
<tr>
<td>Nurses per 100 beds (whole time equivalents (WTEs))</td>
<td>181.60</td>
<td>179.70</td>
<td>183.50</td>
<td>184.90</td>
</tr>
<tr>
<td>Standardised patient mortality ratio (2005/6)</td>
<td>94.6</td>
<td>90.9</td>
<td>98.4</td>
<td>104.8</td>
</tr>
<tr>
<td>MRSA rate per 10,000 bed days</td>
<td>1.05</td>
<td>1.48</td>
<td>0.63</td>
<td>1.56</td>
</tr>
</tbody>
</table>
4.5.3 Testing the demand control and effort reward imbalance models using questionnaire assessment

The questionnaire data for the total sample is shown in Table 4.4. The PANAS scores are comparable to those reported by Crawford and Henry (2004) for a sizeable community sample when asked to rate their mood over the last few days. The values for Control and Demand are very similar to the international norms provided by Karasek et al., (1998). The levels of effort, reward and overcommitment are comparable to those reported by Preckel et al., (2007) in workers in aircraft manufacture.

The models of Demand Control and ERI models are frequently tested by determining the power of the standard questionnaires to predict measures of psychological well being. The measures of affect we used were NA as assessed by the PANAS and the total score on the GHQ12. For completeness and comparability with the EMA measures we also tested the prediction of PANAS PA, but neither model makes strong or critical predictions about positive affect. As this data did not have a nested structure standard regression was used within MLwiN. It is clear from Table 4.9 that of the Karasek measures only Control predicts affect or GHQ12 (high control associated with more positive mood and less negative mood or distress), neither Demand nor the demand by control interaction are at all predictive. The ERI model receives stronger support with Effort, Reward and the Effort Reward interaction all significant for all three outcome measures (Table 4.10). Effort and Reward relate as expected to the outcomes measures but the effort by reward interaction is not as predicted. Figure 4.5 shows that increasing effort has a its greatest effect on nurses who regarded their work as most rewarding, whereas ERI theory suggests that effort should have its greatest effect on those low in reward.

Increasing effort is associated with more distress as is less reward but effect of effort is greatest in participants perceiving their jobs as most rewarding.

Table 4.9 Testing the effects of demand, control and demand by control interaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>.068</td>
<td>0.152</td>
<td>0.872</td>
</tr>
<tr>
<td>Demand</td>
<td>-0.143</td>
<td>0.086</td>
<td>3.250***</td>
</tr>
<tr>
<td>D x C</td>
<td>0.010</td>
<td>0.018</td>
<td>1.111</td>
</tr>
<tr>
<td>PA</td>
<td>-0.094</td>
<td>0.193</td>
<td>0.950</td>
</tr>
<tr>
<td>Demand</td>
<td>0.389</td>
<td>0.111</td>
<td>6.824***</td>
</tr>
<tr>
<td>D x C</td>
<td>0.001</td>
<td>0.021</td>
<td>0.091</td>
</tr>
<tr>
<td>GHQ12</td>
<td>0.124</td>
<td>0.137</td>
<td>1.771</td>
</tr>
<tr>
<td>Demand</td>
<td>-0.171</td>
<td>0.078</td>
<td>4.275***</td>
</tr>
<tr>
<td>DxC</td>
<td>0.004</td>
<td>0.016</td>
<td>0.5</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, ***p<.001
Table 4.10 Testing demand/effort, reward and demand/effort by reward interaction

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coeff</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort</td>
<td>0.219</td>
<td>0.179</td>
<td>2.38*</td>
</tr>
<tr>
<td>Reward</td>
<td>-0.299</td>
<td>0.090</td>
<td>6.50***</td>
</tr>
<tr>
<td>E x R</td>
<td>0.018</td>
<td>0.016</td>
<td>2.25*</td>
</tr>
<tr>
<td>PA</td>
<td>-0.503</td>
<td>0.251</td>
<td>3.899***</td>
</tr>
<tr>
<td>Reward</td>
<td>0.262</td>
<td>0.127</td>
<td>4.077***</td>
</tr>
<tr>
<td>E x R</td>
<td>-0.036</td>
<td>0.023</td>
<td>3.00**</td>
</tr>
<tr>
<td>GHQ12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort</td>
<td>0.276</td>
<td>0.164</td>
<td>3.286***</td>
</tr>
<tr>
<td>Reward</td>
<td>-0.269</td>
<td>0.084</td>
<td>6.256***</td>
</tr>
<tr>
<td>E x R</td>
<td>0.023</td>
<td>0.016</td>
<td>2.875**</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, ***p<.001

Figure 4.5 Interaction of effort and reward

Discussion

Two findings standout from the analysis of the questionnaire data, the very limited support for the Karasek demand control model and the surprising finding that increased effort had its greatest effect on those who found their work most rewarding. Siegrist predicts that it is the lack of reciprocity between reward and effort (high effort and low reward) that produces the most negative outcomes, which appears to imply that reward and effort
interact. It should be emphasised that the main effects of effort and reward are as expected, with more effort being associated with more negative and less positive outcomes and the opposite for reward and the effects are additive, so those high on effort and low in reward will usually have the poorest psychological well being.

There is an extensive literature on the relative role of demand and control in predicting well being. Van der Doef and Maes (1999), in a very influential review of 20 years of research on the model as a predictor of psychological point out that researchers differ in whether they test what van der Doef and Maes term the strain model of simple additive effects of demand and control or the buffering model in which control moderates the effects of demand. They find that the additive model is supported in 28/41 studies of psychological well being while the buffering model is supported in 15/31. They suggest that support for buffering is more common when the measure of control relates closely to the work situation creating the demand, that is, is relevant to that demand. Jones et al., (2005) studied demand and control, assessed by the JCQ, as part of a complex study of managerial and other support in 434 student nurses. They found significant correlations between demand and control with distress measured by the GHQ30 but when demand and control were incorporated in a more complex model demand was driven by the participants’ trait neuroticism (a personality characteristic) and was unrelated to distress when neutoticism was allowed for. Control did not relate directly to distress but operated through job satisfaction, participants who perceived a lack of control in their work environment where less satisfied with their job and as a result more distressed. In unpublished data from the study reported by Johnston et al., (2006) we found no relationship either demand or control and distress as assessed by the GHQ30 in a small sample of 43 nurses. Recently Gelsema et al., (2005) have described the relationship between demand and control as measured by a special questionnaire for nurses and distress on the Symptom Checklist 90 (SCL-90) (Derogatis, 1994) in a large sample of nurses. Demand and control (separated into skill discretion and decision authority) correlated with distress at approximately the same level reported by Jones et al., (2005) but in multiple regression analyses with many other measures of work environment control ceased to contribute significantly. It appears therefore that in nurses demand and control, at least as assessed by questionnaire may have a complex relationship with psychological well being that is at least partially mediated by other work and personality features.

The ERI model fares better than DC in this data set, effort and reward both predicting as expected, although reward was a markedly more powerful predictor than effort. In the unpublished data from Johnston et al., 2006 we also found that both effort and reward predicted QHG30 scores (with equal power in that case). Siegrist (1996) advocates the ratio of effort over reward as a measure of the ERI, and such a ratio relates strongly to psychological well being in this sample. This does not separate out the main and interactive effects of the two concepts and such ratios can be determined by only one of the variables. It is therefore better to assess
both main and interaction effects as we have done. It is clear that the main
effects of reward and effort are strong but the interaction was not as
expected. Preckel et al., (2007) were also concerned to separate out the
main and interactive effects of effort and reward and tested a model that
included the two main effects and the ERI ratio. Gelsma et al., (2005)
included a measure of reward in their study but it related only weakly to
well being. Tests of the more conventional multiplicative interaction are
appear to be rare in the ERI literature.

4.5.4 Ecological Momentary Assessment using the PDA-
based diaries

For illustrative purposes typical results on the diaries are shown from one
participant who completed the diary for three shifts (see Figures 4.6 to
4.9). This nurse was happiest towards the end of shifts, was seldom sad,
clearly became more tired as the shift proceeded, stress and perceptions of
how hard they were working increased over the shift then diminished. This
example shows that the data were systematic and apparently meaningful at
an individual level.

**Figure 4.6 Happiness ratings from one nurse over three shifts**
**Figure 4.7** Sadness ratings for one nurse over three shifts

![Sadness Ratings](image)

**Figure 4.8** Self-ratings of how hard one nurse worked over 3 shifts

![Working Hard Ratings](image)
The 250 participants made 4259 regular diary entries across the three shifts, an average of 17.0 entries per participant. Nine hundred and fifty seven (18 percent) of the entries were missed. There were significant
differences between the sites in the number of observations obtained per participant, with the poorer performing sites providing on average 1.9 less observations. One of the low scoring sites provided markedly less observations than the others (15 compared to the 20 of the best site). The average values for the sample on the EMA affect and work environment scales are shown in Table 4.11. This shows that NA was low, PA high and most participants were working in demanding environments with considerable control, reasonable reward and some desire for more control. All the measures show within and between participant variability.

**Table 4.11 Means and standard deviations of EMA measures of affect and perception of the work environment**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>SD</th>
<th>SD Within</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative affect</td>
<td>15.66</td>
<td>17.33</td>
<td>10.68</td>
</tr>
<tr>
<td>Positive affect</td>
<td>60.90</td>
<td>23.43</td>
<td>15.51</td>
</tr>
<tr>
<td>Demand/effort (Working Hard)</td>
<td>3.62</td>
<td>1.44</td>
<td>1.19</td>
</tr>
<tr>
<td>Demand/effort (working Fast)</td>
<td>3.79</td>
<td>1.47</td>
<td>1.22</td>
</tr>
<tr>
<td>Control</td>
<td>3.92</td>
<td>1.39</td>
<td>1.04</td>
</tr>
<tr>
<td>Reward</td>
<td>3.22</td>
<td>1.52</td>
<td>1.04</td>
</tr>
<tr>
<td>Desire for More Control</td>
<td>2.56</td>
<td>1.59</td>
<td>1.13</td>
</tr>
</tbody>
</table>

All values shown are uncentred. NA and PA range 0-100, other scales 1-5.

The relationship between questionnaire and EMA measures of demand, control, overcommitment and negative and positive affect

The data collected in real time relates to the widely used concepts of demand or effort, control, overcommitment and negative and positive affect which are usually measured by questionnaire. Diary and questionnaire measures are unlikely to be identical (indeed it would be disappointing if they were) but one might expect some relationship between the two types of measure. We therefore tested if our primary EMA measures related to their traditional questionnaire equivalents (see Appendix 16, Tables 1 and 2). In these analyses the EMA measures were uncentred since we were interested in the absolute values obtained not the change across shifts. Included in these appendices are ratio scores representing Strain (Demand/Control) and ERI (Effort/Reward). Ratio scores are problematic but are widely used and enable us to relate the central postulates of each theory as assessed by questionnaire and EMA methods. None of the measures from Karasek’s Job Content Questionnaire related to the EMA counterparts. Reward, Overcommitment and the ERI ratio from Siegrist’s ERI questionnaire did relate to the EMA equivalents. NA and PA from the PANAS (Appendix 16, Table 3) related strongly to the associated EMA measures. As the relationships between the questionnaires on job characteristics and the EMA measures were not strong we tested if the work environment questionnaires predicted NA in real life since it would be expected that nurses who typically see their work as demanding, offering little control, would display more NA in real life. In Appendix 16, Table 4 it
can be seen that all scales from the Job Content and ERI questionnaires relate to NA in real life, although the effects are not strong for the Job Content Questionnaire.

**Discussion**

The two main measures form the JCQ, Demand and Control and the derived measure Strain did not relate to the EMA equivalents. From the ERIQ, Reward, Overcommitment and the ERI ratio did relate in both methods of measurement. The relationship between Effort and Demand, while in the correct direction did not reach conventional levels of sig. In our earlier small study (Johnston et al., 2006) in unpublished analyses (Beedie, 2001) we showed that questionnaire measures of demand, strain, effort, reward, and ERI ratio did to EMA equivalents, although control and overcommitment did not.

The EMA measure of Demand is the average of two scales, working hard and working fast. A supplementary analysis showed that working fast related at marginal level of significance to JCQ Demand (z=2.0 p<.05), working hard did not. The ERIQ Effort measure was also poorly related to demand. It did however relate rather more strongly to working fast (z=2.5 p<.05) in supplementary analyses. These findings may suggest the at least in nurses demand/effort is better assessed by ratings of working fast than working hard. Nevertheless working hard and working fast are highly correlated (the conventional correlation between the measures in the current data set is .77) and they had very similar means and between and within participant standard deviations (see Table 4.11). Since demand was the measure we specified in advance we continued to use it in all subsequent analyses but in further developments of the EMA measures more work on demand might well be justified.

The lack of a relationship between EMA assessed control and control on the JCQ is surprising. The JCQ measure is a subtle measure composed of two subscales (skill discretion and decision autonomy) but one might expect that people who perceive their work environment as differing on these dimensions would experience differing levels of control throughout the day. However we find no evidence of this. Furthermore the JCQ measures did not relate strongly to EMA measures of NA and PA. However JCQ Demand and Control did not relate to NA or PA from the PANAS (another questionnaire) or the GHQ12, so it is possible that Demand and Control as assessed by this measure do not capture relevant aspects of the nursing environment.

With the exception of Effort the ERIQ measures relate quite well to their EMA equivalents. It is perhaps surprising, but gratifying, that appreciation and desire for more control capture some aspects of Siegrist’s complex conceptions of Reward and Overcommitment. These measures also related to questionnaire measures of affectivity and distress suggesting that the ERIQ has considerable relevance to the nursing. It has been shown that high ERI is associated with burnout (Bakker et al., 2000) and intention to leave nursing (Hasselhorn et al., 2004).
Negative and Positive Affect related satisfactorily when assessed by either method of measurement, people who habitually view their world negatively did so throughout the day and those who viewed it more positively similarly saw it in the same light throughout the day. The NA and PA measures related rather more strongly across methodologies than the measures of the work environment. This may suggest that these are more pervasive concepts or simply that we measured them better in the diaries. It is the case that they were assessed using multiple item scales which may be both more valid and more reliable than the single or two item scales that make up the other EMA measures. In EMA measurement one has to balance psychometric adequacy and participant burden. In future studies it may be worth attempting multiple item measures of the key measures of the work environment. However we shall see in the next section that these EMA measures of the work environment are powerful and systematic predictors of affect in real life.

4.5.5 Testing the demand control and effort reward imbalance models in real life

The primary test of the Demand Control and Effort Reward Imbalance models is whether the models predicted affect in real life from the EMA measures of the work environment also determined in real life.

The distribution of NA had a substantial positive skew and a profound floor effect with 16 percent of the scores 0. The distribution of PA was approximately normal. After MLM modelling the residuals of NA were much less skewed but kurtotic. Both NA and PA displayed considerable autocorrelation, however this was much reduced in the residuals. It should be noted that MLwin did not have the capacity to model auto regressive processes during the period when these analyses were conducted. This facility has recently become available and preliminary analyse suggests that while fitting an auto regressive component improves model fit, it does not affect the very robust relationships we find and report here.

Negative Affect. As can be seen from Appendix 16, Table 5, NA increased with demand/effort, decreased with control and demand/effort and control interacted. The simple effects analysis of the interaction is shown in Figure 4.11. As predicted from the Karasek demand control model NA was greatest when demand/effort was high and control low. The findings related to Siegrist’s ERI model approach are shown in Appendix 4 Table 6.

Unsurprisingly Demand/effort is associated with increased NA which diminishes as Reward increases. There is an interaction of demand/effort and reward, shown in Figure 4.12; NA is greatest when effort is high and reward low, as the ERI model predicts.

Positive Affect. Positive affect increased with demand/effort, and more profoundly with control (Appendix 16, Table 5) and reward (Appendix 16, Table 6). There is a interaction of Control and Demand which is however very slight and can be ignored. PA decreased markedly over the duration of a shift.
Desire for More Control is assessed as one aspect of Overcommitment, which Siegrist’s sees as a moderator of ERI. In the analytic model we favour this is most appropriately tested by the three way interaction of demand x control x desire for more control in a model that also includes all main and two way interactions. Since such this a very complex model we followed normal practice in testing the overall model then re-specifying it omitting non-significant effects. We also only specified random effects for the constant. In this model all the main effects were significant and two of the two way interactions, Demand x Control (as previously found, see Appendix 16, Table 5) and Control by Desire for More Control. The three way interaction did not approach significance (z=1.03). The final model is shown in Appendix 16, Table 7. It can also be seen that Desire for More Control is a powerful predictor of NA. Figure 4.13 shows the interaction of Control x Desire for more Control, NA was highest then Control was low and Desire for More Control high. Appendix 16, Table 7 also shows the same model applied to PA. It is clear that Desire for More Control has little relationship to PA.

The previous analyses were all driven by theoretical considerations. It may also be valuable to examine the independent additive effects of the main predictive variables. This was done without testing interaction terms. The results are shown in Appendix 16, Table 8. All the measures of perceptions of the work environment predict NA, with Desire for More Control being the strongest predictor. Demand and control are strongest predictors of PA, with Desire for More Control relating trivially if at all to PA.

Figure 4.11 Relationship between demand, control and negative affect (NA)
Both DC and ERI models received strong support from the analysis of the EMA data. NA increased as demand/effort increased, as control decreased, as reward increased and was maximal when Demand was high and Control low, or Effort high and reward low. We did not have strong predictions from the model about PA and the pattern was not simply the inverse of the
findings with NA. While Demand/effort has related to PA, Control and reward were more powerful predictors. Control and Reward interacted only trivially with Demand/effort in predicting PA. NA increased slightly throughout the shift while PA decreased markedly. There were no reliable differences between the three shifts in either NA or PA.

**Demand control model**

The findings from the analysis of this substantial dataset confirm the analysis of the earlier small study (Johnston et al., 2006), that Karasek’s contention that the combination of demand and control that he calls strain is associated with maximal distress. In our earlier paper we were only able to assess strain as the ratio of demand to control. The much larger dataset in this study enabled us to use the much more satisfactory method of assessing both main and interactive effects in an overall regression analysis. This analysis showed that while the predicted interactive effect was found the main effects of demand and control were also present and were not removed by including the interaction. In general, even at high levels of control, high demand is associated with NA and at low levels of demand more control is still associated with less NA. This indicates that Demand and Control are important in their own right as well as in interaction. The DC model does not make strong predictions for PA. Both demand and control relate positively to PA, as demand or reward increases PA increases. Demand and control do not interact. The increase in PA with demand unexpected and probably relates to the fact that measure of PA is closely related to activation (it is assessed by scales measuring alertness, happiness and energy), indeed a supplementary analysis (not reported) showed that demand was not related to happiness, control did relate to happiness positively as expected.

**Effort reward imbalance**

The ERI model also received strong support. Effort, which identical to Demand in our operationalisation, predicted NA as did Reward (appreciation) and the two measures interacted as predicted so that high effort and low reward was associated with the most NA. Effort and Reward were strong predictors of NA in their own right as well as in interaction. The ERI model does not make strong predictions about PA but reward relates positively and strongly to PA. Effort and reward do not interact.

**Desire for more control (overcommitment)**

Desire for more control was developed as a measure of an aspect of the concept of overcommitment, and it did relate as expected to Overcommitment assessed by the ERIQ. In Siegrist’s ERI model overcommitment is an additional individual variable interacting with ERI so that those will high overcommitment to work should experience particular
distress when also experiencing ERI. The predicted three way interaction was not found but there was a significant interaction between Control and Desire for More Control, NA was markedly greater when control was low and desire for control high. While we developed Desire for More Control as a brief measure of Overcommitment it may be better to consider it in its own right. Nurses frequently wish more control and particularly when they perceive their control to be low they experience greatly increased negative affect. Desire for More Control did not relate to PA.

**Other findings**

In all the overall analyses NA decreased slightly over each shift and PA decreased markedly, reflecting participants increasing lack or energy and alertness as the shift progressed.

**4.5.6 Differences between the low scoring and high scoring Trusts on EMA measures**

The four Trusts were grouped into two categories on the basis of staff stress and safety record. Before grouping the data from the Trusts (within their categories) we compared the Trusts within a category to check that these grouping were appropriate. There were no differences between the two high scoring Trusts on any of the measures, but the two low scoring Trusts differed on control and reward. This has to be taken into account in subsequent analyses. The mean values are shown in Table 4.12 and associated analyses in Table 4.13. In the analysis high scoring Trusts are coded as 1, low scoring as 0. The low scoring and high scoring Trusts did not differ in affect over the working day. They did show slight differences in Demand and Desire for Control with low scoring Trusts reporting a more demanding work environment and more Desire for Control. Since the two low scoring Trusts differed in control and appreciation all four Trusts were compared, see Table 4.14. The four Trusts did not differ in Reward but did differ in Control, one of the low scoring Trusts reporting more control.

Table 4.12  Means and SD for high scoring and low scoring Trusts on EMA measures of Affect and job characteristics

<table>
<thead>
<tr>
<th>Measure</th>
<th>High scoring Trusts</th>
<th>Low scoring Trusts</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>14.77 (15.53)</td>
<td>16.40 (18.64)</td>
</tr>
<tr>
<td>PA</td>
<td>60.67 (23.72)</td>
<td>61.08 (23.05)</td>
</tr>
<tr>
<td>Demand</td>
<td>3.49 (1.49)</td>
<td>3.71 (1.38)</td>
</tr>
<tr>
<td>Control</td>
<td>3.92 (1.41)</td>
<td>3.92 (1.38)</td>
</tr>
<tr>
<td>Desire for More Control</td>
<td>2.40 (1.58)</td>
<td>2.68 (1.59)</td>
</tr>
<tr>
<td>Reward (Appreciation)</td>
<td>3.29 (1.51)</td>
<td>3.17 (1.51)</td>
</tr>
<tr>
<td>Strain (D/C)</td>
<td>1.14 (1.01)</td>
<td>1.17 (0.95)</td>
</tr>
<tr>
<td>ERI (D/A)</td>
<td>1.40 (1.16)</td>
<td>1.60 (1.30)</td>
</tr>
</tbody>
</table>
Table 4.13 Comparison of high scoring and low scoring Trusts on EMA measures of affect and job characteristics.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>-1.735</td>
<td>3.156</td>
<td>1.08</td>
</tr>
<tr>
<td>PA</td>
<td>-0.320</td>
<td>4.212</td>
<td>0.14</td>
</tr>
<tr>
<td>Demand</td>
<td>-0.236</td>
<td>0.178</td>
<td>2.59**</td>
</tr>
<tr>
<td>Control</td>
<td>-0.060</td>
<td>0.206</td>
<td>0.57</td>
</tr>
<tr>
<td>Desire for More Control</td>
<td>-0.348</td>
<td>0.255</td>
<td>2.68**</td>
</tr>
<tr>
<td>Reward (Appreciation)</td>
<td>0.059</td>
<td>0.259</td>
<td>0.45</td>
</tr>
<tr>
<td>Strain (D/C)</td>
<td>-0.006</td>
<td>0.141</td>
<td>0.08</td>
</tr>
<tr>
<td>ERI (D/A)</td>
<td>-0.181</td>
<td>0.196</td>
<td>1.81</td>
</tr>
</tbody>
</table>

**p<.01

Table 4.14 Means and standard deviations for all four Trusts on measures that differed within trust category (high versus low scoring)

<table>
<thead>
<tr>
<th></th>
<th>High scoring Trust 1</th>
<th>High scoring Trust 2</th>
<th>Low scoring Trust 1</th>
<th>Low scoring Trust 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (1-5 Scale)</td>
<td>3.91 (1.40)</td>
<td>3.97 (1.43)</td>
<td>4.19 (1.28)*^</td>
<td>3.74 (1.40)</td>
</tr>
<tr>
<td>Reward (appreciation 1-5 scale)</td>
<td>3.30 (1.49)</td>
<td>3.27 (1.57)</td>
<td>3.45 (1.46)^^^</td>
<td>2.98 (1.52)</td>
</tr>
</tbody>
</table>

^ significantly higher than other low scoring trust, Z= 3.22 p<.01

^^ significant higher than other low scoring trust, Z= 2.49  p<.05

* Significantly different from other Trusts Z=2.22 p<.05, reference group High Scoring Trust 1

Discussion

Both of the high scoring Trusts score lower on self reported demand and desire for more control. However the differences were slight and do not suggest that there were critical differences between the nurses we sampled in the Trusts. The findings for control are difficult to interpret since one of the lower scoring Trusts obtained the highest self-ratings for control, as well as high ratings on desire for control. There was also a tendency for one of the low scoring Trusts to report lower levels of reward.

The nursing staff of the Trusts did not therefore appear to differ greatly in the affect they experienced throughout the three shifts we assessed nor did they differ in their perception of the work situation on these shifts. The global measures we obtained from the questionnaires suggested that nurses in the high scoring Trusts saw their jobs as more rewarding and slightly more demanding, the later being the opposite of the findings on the diaries. However most of these effects on diaries or questionnaire are slight.

There are a number of possible reasons why the differences between the Trusts that were seen in the nursing survey were not seen in the data from the individual nurses. The most obvious is the size of our sample and its
possible lack of representativeness. Over the four sites the percentage of nurses volunteering varied between 12 and 18 per cent and our total sample was 250. While we would argue that these numbers are satisfactory for investigating the determinants of work related stress, particularly using our detailed within participant EMA measures, they are undoubtedly very small for attempting to characterise an organisation and may be quite unrepresentative of the workforce as a whole. A comparison of important characteristics of the total sample tested with the total workforce (Trust D did not provide these data) showed them to be comparable in terms of setting per cent (total workforce per cent), medical 68 per cent (71.4 per cent), surgical 32 per cent (28.6 per cent), gender (male 13 per cent (9.4 per cent), female 87 per cent, (90. per cent) grade (grade 5, 74 per cent (70,7 per cent), grade 6, 14 per cent (19 per cent), grade 7, 12 per cent (10.3 per cent) and age (medical, 39.6 (38.6), surgical, 38.1 (39). Three of the Trusts provided a very similar percentage of volunteers but one of the high scoring Trusts provided very few, only 35. While it was the smallest Trust we tested this was still a very low response rate. Testing in this Trust was conducted during the winter and did coincide with a bout of infections on ward but we also had difficulty in setting up satisfactory data collection procedures in this trust.

### 4.5.7 Effect of incident characteristics on nurse well-being (negative and positive affect)

Nurses face a range of demanding clinical situations, many of which have an influence not just on their mood, but also on their performance. While comparatively little is reported about the effect of specific situations on nurse well-being and performance, it is likely that the work characteristics such as demand and control will have an influence (Elfering et al., 2006). This next sections explore the influence of a range of situational characteristics on nurse well-being and performance.

**Demographic characteristics of nurses providing end of shift data**

Tables 4.15 to 4.17 detail the demographic characteristics of those participants who provided some end of shift data.

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>146</td>
<td>85.4</td>
</tr>
<tr>
<td>Male</td>
<td>25</td>
<td>14.6</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>46</td>
<td>27.2</td>
</tr>
<tr>
<td>Married</td>
<td>93</td>
<td>49.5</td>
</tr>
<tr>
<td>div/sep</td>
<td>15</td>
<td>8.0</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>8.0</td>
</tr>
<tr>
<td>Grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>122</td>
<td>71.8</td>
</tr>
<tr>
<td>6</td>
<td>26</td>
<td>15.3</td>
</tr>
<tr>
<td>7</td>
<td>22</td>
<td>12.9</td>
</tr>
<tr>
<td>Ward</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Medical 113 66.1
Surgical 58 33.9

**Shift pattern**
Fixed days 12 7.0
Fixed nights 6 3.5
Rotating shift not nights 28 16.40
Rotating shift inc nights 125 73.1

Table 4.16 Percentage of staff reporting seeing errors or near misses affecting patients in past month

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>56 33.1</td>
</tr>
<tr>
<td>1-2</td>
<td>70 41.4</td>
</tr>
<tr>
<td>3-5</td>
<td>33 19.5</td>
</tr>
<tr>
<td>6-10</td>
<td>7 4.2</td>
</tr>
<tr>
<td>11 +</td>
<td>3 1.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>169</strong></td>
</tr>
</tbody>
</table>

Table 4.17 Percentage of staff reporting seeing errors or near misses affecting patients in past month

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>72 42.9</td>
</tr>
<tr>
<td>1-2</td>
<td>65 38.7</td>
</tr>
<tr>
<td>3-5</td>
<td>21 12.5</td>
</tr>
<tr>
<td>6-10</td>
<td>8 4.8</td>
</tr>
<tr>
<td>11 +</td>
<td>2 1.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>168</strong></td>
</tr>
</tbody>
</table>

*Are there any differences between those participants who did and did not give an end of shift report?*

Of those nurses who provided end of shift data (EOSD), the only difference between participants and non-end of shift participants (that is, those nurses not providing EOSD), was in terms of shift length, with those working 12 hours more likely to provide end of shift data (Chi$^2$=7.09, df=2, p=.029). Nurses providing end of shift data are likely to be younger (Yes$\bar{M}$=38.19 (8.74); No$\bar{M}$=42.07 (8.74), t(233)=2.77, p=.006) (see Table 4.18); and to report in the questionnaire survey having seen errors or near misses in the previous month relating to both patients (Chi$^2$=15.06, df=1, p<.001, Table 4.19) and staff (Chi$^2$=14.78, df=1, p<.001, see Table 4.20).
Table 4.18 Age and work environment outcomes for those providing and not providing end of shift data

<table>
<thead>
<tr>
<th>Provided end of shift data</th>
<th>Did not provide end of shift data</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>---</td>
<td>-----------</td>
</tr>
<tr>
<td>Age of participants in years</td>
<td>171</td>
</tr>
<tr>
<td>PA from PANAS</td>
<td>168</td>
</tr>
<tr>
<td>NA from PANAS</td>
<td>167</td>
</tr>
<tr>
<td>Decision latitude</td>
<td>170</td>
</tr>
<tr>
<td>Psych job demands</td>
<td>168</td>
</tr>
<tr>
<td>Effort scale with phys</td>
<td>171</td>
</tr>
<tr>
<td>Effort-Reward-Ratio with eri5</td>
<td>170</td>
</tr>
<tr>
<td>GHQ Likert total</td>
<td>169</td>
</tr>
</tbody>
</table>

Table 4.19 Frequency of errors and near misses affecting patients reported by nurses giving end of shift reports

<table>
<thead>
<tr>
<th>Did not provide end of shift data</th>
<th>Provided end of shift data</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not see errors and near misses affecting patients</td>
<td>35</td>
<td>56</td>
</tr>
<tr>
<td>Did see errors and near misses affecting patients</td>
<td>21</td>
<td>113</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>56</strong></td>
<td><strong>169</strong></td>
</tr>
</tbody>
</table>

Table 4.20 Frequency of errors and near Misses affecting staff reported by nurses giving end of shift reports

<table>
<thead>
<tr>
<th>Did not provide end of shift data</th>
<th>Provided end of shift data</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not see errors and near misses affecting patients</td>
<td>40</td>
<td>72</td>
</tr>
<tr>
<td>Did see errors and near misses affecting patients</td>
<td>15</td>
<td>96</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>55</strong></td>
<td><strong>168</strong></td>
</tr>
</tbody>
</table>

Effect of setting

Staff in high scoring settings were far more likely to provide end of shift reports, (Chi²=12.27. df=1. p<.001) (see Table 4.21).
Table 4.21  Frequency of end of shift reports between high and low scoring Trusts

<table>
<thead>
<tr>
<th>End of Shift data</th>
<th>Low scoring</th>
<th>High scoring</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>46</td>
<td>12</td>
<td>58</td>
</tr>
<tr>
<td>Yes</td>
<td>91</td>
<td>80</td>
<td>171</td>
</tr>
<tr>
<td>Total</td>
<td>137</td>
<td>92</td>
<td>229</td>
</tr>
</tbody>
</table>

**Effect of incident on nurse well-being (negative and positive affect)**

In this next series of analyses, we did not undertake any between setting difference analysis in end of shift data given the reduced number of participants who provided such data. Data was provided at the end of each shift, and participants were asked to rate the worst event that had happened to them during that shift. Some 189 practitioners in each of the four Trusts provided this data. If the end of shift entry had not been completed at the end of shift, the behavioural diary asked nurses to provide the information at the start of the next shift. All such late entries for the end of shift data of this kind were removed. The data from setting three was particularly badly affected by this problem. Demographic data of those in this analysis can be seen in Tables 4.15 to 4.21. All MLwiN analyses have the intercept free to vary, with the slope fixed.

**Effect of worst event seriousness on nurse well-being (throughout shift)**

The next series of analyses explore the effects of clinical incident characteristics on nurse’s affect both immediately after the incident (that is, at the next standard entry) and for all the remaining entries in shift after the incident, which reflects the enduring effect of the incident. This series of analyses were based on random intercept and slopes models. The end of shift clinical incidents were classified by respondents as serious or not on a continuous scale from 0-100. Primarily for comparability with earlier analyses, observation and shift were included in these analyses, but are not considered in detail. Appendix 16, Table 9 indicates that the level of NA immediately after an incident (incident-immediate) was greater from other readings and that more serious incidents were associated with higher NA throughout the shift (the main effect of seriousness). Critically seriousness interacted with incident such that NA was higher immediately after more serious events. A similar analysis of the enduring effects of the incident (incident-rest of shift) is shown in Appendix 16, table 10 and it supports the same interpretation, serious incidents also have an enduring effect. This is shown in Figure 4.14 in which it is clear that NA is similar before and after trivial events but markedly higher for the remainder of the shift after serious events.
The effect of managerial support was analysed in a similar manner to seriousness. Appendix 16, Table 11 shows a short term worsening of mood, with the main effect of incident (incident-immediate) on NA immediately after the incident. However, the failure to find an incident-immediate by managerial support interaction suggests that this was unaffected by managerial support. Rather surprisingly, there was a marginally significant main effect of managerial support, such that managerial support was associated with higher NA immediately after the incident (Appendix 16, Table 11). The finding for enduring mood change after the incident are rather different with NA worse after the incident only in those who reported managerial support receipt (Appendix 16 and Figure 4.15). Note also that managerial support and seriousness were significantly correlated in this analysis, coefficient 25.442, 95 per cent CI= 10.36, z=4.81***.
Issue of whether managerial support causes or is a result of distress

Managerial support has been reported to have protective main effects on well-being in qualified nurses (Jonge et al., 1996; Tummers et al., 2002). The significant main effect of managerial support on NA immediately after the incident and the interaction of incident-rest with managerial support may initially seem surprising. However, despite this data being gathered longitudinally, the association between managerial support receipt and negative affect may reflect competing causal processes. It may be that receiving support from the nurse manager is distressing in itself. Alternatively, managerial support may only be sought and therefore received, when the nurse is facing demanding or challenging situations. Examination of the end of shift text reports provided by nurses who reported receiving managerial support in the worst situation of the shift shows that managerial support was sought when the nurse was facing demanding or challenging situations, rather than the nurse manager being the source of distress (see Appendix 16, Table 12).

Table 4.22 Textual accounts of the worst events of shift from nurses reporting managerial support receipt

<table>
<thead>
<tr>
<th>Nurse seeking managerial support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had to seek help from senior nurse due to massive work load and shortage of staff.</td>
</tr>
<tr>
<td>Controlled drug check which appeared to show loss of tablets. Night manager very supportive and it became apparent that none were missing. Don't know if patient had any analgesia 2 go home with though.</td>
</tr>
<tr>
<td>At hand over we had a phone call to say that another patient needed to be admitted. We already had two patients extra on the ward, so it was stressful and I needed to contact our head nurse.</td>
</tr>
<tr>
<td>Angry relative. Patient not moved to another ward after staff arranged move yesterday. frustrated at nurses on XXX who refused to take him. Senior matron contacted XXX team. Move now arranged.</td>
</tr>
</tbody>
</table>

Other forms of managerial contact

Matron did a spot check of standards - staffs reaction was difficult, blamed me for 'dropping them in it'.

Sorting out staffing for the rest of the week. I'm not even going to be here. Management should have sorted it.

Issues with staffing now resolved but was made responsible for mistakes made when not on the ward.

Too busy for patients and not enough time to care for them effectively need more staff and support from management.

Effect of colleague support, plus interaction with seriousness

The effect of work-based social support receipt from colleagues was analysed in the same manner as in the previous section. Within this analysis, while NA was worse immediately both after the worst event (Appendix 16, Table 13) and for the remainder of the shift (Appendix 16,
Table 14), colleague support and its interaction with incident-rest of shift or incident-immediate was not significant.

**Effect of shift climate (averaged D/C, ERI) on well-being at the time of the incident**

In this section we are concerned with the effects of perceptions of shift climate on nurse well-being. Shift climate was assessed by averaging ratings of demand, control, effort and reward over the shift and examining the relationship between these average values of work environment variables on affect reported during the worst incident on the shift. Does working on a shift characterised by the nurse as particularly demanding, or by a lack of decisional control, have any influence on nurse well-being reported within the worst event? Did shifts reported to be particularly rewarding have any relationship to the mood reported in the worst event of shift by nurse participants?

**DC: For demand and control**

Reports of negative affect were related to shift climate characteristics of demand and control. Greater negative affect in the worst situation of shift was associated with main effects of high demand and low control. Positive affect was related to control, with greater control over the shift associated with more positive affect in end of shift reports of the worst event (see Appendix 16, Table 16). In these analyses, intercept was free to vary, but the slope was fixed.

**ERI**

In Appendix 16, Table 17, Demand/Effort and Reward are the average values provided by the participants over the shift on which the incident took place. Shifts that were high on demand/effort were associated with higher NA during the incident. The effect of reward was not significant but demand/effort and reward interacted, and Figure 4.16 suggests that low reward was associated with higher NA, particularly during more demanding shifts. PA was affected by reward, with PA more pronounced in end of shift reports in shifts that were characterised as being particularly rewarding (see Appendix 16, Table 18).
Effect of recovery and work-related support on nurse well-being in the worst incident

Within the end of shift report, nurses were asked to report at that moment their level of recovery from the worst incident on a 0 to 100 scale, with a high score indicating greater recovery. NA reported in the worst incident was associated with the support receipt from the nurse’s manager and the interaction between managerial support and recovery was significant (Appendix 16, Table 18). Those nurses who received managerial support and reporting low recovery, reported the highest negative affect within the worst situation on the shift (see Figure 4.17).

Recovery was related to positive affect, (Appendix 16, Table 19). The greater the recovery since the worst event, the greater the positive affect reported during worst event. When colleague support was analysed (see Appendix 16, Tables 20, 21 and 22) it had no relationship with affect.
While the relationship between general perceptions of the work environment, mood and performance have been studied recently (Hasselhorn et al., 2004; Hasslehorn et al., 2003), far less is known about the influence of incident and shift characteristics on such outcomes. Relatively few studies employ within-person designs using EMA or event sampling to gather such information. It is also unusual to examine the characteristics of participants who provide such data. In this study, we demonstrate that those providing end of shift data were younger, more likely to work 12 hour shifts and more likely to report errors or near misses in the last month that had the potential to harm patients and staff. In addition, nurses from High scoring Trusts were more likely to provide end of shift reports of the worst incident.

Using this innovative approach, it was possible to examine the effect of incident characteristics on well-being and performance. Incident seriousness has an effect on the mood of the Nurse. NA and PA differences as before are not simply the converse of each other. Immediately after the incident, NA was worse and that this worsening of mood persisted for the rest of shift, particularly when the event was serious. Event seriousness was related to a deterioration in nurse mood, immediately after the event, and for the remainder of the shift. We are not aware of previous literature linking event seriousness to nurse mood. The finding that more serious incidents have an enduring effect on nurse mood is an important one.

Managerial support (MS) and seriousness of the incident were also significantly related, with nurses reporting serious events, more likely to report managerial support receipt. Those nurses reporting managerial receipt in the worse incident had raised NA both immediately after the event and for the remainder of shift (see Figure 4.15). Qualitative analysis revealed that MS was primarily sought in response to the difficult situation, rather than it being a source of distress. No similar effects were apparent.
for Colleague Support (CS). CS had little influence in the mood of nurses immediately after the event or for the rest of the shift. In this study, managerial support rather than colleague support was more salient for practitioners in difficult situations, in contrast to the findings of Sundin et al. (2007).

Shift climate also has an influence on the mood reported by the nurse in the worst situation. This mirrors findings in previous sections based on the standard entry analysis. NA in the worst event was adversely affected by shift, categorised as being highly demanding and offering low control. While PA in the worst event was not related to shift effort or ERI, positive affect in the worst incident was positively influenced by shift climates of high control and high reward. The interaction between Demand/Effort x Reward was associated with Negative Affect, (see Figure 4.16). Those practitioners working in shifts characterised by low reward, showed higher NA as shift demand/effort increased. This is in line with theoretical prediction (Siegrist, 1996).

Managerial support reported in the worst event interacted with nurse recovery (see Figure 4.17). Those nurses receiving managerial support, who had not recovered, reported the highest levels of negative affect. The need for recovery and taking time to unwind from the demands of work is increasingly recognised in the literature. Those nurses experiencing managerial support, which is only sought in difficult circumstances, and who have not recover by the end of shift may take into the evening or even into the next day to recover (Sonnentag and Zijlstra, 2006). The effect of incident experienced on one shift may affect the well-being of the nurse on a subsequent shift.

4.5.8 What is the nature of end of shift incidents?

Theoretical content analysis (Krippendorf, 2004) was carried out on the free text responses provided by nurses in the end of shift reports. This analysis was carried out in the following sequence:

1  The first stage of analysis involved the construction of a coding framework: The end of shift qualitative reports were read initially, and each 30 word end of shift report was divided into meaning units (MJ). A series of codes were identified to describe the content within each meaning unit within each 30 word end of shift report. Forty-one nominal codes were identified. Coding headings were agreed by two independent investigators (see Tables 4.23a-f).

2  The codes were then assigned to ‘clusters’ or ‘factors’ representing theoretical concepts including demand/effort (Karasek, 1979; Siegrist, 1996), control (decision, environment, task and resource) (Mclaney and Hurrell, 1988), work-based support from managers and colleagues (House, 1981). Other higher level themes emerged from this coding exercise that have been identified in a range of studies. These include errors and near misses (Healthcare Commission, 2008), physical well-being of the nurse (Karasek and Theorell, 1990) and work-related reciprocity of the organisation (Siegrist and Marmot, 2004). This level of coding was agreed by two principal investigators (MJ, DWJ), with six
higher level clusters identified. Two independent coders (MJ, DWJ) agreed on this application of this six cluster framework to the data set, with a Krippendorf’s alpha of >.8 and high scoring and .9 in low scoring settings.

Two raters independently (MJ, DWJ) applied this coding framework to each meaning unit within each 30 word segment provided in end of shift reports by participants in high and low performing Trust settings. Some 243 meaning units were constructed. While we allowed for the possibility that multiple codes could be applied to this material, raters were asked to generate a single code that best described the section of free text response. Inter-rater agreement was examined using Krippendorf’s alpha. Following initial calculation (see Run 1, Appendix 16, Table 23), any disagreement was examined and Krippendorf’s analysis was re-calculated (see Run 2, Appendix 16 Table 23). The coding framework was updated on the basis of this discussion. Codes relating to clinical demand and to the health of the nurse were collapsed. Codes distinguishing workload from clinical demands were augmented and clarified. These minor and systematic modifications resulted in an improvement of inter-rater reliability index of from .66 to .85. Krippendorf’s analysis was also calculated at the factor or cluster level, that is, whether each unit contained reports of demand, control, support and so on. This showed that independent raters were able to reliably identify whether each unit contained statements of the demands faced by nurses etc, with reliability in excess of .90. All other ratings were above the accepted level of .70, with the single exception of Reciprocity (alpha of .66) in high scoring Trusts. Low number of items coded in this manner, aligned with some disagreement, contributed to this low score.

A selection of the qualitative end of shift, worst event reports is provided in the Tables below.

**Tables 4.23a-f  Coding framework employed on end of shift 30 word accounts**

**Table 4.23a  Demand/effort**

*These situations relate to the day to day clinical demands facing the nurse*

- **Clinical demands/arising from medical condition**
  - Multiple clinical demands from patient, acutely ill patients and general care provision
  - Patient deaths
- **Patient demands**
  - Patient complaints
  - Arising from patient contact
  - Violent/angry, confused or distressed patients
  - Reassurances to patients
- **Relative demands**
  - Reassurances given to relatives, contact with relatives
  - Relative complaints
  - Angry or aggressive relatives
- **Demands arising from staff**
  11- DSTa1- Bullying and harassment, other conflict
  12- DSTa2- Handover issues, speaking to staff
  13- DSTa3- Student nurse contact
Table 4.23b Demand x control interaction

These situations all are demanding situations, but each implies a lack of control in the areas of decision, environment, task and resources

- **Decision (lack of control over)**
  - Risk to patient
  - Concerns regarding patient treatment
  - Being ignored

- **Environment (lack of control over)**
  - Terms and conditions
  - Meetings and effects on ongoing care

- **Task (lack of control over)**
  - Working beyond time, lack of breaks
  - Administrative burden, relating to ward management
  - Reduction in workload, no control over
  - Lack of time
  - High workload, generally, unfair spread of work

- **Resource (lack of control over)**
  - Staff shortages, including sickness absence
  - Boarding, and bed shortages
  - Lack of resources (other than bed)

Table 4.23c Work based support

- **Managerial support**
  - Lack of managerial support
  - Examples of supportive manager
  - Other contact manager, particularly when things are difficult

- **Colleague support**
  - Examples of supportive colleague (that is, a person not identified in managerial role).
  - Poor colleague support

Table 4.23d Errors and near misses

- Medication errors
- Delays in delivery of patient care
- Accidents or near misses patients
- Accidents or near misses staff

Table 4.23e Health of nurse

- Fatigue
- Physical complaints
- Emotional reaction

Table 4.23f Effort reward imbalance

- Lack of reciprocity
- Home-work conflict

There was no difference in percentage or frequency of reports from Factors 1-6 provided by nurses in high scoring and low scoring Trusts (Chi²=7.526, df=5, p=.184).
**Discussion**

There is an extensive literature linking the effect of work environment to well-being and, to a lesser extent, to performance in general work setting (van der Doef and Maes, 1999; van Vegchel et al., 2005). This literature is increasingly applied within a health care context to identify those work and organisational characteristics related to staff well-being and patient safety. However, there are few studies linking the day to day situation faced by nurses to such organisational constructs. Theoretically based content analysis (Krippendorf, 2004) provided a method of characterising the nature of the worst event reports in the end of shift reports in a rigorous manner linking nurse experience with key theoretical constructs. This analysis demonstrates that it is possible to link key theoretical constructs with the day to day experience of nurses provided from free text report, with good levels of agreement.

**Demand**

This analysis revealed that clinical demands facing practitioners are many and wide ranging. The demands arise from the multiple clinical demands that patients present with, including patient death. Some 38.7 percent of the meaning units related to such acute clinical demands. Examples of worst event report reports relating to the demands arising from the patient’s condition are provided in italics.

- Pt very sick post cve> notforresus> gcs four> pt twitching slightly from seizures which distressed family
- went to collect a patient from having ercp procedure and bp was low 70 over 34, nurse said pt is awake but drowsy awoken when spoken to bought back to ward for fluid challenge. should have kept him thei
- Crash call to gi bleed 95yr oold decision not to resus:
- transferring patient from ct to theatre with AAA. EMD arrest in lift, run to recovery, intubated, RIP.

Demands arising from other forms of contact with patients primarily arise from violent, confused or distressed patients.

- two patients having a verbal confrontation in the bay. something that has never happened on a shift that I have worked before.
- Patient agitated and verbally abusive! To staff and patients
- very confused and aggressive patient was wondering around other patients and their property and running of the ward. other patients are complaining and becoming distressed.
- routine x ray pt felt treated badly handled roughly people were rude and insensitive very upset tearful on return

Reassurances given to relatives, and dealing with relative complaints form a significant section of such reports. While demands from staff, include bullying and harassment.

- Issue was about which patient should be assisted with a bath first as each one thought theirs was more urgent.
- conflict between two members of staff
- rudeness and uncaring of nurse in charge towards me.
- Shouted at by senior colleague in front of others
Control

Other demanding clinical situations that imply a lack of control formed 38.3 percent of such reports (meaning units). Control was focused in the area of decisional control, resource, task and environment (McLaney and Hurrell, 1988)

Many of the worst event reports relating to decisional control were focused on the concerns the nurses had regarding patient treatment.

- So doctor told me to give large dose of sedative which I felt was not necessary and would flatten
- Inappropriate patient being nursed on the ward as no staff trained to deal with his infusion making this unsafe
- patient was told doctors that he going to died and he was very upset without my knowledge and the family was upset too
- colleagues expected to just manage and patient's will suffer

A lack of control in the resources the nurse required to perform was focused on staff shortages, boarding and bed shortages and skill mix issues

- recovery brought four patient s back from theatre at the same time with limited staff present
- constant pressure for beds in the nurse enhanced unit moving patients in and out is very stressful on both patients and staff.
- I was the only chemo trained nurse therefore one patent treatment was delayed.

Participants reported a lack of control regarding the tasks the nurse had to carry out. This related primarily to working beyond time, administrative burden and high and unfair workload.

- interrupted too many times when trying to do documentation, had missed lunch so intended to go home early now 40 mins late off. no break at all today!
- work load and demands too much, stressful shift too busy to even take a break. 2 pts escorted to ct 1 pt very confused taking I nurse to care constantly.
- patent sent from my ward to theatre for surgery had to spend a lot of time organising a bed which some one else should have done
- adminstering cytotoxic drugs during night to alliviate another department workload
- extra patients to be dialysed immediately
- patients coming in for admission from home, clinic and accident and emergency. also patients retuning from theatre.

Work-based support

Work based support from managerial and colleagues formed 4.9 percent of the content has been reported earlier in sections.

Errors and near misses

The end of shift accounts that focused on errors and near misses relating to patients were related to medication errors, delays in patient care, accidents and near misses affecting patients. This formed 14.4 percent of the content. None of the reports were characterised as accidents and near misses relating to staff.
- Controlled drug check which appeared to show loss of tablets.
- Wrong ward name on drug chart so TTO is in wrong pigeon hole cannot get at to give to patient.
- Drugs omitted unnesesary. Patient suffered as a consequence.
- Consultant unhappy.
- Chemotherapy regime comenced hour late despite asking colleague to start while I was on a break.
- Incident related to being too busy to insert male catheter until five pm. this was due to business of ward.
- Hand over had suggested patient well, but when telephoned different nurse he had been unstable for 48 hours,
- Patient fell out of bed. No injury.
- Patient had problem with lines and fistula, at risk of losing lines.
- Patient nearly off the bed.

Other themes

Health of the nurse and effort-reward imbalance constituted 2.1 and 1.6 percent of worst event content. This suggests that both work demand and lack of control in demanding situations are key issues for the nurse in the end of shift reports provided by nursing staff. Demands arise from a range of clinically based sources. Instances of bullying and harassment also featured within worst event, end of shift reports.

NHS Employers (2007) currently recognise the range of severity of demands facing their employees and have suggested strategies to reduce demand, including risk assessment, supporting managers to identify and manage the causes in stress in their workforce, to provide stress management training for practitioners. Additional organisationally level strategies might focus on strategies to reduce patient/relative violence, the provision of staff training in de-escalation techniques and rapid access to security. Other settings have introduced strategies to combat causes of work stress such as bullying (Kings College Hospital NHS Trust, 2008).

A lack of control in terms of decision, task and resource feature prominently in the worst event accounts. McLaney and Hurrell (1988) suggest that forms of control other than the decisional form are most pertinent to nurse practitioners. We suggest, however, that the decisional control items that are most salient to nurses in this study are those that relate to the concerns nurses have regarding patient treatment. Such items are not included in the Job Content Questionnaire (Karasek, 1985). Further research in this area should consider using more nurse specific measures that target related items. Strategies to increase the control that nurses perceive also may also include key issues relating to task and resource control. Reports of staff and resource shortages are not new (BBC, 2003, 1999), and the impact of such shortages on quality of care has been detailed in a recent systematic review (Lankshear et al., 2005). Improving nurse patient ratios and improving skill mix can improve patient outcomes. However, there are limits to the effectiveness of this strategy, or there is a diminishing return in increased staffing levels and improving outcomes (Lankshear et al., 2005).

Strategies to reduce task control issues such as interruptions, unfair distribution of work, reducing administrative burden fall within the
organisational stress management sphere. To date, there are few intervention studies based on the Demand Control model or the Effort Reward Imbalance Model. Such interventions have used a mix of organisational and individual interventions to identify and manage causes of work-related stress. In one study, employees were facilitated to discuss sources of effort-reward imbalance with managers and their suggestions were passed to the Occupational Health and Safety Committee (Aust et al., 1997). Individual level strategies, such as relaxation, development of conflict management skills and coping with anger and overcommitment were also applied. Tsutsumi and Kawakami (2004) also suggest that organisations examine strategies to restore the balance between effort and reward, suggesting that high effort is rewarded in a range of monetary and non-monetary strategies.

Similar organisational and individual level strategies have been used in health care settings to minimise errors and near misses. Such events constituted a significant element of worst event, end of shift reports and many of the situations reported in this study are similar to those seen in studies, e.g. Elfering et al., (2006). Organisation level stress management interventions have been used to reduce medication errors and malpractice cases. The focus of these ‘interventions’ was at the unit/hospital manager level, training managers to run meetings more often and more successfully (Jackson, 1983) or to amend organisational structures (Jones et al., 1988). Hospital managers were facilitated to identify the sources of stress within their organisation, produce and disseminate action plans to amend operational policy and job design, and offered coping training to large groups of employees using a video medium (Jones et al., 1988). Using these organisational approaches, adaptive changes in role conflict, role ambiguity, perceived influence, job satisfaction, and absence frequency and turnover intention were found (Jackson, 1983). Success was achieved in reducing medication errors in a single hospital following intervention, and in minimising malpractice law suites in 22 hospitals receiving an identical intervention (Jones et al., 1988).

The development and introduction of similar multi-level strategies may be warranted in this current clinical context, and such interventions should target improving managerial support, individual self and colleague management skills.

4.5.9 Do averaged values of the work environment (shift climate) predict nurse performance following the worst incident?

In the end of shift report, nurses reported on their subsequent performance following the worst incident on the shift. Performance was based on their self perceptions concerning how well they performed in four areas: meeting patient needs, attending to relative needs, working with other staff and organising their workloads. Principal Components Analysis (PCA) analysis showed that these items loaded onto a single factor in shifts 1-3, explaining 54.8, 60.7 and 59.8 per cent of the variance respectively. Within this
analysis, the intercept was free to vary and slopes were fixed. Where effect on work is the outcome variable, a high score shows that the nurse reported ‘meeting needs of patients’ et cetera. A low score indicates that the nurses’ work performance was worse following incident.

General shift related perceptions of demand were un-related to self-reports of work performance following the worst event on shift in the Demand, Control (DC) analysis. Perceptions of control in the shift were associated with reports of meeting patients and relative needs following the worst incident. The interaction of demand and control reveals that the performance of those nurses perceiving low control worsened as perceptions of demand in the shift increased (see Appendix 16, table 24 and Figure 4.18). Shift related perceptions of high levels of control were related to a positive improvement in work performance following the worst incident. The interactions between Effort and Reward was also significant, with those nurses reporting high reward improved their performance after the worst event, particularly when the shift was perceived as highly demanding or effortful (see Appendix 16, table 25 and Figure 4.19).

**Figure 4.18 The interaction of shift DxC interaction on work performance following the worst incident**
Nurses who said they had recovered from the worst event of the shift, reported meeting the needs of their patients, relatives and organising their workload after the event. Negative affect reported in the worst event, was significantly related to reduced work performance following the worst incident in this analysis (see Appendix 16, Table 26). In contrast, with PA in this regression, while recovery and work performance were still positively related, those nurses reporting positive affect during the incident reported subsequent improvements in meeting patient needs and other commitments (see Appendix 16, Table 27).

**Effect of work-based support in the worst incident on work performance**

Managerial support

This analysis examines whether the Negative Affect reported and managerial support received in the worst event of the shift predicted subsequent nurse performance. Negative affect has a negative relation with performance items such as meeting patients’ needs. The more the nurse reported negative affect in the worst event reports, the less satisfactory was the nurses’ perception of their subsequent performance (see Appendix 16, Table 28). Managerial support and the interaction of MS x NA were not significant. Conversely, the greater reports of PA in the worst
event, the better nurse performance was subsequently (see Appendix 16, Table 29). Managerial support, therefore, had no impact on subsequent nurse performance.

Colleague as support

The picture with colleague providing support was more interesting. The inverse relationship between NA and work performance remains (see Appendix 16, table 30). The main effect of colleague as support was not significant on NA or PA, but the interaction of NA x colleague as support was significant (see Appendix 16, Tables 30, and 31). The relationship between mood and effect on work was different depending whether colleague support was received or not, that is, those nurses reporting high NA and no colleague support reported the greatest effect on their subsequent clinical performance (see Figure 4.20).

Figure 4.20 The interaction of NA and colleague as support on work performance

4.5.10 Who is involved, colleagues or patients, and what is the effect on performance?

Colleague involvement (colleague as problem)

While colleague support in the worst situation may be protective (see Figure 4.21), if a colleague is involved in the incident (that is, is part of the problem) colleague involvement is negatively associated with meeting needs of patients, less Positive affect is reported in the worst situation and the interaction with positive affect is significant (see Appendix 16, Table 33). If a colleague is involved and the nurse reports low PA in the worst event, subsequent performance of the nurse suffers (see Figure 4.21, Appendix 16, Table 32). The main effect of positive affect is also significant, the more positive affect reported in the worst event, the more needs are met and the better performance.
**Patient involvement**

Patient involvement (that is, as the problem) had no relationship with subsequent nurse performance, as a main effect or interaction with NA or PA (see Appendix 16, Tables 34 and 35).

**Issue of whether colleagues are a source of support or are the problem (qualitative analysis)**

Work-based social support may be received from managerial or colleague sources, and it is important to distinguish the effects of each. Co-worker and patient support has been shown to be negatively related to depersonalisation and emotional exhaustion and positively related to personal accomplishment (Sundin et al., 2007). In this setting, analyses suggest that colleague support may be protective on performance, but that colleagues may also constitute part of the demands facing nurses. This interpretation is supported by qualitative, worst incident data from end of shift reports. This data was provided by nurses who stated that they had received support from colleagues. Instances of colleague support were greatly outnumbered by unsupportive colleague behaviour. Perhaps this is not surprising, given that participants were asked to focus on the worst event on shift (see Table 4.24).

**Table 4.24 Examples of supportive and unsupportive colleague behaviour**

<table>
<thead>
<tr>
<th>Examples of supportive colleague support</th>
</tr>
</thead>
<tbody>
<tr>
<td>patient had problem with lines and fistula, at risk of loosing lines. problem sorted by more experienced member of staff and teamwork.</td>
</tr>
</tbody>
</table>

---

*Queen’s Printer and Controller of HMSO 2010*
chemotherapy regime commenced hour late despite asking colleague to start while I was on a break.
patient awaiting cannula for 10 hours cannulated 1430. waited all mane patient nbm and poorly waited for doctor 
patient x had episode; hypertensive, tachycardic, vomiting, rigor. hand over had suggested patient well, but when telephoned different nurse he had been unstable for 48 hours, also drugs not given.
She was very condescending and did not thank me or my colleagues for our hard work in stabilising the patients condition.
bed managers trying to move dying, agitated patients out of side rooms, family very angry. ward nurse opinion ignored.
Shouted at by senior colleague in front of others
recovery brought four patient s back from theatre at the same time with limited staff present
junior house officer did not want to rewrite de drug chart which were full
a patient needed transferring into hdu. I was unable to move the patient safely on my own but no one was available to help me. it was nearly two hours before the patient was moved
my student would not do a task which she was required to do
colleague telling lies regarding me

Discussion

Nurse performance after the worst incident was captured well with the four item measure targeting competence in meeting patient needs, attending to relative needs, working with other staff and organising their workloads. Shift climate control and the interaction of demand and control interaction predicted subsequent clinical performance. Those nurses who reported that their shifts were characterised by low control generally reported lower levels of performance following the worst event. This buffer effect is reported by van der Doef and Maes (1998, 1999). A similar main effect of reward and effort x reward interaction was also seen on performance using the end of shift data from PDA diaries. High levels of reward were protective generally, with nurses who felt their work was appreciated, reporting improved performance after the worst event. This was particularly the case in shifts characterised as highly effortful, in line with prediction (Siegrist, 1996).

Work performance was also influenced by NA, PA in the worst event and by the recovery reported subsequently in the end of shift report. Higher levels of Negative affect reported in the worst event were associated with deteriorations in subsequent work performance. The greater the PA reported in the worst event, the better the subsequent self-ratings of performance. The more recovery the nurse reported at the end of shift, the less effect the worst event had on work performance.

While managerial support was protective of nurse mood, it had no relationship with subsequent work performance. Only colleague support had any relationship with work performance subsequent to the worst event. The relationship between mood and effect on work was different depending whether colleague support was received or not. That is, those nurses reporting high NA and no colleague support in the worst event reported the greatest effect on their subsequent clinical performance (see Figure 4.20).
If a colleague was involved in the worst situation, not as a source of support, but as part of the problem and the nurse reports low PA in the worst event, subsequent performance of the nurse suffered. The main effect of positive affect was also significant, the more positive affect reported in the worst event, the more the nurse reported improved performance. The relationship between work-based support on mood and performance may be more complex than that reported by Sundin et al., (2007). The qualitative accounts of colleague unsupportive behaviour in the worst event significantly outnumbered supportive accounts.

4.6 Conclusion

In this study we used traditional questionnaires and electronic diaries to capture the stress related experience of nurses working in four selected trusts. The innovative diaries which have seldom been used in a nursing context worked well were accepted by the nurses who volunteered and produced systematic and unique data both on the possible determinants of nurse stress and on the effects of significant incidents during the nursing day. Both Karasek’s demand control model and Siegrist’s effort control model received support and both models can contribute to our understanding of nurse stress and hence improve our efforts to minimize it. The critical variables appear to relate to control and reward since it is clear that lack of control and inadequate reward contribute to increased negative affect and diminished positive affect. In addition desire for more control was a very important determinant of negative affect. The implication is clear: nurses need to have an increased perception of control. Strategies to increase perceived control should be focused on increasing the resources available to nurses, particularly in the area of resource and task control. Strategies to improve resource control include improving nurse patient ratios and improving skill mix (Lankshear et al., 2005). Strategies to reduce task control issues such as interruptions, unfair distribution of work, reducing administrative burden fall within the organisational stress management sphere. Obviously, increasing actual control is important but perception of control is subtle and does not reflect only actual control but also the perception of control. Increased involvement of nurses in decision making and improved information flow within the organisation are likely to improve perception of control without necessarily greatly altering actual control. It is more difficult to make recommendations about demand since increased demand had both negative and positive effects. It led to increased negative and positive affect, perhaps because high demand is energizing as well as stressful. It appears unremarkable that increased perceptions of reward are almost invariably positive. To date, there are few intervention studies based on the Demand Control model or the Effort Reward Imbalance Model. However it should be recalled that reward as conceptualised by Siegrist and as operationalised in our diaries is not solely about material reward but includes job prospects and appreciation (the term used in our diaries). Efforts need to be made to increasing reward conceived in this wide way.
We also studied critical incidents during each shift, both qualitatively and quantitatively. This unique aspect of the study suggests that these incidents have persistent effect on nurse mood and clinical performance. Organisational level strategies are required to reduce the effects of such incidents which reflect control and demand nurse and patient and relative violence and bullying. The provision of staff training in de-escalation techniques and rapid access to security may be required. It may be appropriate to consider the wider introduction of strategies to combat causes of work stress such as bullying (King’s College Hospital NHS Trust, 2008).

The diaries were the main innovation in the staff well being strand of this study. They worked well but can be improved. In their current form they tell us a great deal about how the nurse views their work situation. We know how demanding it is, how rewarding etcetera. However we do not know what the nurse was actually doing that they saw as demanding, unrewarding etcetera. The next step is to develop a comprehensive but not over-elaborate taxonomy of nursing tasks and implement that on the diaries. That would enable us to make much more specific recommendations concerning the situations that nurses find most problematic (or most rewarding). The experience gained in this study, including the qualitative accounts will guide us in the next stage of our research.
Section 5  Integrated strand analysis

5.1 Introduction

This section aims to distil some of the common themes which cross-cut all the strands of work. There are two parts: the first will cross-examine linkages between the primary strands of work and the second will test some relationships between primary strands and the NHS Staff Survey. This secondary analysis was undertaken after the analysis of the primary strands and built on questions generated therein. In undertaking this integrative analysis attention is paid to the complexity of synthesising different strands of work, informed by different disciplines, methodologies and paradigms and between primary and secondary data. Methods for synthesising quantitative data are well developed and established and there is a growing body of scholarship and experimentation around synthesising primary qualitative data and interpretive studies (Noblit and Hare, 1988; Dixon-Woods et al., 2007a; Campbell et al., 2003; Mays et al., 2005; Pope and Mays 2006). Furthermore, recent literature has also extended to combining qualitative and quantitative data within synthesis reviews (for example Scholz and Tietje, 2002; Dixon-Woods et al., 2007b). Much of the challenge in undertaking such synthesis is around issues of transparency; systematisation; epistemology; status of the evidence; quality control of evidence; and criteria for comparability. There is typically some effort to identify stages in the synthesis and to build in robust checks and controls into the assessment process.

Within this section we have deliberately kept our review of the strands simple and bounded. The linkages between the Organisational and the Leadership strands were easy to make, as were those between the Organisational and the Staff well-being strands. This section looks in detail at these two interfaces; and Section 6 will bring all of the data together in our Conclusions section. It has proved difficult to extract direct overlap or synthesis between the Leadership and Staff well-being strands. We are aware that more deliberate interrelationships and connectivity could have been built into the study design and we reflect on this elsewhere (see Sections 3 and 6 in relation to Limitations and Future Research). CEOs in the Leadership strand were not asked about the experiences of front-line staff and, likewise, nursing staff talked about their local ward senior management, but not corporate leaders, in the Staff well-being strand. The Organisational Strand has buffered these discrete strand-based limitations and brokers the interpretation across all three strands (see Section 6 Conclusions).

We have only reflected on themes where there is direct cross-over data from strands and where each of the three strands adds collective insight.
For the integration of primary data we have relied on producing a narrative overview of key emerging themes derived from initially a reading of all strands by one investigator (LMcK). The first interpretation of this reading has then been passed for authentication and critical comment to all team members, whose responses have then been incorporated.

When the Leadership and Organisational strands were directly compared there were three clear and dominant areas of overlap. These are: valuing and priority of patient safety; leadership, especially CEO leadership; and leadership style. In comparing the Organisational and Staff well-being strands, common issues emerged around: nursing demands; work based control and clinical realities; and the issue of senior level or collegial support.

The synthesis and search for commonality has been aided by the iteration of the strands at all stages of the conduct of the project, from design onwards. The design itself displays a strong internal rationale, integrity and coherence. All strands are united by overlapping preoccupations and shared research questions. This has made the task of integrating themes easier than were we comparing detached studies. Despite the distinctive sub-themes and approaches in each strand there has been overall clarity of aims and scope of the project from the outset. Interaction between the research team has been close and continuous in order to share delivery of the project as a whole. The team have also developed a degree of familiarity with each others concepts, literatures and models. The fieldwork was co-ordinated and sequenced and the tools developed and piloted in close harmony. The interview tools for CEOs from the different strands were discussed and worked up side-by-side to ensure there was symmetry and limited conflict. This acquired and shared literacy and insight has been purposive and serves as a strength when the project is then pulled together. It also delivers on one of our aims of multidisciplinarity; and demonstrates that while such synergistic research is complex, it is also achievable and worthwhile.

### 5.2 Integrating primary data strands

#### 5.2.1 Cross-cutting themes between the Organisational and Leadership strands

The following dominant themes could be extracted from reading of these two strands:

- The issue of how safety is valued and its identification as a priority by Trust leaders, in particular by Trust CEOs, is important.
- Leadership style matters in terms of perceived commitment to safety, but is not in itself a sufficient explanation for how highly safety is valued, or whether safety breaches occur. Both transactional and transformational CEO leadership styles were found in a variety of Trusts and were not tightly correlated to safety performance, although there was some evidence in the
‘Leadership’ strand that transformational leadership could be beneficial for safety. The ‘resilient’ Trusts described in Section 2 displayed a mix of both styles.

- In the Organisational strand, continuity of leadership and the stable tenure of CEOs and their senior management teams were reported as facilitating the prioritisation of patient safety. The dispersal of leadership across the organisation to clinical teams was frequently identified as important in securing a commitment to patient safety and the role of Matrons in particular was valued by some staff interviewed for the Organisational strand. Good clinical governance and positive managerial-clinical relations were identified as promoting patient safety and as ensuring Trust resilience in the face of competing organisational and policy priorities and pressures.

- The way in which patient safety was prioritised by senior leaders and signalled to the organisation was critical. The CEO could have a pivotal role in communicating the vision about safety and quality and in steering the commitment to patient safety in the light of complex and competing intra- and extra-organisational pressures. CEOs could buffer organisational threats and provide strategic direction when financial and other political or policy challenges sprang up.

- Using the NHS National Staff Survey data, which focused on patient safety questions, helped to identify ‘high’ and ‘low’ performing Trusts at the outset. The analysis provided additional clusters of Trusts along a wider range of factors, including diverse cultural and contextual factors affecting commitment to patient safety and staff well-being. Interestingly, two Trusts, A and H, appear as ‘resilient’ and ‘high’ performing across the two factors, despite the different measurement criteria and despite the analysis being conducted independently/ blind of the original categorisation. The Organisational strand allows for further finer gradations of evaluation for the other six Trusts, reflecting the wider interest in receptivity for change in the context of patient safety.

5.2.2 Cross-cutting themes between the Organisational and staff well-being strands

- The experience and role of frontline clinical staff, especially nurses, in maintaining and delivering high quality care and patient safety are crucial and often under-researched. There are important linkages between the demands on clinical staff and perceptions of maintaining safe care.

- It is important to understand what happens at ward and shift level, as this micro-level context can contribute to the overall safety performance of Trusts and can vary markedly within Trusts and between operational teams and groups. It is also time-sensitive and may vary across the shift cycle, with peak times of tiredness and/or positive or negative mood.

- Clinical demands on nurses in acute hospitals are many and wide-ranging, including pressures relating to resources; personnel; management; support levels; skill-mix; patient condition and behaviour; interaction with relatives and with colleagues (including bullying and harassment); the organisation of care;
shift climate and specialty. All these factors are closely woven into how staff experience their work and articulate with how they promote and preserve safe working. High work demand and lack of control over work were common for many nurses in this study. Nurses who reported working in shifts that were characterised by low control generally reported lower levels of performance. High levels of reward could be protective in shifts characterised as being high in demand and effort.

- The Organisational strand was littered with accounts from staff about demanding work environments; addressing issues of the interaction between staff morale and ability to provide high quality safe care. The themes of ‘rushed busy’ staff; poor nursing or bed capacity; inadequate staffing levels or skill-mixes; time pressures; the existence of a blame culture; failure to report safety incidents or document procedures; violence and abuse of staff by patients or indeed colleagues were common in many of the eight sample Trusts. Staff themselves make direct links between high work demands that could lead to them being ‘stretched’; ‘stressed’; ‘overloaded’: and thus at risk of making errors either in procedures or in communication.

- The issue of nurse patient safety reporting is complex and still poorly understood. Incident reporting was described in the Organisational strand as more customary for nurses than doctors but it was not always motivated by a drive for improvement. Instead, compliance with the reporting systems could be described as defensive and coloured through a sense of fear. In the Staff well-being there was evidence of largely the most serious incidents being reported to a senior manager and for the reporting behaviour itself instilling enhanced stress.

- Nurses did often report linkages between their own sense of well-being and ability to provide good quality, safe care. In particular, the level of perceived job reward and control affected nurse performance and patient outcome. This included decisional control for example control over treatments; resource control, for example

- control over bed shortages, skill-mix and level, workloads; and task and environment control. Change and instability in the corporate tiers and churn in the tenure of senior leaders of the organisation did appear to unsettle frontline staff and affect their ability to feel secure. The need to protect and defend jobs and the movement or displacement of nursing staff were perceived as impacting on the quality and safety of care.

- The role of collegial support among nurses is interesting and both strands delivered some counter-intuitive insights that suggest that more needs to be known about when, how or whether close-knit teams can enhance or promote safety. This issue is not straightforward and the well-being strand found that while colleagues could be supportive in the circumstances of a safety error this was not the case if a colleague is directly involved in a safety breach. In the Organisational strand there were certainly indications in one Trust that strong, cohesive and enduring collegial relationships served to screen out any management innovation in patient safety and promoted a degree of conservatism, closing of ranks and resistance to safety interventions and change.
5.3 Tests of relationships in the NHS National Staff Survey data and the primary data strands

In this part of the section the integration of data is based on some questions derived from early analysis of primary data from several of the strands. These are tested against the NHS Staff Survey data set which was used in our Trust selection and design phases. The hypotheses are related to many of the recurrent themes criss-crossing the strands to do with staff training; levels of support; staff involvement in decision making; resources; communication; Trusts’ use of external links; clinical demands; and issues of work autonomy and control.

To provide further support for the findings presented earlier in this report, we interrogated the national NHS Staff Survey data set (Healthcare Commission, 2007). Unless otherwise stated, we use data from 2006, the closest survey to the majority of data collection in the study. The NHS Staff Survey in England is an annual survey that has been conducted since 2003, with all NHS Trusts obliged to participate and with a sample of up to 850 staff being surveyed each year.

Results in this section are based on the 143 non-specialist acute Trusts that were not included in the main study. Analysis is conducted on Trust-level data, with individual data being aggregated to the trust level before the relationships are tested. This is in common with the way the survey results are reported, as Trust-level data are published on an annual basis at the Healthcare Commission’s web site (www.healthcarecommission.org.uk).

As we are using secondary data, details of the survey methodology are not repeated here, but are available in the survey guidance notes which can be found at the survey advice centre web site (www.nhsstaffsurveys.com). A copy of the questionnaire is in the Appendix 17 to this report: we refer to question numbers in the text to enable readers to identify the precise questions used. All multi-item scales used are those reported in the Healthcare Commission survey, where psychometric properties have also been published on the web site.

5.3.1 Links between the Organisational strand and the NHS Staff Survey

Eight hypotheses are tested based on the findings presented earlier (see Section 2). These represent those hypotheses where there are closely related variables within the staff survey.

There are five outcome measures that are common across several of the hypotheses in this section. These are measured by the following questions in the questionnaire:

- Witnessing of errors – Q32a/b
- Reporting of errors – Q33 (Yes/No responses only)
- Staff injuries – Q25a-d
- Staff stress – Q25e
Hypotheses

H5.1 Overall staff uptake of training is related to (i) witnessing of errors, (ii) reporting of errors, (iii) staff injuries, (iv) staff stress, and (v) staff satisfaction

Table 5.1 shows the relationships between several variables, including overall uptake of training and uptake of health and safety training, and the five outcomes. These relationships all control for trust size and cluster (that is, teaching/general acute/multiple service providers). The general uptake of training was calculated from the collective answers to questions 9, 10 and 11.

It can be seen that the general uptake of training, learning and development activities is not, in fact, related to any safety outcomes. This is possibly because of the lack of variation between trusts in this variable: in most trusts at least 95% of staff has had some form of training in the previous year.

If we concentrate on health and safety training (Q10a), however, it is a different story. Uptake of health and safety training is significantly associated with fewer staff witnessing errors (probably due to fewer errors occurring as a result of the training); it is also significantly related to staff stress, with fewer staff reporting illness as a result of stress where more staff have received health and safety training. It raises the question of whether health and safety training might play some role in sensitising staff members more generally to safety and making them more vigilant and systematic in their approach to patient safety. However, this linkage deserves further investigation. Likewise, Trusts which prioritise and resource Health and Safety may also place a greater priority overall on supporting staff well-being. Importantly, the relationships with reporting of errors, staff injuries and staff satisfaction are not significant.

H5.2 Nurse uptake of training is related to (i) witnessing of errors, (ii) reporting of errors, (iii) staff injuries, (iv) staff stress, and (v) staff satisfaction

The following two rows of the Table relate the same story but for nurse training only. Here, the general uptake of training is associated with staff injuries and staff stress (both negatively) and staff satisfaction (positively). However it is not associated with the witnessing or reporting of errors.

Nurse uptake of health and safety training is related to the same two outcomes (witnessing of errors and staff stress) as general uptake of health and safety training.

H5.3 Senior management emphasis on building external links is related to (i) witnessing of errors, and (ii) reporting of errors

This question relied on using data from the 2004 survey, which was the final year the survey asked a question on whether senior management placed an emphasis on building links with external organisations. However,
neither link was significant: the partial correlation with witnessing of errors was \(-0.10\) \((p = .244)\), and with witnessing of errors was \(0.12\) \((p = .147)\).

**H5.4 Short-term sickness absence is related to (i) witnessing of errors, (ii) reporting of errors, (iii) staff injuries, (iv) staff stress, and (v) staff satisfaction**

Short-term sickness absence is measured via a question that was optional, and was only asked in 16 of the Trusts. Therefore this analysis is done by simple correlation. Short-term sickness absence is defined as the proportion of staff who have been absent for work for up to a week due to injury or illness.

Only one of the outcomes was significantly related to this absence variable: staff stress, which unsurprisingly had a high positive correlation with absence \((\rho = .55, p = .034)\). As can be seen in Table X.1 some of the other relationships had substantial correlations, but due to the small sample size were not statistically significant.

**H5.5 Support from colleagues is related to (i) witnessing of errors, (ii) reporting of errors, (iii) staff injuries, (iv) staff stress, and (v) staff satisfaction**

Support from colleagues is measured in two key ways: support from supervisors \((Q20a-e)\) and support from other colleagues \((Q18d)\). As can be seen in Table 5.1, support from supervisors is significantly associated with all outcomes apart from reporting of errors - more support is linked to fewer errors witnessed, fewer occurrences of injury and stress, and substantially higher satisfaction.

Support from other colleagues is not significantly associated with witnessing (or reporting) of errors, but is significantly linked to injury, stress and satisfaction. However, the link with satisfaction should be treated with extreme caution, as the support variable forms part of the wider satisfaction scale, and therefore this is heavily inflated by common method variance.

**H5.6 Reporting of violent incidents is lower in Emergency departments (ED) than in other departments**

There were 13 Trusts where the survey data allowed us to distinguish between staff in Accident and Emergency (A&E) departments and those elsewhere. Experiencing of violence against staff from patients or their relatives \((Q27a/b)\) and reporting of it \((Q27e)\) was tested for differences by department was tested via logistic regression controlling for trust membership.

In these 13 Trusts, such violence was significantly higher in A&E than elsewhere (having been experienced by 33 per cent of A&E staff, and 8 per cent of other staff; \(p < .001\)). However, contrary to expectations, reporting of violence was also higher amongst A&E staff (73 per cent of whom reported these incidents) than other staff (54 per cent) \((p = .006)\).

**H5.7 A lack of resources is linked to poorer communication**

There is a very strong link between the extent to which staff say they are asked to complete work without adequate resources \((Q16e)\) and the extent to which they think communication in the trust is effective \((Q22d)\) \((p = -}\)
This of course may be reflective of general good or poor management within the trust.

**H5.8 Junior clinical staff involvement in decision making is related to (i) witnessing of errors, and (ii) reporting of errors**

Table 5.1 shows that there is no link between the involvement of junior clinical staff (defined as clinical professionals without line management responsibility) in decision making (Q16c) and either the witnessing or reporting of errors.

### 5.3.2 Links between the Leadership strand and the NHS National Staff Survey

This analysis looks at the links between perceptions of senior management and safety outcomes.

The variables used for these analyses are:
- Perceptions of senior management – Q22a-c
- Reporting of errors – Q33 (Yes/No responses only)
- Perceptions of incident reporting procedures – Q34
- Staff injuries – Q25a-d
- Availability of infection control materials – Q31

As before, data are aggregated to the organisational level for analysis.

**H5.9 Perceptions of senior management are linked to levels of reporting incidents**

There is no direct effect apparent between perceptions of senior management (standardised regression coefficient, $\beta$, controlling for size and cluster is .09, $p = .321$). However, this did not prevent the testing of the following hypothesis:

**H5.10 The relationship between perceptions of senior management and reporting of incidents is mediated by perceptions of incident reporting procedures**

According to James, Mulaik & Brett (2007), the lack of a direct effect between two variables does not preclude the possibility of a mediated effect. Therefore this hypothesis was tested using a path analytic approach as recommended by James et al.,

As well as finding direct relationships between perceptions of senior management and perceptions of incident reporting procedures ($\beta = .65$, $p < .001$), and between perceptions of incident reporting procedures and reporting of incidents ($\beta = .39$, $p < .001$), there was indeed an indirect (i.e. mediated) effect present ($\beta = .25$, $p < .001$). Therefore the hypothesis is supported.

**H5.11 Perceptions of senior management are linked to levels of staff injury.**

There is a negative, albeit fairly small, relationship between the perceptions of senior management and the levels of staff injury ($\beta = -.22$, $p = .011$).
H5.12 Perceptions of senior management are linked to availability of infection control materials

There is no relationship found between perceptions of senior management and the availability of materials for hand washing ($\beta = .08, p = .381$).

5.3.3 Links between the staff well-being strand and the NHS Staff Survey

The analysis in this section concentrated on the links between work demand, autonomy/control, support and reward, and four outcomes: stress, satisfaction, intention to leave, and witnessing of errors. As well as direct links, interactions between the four variables, as predicted by Karasek’s model, are tested.

The variables used for these analyses are:

- Nurse stress – Q25e
- Nurse satisfaction – Q18a-g
- Intention to leave – Q17a-c
- Witnessing of errors – Q32a/b
- Work demand – Q16d-f, Q19c
- Autonomy and control – Q19f
- Support from supervisors – Q20a-e
- Perceptions of reward – Q13b (Yes/No responses only)

As before, data are aggregated to the organisational level for analysis. These hypotheses are tested on data from adult/general nurses only. For completeness, these hypotheses were also tested on individual level data; the pattern of results, and conclusions that can be drawn, were very similar, so we report only the organisational level findings for the sake of consistency.

Hypotheses

H5.13 Work demand is related to (i) nurse stress, (ii) nurse satisfaction, (iii) nurse intention to leave, and (iv) witnessing of errors

The effects of work demand on the four outcomes are shown in column 1 of Tables 5.2 to 5.5 respectively. There are consistent, strong relationships in the expected direction, so that higher work demand is associated with higher levels of stress, lower satisfaction, higher intention to leave and higher witnessing of errors.

H5.14 Autonomy and control is related to (i) nurse stress, (ii) nurse satisfaction, (iii) nurse intention to leave, and (iv) witnessing of errors

The effects of autonomy and control on the four outcomes are shown in column 2 of tables 5.2 to 5.5 respectively. There are moderate relationships in the expected direction with three of the four outcomes, so that higher control is associated with less of stress, higher satisfaction, and less
intention to leave. However, there was no significant relationship with the proportion of nurses witnessing errors or near misses.

H5.15 Support from supervisors is related to (i) nurse stress, (ii) nurse satisfaction, (iii) nurse intention to leave, and (iv) witnessing of errors

The effects of support from supervisors on the four outcomes are shown in column 3 of Tables 5.2 to 5.5 respectively. There are consistent, strong relationships in the expected direction, so that higher support from supervisors is associated with lower levels of stress, higher satisfaction, lower intention to leave and fewer errors and near misses witnessed. The relationship with satisfaction is particularly strong.

H5.16 Perceptions of reward are related to (i) nurse stress, (ii) nurse satisfaction, (iii) nurse intention to leave, and (iv) witnessing of errors

The effects of perceptions of reward on the four outcomes are shown in column 4 of Tables 5.2 to 5.5 respectively. There are moderate relationships in the expected direction with three of the four outcomes, so that better reward is associated with less of stress, higher satisfaction, and less intention to leave. However, as with autonomy and control, there was no significant relationship with the proportion of nurses witnessing errors or near misses.

It should be noted that ‘perceptions of reward’ is very much a proxy variable for true reward. With regard to the item used, it has specific attention to the recent Agenda for Change process that determined the pay band on which nurses would be paid; the item asks specifically about the fairness of this reward, rather than the value of it.

H5.17 Interactions between the above independent variables predict (i) nurse stress, (ii) nurse satisfaction, (iii) nurse intention to leave, and (iv) witnessing of errors in line with Karasek’s model

The six possible two-way interactions between the four independent variables are tested and shown in columns 5 to 10 of Tables 5.1 to 5.5. The interactions are mostly not significant, suggesting that Karasek’s model may not extend to the particular variables being used, or that it is not context-specific enough. However, there is one interaction that is significant: that between work demand and support from supervisors predicting satisfaction. The nature of this interaction is shown in Figure 5.1.
The main effect of support from supervisors is clear, as is the main effect of work demands. However, it can also be seen that the positive effect of having low work demands on satisfaction is stronger when joined by high levels of support from supervisors.

5.4 Comparing categorisations of Trusts

This section also explored the correspondence of the original typology of Trusts (on the measures of ‘high’ and ‘low’ performance informed by the NHS Staff Survey) with the emergent typology of Trusts arrived at inductively from the Organisational Strand (in Figure 2.5). The synthesis here is least satisfactory and difficult to understand as there are so many qualitative and interpretive factors used to arrive at the emergent Trusts clusters. The environmental ‘shocks’ notion (See Section 2) is not based on performance alone, or on discrete single measures: it is a composite interpretation and captures the reported qualitative dynamics of change, cultural attributes and receptivity to change. Assessment of performance drawn from the case study participant interviews was based on subjective and complex interpretations. It is also noted that ‘stability’ in the original sampling frame (drawn from the NHS National Staff Survey) used the notion of ‘stability’ to reflect changes in patient safety and staff well-being performance between survey time periods. The notion of ‘stability’ referred to in Section two refers to broader levels of change in the organisation, including personnel and structured changes. This again makes comparison difficult. The emergent typology is a qualitative assessment of Trusts and provides only a snapshot in time. It is not ‘clear cut’ and while clusters of Trusts emerged as similar, there were also anomalies with Trusts differing from each other in subtle ways even within categories as well as between categories. The importance of this nuanced study is that it captures the
methodological difficulties of categorising and selecting Trusts for comparison.

5.5 Conclusions

The opportunity for yet further interrogation of secondary data remains, as will be identified in Section 6. It could shape further research beyond the lifetime of this project: any emergent linkages between the Organisational, Staff well-being and Leadership strand findings/hypotheses and the NHS Staff Survey should be investigated and could prove fruitful in subsequent work.
Table 5.1 Relationships between survey variables and safety outcomes

<table>
<thead>
<tr>
<th></th>
<th>Witnessing of errors</th>
<th>Reporting of errors</th>
<th>Staff injury</th>
<th>Staff stress</th>
<th>Staff satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uptake of training, learning &amp; development (overall)</td>
<td>-0.04</td>
<td>0.11</td>
<td>-0.09</td>
<td>-0.12</td>
<td>0.13</td>
</tr>
<tr>
<td>Uptake of health &amp; safety training (overall)</td>
<td>-0.25**</td>
<td>0.15</td>
<td>-0.10</td>
<td>-0.21*</td>
<td>0.11</td>
</tr>
<tr>
<td>Uptake of training, learning &amp; development (nurses)</td>
<td>-0.02</td>
<td>0.02</td>
<td>-0.23**</td>
<td>-0.26**</td>
<td>0.17*</td>
</tr>
<tr>
<td>Uptake of health &amp; safety training (nurses)</td>
<td>-0.17*</td>
<td>-0.02</td>
<td>-0.12</td>
<td>-0.19*</td>
<td>0.11</td>
</tr>
<tr>
<td>Support from supervisors</td>
<td>-0.21*</td>
<td>0.01</td>
<td>-0.25**</td>
<td>-0.45**</td>
<td>0.85**</td>
</tr>
<tr>
<td>Support from colleagues</td>
<td>-0.13</td>
<td>0.02</td>
<td>-0.22**</td>
<td>-0.40**</td>
<td>0.45**</td>
</tr>
<tr>
<td>Lack of staff resources</td>
<td>0.32**</td>
<td>-0.09</td>
<td>0.18*</td>
<td>0.53**</td>
<td>-0.61**</td>
</tr>
<tr>
<td>Junior clinician involvement in decisions</td>
<td>-0.08</td>
<td>0.06</td>
<td>-0.03</td>
<td>-0.25**</td>
<td>0.49**</td>
</tr>
<tr>
<td>Short-term sickness absence (optional question)</td>
<td>0.32</td>
<td>-0.48</td>
<td>0.28</td>
<td>0.55*</td>
<td>0.01</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01

Table 5.2 Effects of demand, control, support and reward on nurse stress

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work demand</td>
<td>.377**</td>
<td>-312**</td>
<td>.279**</td>
<td>.379**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy &amp; control</td>
<td>-.312**</td>
<td>-.236**</td>
<td>-.206*</td>
<td>-.299**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support from supervisors</td>
<td>-.324**</td>
<td>-.199*</td>
<td>-.236**</td>
<td>-.288**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of reward</td>
<td>-.228**</td>
<td>-.230**</td>
<td>-.209*</td>
<td>-.168*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>.075</td>
<td>.120</td>
<td>-.004</td>
<td>-.035</td>
<td>-.045</td>
<td>-.033</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01

Figures in table are standardised regression (beta) weights
### Table 5.3 Effects of demand, control, support and reward on nurse satisfaction

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work demand</td>
<td>-.555**</td>
<td>-.448**</td>
<td>-.239**</td>
<td>-.558**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy &amp; control</td>
<td>.492**</td>
<td>.385**</td>
<td>.169**</td>
<td>.480**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support from supervisors</td>
<td>.795**</td>
<td>.687**</td>
<td>.725**</td>
<td>.763**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of reward</td>
<td>.305**</td>
<td>.309**</td>
<td>.285**</td>
<td>.150**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>-.110</td>
<td>-.100*</td>
<td>.010</td>
<td>.083</td>
<td>.028</td>
<td>.024</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01

*Figures in table are standardised regression (beta) weights*

### Table 5.4 Effects of demand, control, support and reward on nurse intention to leave

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work demand</td>
<td>.489**</td>
<td>.439**</td>
<td>.300**</td>
<td>.486**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy &amp; control</td>
<td>-.299**</td>
<td>-.173**</td>
<td>-.066</td>
<td>-.281**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support from supervisors</td>
<td>-.536**</td>
<td>-.401**</td>
<td>-.513**</td>
<td>-.500**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of reward</td>
<td>-.263**</td>
<td>-.264**</td>
<td>-.237**</td>
<td>-.159**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>.029</td>
<td>.122</td>
<td>.032</td>
<td>-.120</td>
<td>-.079</td>
<td>-.060</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01

*Figures in table are standardised regression (beta) weights*
Table 5.5 Effects of demand, control, support and reward on nurses’ witnessing of errors

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work demand</td>
<td>.353**</td>
<td>.355**</td>
<td>.275**</td>
<td>.371**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy &amp; control</td>
<td>-.105</td>
<td>-.028</td>
<td>.015</td>
<td>-.117</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support from supervisors</td>
<td>-.287**</td>
<td>-.164</td>
<td>-.290**</td>
<td>-.268**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of reward</td>
<td>-.089</td>
<td>-.099</td>
<td>-.108</td>
<td>-.036</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>.119</td>
<td>.051</td>
<td>-.118</td>
<td>.080</td>
<td>.104</td>
<td>.079</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01

Figures in table are standardised regression (beta) weights
Section 6 Delivering on the study aims

6.1 Introduction

This study has been ambitious and complex and aimed to explore a range of questions concerning the interaction between aspects of organisational culture, patient safety and staff well-being using a multi-disciplinary approach and incorporating a range of approaches, intellectual traditions and methods.

Overall, our aims were focused on extending the evidence base and trying to develop understanding of how and why NHS Trusts in England varied in their approaches and performance in relation to patient safety and staff well-being. We have provided extensive detailed analysis of these issues, using different methods, measurement tools and techniques. We have also been able to reflect on different levels of Trust organisation for example, in the Organisational strand, the case study emphasis is on the whole organisation, with informants drawn from across the Trust, as well as enquiry into the impacts of external organisational issues. In the Leadership strand the focus is on the top tier of the organisation, with not only dedicated interviewing but also appraisal of senior leaders by their executive team. Importantly, we have also brought the analysis down to ward and shift level and examined front-line nursing staff. At this micro-level we have used some pioneering tools to examine the nuances and dynamics of behaviour across consecutive shifts, identifying the factors impacting on nursing interaction, significant events, well being, mood and performance. The entire data set includes responses from a diverse range of personnel including CEOs; Medical and Clinical Directors; other executives; middle managers; patient representatives; junior doctors; matrons and occupational health and risk managers. The inclusion of multiple accounts from professional groups across settings has enabled us to identify policy impacts of patient safety and staff well-being over time. The combining of approaches has provided a unique and extensive data set based on the same small group of eight Trusts who were studied in depth over a fairly discrete time period. We have also been able to compare aspects of these data with NHS Staff survey data from these same Trusts, as well as the opportunity to test emerging relationships on the survey data from other Trusts.

At the outset, Trusts were heuristically selected using notions of ‘high’ and ‘low’ and ‘stable’ and ‘less stable’ as descriptors extracted from measures within the NHS Staff survey, (see Section 1). However, the field researchers were not aware of these descriptors during the data collection or preliminary analysis stages. The interrogation of the data using these descriptors happened at a late stage in the analysis process for all strands and was employed to differing degrees. In the Organisational strand, the
analysis was conducted inductively and independent of these descriptors and was not cross-referenced until the assembly of Section five on integrating the strands. This heuristic differentiation of Trusts was also complemented by other selection criteria ensuring that we had a mix of large scale and smaller Trusts; Trusts within large cities and more rural or semi-rural contexts; and Trusts varied by Foundation and non-Foundation status. It was considered to be a design strength to have this variation in the study as it reflects the broader, diverse picture of NHS Trusts. It was also useful in allowing the study to capture change and dynamism across Trusts, with some who were ‘stable’ at the outset showing less stability later; together with some having major internal and external structural changes and other changes in performance and status. In particular, within the Organisational strand we have been able to uncover the role of policy and environmental change context issues with a major finding being the need for organisations to build capacity to deal with and buffer major external organisational threats/’shocks’: especially when these combine to create significant pressure on the organisation. We return to this theme later in the section.

It was also an aim of the study to pilot and assess interventions that might be tailored to local contexts in relation to patient safety and staff well-being. In this respect, there was a major knowledge sharing or dissemination event in the latter phase of the project where Trusts were provided with direct feedback through a ‘master class’ format and an interactive ‘action workshop’. Equally this event has triggered further potential for follow-up with Trusts who have requested personalised outputs and consultancy style engagement. The study has also developed some frameworks (see Section 2, Figures 2.4 and 2.5) which deserve further development in partnership with both participating Trusts and other stakeholders.

6.2 Reflections on the study

6.2.1 Implementing the study: innovations and strengths

The novelty and innovation in this study are embedded in the questions it asks, its design, its focus and the complementary expertise of the research team (including experts in sociology; organisation behaviour and management; health service research; health and organisational psychology; statistics and NHS senior management). Conceptually it has tackled questions about patient safety and staff well-being together, hitherto often researched separately, and finding there to be many perceived linkages and interdependencies.

The study has simultaneously focused on using its different strands and measurement techniques to access different levels in an organisation; and this multi-level, multidisciplinary analysis of the same organisation is uncommon. There has also been the opportunity to use secondary data sources from a national survey to inform the primary study and to help
define further research gaps for the future. Interestingly, this study has also been privileged in being able to draw on team members’ knowledge of safety in industrial sector organisations and on an extensive international network of patient safety researchers.

It is concluded that research on patient safety and staff well-being can benefit from configuring novel teams of disciplines; that combining paradigms and methods can be achieved despite many challenges; that concurrent and contiguous work on different organisational levels is highly instructive. Significantly the study underscores the point that ‘positive’ cases of ‘high achievement’ in relation to patient safety and staff well-being merit study and not just ‘struggling’ Trusts or those in the centre of a major incident. The incorporation of understanding from industry has also proved fruitful. The key to ensuring that this study has delivered on its ambition is that all aspects of the study have been informed by strong conceptual and theoretical underpinnings. In each strand there is a coherent approach and body of relevant academic research literature underpinning the key questions and design. This clarity from the outset has ensured that each strand has set and met its own quality standards. This adds strength, rigour and confidence to the process of synthesis as described in the previous section.

Interestingly, too, it is an unusual study insofar as the research was not initiated in the eye of an ‘Inquiry’. The selected Trusts were not ‘under investigation’ and thus a broad spectrum of both successful examples and practices could be explored: not just ‘problem’ cases. The study has thus shed a spotlight on Trusts who seem to be ‘high achievers’, as well as on those which are challenged in relation to patient safety and staff well-being. This need to understand ‘protective’ factors underlying organisational and staff resilience emerged as a strong theme in the study.

6.2.2 Limitations of the study and considerations

In equal measure, it is important to note some of the generic challenges and limitations to the study (limitations of the individual strands have been detailed in the individual sections). The biggest factor that has to be considered is the timing of fieldwork and the rapidly changing policy and research environment. There was considerable organisation structural reconfiguration in the NHS during the study lifetime, both in relation to Trust mergers and reconfigurations. There was also some turnover of CEOs and other senior staff mobility. The fieldwork was completed pre-publication of the Lord Darzi report (High Quality Care For all: NHS Next Stage Review Final Report, DoH, 2008c). As touched on in Sections 2, 3 and 4, there has been an explosion of patient safety research and of practical tools, initiatives and interventions at different levels of the service during the time period of the study. The interviews and the other data sets are mainly snapshots, although some retrospective data is gleaned in the Organisational strand and encapsulated in the repeat data sets of the NHS Staff Survey. A number of major research centres have now been commissioned to lead work on patient safety in England, Scotland and
internationally, which is shaping the contours of the knowledge base. Limitations are also enshrined in the small number of Trusts and in the type of Trusts selected: only acute Trusts were studied here. No direct patient experiences or observations were recorded in the design although patient representatives were included in the Organisational strand and in the project advisory body. Similarly the study has not examined the perspectives of individuals outside the organisation: for example, PCT CEOs or government officials; nor has it aimed to focus on ergonomic considerations.

In the Leadership strand the overall sample size was small and it is noted that this affects the power of the results and type of analysis possible (predictive or multi-level modelling were not feasible) (see earlier detailed discussion in Section 3). It is also recognised that the self-report measures may not have been sensitive enough to detect differences between the two groups of leaders. In the Staff well-being strand, the response rates were relatively low and there was some variation from Trust to Trust. The use of ‘Nurse Advocates’ to assist with gathering data was more or less effective in different settings. Gathering ward data could be directly affected by issues of staffing and in one instance by an outbreak of ward based illness and infection.

Other challenges have included the management and reporting of the large quantity of data. The final report has had to be highly selective and refined in its level of detail and reportage. Detailed case studies have had to be radically edited into appendices and substantial qualitative material highly condensed within the report. Likewise provision of a fully integrated and synthesised analysis has been a ‘first’ for the research team, as the analysis has moved above and beyond individual disciplinary preoccupations, contributions and disciplines. This feat of synthesising across the strands (Section 5) and achieving a ‘shared’ overview will be further extended in published papers, but in terms of the report it has necessitated grappling with different languages, terms and with differing world views as to what constitutes evidence; and many other conceptual and philosophical discussions identified in the literature on multi or interdisciplinarity (Mays et al., 2005; Dixon-Woods et al., 2007a). It has been an objective of the study to add insights on this process and to highlight the value of multi-disciplinary work. The richness and extensiveness of our data confirm that this adoption of a multidisciplinary strategy has been productive and valuable. (A methodological paper by McKee has been submitted to a symposium for the American Academy of Management, Chicago 2009 Annual Meeting, reflecting on this case example of multidisciplinarity).

6.3 Key messages from the study

Despite the caveats above, the team have added to the knowledge base and distilled a number of highly important insights. External dissemination
of these insights has been undertaken (see Appendix 18) for details of dissemination. We conclude that key among these are the following:

### 6.3.1 Adding to the evidence base

Definitions of organisational culture have been widely debated in many different social science literatures and multiple attempts have been made to operationalise and measure facets of culture. Organisational culture is referred to in many Public Inquiries where health care safety or other breaches have occurred. While there is a growing literature on health care cultures and a proliferation of tools and models to assess culture, there are as yet few depth empirical studies which explore what connections staff themselves make between culture and patient safety and staff well-being. In this study we have shown that it has been very useful to combine ideas drawn from change management with notions of culture. We have shown how very powerful insights can be gleaned by enabling health care staff to articulate what they perceive as facilitating or hindering cultural change in these two areas. The analysis has indicated that content, process and contextual dimensions of change interact or converge to either promote or inhibit patient safety or staff well-being in individual Trusts. (see Figure 2.5). This holistic organisational view has allowed us to discriminate between Trusts who are facing different levels of change and 'environmental' shocks and who display different change capacity in the face of external or internal pressures. This approach has been valuable not least because we have revealed insights about, 'resilient' and 'adaptive' Trusts, as well as those who are at different stages of developing patient safety and staff well-being strategies. We have shown that the 'receptive contexts' for change framework constitutes and provides a most valuable, sensitising framework.

Senior strategic leadership as a cultural attribute has been researched in particular depth in this study and informed by an extensive literature on human factors in safety in industry and styles of leadership. Again there are many instruments for assessing leadership style within organisational psychology but few of these focus specifically on safety leadership, especially at a senior level. In high risk industries, leadership of senior managers (or the lack of it) is cited in analyses of many safety incidents. However, in health care, despite a growing fascination and emphasis on leadership and the focus on the development of improvement tools, there remains an enduring paucity of empirical data that relates the leadership of top managers to patient safety in particular. Here we have provided important new empirical data which can help build a normative picture and provide a basis for comparison with a wider sample of Trusts and with other organisational or national contexts.

The issue of staff well-being and stress has been widely researched across many organisations and the link with performance has been increasingly debated. In this study, one strand has allowed us to focus on variations in staff well-being and linkages between well-being, performance related to patient safety and demands on staff in real time. This detailed exploration
suggests that micro-contexts at the level of wards and shifts may need to be further understood in evaluating organisational safety breaches. In particular, this investigation has shown that issues of clinical demands on staff; the amount of control they feel they have over their work and how much they are supported, valued or rewarded deserve further analysis. It has been shown that subtle, real-time, micro-level tools and analyses can be powerful in identifying such patterns and interconnections.

6.3.2 Complexity of meaning, organisation and processes

The Organisational Strand drew particular attention to the complexity of the notion of patient safety itself. The concept does not seem to have universal meaning or power and was used interchangeably with other terms. It could be confounded by terms such as ‘risk’, ‘incidents’, ‘quality’, ‘complications’, ‘governance’. Similarly, several different job descriptions, roles and levels of personnel could be charged with safety briefs and the portfolio was not always held by similarly designated people in different Trusts (for example titles and roles varied including Risk Managers; Clinical Governance Managers; Directors of Nursing; Directors of Human Resources). These post holders varied in their levels of organisational power and influence and in their reporting lines to top management. Geographically they could find themselves on different sites and campuses with complicated communication lines. Furthermore, the types of safety errors that can occur are diffuse and this adds to its complexity: ranging, for example, from infection control, through medication errors, to trips and falls. This means again that the patient safety portfolio is dispersed and that many stakeholders and many levels of the organisation and professional groups are involved. Most professional clinical bodies have their own quality guidelines and regulations, which are overlaid both by corporate and/or localised procedures and reporting systems. This makes for a huge complexity of accountabilities and compliance. A number of barriers to implementing safety were also said to relate to these blurring of roles and accountabilities and a lack of coherence in overall strategy. Some staff also mentioned that a lack of clear evidence as to ‘what works’ was inhibiting. This lack of maturity of patient safety evidence, coupled with failure to transmit examples of good practice, was commonly reported.

The data also showed that the fragmentation of many health care pathways also make it difficult for staff to always know who is responsible when a safety incident occurred with many steps in care being cumulative and involving step-wise interventions with different caregivers. Problems could be dispersed and opaque with long chains of communication and action. Patients themselves came into the mix and some accounts suggested that more needs to be known about patients’ role in safety.

Importantly, this study indicates that providing safe care is the invisible and intangible norm: and more needs to be known about how this preservation of safety is assured for much of the time. All of the staff in all of the Trusts in this study agreed that safety and quality of care mattered and in all
Trusts it was reported that patient safety priorities were increasing. What differed lay in how it was prioritised and put into action. Importantly, the Trusts who appeared to be better at mastering some of these complex challenges had focused on creating coherence in their approach: translating policy ambitions into practical, achievable interventions. They tended to adopt a gradualist approach and reported breaking down the components of their patient safety strategy into manageable sub-components or ‘bundles’.

### 6.3.3 Priorities, values and leadership

The Organisational strand interviews also delineated a range of other commonly perceived barriers to patient safety, including issues to do with poor communication between staff and between groups of professionals; issues to do with clinical and other demands on staff for example work loads, turnover and skill mix, limited training (this is discussed more fully later); issues to do with poor compliance or poor documentation of procedures; limited awareness of risk; poor physical infrastructure, for example bed shortages or limited equipment; inability of staff to link actions and consequences due to the way work is organised and distributed; weak management at different organisational levels. This study provides a strong message about the enduring difficulties that arise due to fragmentation of care and of responsibility and failure at any level of the organisation to make connections between overall patient safety strategy and operations.

The value that is attached to patient safety and staff well-being and how they are valued and prioritised by senior staff - and particularly by the CEO - do seem to be important in galvanising the organisation. Leadership does appear to matter. The value of financial performance and budgetary control or preoccupations with major external change could create tensions or distract CEOs from focusing safety and staff well-being. Four out of seven CEOs were thought to prioritise patient safety over other business goals when their senior teams were asked about this in the Leadership strand: although we are aware there is limited normative data on this. The tenure and stability of leadership also seemed to affect the organisation’s ability to maintain a vision and focus on patient safety and staff well-being. High turnover of CEOs was felt to be a risk factor in maintaining quality of care and engagement of staff.

The CEO can play a vital role in communicating a strategic vision and direction on issues of safety and staff well-being. Whether and how senior members of the executive team lead and engage other middle management and clinical leaders in this vision appears to make a difference. This connection between ‘good’ patient safety performance and CEOs having longer-term goals, change processes and organisational development plans in place arose in both Leadership and Organisational Strands of the study.

In terms of leadership style, both transactional and transformational leadership styles and a consensual approach seem to be important and were identified in ‘Resilient Trusts’ where perceptions of patient safety quality were perceived as high priorities. In the Leadership strand the CEOs...
tended to show more transactional than transformational or passive styles and it is indicative that transactional styles may be beneficial for patient safety. However, ratings of transformational leadership were related to perceptions of executive safety climate. The findings are slightly equivocal and based on small numbers of CEOs and in the Organisational strand the findings seem to favour a combination of both styles.

Leadership across organisational divisions and professional groups also appeared to be necessary so that the top level vision is enacted and understood. The data seem to support the value of dispersed leadership and particularly reinforce the need for strong local clinical and middle management leadership; and for connectivity between these constituencies.

Leadership could be expressed in different ways: through key individuals making sense of policy and Trust level initiatives; being visible and undertaking translational roles; providing role models and mentoring; setting goals; and mobilising resources and learning at an operational level; drawing in and co-ordinating external expertise and knowledge from outside the organisation. However, such motivational and visionary roles were especially effective when combined with clarity of expectations, roles and accountability. Informal leadership was perceived as important and key clinical staff could help to set the tone and provide role models. The notion of ‘adaptable’ leadership was also raised and may merit further investigation.

6.3.4 The role of context, systems and organisational capacity

Trusts differed in their degree and scale of external and internal pressures and threats and in how these precise threats were configured and sequenced. The extensiveness and sequencing of change, the pace of change and how different discrete changes combined could all influence prioritisation of patient safety and staff well-being. The term ‘environmental shocks’ was found to be helpful and was used to map the force and magnitude with which organisations were affected by complementary changes or ‘disturbances’: and also whether these ‘shocks’ could impact on patient safety and staff well-being. The capacity of an organisation to adapt to such changes is linked to three criteria: cultural attributes which facilitated organisational learning; staff perceptions of empowerment; and reported staff engagement in decision making. Through the Organisational strand we revealed four broad types of Trusts or Trust scenarios: Resilient Trusts; Adaptive Trusts; Trusts In Recovery; and Conservative / Passive Trusts. The characteristics of these related to their organisational capacity to buffer ‘shocks’; and this would merit further exploration in subsequent studies. Resilient Trusts are described as maintaining stability of patient safety focus and operations; Adaptive Trusts are able to develop a rapid response to threats and to mobilise appropriate solutions; Trusts In Recovery appeared to have a piecemeal response to pressure and failed to put in place organisational level systems; while in the Conservative/ Passive
Trusts staff reported little impetus to engage innovatively in patient safety and staff well-being. This typology is useful in the context of these data but it should be emphasised that the Trusts may move between ‘types’ over time and is dependent on the evaluative criteria used.

This observation about environmental ‘shocks’ and Trust responsiveness and capacity to manage change highlights a key and powerful finding from this study. The data strongly suggest that it is essential for researchers of patient safety and of staff well being to understand organisational ‘outer’ as well as ‘inner’ contexts. There is a need to assess Trusts’ environmental hinterland: both their permeability and their stability. Many cultural analyses/ tools fail to take account of contextual issues and do not capture the way that a range of factors can escalate or build cumulatively and undermine patient safety or staff welfare. It is suggested that this study adds value by distinguishing between Trusts’ robustness in the face of major change or complementary ‘shocks’ and delineates the precise cultural attributes (including leadership; relationships; organisational learning and capacity/ capability; level of priorities and receptivity to change) that affect resilience and adaptation.

In relation to patient safety in particular, the study produced some useful insights around processes and systems. There was some concern over the prioritisation of operational procedures over strategy in some Trusts and that there could be a proliferation of initiatives in the absence of an overall patient safety strategy. In all Trusts there was concern about the ease and value of implementing reporting systems for patient safety. Differences were often reported between clinical groups and it was noted that some doctors’ were non-compliant. Nurses were typically described as more co-operative: however, nurse reporting could be seen as compliant and defensive; and reporting was not always done in the spirit of learning or improvement. There were also complaints about there being too many fragmented systems which did not always align or iterate effectively. It was also commented that there were too many bureaucratic boundaries between aspects of governance; an overload of professional roles; poor lines of accountability; long chains of reporting; and delays in the investigation of incidents coupled with limited, slow, poor or ‘no’ feedback. Ironically it was sometimes reported that excessive formalisation and systematisation got in the way of ad hoc problem solving/ sensing and blocked the more informal and instinctive communication of concerns. Use of innovative methodologies such as ‘Table Top’ discussions was praised. Many staff said they would welcome novel ways of condensing error reporting and of speeding up the steps from reporting to investigation, through to analysis and action. Key to this seems to be how Trusts can streamline and simplify such processes and ensure timeliness, leadership, ownership and accountability. There also is an issue about how to encourage and build trust between staff and between clinicians and management, so that constructive, informal communication is also released.
6.3.5 Clinical realities and staffing

Issues of staffing, particularly the clinical demands on nursing staff, arose repeatedly in this study. The interviews in the Organisational strand provided a picture of high commitment and busyness, with staff themselves often handling considerable amounts of change, sometimes with limited control. Staff had been coping with initiatives such as ‘Agenda for Change’, which many had found unsettling or had been perceived as badly handled in some Trusts. The effects of Trust mergers and reconfiguration in some Trusts had led to changes in staff ratios and staff shortages; skewed skill mixes; high turnover; vacancy freezes; displacement and redeployment. Staff reported that some of these combined effects could threaten their ability to maintain safe care. It was felt that being overstretched could lead to a range of risks, resulting in a lack of focus; lack of approachability or responsiveness to patients; limited competence in new roles; undermining of clinical confidence; inattentiveness or imperfect communication. There was also variation in these localised conditions within Directorates, specialities and wards, as well as between Trusts, with the presence or persistence of ‘known hotspots’ (for example maternity and elderly care were often cited). This also varied over time. There were also reports from two Trusts where some staff described feeling insecure either about their own jobs or in terms of their personal safety (through harassment or bullying or violence from staff or colleagues). This was perceived as having the potential to affect concentration on the job and quality of care.

In contrast, the study shows that a number of Trusts had managed to keep staff engaged and feeling motivated and supported. There were examples of staff reporting good levels of communication, and where Agenda for Change (DoH, 2004) was perceived as well managed. Senior leadership appeared to be crucial in these Trusts as was the calibre of relationships between clinical and managerial staff. These Trusts were described as having ‘participative, inclusive’, less ‘command and control’ styles, coupled with devolved leadership structures. Often positive staff communications had been initiated by a joint approach by senior and front-line management including Clinical Directors and Matrons. In terms of patient safety, such examples seemed to hinge around using deliberative communication strategies: ‘multi-level’ marketing informed a clear strategy which was effectively transmitted. When incidents or errors occurred these were used as learning devices. Effective informal as well as formal communication and high levels of trust and collegiality between long established staff and teams were also seen as beneficial in preserving high quality care.

The Staff well-being strand provides further real-time insights and adds colour to this picture of interaction between what happens to staff and how their sense of demand, control, effort and reward affect patient safety. The issue of perceived control over work emerges as an especially strong issue. Low levels of perceived control were linked with lower levels of performance, particularly after a ‘worst’ incident was experienced during that shift. It is important to note that in contrast, where staff reported high
levels of reward within their working context this was found to be protective and particularly so in shifts characterised as both high demand/effort.

Mood changes were recorded across the course of shifts and periods of tiredness (extracted from one nurse’s shift) unsurprisingly increased toward the end of shifts. This study suggests that it may not be just ‘handovers’ that present risky transitions for patient care, but there may also be merit in further understanding of nurses’ behaviour toward the end of their shifts and in response to different types of ‘incidents’. The detailed mapping of changes of mood also suggests that more needs to be known about the role of support to frontline staff, in terms of colleagues and senior nurses, to protect levels of stress and promote well-being. This study has added insights in relation to the types of ‘worst’ events that cause nurses’ moods to change in the course of their work and which can affect their performance. These ranged from issues to do with: clinical circumstances such as meeting patient needs (sometimes patient deaths or deterioration); the behaviour of colleagues; resources (for example bed or staff shortages); workloads (too few, or the wrong level of staff); high administrative burdens; interruptions and poor work procedures or systems; dealing with conflict or challenging behaviour (for example, confused, distressed patients and/or relatives; threats, abuse and violence from patients, relatives or from other colleagues); time pressures and availability of support. The role of managerial and collegial support on nurse well-being and performance is a complex area that requires further research. This study provides unique insights into the texture of everyday life on wards from a nurse’s perspective and it has the potential to inform ward based strategies and responses to improving working life of nurses. These implications are further developed below.

6.4 Implications of the study

This study has generated a number of broad implications for policy and practice and future research. These are listed as bullets below. They are not listed in any order of importance:

6.4.1 Practice and policy implications

Identification of the need for Trust leadership to assess ‘cultural capacity for change’

This study has drawn attention to assessing ‘cultural capacity for change’ as opposed to organisational ‘culture’ per se. It is argued that it is important to assess cultural attributes, organisational processes and structures, contexts and content factors that lead to an organisation prioritising and implementing patient safety and staff well-being. It is particularly valuable to assess the degrees of external threats and pressures bearing down on an organisation. It appears that it is this chemistry between external realities and internal cultural attributes, especially leadership and staff engagement that affects how priorities are addressed. Some organisations face more
environmental shocks or shocks of greater magnitude than do others; and it is the way these complementary and cumulative pressures coincide or configure that matters. This implies that whole organisations should do periodic and regular self assessment of external and internal risks; and should not rely just on external inspection visits or formal accountability mechanisms. This cycle of review and reflection could be especially important when key staff leave, or with the high level of CEO turnover. In section 2 Figure 2.4 a framework for an assessment tool is forwarded which denotes the core properties that inform cultural capacity for change.

**Creating processes to articulate and mobilise a common understanding of patient safety and staff well-being**

Patient safety and staff well-being have intrinsic value within most health care organisations but are often abstract, invisible and taken for granted. Safety usually becomes visible only when it is breached; and staff well-being only when it is compromised. Providing high quality care and looking after staff thus can be hard to measure and qualitative assessments may be a useful complement to survey tools. These strategies also need to be ‘named’, prioritised and ‘marketed’, otherwise they can perish, due to their diffuse, generic value. Attention should be given not only to risks and threats but also to aspects of preserving and promoting good practices. It seems increasingly important that Trusts are enabled to develop high level patient safety and staff well-being strategies that interrelate and are recursive. In the light of the new emphasis on quality following the Lord Darzi report (DoH, 2008c) the data here suggest that there needs to be further consideration as to how government level policy directives can be translated and implemented at Trust level and as to how competing priorities, especially those of financial performance can be reconciled and delivered. The role of the CEO in respect of signalling to an organisation what matters and in championing initiatives did appear important in the data. This would suggest that more research needs to be done, both to understand and dissect these influencing behaviours of senior managers.

**Policy and planning to support and develop CEOs and ensure stability of Trust senior leadership**

It appears to be important to develop policies and practices to secure the continuity of tenure of CEOs and to identify what sorts of supports might encourage longevity in these roles. Mentoring, coaching and other kinds of professional development supports might be explored, as well as links to academic centres, 'time out' or sabbaticals; and other support mechanisms. Developing and valuing these senior leaders, utilising and building their knowledge and evidence bases and similarly encouraging their senior teams seems to be highly relevant to delivering good quality of patient care, fostering staff engagement and in creating resilient and flexible organisations. Providing them with feedback on their leadership style and perceived commitment to safety could be added to the managerial Continuing Professional Development (CPD) programme for senior leaders. These insights on leadership style could also inform Strategic Health
Authorities with their leadership development programmes and the identification of potential CEOs. Similarly there is potential to use this research to inform the recruitment and selection of general management trainees.

**Trust Leaders endowed with competencies in managing disruptive changes**

At the level of the Trust organisation, the need to encourage strategic thinking and oversight, horizon scanning and vision all appear as crucial. Transformational styles of leadership as well as transactional capabilities need to be fostered in tandem. This has implications for the types of leadership competencies and training that are introduced and for recruitment to CEO posts of the future. Understanding aspects of change management and how to buffer external threats and risks along with political and contextual awareness would appear important. More needs to be known about the precise combinations of competencies needed by NHS senior staff and fed into practical training initiatives.

**Identification of systems level thinking, structured reflection and purposive use of change agents**

Some effort into understanding the complexity of systems and procedures and processes has to be made, with the identification of key individuals who are charged with helping to create clarity of focus and coherence. This needs to be done at different levels in the Trust, ensuring that the portfolio for patient safety and staff well-being is embedded in power structures in the organisation and properly co-ordinated at a senior level. In this way these change agents can intercede, build trust, encourage dialogue and breakdown ‘blame barriers’ and thereby facilitate useful changes in patient safety and staff well-being support systems. Individuals who combine systems level thinking with organisational, ‘environmental’ or contextual diagnostic awareness and abilities should be encouraged in top teams. The role of change agents and facilitated organisational learning initiatives around patient safety could be developed and evaluated at local level. The use of structured reflection on past patient safety errors might be valuable and importing some critical thinking from management or other disciplines through ‘master classes’ and directed ‘workshops’ could be supported. The appetite for this type of initiative proved high in this study.

**Harnessing Quality Improvement (QI) approaches to develop dispersed leadership and engage clinical leaders to improve and develop patient safety strategy**

There is huge capacity for improvement in many Trusts and a wealth of highly talented and committed staff actively making step wise improvements. These incremental and gradualist approaches do seem to be working, but ways need to be found to spread such good ideas and good practices. Since this study commenced the national focus has intensified leading to large scale, long term campaigns to improve patient safety, build
capacity for improvement and spread knowledge and expertise are seen to stimulate improvement. (see for example: The Safer Patients Initiative, Welsh 1000 Lives campaign, Scottish Patient Safety Programme and English Patient Safety First). Quality Improvement (QI) tools offer a way of releasing additional creativity in problem sensing’ and solving at middle management and at clinical levels. The study seems to indicate that more support and development of middle managers and clinical leaders would be appropriate. Ensuring that the patient safety portfolio is shared by managers, doctors, and other clinical groups and thus creating a consensus approach may need considerable effort and innovation. The notion of dispersed leadership could be exploited further with a view to cutting across traditional professional boundaries. Incident reporting systems may have resulted in the estrangement of some key constituencies and Trust managers need to review any perverse effects of these systems.

**Improvement of communication channels, development of multi-level modes of communication and championing of face-to-face dialogue**

In terms of safety reporting systems and procedures the main message from this study relates to the need for simplicity of systems and speed of reaction, action and feedback. While there was evidence of innovative practices with CEOs undertaking different types of intelligence gathering activities (for example, walkabouts, Table Top enquiries), there seems considerable scope to refine these often convoluted systems and chains of analysis; to critically and regularly review their operations and value. Trusts need to avoid information overload, disenfranchisement of key constituencies who may be sceptical of the processes or who have become demoralised or defensive.

Many of the well-rehearsed issues concerning communication appear to need still further resolution and improvement. This can be communication at all levels, both vertical and horizontally. Some examples of good practice were evident in this study, with some trusts showing the use of proactive and very coherent ‘multi-level’ communication. There were many examples of effective teams cited; and issues of trust, mutual respect, long established relationships and good problem solving were identified as key to their effectiveness. At a Trust level, increased efforts could be made: to avoid dismembering these teams or fracturing their capacity; and in buffering the impact of change. This requires a heightened degree of understanding of what works and why at the local specialty, clinical directorate and ward levels; and requires ongoing consultation, leadership and management.

**Identification of ‘organisational inertial dampeners’: development of strategies to ‘buffer’ staff from organisational changes**

A key feature of this study is the suggestion that working conditions and staff well-being are closely interlinked; and that staff themselves perceive that the two issues are related and influence the provision of safe, good quality care. In terms of policy and practice the implication is for the
development of more integrated policies and thinking around patient safety and staff well-being and bringing together key people when cultural changes are underway. Identification of organisational ‘inertial dampeners’ relates to ways of protecting staff from environmental factors which threaten staff well-being and distract focus from patient safety and quality of care priorities. The notion of ‘buffering’ changes seems powerful in this study and arose both at the ward level, when individual staff experienced an incident that caused stress, through to buffering at the macro organisational level. There seems to be scope to develop this notion further and to identify more about both who can provide buffering and what it might mean in practice at different levels of the organisation.

**Development of methodologies and interventions to assess demand/effort, control, reward and stress at individual, ward and unit levels**

This study has provided insights about micro-level ward based incidents that compromise nurses’ sense of well-being. What it has not been possible to do is to track how many of these ‘events’ were formally recorded, discussed or acted upon (see detailed discussion provided earlier in Section 4). The implications here are that diary methods may be valuable ‘add-on’ tools, to be used judiciously within wards from time to time to enhance local understanding of operations and to complement other incident measurement tools. The findings also add to debates and evidence about the appropriate level at which strategies should be introduced, to avoid errors and near misses. In the light of these data, Trusts might find it helpful to reflect on whether interventions to enhance staff demand/effort, control, reward and stress should be targeted at the level of the individual, or at a ward or unit level. The data here are suggestive that interventions might have to be customised to account for contextual differences. From the organisational case study data there is evidence that good clinical leadership, effective communication and engagement might be able to mitigate some worst effects of overload and high demand environments.

**Cross-Trust ‘Action Learning Workshops’ to access and transmit knowledge, learning and expertise on patient safety**

This study found NHS Trust staff to be very interested in organisational research and keen to learn from research. More innovation is needed from both the research and practitioner communities to find ways defining research gaps; and of conducting and disseminating research that sustains this kind of positive interface. NIHR SDO and other organisations are experimenting with different types of cross-boundary linkages and this study would suggest that this is timely and desired by practitioners. More attention needs to be given to building extended dissemination activities into key projects from the outset, but recognising that these activities are time and cost-intensive.
6.5 Future research

Further research gaps and opportunities naturally spring from this study. The list is not exhaustive. Some of these points are expanded more fully in the earlier detailed strand Sections.

Replication of this study and follow up

Clearly there is scope to repeat or follow up elements of this study at a later stage as much of the data here have been captured at one specific time point. Equally the data could be extended to include a wider range, or a larger number of Trusts; and to include other countries, in the UK or elsewhere, for comparative purposes. Primary care and other Trusts could productively be included. This study would endorse the need for research to include ‘typical’ cases and not just those Trusts where patient safety or staff well-being are viewed as problematic. The research design should be dynamic and capture ‘change’ processes over time. There is a need for further research and delineation of the organisational and individual, protective factors that foster and maintain quality and safety. The notions of resilience and adaptability are open to wider scrutiny and operationalisation. In terms of methods used these could be extended to include more observational or ethnographic data to ensure that some of the complex interactions and behaviours are fully appreciated.

Use of multidisciplinary and holistic approaches to explore patient safety and staff well-being

The potential for further multidisciplinary work and of combining secondary and primary analyses is underscored by this project. The fields of patient safety and staff well-being are ripe for extended work including an even broader range of disciplines and methodologies: for example, ergonomics, political theory, economics, or ethics. Questions about the intellectual boundaries of study of patient safety can be asked and it might be important to develop pluralistic research that is interdisciplinary or transdisciplinary in nature.

Identification of senior Trust leadership roles and styles of leadership which enable the development of patient safety and staff well-being

This study has suggested we need to glean more insights into the enactment of CEO leadership roles in relation to patient safety and staff well-being, as well as delivery on government health targets. Most studies are small scale and more in-depth research and survey data on CEOs could be undertaken to measure leadership styles and to investigate how senior leadership is perceived by a broad range of staff, at all levels and including senior clinicians and how these perceptions influence safety behaviours. Additional observational data could be added, with work-shadowing of CEOs and other non-participant methods being introduced to get at the fine grain of their performance and roles. It would be possible to test in further research the relationship between transformational leadership styles and
safety outcomes and also the issue of whether the safety climate was moderated by work group leaders’ perceived priority for safety.

**Investigation of how leadership and responsibility for patient safety is dispersed**

The role of middle managers and middle level clinical leaders has been typically neglected and this study suggests the need for more research on this. There is need for further empirical evidence on what ‘dispersed’ leadership entails in the context of patient safety.

**Research focused to include front-line staff and clinician/management interfaces**

New research could attempt to survey significant numbers of front line staff to assess levels of engagement with senior managers. The interface between clinicians (especially consultants) and management and the nature and tenor of these relationships seem to be enduring themes affecting how large scale organisational change is managed and received. Again such research might adopt a longitudinal perspective to capture policy and organisational change in what is becoming a fast moving policy field.

**Exploration of patient experiences of patient safety**

This study has not directly explored patient experiences of patient safety and the role of organisational factors. There is scope for significant further work employing different approaches, tools and techniques.

**Further empirical investigation of the links between staff well-being and patient safety**

The study has identified possible links between staff well-being and outcomes affecting patient safety. This offers potential for future empirical investigation to unravel the sequences of behaviours and actions which link staff stress, sickness, dissatisfaction, distraction and work overload to patient safety outcomes. As the Karasek model only received partial support in the study, further research should also focus on identifying the factors that contribute to stress amongst nursing staff.

**Exploitation of the NHS National Staff Survey as impetus for further research**

The interface with and exploitation of elements of the NHS Staff Survey offer a prospect of enhanced enquiry, in the identification of issues and locations for detailed, intensive study; and also in reflexively expanding and focussing the NHS Staff Survey itself.
Development and exploration of the Trust contextual assessment tool and Trust typology

The Organisational strand identified some key dimensions for a Trust contextual assessment tool for use by Trust leadership. Further research could refine, develop and pilot these.

Development and evaluation of knowledge interventions focused on transmission of learning and expertise between NHS Trusts

The ‘Action Learning Workshop’ piloted in this study provided a direct face-to-face method to share the research findings with senior leaders. Further research is needed to assess these types of events that transmit knowledge and learning between Trusts.
References


Bass B M and Riggio R E. 2006 *Transformational Leadership*, Lawrence Erlbaum, Mahwah, NJ,


Bryden R and Flin R. (under review). Senior managers’ leadership style and safety.


Fennell, D. 1988. Investigation into the King's Cross underground fire. London: Department of Transport, H.M.S.O.


Gummesson E. 2000, Qualitative methods in management research. New York: Educational Management Administration.


Hasselhorn H, Tackenberg P and Muller B. 2003. Working conditions and intent to leave the profession among nursing staff in Europe. Wuppertal: University of Wuppertal.


Kennedy I. 2006. Investigation into outbreaks of *Clostridium difficile* at Stoke Mandeville Hospital, Buckinghamshire Hospitals NHS Trust. London: Commission for Healthcare Audit and Inspection


Lincoln YS and Guba E. 1985, Naturalistic Inquiry, California, USA, Sage.


Hospital Administrative Data – The Patient Safety Indicators. 02-0038: Agency for Healthcare Research and Quality.


Mindgarden 2008, Mindgarden. www.mindgarden.com


www.NHSLeadershipQualities.nhs.uk


Appendix 1 Broad descriptors of Trusts

**Trust A** was a Foundation Trust which served a population of more than 300,000 people. It was originally selected as a Trust with low numbers of staff witnessing errors or near misses. It has maintained this low rate compared with other trusts, and also has a relatively low number of staff suffering from work-related stress. It has performed very well on the Annual Health Check, scoring “excellent” for both use of resources and quality of services in the most recent one; patient satisfaction is above average, and patient mortality is below average. Infection rates are below average and improving, and the Trust has made a strong financial surplus in each of the first two years of the project. The Trust also participates in a range of initiatives supportive of patient safety and focuses on developing diverse methods to communicate with staff and support staff well-being.

**Trust B** served a population of more than 800,000 people. At the time of the study it was applying for Foundation Trust status. It was originally selected as a Trust with high levels of staff well-being. It has remained as one of the lowest Trusts on this measure over the four years since. It has been a moderate performer in terms of errors witnessed overall. Overall, the trust’s performance looks good: in 2007/8 it received a score of “excellent” on both elements of the Annual Health Check. Additionally, patient satisfaction is above average and patient mortality below average, and infection rates are amongst the lowest in the country. Financially the Trust has made a small surplus in each of the first two years of the project. However it has also experienced disputes with its PCT and reductions in its commissioned services. Implementation of Agenda for Change has been slow and vacancy control measures were in operation. The Trust was also proactive in the development of innovative risk assessment tools.

**Trust C** was the largest Trust serving a population of more than 2 million. It was a top performing teaching Trust with plans to apply for Foundation Trust status. It was originally selected as a Trust with high numbers of staff witnessing errors or near misses. It has improved somewhat relative to other Trusts since the start of the project, however, and is now fairly average in this respect, as it is with regard to staff work-related stress. It performed reasonably on the Annual Health Check, scoring “fair” for use of resources and “excellent” for quality of services most recently, although patient satisfaction is slightly below average, and patient mortality is a bit above average. MRSA rates have seen a good improvement over the last three years, and C. Diff. rates are slightly better than average despite a major C. Diff. outbreak. Financially the Trust has performed strongly, with a large surplus in each of the first two years of the project.

**Trust D** was an acute Trust which served a population of more than 500,000 people. It was originally selected as a Trust with high levels of work-related staff stress. This has remained the case over the course of the project, whereas the proportion of staff witnessing errors or near misses has been relatively average. It performed reasonably in the last Annual Health Check, scoring “good” for both use of resources and quality of services. Patient satisfaction and patient mortality are around average. Infection rates were historically high, but MRSA rates in particular have seen strong
improvements. Financially the trust’s performance has grown stronger, making a modest surplus in 2005/6 but a large one in 2006/7.

**Trust E** was an acute Trust which served a population of more than 200,000 people. It was originally selected as a Trust with low numbers of staff witnessing errors or near misses. It has maintained this low rate compared with other Trusts, and has a relatively moderate proportion of staff suffering from work-related stress. It has performed well on the Annual Health Check, scoring “excellent” for use of resources and “good” for quality of services in the most recent one; patient mortality is slightly below average as well. It has made steady improvements in MRSA rates over the last three years, although C. Diff. rates are still on the high side. Financially the Trust has made a modest surplus in each of the first two years of the project.

**Trust F** was a Foundation Trust which served a population of more than 300,000 people. It was originally selected as a Trust with high rates of errors witnessed. Although there has been some fluctuation since, it is still amongst the worst in the sample in this respect. Conversely, it has managed to decrease the level of employee stress quite considerably compared with other trusts. In the most recent Annual Health Check it achieved the maximum rating for both use of resources and quality of services. It also has higher than average patient mortality. Although great improvements have been made in MRSA rates over the last three years, rates of C. Diff. infection are slightly above average. The Trust has participated in hand hygiene initiatives and promotes the participation of matrons in leading patient safety initiatives. It also focuses on the development of programmes and initiatives to support staff well-being. Financially the trust achieved a reasonable surplus in each of the first two years of the project.

**Trust G** was an acute Trust which served a population of more than 200,000 people. It was originally selected as a Trust with high levels of staff stress, and it has maintained this status. It also has relatively high levels of staff witnessing errors or near misses. In the Annual Health Check its performance has improved, from “poor” to “fair” for use of resources and from “fair” to “good” for quality of services. Patient satisfaction is lower than average, and patient mortality has been much, much higher than average. Infection rates are high, and financially the Trust has suffered from a lack of stability, having made a loss in 2005/6 but a surplus in 2006/7.

**Trust H** was a Foundation Trust which served a population of more than 400,000 people. It was originally selected as a Trust with low levels of staff work-related stress. It has reverted to being average in this domain, although it has become a Trust with well-below average rates of staff witnessing errors or near misses. It has performed well on the Annual Health Check, scoring “excellent” for use of resources and “good” for quality of services in the most recent one; patient satisfaction is above average, and patient mortality is below average. Infection rates have been consistently lower than average, and the Trust made a reasonable financial surplus in each of the first two years of the project. The Trust was active in a range of local programs focused on communicating and supporting staff and active in supporting patient safety via hand washing campaigns and upgrading and rationalisation of incident report systems.
Appendix 2 Timeline and activities

<table>
<thead>
<tr>
<th>Phase</th>
<th>Dates</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01/10/05 to 28/02/06</td>
<td><strong>National comparative data strand:</strong> &lt;br&gt;• Analysis of NHS Staff Survey &lt;br&gt;• Setting of sampling criteria for Trust selection &lt;br&gt;• Selection of Trusts</td>
</tr>
<tr>
<td>2</td>
<td>01/01/06 to 30/04/06</td>
<td><strong>Project team</strong> &lt;br&gt;• Recruitment of seven Trusts &lt;br&gt;• Project website created &lt;br&gt;• Desk research on organisational climate, culture and performance/policy, analysis of context of HRM practices, patient safety guidelines etc.</td>
</tr>
<tr>
<td>3</td>
<td>01/04/06 to 30/07/06</td>
<td><strong>Project team</strong> &lt;br&gt;• Selection of Trust subset and target Trusts for safety and well-being studies. Involve and consult key stakeholders, as informed research users. Produce research protocols, negotiate access, ethics approvals. &lt;br&gt;• Seven Trusts recruited and advisory team meeting</td>
</tr>
<tr>
<td>4</td>
<td>01/08/06 to 31/12/06</td>
<td><strong>Project team</strong> &lt;br&gt;• Project facilitators identified in Trusts &lt;br&gt;• MREC ethics granted September 2006 &lt;br&gt;• R&amp;D Research governance approval gained in 6 Trusts and honorary contracts for research staff acquired &lt;br&gt;• Enhanced disclosure from Criminal Records Bureau acquired &lt;br&gt;• Prepare study instrumentation and administer measurement tools &lt;br&gt;• Preparation of occupational health guidelines &lt;br&gt;• Trust C postpone data collection until after May 2007 &lt;br&gt;&lt;strong&gt;In-depth, staff well-being and leadership strands&lt;/strong&gt; &lt;br&gt;• Pilot interviews &lt;br&gt;• Data collection in four Trusts Centres A, B, D, E. &lt;br&gt;&lt;strong&gt;National comparative data strand&lt;/strong&gt; &lt;br&gt;• NHS survey and OCM stages</td>
</tr>
<tr>
<td>Phase</td>
<td>Dates</td>
<td>Activities</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>5</td>
<td>01/01/07 to 30/06/07</td>
<td><strong>Project team</strong>&lt;br&gt;• Advisory meeting&lt;br&gt;• Data Collection complete in Centres A, B &amp; E, continues in five Trusts Centres D &amp; F.</td>
</tr>
<tr>
<td>6</td>
<td>01/07/07 to 31/12/07</td>
<td><strong>In-depth, staff well-being and leadership Strands</strong>&lt;br&gt;• Withdrawal of one Trust from study&lt;br&gt;• Recruitment of replacement Trust H&lt;br&gt;• R&amp;D and Ethics approval gained for replacement Trust&lt;br&gt;• Data collection completed in Centres A, B, D, F, E &amp; G. Data collection continues in two Trusts Centres C &amp; H.&lt;br&gt;• Data analysis commences&lt;br&gt;• Dissemination preliminary findings at conferences</td>
</tr>
<tr>
<td>7</td>
<td>01/01/08 to 30/01/09</td>
<td><strong>Project team</strong>&lt;br&gt;• Final data collection completed in all Centres February 2008&lt;br&gt;• Advisory meeting January 2008&lt;br&gt;• Dissemination to Trust participants – Aston Action Work shop – feedback to participating Trusts&lt;br&gt;• Dissemination of preliminary findings at three International conferences&lt;br&gt;• Analysis of Data&lt;br&gt;• Final report write up and development of culture change workshops</td>
</tr>
</tbody>
</table>
Appendix 3 Research protocol

Understanding the dynamics of organisational culture change in the NHS:
creating safe places for patients and staff

Funded by the NHS Service Delivery and Organisation
R & D Programme

Protocol
version 2  August 2006

MREC PROTOCOL: VERSION 2 AUGUST 2006
Introduction

This research study aims to explore links between organisational culture change, patient safety and staff well-being. Organisational dynamics will be highlighted, using qualitative, real time and retrospective measurement data and exploring extant, purposive initiatives to enhance patient safety and staff welfare in the selected study sites (including, for example, Human Resource Management (HRM) policies and safety audits). The study will use qualitative and quantitative perspectives, drawing on theoretical insights of the HRM, organisational climate and safety change measurement literatures, behavioural and psychological models of staff well-being and processual models of organisational change. Longitudinal data will be utilised from 100 Trusts participating in the NHS Staff Survey 2003 (NSS) and sub-samples (16, then 8) comparative case studies in Acute Trusts. The aims and objectives can be summarised as follows:

1. To extend the evidence base on organisational culture change and performance: exploiting the Healthcare Commission NHS Staff Survey database, documenting any marked variation over time, across and within NHS settings, generating extended data and measurement in selected Trusts, and developing depth case studies.

2. To research key measurement issues: identifying high/low performance in domains of patient safety and staff well-being; tracking impacts of policy change over time and linking culture to care across settings and professional groups. Research questions include: What are the precise contours of a ‘patient safety’ or ‘health promoting’ culture for staff? Are these similar and/or related? How is performance delivered, assessed and changed in the domains of safety and well-being? For example, what are the impacts of management and leadership, supervision, communication, HRM practices or work organisation? Are there lessons from other non-health sectors? What is the relationship between work environment, strain outcomes (distress/stress) and staff performance in NHS settings that differ in terms of organisational culture?

3. To define and identify policy and environmental change context issues: focussing on the separation of ‘change-receptive’ from intransigent contexts and their links to culture, leadership, performance, patient safety and staff
well-being; addressing the role of internal as well as external contexts in failures and turnarounds and in sustaining high performance. Research questions include: What cultural factors are associated with turnaround/intransigence and high/low performance? What external contextual factors affect receptivity to cultural change (e.g. salience of policy and regulatory environment, fit between change agenda and locale)? What internal contextual factors affect change receptivity (e.g. clinician-managerial relationships, HRM and occupational health practices, team-working, leadership, simplicity of local goals, depth of networks)? How are leadership styles and associated behaviours of senior managers related to safety management activities?

4. To pilot and assess interventions: working in partnership with selected Trusts, tailored to local contexts and sensitive to local cultures, the project will develop and pilot programmes for purposive cultural change to improve patient safety and staff well-being. In developing the intervention, the literature suggests that attention needs to be paid not just to the development of an instrument but to its implementation. Industry safety climate literature for example, emphasises the roles of management/supervision, safety systems, work pressure, competence and training. Creating trust and creating a reporting culture combining justice, learning and reduction of blame are viewed as cornerstones of success. The intervention will build on emergent findings and include for example, development of guidelines for individual, team-working and organisationally-based interventions aimed at improving occupational health for nurses and doctors. The interventions will be participatory and involve professionals and managers, patients and other users in their design, implementation and monitoring.

This programme of research will build on the expertise of a multi-disciplinary team of leading researchers to focus analysis of organisational change, culture, climate and performance on two salient domains for UK healthcare – patient safety and staff well-being. This is justified by their high public and policy relevance, with high levels of adverse events, growing rates of hospital infection, and established links between mortality and employee management and between styles of leadership, professional cultures, staff morale, team climate and performance (see e.g. DoH 2000a; 2001a; Iles & Sutherland 2001; NHS Confederation 2003; Michie & West 2004; West & Spendlove in press).
Definitions of concepts of organisational climate and culture will be developed in collaboration with other researchers working within the SDO programme and used iteratively and pragmatically. The research will begin with climate measures derived from the NHS Staff Survey, used to isolate Trusts for further depth work. The in-depth work in case studies will synergistically feed back into decisions about where climate measure and other tools are directed/re-directed.

The project draws together several major strands of academic analysis:

- Aspects of organisational change in healthcare, where culture, leadership and receptivity to change are recognised as central issues (see e.g. Pettigrew et al. 1992; Dopson et al. 2002; Bate et al. 2002; Greenhalgh et al. 2004)
- Measurement and analysis of organisational culture, climate and performance: a complex and challenging field where the applicants are research leaders (see e.g. Michie & West 2004; West & Spendlove in press; Flin et al. 2004)
- Culture, climate and leadership in safety-critical organisations (see e.g. Flin et al. 2004)
- Measurement of healthcare technologies, professional behaviour, work stress and occupational health, using developments in analysis, methodologies and tools of measurement (see e.g. Jones et al. in review; Jones & Johnston 2004; Beedie et al. in review)

This combination addresses well-known weaknesses in the various organisational change, culture and climate literatures. Research has suffered from problems of a multiplicity of definitions of culture; a lack of consensus about what is being measured (climate or culture, but with a bias to climate); lack of a common language; poorly validated instruments; poor response rates; failure to engage or capture professional cultures; crude aggregation of data; inability to reveal direction of cause and effect; and over-simplification or rigidity of cultural typologies. Reviewers lament the failure to focus on outcome variables and, in the context of health, detect a bias towards managerial perspectives and resultant omission of research on professionals' performance related to culture. Added to this is the frequent failure to capture improvement or deterioration in performance and how this links with culture (see e.g. Ashkanasy et al. 2000; Flin et al. 2004; Mannion et al. 2003; Patterson et al. in press; Scott et al. 2003a; 2003b; West & Spendlove in press).
Overall plan of investigation

Collaborators: Professor Michael West (Aston Business School), Professor Lorna McKee (University of Aberdeen), Professor Derek Johnston (University of Aberdeen), Dr Martyn Jones (University of Dundee), Professor Rhona Flin (University of Aberdeen), Dr Steven Yule (University of Aberdeen), Dr Sharon McCann (University of Aberdeen), Jeremy Dawson (Aston Business School)

Phase 1 (MW/JD at Aston, Oct 05-Feb 06): NSS analysis of 100 Trusts & sample selection of 16 for detailed analysis.

Phase 2 (LM/SM at A’ddeen, Feb 06-Apr 06): Desk research on organisational climate, culture and performance, safety culture and performance from other non-health care sectors and related measurement tools. Policy analysis (current and historical) of context of HRM practices, patient safety guidelines/audits, etc. Overview of the two issues, including hard data on adverse events, physical assaults, infection rates, readmissions, staff turnover, absences.

Phase 3 (all, Apr/May 06): Selection of Trust subset and target Trusts for safety and well-being studies. Involve and consult key stakeholders, as informed research users. Negotiate access, ethics approvals.

Phase 4 (RF, DJ at A’ddeen, MJ at D’dee, June-Nov06): Prepare study instrumentation and administer measurement tools; concurrently MW at Aston NHS Survey and Organisational Climate Measures stages (to mid 07) and LM at A’ddeen qualitative case studies (to mid 08). Preparation of occupational health guidelines (MJ/DJ). Strand-based researchers and data analysts will be employed to implement the distinct phases of the work, as in Section F and Finance section below.

Phase 5 (all, throughout): Analysis and integration of different data, write up and interim/final dissemination.
Phase 6 (MW & LM: Aug 07 onwards): Develop and pilot culture change action research; feedback workshops with participating organisations. The precise intervention will be customised with target Trusts and evaluated.

A full project timetable is shown in appendix 3.1.

Methods of study and approach: management of the multi-method approach

The research adopts both a multi-disciplinary and multi methods approach, drawing from different paradigms and domain-expertise. The team configured here brings combined expertise in disciplines and methods. NSS data will be used at the outset to explore key predictors of culture and performance and to enable selection of Trust case studies. The depth case studies will further allow the team to gain breadth and depth and to integrate the battery of methods and research questions across the two topic domains and in focussed sites, especially in relation to performance change. Different analytical tools and perspectives will be used to rework similar questions.

The team will coordinate work in a number of parallel strands, led by the specialist applicants. For exposition, the methods to be deployed are summarised below, starting with analysis based on NSS data, moving through strands on safety and well-being and closing with the case study strand. Strands are, however, designed to be recursive and reflexive with each other, informing and interlacing with the data and analyses across the project.

Project strands

(I) Project strand a: determining culture: organisational climate measures (OCM) and the NHS staff survey data (NSS)

Issues of performance and cultural change will be addressed by drawing, at different stages, on a dynamic data set, the Healthcare Commission National Staff Survey (NSS), which provides detailed insight into organisational climate and practices based on the self report of over 200,000 staff on their conditions of work and quality
of working life. One of the applicants (MW) is responsible for administering the NSS and access is available. The dataset has huge advantages: it is national; is to be repeated annually; has high response rates (57%) and organisational legitimacy. It allows Trusts to be benchmarked, provides data over time and can capture performance stability/instability; it affords opportunity to drill down into focussed topics/ issues; it includes a patient care and patient safety focus and also asks staff about their personal sense of safety, levels of bullying and violence. Use of NSS focuses attention on Acute Trusts where data is most complete at this stage.

Culture factors will be determined from the NSS data and analysed for their relationship with staff well-being and patient safety. Trusts with different cultures, change and performance characteristics: i.e., (1) Trusts that are stable and performing well; (2) unstable Trusts that are improving; (3) unstable Trusts that are worsening or improving less than most; and (4) stable, poor-performing Trusts. Early analysis from 100 Trusts (17% of all Acute Trusts in NSS) has been used purposively to select 16 Trusts and then 8 Trusts along the dimensions of patient safety and staff well-being: stability/change, high/low performance.

The study will thus permit tracking of the implementation and impact of policy initiatives and of the role of management. Interacting with the case studies, an action research component will be piloted and monitored through development of a culture change programme.

(II) Project strand b: development of in-depth comparative cases

Background

The comparative case study approach has been successfully used in earlier research on organisational change in the NHS by the lead applicant (Pettigrew et al 1992).

Longitudinal comparative cases will be developed in 8 Trusts: 4 depth cases with a minimum of 30 interviewees and extensive documentary and observational data; 4 mini-cases restricted to telephone interviews with up to 10 key stakeholders, site visits, interviews with core personnel and documentation.
Aims

The aim of these in-depth comparative cases is to generate new data from investigation in selected NHS Trusts, allowing the team to gain breadth and depth and to integrate the battery of methods and research questions across the two topic domains (patient safety and staff well-being) and in focussed sites, especially in relation to performance change. Direct links and integration with other project strands will be ensured at each stage, building cumulative insights and complementary data and achieving economies of time, depth and scope.

Methods

Identification of Trusts

Acute Trusts have been identified by one of the other project strand teams, using the Healthcare Commission National Survey (NSS). See section above for details of the analysis and selection of Trusts. Early analysis from 100 Trusts has been used purposively to select 16 Trusts along the dimensions of patient safety and staff well-being.

Using the list of purposively selected 16 Trusts, local knowledge and insights about Trusts has been gathered from NHS management and patient safety experts, as well as from colleagues at Aston University. The PI has liaised with the National Patient Safety Agency (NPSA) and other projects in the SDO Organisational Culture Programme, to ensure minimum conflict in Trust selection with other major ongoing research, and to seek guidance and advice on how best to direct our access requests to the key people in Trusts. Eight acute Trusts have been subsequently short listed and approached.

Recruitment of Trusts

A flexible and staggered approach to gaining access to Trusts has been adopted. In preparation of approaching Trusts, ‘access’ letters (Appendix 3.2) were drafted and reviewed by representatives of NHS management, and patient safety experts (for example, Christine Miles, Professor Richard Thomson (NPSA), and Malcolm Lowe-Lori who Chairs a CEOs forum). The PI also liaised with members of the NPSA to
seek guidance and advice on how best to direct our access requests to key personnel in Trusts.

For each of the Trusts, the relevant Chief Executives were approached, along with the Directors of Human Resources and Nursing, in each of the sites. The PI arranged set-up meetings with the relevant key personnel in each of these Trusts to discuss in detail how the study will be conducted and implemented locally. Local project “champions” have been identified in all of these Trusts to help facilitate the fieldwork.

The next phase of ‘access’ letters (Appendix 3.3) to the four Trusts identified for the mini-case studies have been sent to the respective Trusts. To date, three of these Trusts have confirmed their willingness to participate in this study. If we are not successful with the other one, Trusts from the purposively selected sample will be approached until we have reached our target of four for the mini-case studies.

Data collection

(i) Interviews
Detailed longitudinal case studies will be developed in eight acute Trusts to uncover deep, basic, tacit, hard-to-decipher, layered, multifaceted aspects of organisation.

Depth case study Trusts
Interviews will be conducted in the four depth Trusts with differing levels of staff and stakeholders responsible for patient safety or staff well-being, for example chief executive, director of nursing, director of human resources, head of patient safety, head of risk management, clinical governance managers, ward managers and ward nursing staff (minimum 30 per Trust). Participants will be given a participant information sheet (Appendix 3.4) and asked to sign a written consent form (Appendix 3.5). All interviews will be audio tape-record and fully transcribed.

Pilot interviews will be conducted with NHS management representatives. Using an interview schedule (Appendix 3.6), interviews will focus on what staff perceive to be a safe place for patients and staff; details of precise safety practices; role of team work
in safety; who is charged with making safety a priority. In terms of staff well-being, examples of questions include how it feels to work there, morale, what provokes stress, impressions of own roles and responsibilities, perceived autonomy, as well as evidence of job satisfaction and commitment. All telephone interviews will be audio tape-recorded.

Mini-case study Trusts

For the mini-cases in four Trusts, data collection will be restricted to telephone interviews with up to 10 key stakeholders (e.g. chief executive, directors of nursing, head of patient safety etc), site visits, and interviews with core personnel (minimum 10 per Trust).

(ii) Observations

Where possible, we will aim to observe any relevant meetings concerning safety and staff well-being, subject to approval from the relevant Trust representatives.

(iii) Documentation review

Review of key Trust documents, for example, performance data, minutes of meetings, annual reports, historical records with relevance of safety and staff well-being, and reports of risk assessment activity.

(iv) Integration of data collection

These qualitative data will be gathered over time and the researcher will aim to spend blocks of time attached to each case study Trust. There will be formal and informal contact and the researcher will build up a deep understanding of what distinguishes each Trust. This approach emphasises the ‘insider’s’ perspective and also aims to hear multiple views integrating these with objective data from key Trust documents. The depth work will complement and reflect the NSS data and other strands at every stage.

(v) Data analysis

Interviews will be fully transcribed, and analysis will involve a processual change perspective and the model of Receptive Change Contexts for Change will be applied (Pettigrew et al 1992). A qualitative software package (NVIVO) will be used to assist
with the management and retrieval of data. Descriptive accounts will be produced, and theoretical explanations developed.

**Timescale**
We would aim to commence fieldwork Summer 2006, subject to ethics approval, and aim to complete all fieldwork for this strand by Summer 2008.

**Project strand c: senior managers’ leadership and safety**

**Background**
The importance of leadership for effective safety management has been the focus of research attention in industry for a number of years, especially in energy and manufacturing sectors. In contrast, very little research into leadership and safety has been carried out in healthcare settings.

**Aims**
This strand will examine the leadership styles and managerial safety-related activities in the identified cases, in a sample of senior leaders from higher and lower performing case study Trusts. In 8 case study Trusts a combination of depth interviews and quantitative self-report and upward appraisal data will be collected from senior managers to identify leadership styles and associated behaviours relating to safety.

**Methods**

**Data collection**

**Recruitment of participants**
CEO’s will be contacted by telephone to arrange a suitable interview time. Thereafter approximately 5 senior managers will be identified in conjunction with the CEO. Potential participants will be sent a participant information leaflet describing this strand of the study (Appendix 3.7).

(i) **In-depth interviews**
For the interviews, it is planned that interviews will be conducted with 5 senior managers (e.g. chief executive, director of human resources) to identify their views on safety management and their preferred methods of demonstrating commitment to safety. Participants will be asked to sign a written consent form before the interview takes places (Appendix 3.8). An interview schedule has been drafted and piloted with NHS management representatives (Appendix 3.9). It is estimated interviews will last between 1-2 hours and will be audio tape-recorded.

(ii) Quantitative self-report and upward appraisal data
Quantitative self report and upward appraisal data will be collected from each manager and his/her direct reports (6 per manager) using standard leadership questionnaires (Appendix 3.10) used in safety research (Multifactor Leadership Questionnaire, Bass & Avolio, 1995) and specially designed upward appraisal instruments (Appendix 3.11) used in the oil industry to measure senior managers’ commitment to safety (Flin 2003; Flin & Yule in press). These instruments are currently being adapted for use in other international healthcare systems.

Organisations with mature safety cultures routinely measure the leadership style of senior managers using the ‘upward appraisal’ technique. This involves asking individuals who report directly to the leader (the ‘direct reporters’ or ‘raters’) to complete a standardised questionnaire on their leader’s style. This technique allows us to assess how leaders’ styles are received by others and provides leaders with a unique insight into their actual behaviours. Each leader is also provided with a self-rating for comparison on the same question-set. Best Practice Guidelines are shown in Appendix 3.12.

The questionnaire relates to transformational (visionary, stimulating, considerate) and transactional (compliance-seeking) leadership styles, which have been shown to relate to safety outcomes in previous research. Leaders’ behaviours for safety will also be measured. The process is anonymous for raters and leaders receive an individual feedback report on their style with suggestions for development.

A summary of the data collection process for the leadership appraisal is as follows:

- Contact CEOs to arrange a suitable interview time.
• Confirm the number of direct reports (likely to be board members) for each leader from the Trust organogram.
• After the interview has been conducted, the researcher will provide each leader with a self-appraisal questionnaire and confirm it is ok to send upward appraisal questionnaires to the leader’s ‘direct reports’.
• Leaders complete the self-appraisal questionnaire and return it directly to the research team at University of Aberdeen.
• Researcher sends each rater an upward appraisal pack containing background information, an upward appraisal questionnaire (to be completed about the leader’s style) and a self-addressed envelope.
• Each rater completes a questionnaire and returns it directly to the research team at University of Aberdeen.
• After the deadline for returns the data are analysed and an individual confidential report is prepared for each leader on his/her style. This report comprises a comparison of self-perception with how his/her style is seen by others. Benchmark data will also be provided if appropriate.
• Reports will be sent to leaders and an opportunity to discuss their results with the researchers by telephone will be offered.
• Leaders are free to discuss and share their results with raters and peers if they wish but this is entirely at their discretion.

(iii) Handling of data
• The data, analysis, and reports will be archived securely at the University of Aberdeen only, and will not be seen by other researchers or clinicians.
• If used for research purposes, summary statistics for the entire sample only will be used - no individuals will be identified.

(iv) Data analysis
The analysis will be restricted to methods of association (i.e. correlations) due to the sample size (n=8). As the specific outcome measures that will be available are not yet known, only general hypotheses can be made. We hypothesize that leaders rated higher on transformational leadership will be associated with better patient safety and quality records. They are also likely to prioritise patient safety higher than other organizational goals such as cost and waiting lists. Qualitative analysis of transcribed interview data will reveal the leaders personal values about patient and worker safety, and the boundaries of their perceived personal influence on organizational performance.
(v) Integration of data collection

It is estimated that data collection will directly follow after the in-depth comparative case study interviews with Trust Chief Executives (project strand B).

Timescale

We would aim to commence fieldwork June 2006, subject to ethics approval, and aim to complete all fieldwork for this strand by November 2006.

Project strand d: staff well-being: effort, rewards and control: nursing in different work cultures

Background

This strand of the study will focus on staff well-being and links to aspects of care delivery.

Aims

We shall examine how staff perception of stress, the organisational determinants of stress and the changes required to reduce stress vary between Trusts with different cultures. We propose to supplement the Healthcare Commission NSS with detailed studies of working conditions and participants’ responses to work, using standardised questionnaires and, critically, work-based diaries using handheld computers, in representative samples of 4 x 75 nursing staff working in medical and surgical settings.

The aims of this will be to explore the effects of working in demanding healthcare situations on nurse well-being and performance using work-based diary using handheld computer and self-reports of personally significant clinical incidents. Examples of personally significant clinical incidents in previous studies have included bed and staff shortages, working with critically ill patients, patient and staff aggression. This research will be carried out in four selected Trusts with different cultures and degrees of performance (high versus low) of patient safety and staff
well-being. This study will explore the effects of working in difficult healthcare situations on nurses and the care they provide, as the events happen. In this study, work environment is operationalised in terms of Demand Control (Karasek & Theorell, 1990) and Effort Reward Imbalance (ERI) models (Siegrist & Peter, 2000), i.e. demand, control, strain, effort, reward, ERI and over commitment.

Methods

Working conditions and nurses’ responses to work will be surveyed using standardised questionnaires and established electronic monitoring techniques to measure real time responses to stress of 75 nurses in each of four selected Trusts with different cultures and degrees of performance. Work-based diaries on a handheld computer platform will record both critical incidents and routine responses. Measures of, for example, demand, control, reward, emotional states and social support will link work environment to staff and patient outcomes.

Objectives

1. To determine whether differences in work environment can be identified between the 4 hospital-based nursing settings using traditional retrospective measures of work stress.

2. To identify the relationship between work environment, strain outcomes (distress/stress) and staff performance in 4 NHS settings using ambulatory measurement (via the work-based handheld diaries).

3. To determine the effect of experiencing personally significant clinical incidents in the work setting on nurse well-being and subsequent clinical performance. For example, does nurse well-being suffer following reports of a personally significant event?

4. To develop guidelines for individual, team-working and organisationally-based interventions aimed at improving occupational health for trained nurses working in general medical and surgical settings.

Data collection

(i) Identification of medical and surgical nurses
We are targeting medical and surgical nurses, given their comparative large numbers. Recruitment of two relatively homogeneous groups of nurses in each of 4 Trusts, will assist us in attributing any differences in staff perceptions of *Effort, Reward and Control*, nurse well-being, work performance to the setting rather than to occupational role (if we were to recruit from a wider range of nurse specialities, and rates of recruitment differed across Trusts). To assist with identifying medical and surgical nurses the aim will be to seek an internal nurse advocate or sponsor to support this research. A letter will be sent to the director or nursing or other senior nurse managers in the first instance to facilitate this process (Appendix 3.13). When nursing staff has been identified a participant information leaflet will be sent to them (Appendix 3.14) and if they are willing to take part they will be asked to sign a written consent form (Appendix 3.15).

We will compare reports from nursing staff in 4 case study Trusts with different cultures, change and performance characteristics: i.e., (1) Trusts that are stable and performing well; (2) unstable Trusts that are improving; (3) unstable Trusts that are worsening or improving less than most; and (4) stable, poor-performing Trusts.

(ii) Standardised questionnaires

Widely accepted theory suggests that stress is commonly determined by the mismatch of demand and control (Karasek et al. 1998) or demand and reward (Siegrist 1996). These characteristics of the work situation (along with perceptions of managerial support (Karesek et al, 1998) will be assessed by standardised questionnaire along with distress (GHQ12: Goldberg & Williams 1988), mood (POMS), satisfaction (Parkes, 1993) health and emotional and response styles which influence responding (PANAS, Marlowe Crowne: Watson et al. 1988; Crowne & Marlowe, 1960). Please see Appendix 3.16 for the questionnaire pack. We will seek self-reports of sickness absence instances and totals, intention to leave (Michie & West, 2004) and errors and near misses observed in the past month (Michie & West, 2004).

(iii) Work-based diaries using handheld computers

The work-based diaries (Appendix 3.17) will be based on diaries we have already used in healthcare settings in the UK and abroad, and will include variables thought to link work environment variables to staff and patient outcomes (Michie and West, 2002). This will enable us to assess at times of our choosing throughout the working
day many of the same features of the work environment and the participants response to it (i.e., demand, control, reward, emotional states and social support).

Around 75 nurses in each setting will be asked to fill a diary for 3 successive shifts. The diary will be presented on handheld computer, and participants will be prompted to fill the diary on average every 90 minutes. Participants can also record their response to personally significant critical incidents at any time. At the end of each shift the participants enter information on the most difficult or personally significant clinical incident on the day. For end of shift, and critical incident reports participants will be asked to provide a 30 word description of the personally significant clinical incident. A personally significant clinical incident is defined as a “clinical” situation that has a subsequent significant impact on the emotion, cognition, physical well-being and behaviour of the nurse. Past research has shown that staff report a range of incidents relating to patient safety (including near miss and patient accidents/controlled drug errors), critically ill patients, bed shortages, staff shortages, multiple patient demands, patient and staff aggression and arguments, emotional support of patients and staff (Jones and Johnston, 2004). Participants will also be asked whether they have witnessed any errors or near misses on each shift.

The relationship between reports of personally significant clinical incidents, and subsequent emotional reaction and behaviour will be explored. Do reports of personally significant clinical incidents affect the subsequent perceptions of the work environment and behaviour of the nurse during the remainder of the shift and the next day? Does incident severity influence the strength of such relationships?

A summary of the data collection process for this strand is shown below:

1. Write to nursing management to gain support for study, identify a sponsor/advocate for the study and gain permission to approach nursing staff from medical and surgical settings in each Trust. [MJ/Research assistant: date, month].

2. Once this permission has been obtained, I will contact Personnel in each NHS setting to identify procedures to allow us to approach a random sample of 300 nurses, to enable our recruitment target of 75 participants. Clarify whether Personnel will provide us with a list of those trained nurses working in medical and surgical settings in each Trust, or whether
they will circulate to those on a list. [MJ/Research assistant date, month].

3 Obtain list/access list early in study. [MJ/Research assistant date, month]

4 Send an initial request for participation in work-based diary element of [date, month] for strand 2 of the study to 300 randomly select nurses working in medical and nursing settings. (Study Research fellow) [date, month].

5 Once consent forms returned and recorded (Study Research fellow), send out pack of questionnaires. Participants return to a negotiated local collection point in the Trust (Study Research fellow). Questionnaires must be before behavioural diary part of study. [date, month].

6 Identify 75 nurses willing to take part and derive shift patterns (Diary RA). [date, month].

7 Derive plan of action to deliver diaries over 4 weeks. We have 20 handheld behavioural diaries. We need to collect 20 per week, 3 days per diary. [date, month].

Data Analysis

Analysis of the retrospective questionnaire data will involve the use of descriptive statistics; correlation and regression analysis to test key relationships predicted by the Demand-Control and Effort-Reward Imbalance models between work environment and emotional outcome. The data from the work-based diaries will be undertaken using a multilevel modelling approach, using MLWin 2.02 to examine longitudinal relations between elements of the work environment, emotional outcome and performance. The range of personally significant clinical incidents will be subjected to a thematic analysis.

We will compare reports from nursing staff in case study Trusts with different cultures, change and performance characteristics: i.e., (1) Trusts that are stable and performing well; (2) unstable Trusts that are improving; (3) unstable Trusts that are worsening or improving less than most; and (4) stable, poor-performing Trusts.

Timescale

We would aim to commence fieldwork in June 2006, subject to ethics approval, and aim to complete all fieldwork for this strand by November 2006.
Flowchart summary of data collection across project strands

**Strand A**
National Staff Survey analysis of 100 Trusts:
- Sample selection of 16 Trusts for detailed analysis
- Selection of 4 Trusts for depth cases and 4 Trusts for mini-case studies

**Strand B**
Depth cases (8 Trusts)
Interviews (face-to-face and telephone) with CEO’s and other staff responsible for patient safety and staff well-being in 8 Trusts.
Observations of some meetings specific to patient safety and staff well-being along with relevant document review.
Data collection: June 06-May 08

**Strand C**
Senior Managers’ Leadership
Interviews with CEOs in 8 Trusts. Self-report and upward appraisal data will be collected from approximately 5 senior managers. For each manager 6 direct reports collected from reporting line staff using standard instruments.
Data collection: June 06-November 06

**Strand D**
Staff well-being
Standardised questionnaires and work-based diaries to explore the effects of working in a demanding work setting on nurse well-being and performance. This strand being conducted in the 4 depth Trusts.
Data collection: June 06-November 06

Pilot and assess interventions
Working in partnership with selected Trusts, tailored to local contexts and sensitive to local cultures, the project will develop and pilot programmes for purposive cultural change to improve patient safety and staff well-being. The intervention will build on emergent findings and include for example, development of guidelines for individual, team-working and organisationally-based interventions aimed at improving occupational health for nurses and doctors. The interventions will be participatory and involve professionals and managers, patients and other users in their design, implementation and monitoring.

Bate, SP et al. (2002), *Report on the ‘Breakthrough’ Collaborative Approach to Quality and Service Improvement in 4 Regions of the NHS*, Birmingham: HSMC
Beedie, A, DW Johnston & MC Jones (in review), ‘Comparison of Computerised Ecological Momentary Assessment and Questionnaires in the Assessment of Job Strain in Nurses’, *Work and Stress*


DoH (1999a), Our Healthier Nation, Department of Health, London: HMSO.

DoH (1999b), Modernising Health and Social Services: Developing the Workforce, Department of Health, London: HMSO.


Iles, V & K Sutherland (2001), Managing Change in the NHS: Organisational Change, London: NHS SDO.


Mannion, R et al. (2003), Cultures for Performance in Healthcare: Evidence on the Relationship between Organisational Culture and Organisational Performance in the NHS, University of York: Centre for Health Economics
NHS Confederation (2003), Failure and Turnaround: Dealing with Failing Hospitals. London: NHS Confederation
Patterson, MG et al. (in press), Development and Validation of an Organisational Climate Measure
Pettigrew, AM, E Ferlie & L McKee (1992), Shaping Strategic Change: Making Change in Large Organisations, London: Sage
APPENDICES to Research Protocol
Appendix 3.2 Access letter to depth Trusts

Headed university paper

Name
Address
Address
Address

Understanding the dynamics of organisational culture change; creating safe places for patients and staff

Dear (name)

We are writing to inform you about an exciting new project which aims to explore the relationship between organisational culture and the issues of patient safety and staff well-being. We would like to invite you to consider becoming a key contributing Trust to this study. We are inviting 8 acute Trusts from across England to participate and there will be diversity in terms of size, complexity and geography. We are using data from the Health Commission NHS Staff Survey to identify Trusts that are at different stages of developing their strategies in the areas of patient safety and staff well-being.

The study is a major 3 year funded project which commenced in October 2005 and is funded by the NHS SDO (part of the DoH R and D programme). It is led by a multidisciplinary team of senior academics from the Universities of Aberdeen (Professors McKee, Flin, Grant and Johnston); Aston (Professor Michael West) and Dundee (Dr. Martyn Jones) and Christine Miles, Director of Delivery and Support for Healthcare in Wales (formerly CEO at the Royal Orthopaedic Hospital in Birmingham). Our backgrounds include expertise in: organisational and workplace psychology, sociology, health care management, health psychology, health services research and nursing studies. We all have extensive experience of researching and/or working in health care organisations. Malcolm Lowe-Lauri, CEO of Kings College Hospital Trust and Chairman of the CEO’s Research Forum and Network is also advising us.

The study is designed to undertake organisational case studies, and this will include:

- Interviews with key personnel with relevance to patient safety/staff well-being
• Self completion questionnaires with nurses who will also be asked to keep an electronic work diary
• Interviews with senior line managers
• Access to approved documentation and ‘hard’ data
• Limited observation of agreed relevant meetings

Participating Trusts will be offered a confidential interim and final report, which provide best practice guidelines. In addition, we are committed to sharing knowledge and experience across the 8 case study Trusts and we will create a Trust ‘learning set’ or workshop, where we bring representatives of all the Trusts together to give tailored individual Trust feedback as the study progresses. These meetings could also involve guest speakers with expertise in the areas of patient safety and staff well-being and serve as a ‘think tank’ for the participating Trusts. We would of course wish to shape any final workshop programme around the expressed needs of the Trusts and to discuss these plans in more details with them. Professor Michael West and his team have offered to host these ‘research in action’ events at Aston University. We would envisage at least three such events during the life-time of the project.

We would aim to work in a collaborative and respectful manner with participating Trusts, obviously adhering to clear research governance, ethics protocols and rules of confidentiality and anonymity. Trusts and individual respondents will not be named in outputs from the project. We will be guided by a project advisory group (including members from the National Patient Safety Agency and patient representation).

I would like to follow this letter with a telephone call to you or your named representative within the next two weeks where I can arrange a meeting with you to provide more information and detail and answer any queries. We would not envisage the fieldwork commencing before late Spring of 2006 as we will be seeking ethical approval, preparing all our documentation and literature based work over the coming months. We have included reply e-mail details (please see below).

Thank you for considering this request.

With Best Wishes

Yours Sincerely

Professor Lorna McKee
Professor of Management
Programme Director for Delivery of Care Programme

CONTACT DETAILS
If you agree to a meeting, I would be grateful if your secretary could email l.mckee@abdn.ac.uk or return this reply slip by x indicating your availability to arrange a mutually convenient time to discuss your potential involvement. Please also provide a contact name and number for our follow up.

Contact Name: ______________________________________
Job Title: __________________________________________
Telephone Number: __________________________________

Appendix 3.3 Access letters for mini-case studies

Headed Paper

Date

Name
Trust
Address
Address
Address

Understanding the dynamics of organisational culture change; creating safe places for patients and staff

Dear name

We are writing to inform you about an exciting new project which aims to explore the relationship between organisational culture and the issues of patient safety and staff well-being. We would like to invite you to consider becoming a key contributing Trust to this study. We are inviting 8 acute Trusts from across England to participate and there will be diversity in terms of size, complexity and geography. We are using data from the Health Commission NHS Staff Survey to identify Trusts that are at different stages of developing their strategies in the areas of patient safety and staff well-being.

The study is a major 3 year funded project which commenced in October 2005 and is funded by the NHS SDO (part of the DoH R and D programme). It is led by a multidisciplinary team of senior academics from the Universities of Aberdeen (Professors McKee, Flin, Grant and Johnston); Aston (Professor Michael West) and Dundee (Dr. Martyn Jones) and Christine Miles, Director of Delivery and Support for Healthcare in Wales (formerly CEO at the Royal Orthopaedic Hospital in Birmingham). Our backgrounds include expertise in: organisational and workplace...
psychology, sociology, health care management, health psychology, health services research and nursing studies. We all have extensive experience of researching and/or working in health care organisations. Malcolm Lowe-Lauri, CEO of Kings College Hospital Trust and Chairman of the CEO's Research Forum and Network is also advising us.

The study is designed to undertake organisational case studies, and this will include:

- Interviews with key personnel with relevance to patient safety/staff well-being
- Access to approved documentation and ‘hard’ data
- Limited observation of agreed relevant meetings

Participating Trusts will be offered a confidential interim and final report, which provide best practice guidelines. In addition, we are committed to sharing knowledge and experience across the 8 case study Trusts and we will create a Trust 'learning set' or workshop, where we bring representatives of all the Trusts together to give tailored individual Trust feedback as the study progresses. These meetings could also involve guest speakers with expertise in the areas of patient safety and staff well-being and serve as a ‘think tank’ for the participating Trusts. We would of course wish to shape any final workshop programme around the expressed needs of the Trusts and to discuss these plans in more details with them. Professor Michael West and his team have offered to host these ‘research in action’ events at Aston University. We would envisage at least three such events during the life-time of the project.

We would aim to work in a collaborative and respectful manner with participating Trusts, obviously adhering to clear research governance, ethics protocols and rules of confidentiality and anonymity. Trusts and individual respondents will not be named in outputs from the project. We will be guided by a project advisory group (including members from the National Patient Safety Agency and patient representation).

I would like to follow this letter with a telephone call to you or your named representative within the next two weeks where I can arrange a meeting with you to provide more information and detail and answer any queries. We would not envisage the fieldwork commencing before early Summer of 2006 as we will be seeking ethical approval, preparing all our documentation and literature based work over the coming months. We have included reply e-mail details (please see below).

Thank you for considering this request.

With best wishes

Yours sincerely

[Signature]
Appendix 3.4 Participant Information Sheet (In-depth cases)

Participant information sheet

Part 1

“Understanding the Dynamics of Organisational Culture Change: Creating Safe Places for Patients and Staff”.

An invitation to participate in a research project.

You are being invited to take part in this research study (IN-DEPTH COMPARATIVE CASES). Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully, and carefully consider whether you want to take part.

- Part 1 tells you the purpose of the study and what will happen to you if you take part.
- Part 2 gives you more detailed information about the conduct of the study. Ask us if there is anything that is not clear or if you would like more information.
What is the purpose of this study?

This research aims to explore links between organisational culture change, patient safety and staff well-being in a number of ways. We plan to mix qualitative and quantitative research approaches to investigate the organisational factors that influence high and low performance in patient safety and staff well-being. Four strands of research will be undertaken.

Strand 1: Determining Culture: Organisational Climate Measures and the Healthcare Commission NHS Staff Survey database (NSS)

Strand 2: Development of In-depth Comparative Cases

Strand 3: Senior Managers’ Leadership

Strand 4: Staff well-being: Effort, Reward and Control: Nursing in Different Work Cultures

The aim of this strand of the study is to explore issues regarding safety of patients and the well-being of NHS staff, and the culture or style of organisation in your Trust. This strand of the study will use interviews (face-to-face and telephone) to discuss these issues with a range of staff in your Trust.

This strand of the study is being conducted in 8 NHS Trusts across England. Selected Trusts differ in terms of the stage of development of strategies in relation to staff-well being and patient safety.

Why have I been chosen?

Permission to approach you has been obtained from your local senior Trust personnel.

Do I have to take part?

No, your participation in this strand of the study is strictly voluntary. Even if you do decide to participate you may withdraw from this study at any stage, without having to provide a reason.

What will happen to me if I take part?
If you decide to take part in this strand of the study *(In-depth case studies)* you will be asked to take part in an interview at a time and location convenient to you. It is estimated the interview will last for about 1-1½ hours. Your time involvement in this part of the study will total no more than 1½ hours.

**What do I have to do?**

- If you decide to take part in this strand of the study *(In-depth case studies)*, a researcher (Dr Sharon McCann) will arrange with you a time and location to interview you face-to-face; alternatively a telephone interview may be conducted.

- Before the researcher interviews you, you will be asked to complete a written consent form. You will be given a copy of the consent to keep for your own records.

- Following consent, an interview will take place, and with your permission the interview will be audio recorded. The interview questions will focus on aspects of patient safety and staff wellbeing, specifically exploring issues such as, the roles and responsibilities of staff, Trust policies and procedures, perceptions of organisational culture and leadership within the Trust, and the working environment for staff within the Trust.

- The interview will be tape-recorded, with your permission, and is strictly confidential. After the interview, the interview will be transcribed and the original tape destroyed. The transcription of your interview will be anonymous and any data will be kept in a locked filing cabinet. Only the researchers will have access to the data.

**What are the advantages and disadvantages of taking part?**

- In this strand of the study *(In-depth case studies)* we hope to better understand aspects of leadership, the management of safety and the feelings of staff in the NHS.

- We intend to also develop and test out some possible actions to improve patient safety and staff well-being that may come out of the research.
• We hope that participants will enjoy taking part in interviews and discussing their experiences.

• The disadvantage of taking part in this strand of the study is related to the additional demands on your time, but we will seek to work in a respectful manner, ensuring flexibility and convenience for you at all times. Interviews will last approximately 1-1 ½ hours.

Part 2

Will my taking part in this study be kept confidential?
Yes, in accordance with the Data Protection Act (1998), any data provided by you in the interviews and from observations in this strand of the study (In-depth case studies), will remain confidential and no one’s name or workplace setting will ever be used in any discussion or publication of the findings.

However, it should also be noted that any evidence of an issue of a serious nature relating to patient safety and/or staff well-being could be disclosed to an appropriate Trust contact.

What will happen to the results of the research study?
• The results from this strand of the study will feed into the larger study and be incorporated into our overall report to NHS Service Delivery and Organisation Research and Development programme, Department of Health.

• We also hope to disseminate the findings of this study to a wider health care management and academic audience via conference presentations and journal articles.

• In accordance with the Data Protection Act (1998) all information provided by participants will remain confidential and names will not be used in any discussion or publication of the findings.

Who is organising and funding the research?
This part of the study has been organised by Professor Lorna McKee (Principal Investigator) University of Aberdeen, and Dr Sharon McCann a Health Services
Researcher, University of Aberdeen. Both have considerable research experience in this area. This research is funded by NHS Service Delivery and Organisation Research and Development programme, Department of Health.

Who has reviewed the study?
This project has been reviewed by NHS North West Multi-Centre Research Ethics Committee who have given ethical permission for this study. Each of the strands of research in this study have been peer refereed as part of the NHS Service Delivery and Organisation Research and Development programme commissioning process.

What do I have to do now?
If you would like more information about this study, please contact Dr Sharon McCann (contact details shown below). The researcher will contact you shortly by telephone to ask if you would be willing to be interviewed. If you agree to take part in this study, the researcher will arrange a time and location to come and interview you. Before your interview you will be asked to complete a written consent form, and will be given a copy for your own records.

Thank you for taking the time to read this invitation to participate in this strand of the study (In-depth case studies). Further information regarding this study can be obtained from:

Dr Sharon McCann, Health Services Research Unit, 3rd Floor
University of Aberdeen, Health Sciences Building,
Foresterhill, Aberdeen
AB25 2ZD

Tel: 01224 554066 Email: s.k.mccann@abdn.ac.uk

Appendix 3.5 In-depth cases consent form

Centre number: Study number:
Participant Identification Number for this study:
Participant consent form

Title of study: “Understanding the dynamics of organisational culture change: creating safe places for patients and staff”.

Researcher: Dr Sharon McCann

The participant should complete this form him/herself.

Please initial box

1. I confirm that I have read and understood the information sheet dates for the above study (Version 2: August 2006)

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving and reason and without this affecting my employment in any way.

3. I have received enough information about the study

4. I agree to take part in the above study

Name of participant Date Signature

Name of researcher taking consent Date Signature

(When completed, one copy of consent form to be given to the participant, and one copy retained by the researcher for record)

MREC VERSION 2: AUGUST 2006

Queen’s Printer and Controller HMSO 2010
Appendix 3.6 In-depth case studies interview schedule

DRAFT AIDE MEMOIR / INTERVIEW SCHEDULE

Overview of Policies and Procedures

• Perhaps we could start off by you describing the priority and commitment given to safety in this Trust?

• Could you provide an overview of safety policies standards and reporting procedures across the Trust, including health and safety? (how are these used, reviewed and updated?)

• Do you have a continuous improvement framework and if so, how is this developed?

• What structures are involved in safety audits? (Do these happen only in response to specific incidents and national directives or reflect local needs? Who has ownership of these?)

• Who’s involved? (Engagement with front line staff, clinicians, managers, board members, patients and the public?)

• Any change in these practices over time/ Responses to what is discovered?

• Can you tell me about the clinical governance arrangements in place at your Trust? Who’s involved etc. How successful is the integration of these elements?

• Where does health and safety lie in relation to clinical governance at the Trust?

• Can you tell me about what risk management systems/strategies your Trust have in place? How are these organised? What personnel are involved? How are these actually implemented/delivered? (are risk proactively prospectively identified or dealt with once an incidence occurs?)

• Strengths and weaknesses of policies – local and national (e.g. adequacy of regulation and policies and safety guidelines and national frameworks / role of external organisations?)

Local Data and Performance

• What is the current evidence on safety at a local level?
(describe systems of monitoring, incident reporting and feedback mechanisms).

- How do you perceive the quality of data and accuracy of these sources?
- Have there been any audit commission reports done on your Trust’s data quality?
- Perceptions of current performance in relation to patient safety? Has this improved over time? / no change?/ worsening?
- What resources have been committed to patient safety across the Trust – level and type of resource
- What would you say are the key areas of perceived “high” and low “risk” in relation to patient safety across the Trust? – Why these areas identified? Change over time- same, worse, improvement?
- Can you describe the methods used for handling poor performance in the Trust – local examples, role of clinical audit. Any examples of recent patient safety concerns / major incidents etc?

Professional Roles and Responsibilities

- Who is involved in ensuring patient safety? Key individuals, groups? How are their roles identified / accountability and reporting mechanisms?
- Would you say there is any perceived difference in the priority given to patient safety by different professional groups? (doctors, nurses, managers etc) If so, can you provide some illustrative examples? Has this changed over time?

Culture, Leadership and Patient Safety

- How would you describe the way things are done in your organisation, how decisions are made, the general ethos across the Trust? (Stability of management in terms of duration of tenure of key people, pace of change, perceptions of performance, calibre of leadership etc?).
- How would you describe the nature of relationships between different professional groups – styles and characteristics of communication and interaction (e.g. levels cooperation or conflict).
- Are there examples of outstanding (high performing) teams and what makes them effective?
• What about relationships between senior management and clinicians – how would you characterise these relationships? Does this vary across the Trust?

• How would you describe current senior management leadership style at the Trust? Has this changed over time?

• What three factors would you say might preoccupy senior managers most in any week?

• Would these three issues be the same for doctors / nurses?

• Where does patient safety figure in a list of management priorities – how much actual time in a working week would be devoted to safety-related issues? (give examples).

• How would you describe your track record in patient safety? How much of a priority is patient safety? How is this evidenced?

• What are your perceptions of how organisational change is handled in your Trust?

• What do you see as the dominant issues for the Trust over the next three years?

**Patient Focus and Patient Safety**

- To what extent are patient views considered important in relation to patient safety and how are they engaged across the Trust?

- Are there direct examples of involving patients in patient safety issues? (e.g. patient forums?)

**Handling Critical Incidents / Safety Concerns**

What sorts of reporting systems are there in the Trust?

- How are incidents received?
- How are incidents viewed – (opportunity to improve or blame?)

- Can you describe what happens if a minor safety breach has occurred? What do staff typically do first in your experience? Examples? (Reporting?)

- How are incidents evaluated, and how is the resultant data used?

- What are the sorts of consequences of these type of occurrences? (What happens after an event, what mechanisms are in place to learn from an incident? How are changes introduced and evaluated?)
• Is there an open atmosphere / climate across the Trust where reporting minor breaches is encouraged? Any differences across different specialities?

• What influences whether staff who make a minor error, feel they can discuss / report this?

• Do different staff groups respond differently to minor safety concerns (e.g. nurses or doctors?)

• Are any types of clinical procedures / settings perceived to carry more risk than others?

• What is your view on the perceived high-risk areas in your Trust and why?

• Can you highlight three or more organisational conditions, which lead to safety consciousness?

• What would you say are the major threats to patient safety and can you rank these? (probe – poor communication, poor training, technology, failure, fear of disclosure etc)

Patient Safety / Working Environment and Staff well-being

• How would you describe the working environment in your Trust – any key pressures / challenges (probe resources / staff turnover / stability of senior management / pace of change etc).

• The issue of staff well-being is often cited as influencing overall patient care. What indicators are there of staff well-being in your Trust? Give examples.

• Do you perceive there to be particular current safety / health threats to staff in your Trust (please describe)? Levels of stress / burn out / abuse / violence?

• Patient safety and staff well-being – in your view is there any relationship? (Can you give any examples and if yes how is this manifested?).

Training and Professional Development / Organisational Learning

• What is the level of perceived value of training provided in relation to patient safety / Staff well-being? (Examples of initiatives in last two years)

• Level of engagement in patient safety tools or broader research? (local or national initiatives)
• Perceived role of formal agencies in training (NPSA etc) Role of new technology in spread of new practices/tools?

• Any perceived lessons available from research on topic of patient safety/staff well-being – how is this evidence made available and disseminated?

• Is there a credible evidence-base on patient safety – are there key ‘take-home’ message (examples).

• Key barriers to getting good practice in place i.e. patient safety, staff well-being (examples).
Appendix 3.7 Senior managers’ leadership participant information sheet

Part 1 Participant information sheet

“Understanding the dynamics of organisational culture change: creating safe places for patients and staff”.

An invitation to participate in a research project.

You are being invited to take part in strand 3 of this research study (Senior Managers’ Leadership and Safety). Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully, and consider whether you want to take part.

- Part 1 tells you the purpose of the study and what will happen to you if you take part.
- Part 2 gives you more detailed information about the study

Please ask if there is anything that is not clear or if you would like more information. Contact details are at the end of this information sheet.

What is the purpose of this study?
This multidisciplinary, multi-method research aims to explore links between organisational culture change, patient safety and staff well-being. We plan to mix qualitative and quantitative perspectives to investigate complex interactions and organisational factors influencing high and low performance in health care. Four strands of research will be undertaken.

Strand 1: Determining Culture: Organisational Climate Measures and the Healthcare Commission NHS Staff Survey database (NSS)
Strand 2: Staff well-being: Effort, Reward and Control: Nursing in Different Work Cultures
Strand 3: Senior Managers’ Leadership and Safety
Strand 4: Development of In-depth Comparative Cases
The aim of strand 3 of this study is to explore the leadership style of senior managers in the health service. This strand of the study will use a semi-structured interview and leadership style questionnaire to collect data on leadership style, behaviour, and personal values.

This strand of the study is being carried out in eight NHS Trusts across England. Selected Trusts differ in terms of the stage of development of strategies in relation to staff well-being and patient safety.

Why have I been chosen?

The CEO in each of the eight NHS trusts selected are being asked to participate. CEOs have been chosen because previous research on leadership consistently identifies that senior managers have the biggest influence on the workplace culture, which in turn influences the way employees work, and therefore the performance of the organisation.

Do I have to take part?

No - your participation in strand 3 of this study is voluntary. You may withdraw from this study at any point without providing a reason.

What will happen to me if I take part?

There are two parts to this study.

(i) If you decide to participate, a convenient time and place for a face-to-face interview will be arranged. The interview will be about your style of leadership, the influence you have on the way your Trust operates, your thoughts about the quality and safety of patient care, and your vision for the future of patient care. The interview will last one hour. You will not see the questions beforehand. The interview will be tape-recorded, with your permission, and is strictly confidential. After the interview, the interview will be transcribed and the original tape destroyed. The transcription of your interview will be anonymous and any data will be kept in a locked filing cabinet. Only the researchers will have access to the data.

(ii) You will also be asked to complete an online questionnaire about your leadership style, which will take about 20 minutes to complete. We will
ask the people who report directly to you to also complete an anonymous questionnaire on your leadership style.

What do I have to do?

- We will contact you to arrange an interview time and to answer any questions you have about the research project. If you decide to take part you can accept the invitation to be interviewed, agree a time with the researcher and complete a consent form on the day of the interview.
- After the interview you will be given access to an online leadership questionnaire to complete.
- With your permission, we will give the people who report directly to you access to an online questionnaire about your leadership style.

What are the advantages and disadvantages of taking part?

- We hope to identify how senior healthcare managers influence the quality and safety of patient care and also to pinpoint leadership behaviours that are associated with safe patient care.
- You will receive a confidential report on your leadership style, comparing your self-ratings with the average ratings from your direct-reports.
- Other managers have found the interview a useful opportunity to reflect on their practice.
- The main disadvantage is the time required to participate in the interview (1 hour) and questionnaire survey (20 mins).

Part 2

Will my taking part in this study be kept confidential?

Yes - the interview transcription will be confidential, de-identified (your name or position will not be included with the interview text), and kept in a locked filing cabinet. The only exception is that any evidence of an issue of a serious nature related to patient safety and/or staff well-being could be disclosed to an appropriate Trust contact.
The leadership questionnaire data is confidential. No individuals will be identified or identifiable in the research reports or papers. Only the researchers will have access to the data.

**What will happen to the results of the research study?**

- We will identify the leadership style(s) and behaviours that are associated with patient safety.
- Each leader interviewed will receive a personal confidential report on their leadership style.
- The results from this strand of the study will feed into the larger study and be incorporated into our overall report to NHS Service Delivery and Organisation Research and Development programme, Department of Health.
- We will disseminate findings in a research paper (journal to be decided) and possibly conference presentation.
- No individuals will be identified or identifiable in the research reports or papers.

**Who is organising and funding the research?**

This study has been organised by Professor Rhona Flin and Dr Steven Yule, School of Psychology, University of Aberdeen. Both have considerable research experience on senior managers' leadership. This research is funded by NHS Service Delivery and Organisation Research and Development programme, Department of Health.

**Who has reviewed the study?**

This has been reviewed by NHS North West MREC who have given ethical permission for this study.

Each of the strands of research in this study have been peer refereed as part of the NHS Service Delivery and Organisation Research and Development programme commissioning process.

**What do I have to do now?**

We will contact you to answer questions about the project and to arrange an interview time. If you decide to take part you can accept the invitation to be interviewed, agree a time with the researcher and complete a consent form on the day of the interview. If you do not wish to take part you can decline the offer and do not need to give a reason.

Thank you for taking the time to read this invitation to take part in this strand of the study. Further information regarding this study can be obtained from:
Appendix 3.8 Senior managers’ leadership participant consent form

Title of study: “Understanding the Dynamics of Organisational Culture Change: Creating Safe Places for Patients and Staff”.

Researcher: Dr Steven Yule
The participant should complete this form him/herself.

Please initial box
1. I confirm that I have read and understood the participant information sheet for the above study (Version 2: August 2006)

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving and reason and without this affecting my employment in any way

3. I have received enough information about the study

4. I agree to take part in the above study

Name of participant Date Signature

........................................

Name of researcher Date Signature
(When completed, one copy of consent form to be given to the participant, and one copy retained by the researcher for records).

MREC VERSION 2: AUGUST 2006

Appendix 3.9 Senior Managers’ Leadership Participant Interview Schedule

INTERVIEW SCHEDULE

1. Please describe your leadership style
2. What have been the influences that have shaped this?
3. Why is your leadership style effective for you?
4. Who has most influence on patient safety in this hospital/ trust? (to delete as applicable)
5. Describe the safety culture in this hospital/ trust?
6. What are the main obstacles to patient safety in this hospital/ trust?
7. What influences on safety do you have here?
8. What influences on safety do you not have here?
9. Mechanisms for prioritising patient safety/ staff view of priority?
10. Tell me about the influences on your career – can you remember the first time you realised the importance of safety in healthcare?
11. Tell me about your fundamental beliefs regarding safety.
12. Do you believe in setting targets for safety?
13. Do you believe that it is possible to prevent all adverse events?
14. If, in 10 years time, this hospital/trust was seen as the world leader in patient safety performance, what will people be doing differently?
15. What differences would patients see if this hospital was ‘world class’ in 10 years?
16. What is your vision for the future of patient safety?

Note – this is a draft question set and will be refined/ altered before the study commences.
Appendix 3.10  Senior managers’ leadership questionnaire

MLQ

RATER FORM
Leadership questionnaire
rater form

Leader rank: Date:

This questionnaire is to describe the leadership style of the above mentioned individual as you perceive. Please answer all items on this answer sheet. If an item is irrelevant, or you are unsure or do not know the answer leave the answer blank. Please answer this questionnaire anonymously.

IMPORTANT

☐ I am at a higher organisational level than the person I am rating
☐ The person I am rating is at my organisational level
☐ I am at a lower organisational level than the person I am rating
☐ I do not wish my organisational level to be known

1. Your Rank
2. Date (today’s date)
3. Leader’s rank
4. How long have you been in this role?

Section one:

Forty five descriptive statements are listed on the following pages. **Judge how frequently each statement fits the person named above.** Use the following rating scale:

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Once in a while</th>
<th>Sometimes</th>
<th>Fairly often</th>
<th>Frequently, if not always</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

5. Provides me with assistance in exchange for my efforts
6. Re-examines critical assumptions to question whether they are appropriate
7. Fails to interfere until problems become serious
8. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once in a while</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequently, if not always</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Avoids getting involved when important issues arise

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. Talks about their most important values and beliefs

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Is absent when needed

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. Seeks differing perspectives when solving problems

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. Talks optimistically about the future

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. Instils pride in others for being associated with him/her

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. Discusses in specific terms who is responsible for achieving performance targets

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. Waits for things to go wrong before taking action

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. Talks enthusiastically about what needs to be accomplished

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Specifies the importance of having a strong sense of purpose

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19. Spends time teaching and coaching

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20. Makes clear what one can expect to receive when performance goals are achieved

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21. Shows that he/she is a firm believer in ‘if it ain’t broke don’t fix it’

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22. Goes beyond self-interest for the good of the group

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

23. Treats me as an individual rather than just as a member of a group

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

24. Demonstrates that problems must be chronic before taking action

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

25. Acts in ways that build my respect

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

26. Concentrates his/her full attention on dealing with mistakes, complaints and failures

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

27. Considers the moral and ethical consequences of decisions

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

28. Keeps track of all mistakes

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. Displays a sense of power and confidence

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

30. Articulates a compelling vision of the future

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

31. Directs my attention toward failures to meet standards

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

32. Avoids making decisions

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

33. Considers me as having different needs, abilities and aspirations from others

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>34</td>
<td>Gets me to look at problems from many different angles</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>35</td>
<td>Helps me develop my strengths</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>36</td>
<td>Suggests new ways of looking at how to complete assignments</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>37</td>
<td>Delays responding to urgent questions</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>38</td>
<td>Emphasizes the importance of having a collective sense of mission</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>39</td>
<td>Expresses satisfaction when I meet expectations</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>40</td>
<td>Expresses confidence that goals will be achieved</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>41</td>
<td>Is effective in meeting my job-related needs</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>42</td>
<td>Uses methods of leadership that are satisfying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>43</td>
<td>Gets me to do more than I expected to do</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>44</td>
<td>Is effective in representing me to higher authority</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>45</td>
<td>Works with me in a satisfactory way</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>46</td>
<td>Heightens my desire to succeed</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>47</td>
<td>Is effective in meeting organisational requirements</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>48</td>
<td>Increases my willingness to try harder</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>49</td>
<td>Leads a group that is effective</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Appendix 3.11 Senior managers' leadership upward appraisal questionnaire

Instructions for respondents

Name of leader being rated: <INSERT LEADER NAME>

This upward appraisal forms part of a research project carried out at the University of Aberdeen on leadership style in healthcare. The questionnaire asks you to describe the leadership style of the above-mentioned individual.

The following questions do not ask you to make value judgements about whether certain behaviours are desirable or not. We are simply interested in identifying patterns of leadership style. Your personal experience and knowledge will be invaluable to us in understanding the complex relationships between leadership and safety.

1. Answer all items on the answer sheet. Leave the answer blank if an item is irrelevant or you are unsure.

2. Please be frank and honest in your responses.

3. Return the questionnaire to X, University of Aberdeen in the enclosed envelope by <insert date>.

Please read this before you fill in the questionnaire

1. Your name is not required.

2. Your responses will not be seen by anybody other than the researcher.

3. No individuals will be identifiable in summary statistics, analysis or subsequent research reports.

4. Individual responses will not be identified in summary feedback to the rated manager.
Thank you for taking part in this exercise

If you have any questions please contact Dr Steven Yule
School of Psychology, College of Life Sciences and Medicine, University of Aberdeen, Aberdeen AB24 2UB

Email: s.j.yule@abdn.ac.uk  Telephone: 01224 273214  Fax: 01224 273211
Forty-five descriptive statements are listed on the following pages. Judge how frequently each statement fits the person you are describing. Use the following scale:

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Once in a while</td>
<td>Sometimes</td>
<td>Fairly often</td>
<td>Frequently, if not always</td>
</tr>
</tbody>
</table>

**THE PERSON I AM RATING...**

1. Provides me with assistance in exchange for my efforts. 0 1 2 3 4
2. Re-examines critical assumptions to question whether they are appropriate. 0 1 2 3 4
3. Fails to interfere until problems become serious. 0 1 2 3 4
4. Focuses attention on irregularities, mistakes, exceptions, and deviations from standards. 0 1 2 3 4
5. Avoids getting involved when important issues arise. 0 1 2 3 4
6. Talks about his/her most important values and beliefs. 0 1 2 3 4
7. Is absent when needed. 0 1 2 3 4
8. Seeks differing perspectives when solving problems. 0 1 2 3 4
9. Talks optimistically about the future. 0 1 2 3 4
10. Instills pride in me for being associated with him/her. 0 1 2 3 4
11. Discusses in specific terms who is responsible for achieving performance targets. 0 1 2 3 4
12. Waits for things to go wrong before taking action. 0 1 2 3 4
13. Talks enthusiastically about what needs to be accomplished. 0 1 2 3 4
14. Specifies the importance of having a strong sense of purpose. 0 1 2 3 4
15. Spends time teaching and coaching. 0 1 2 3 4
16. Makes clear what one can expect to receive when performance goals are achieved. 0 1 2 3 4
17. Shows that s/he is a firm believer in “if it ain’t broke don’t fix it.” 0 1 2 3 4
18. Goes beyond self interest for the good of the group. 0 1 2 3 4
19. Treats me as an individual rather than just as a member of the group. 0 1 2 3 4
20. Demonstrates that problems must become chronic before s/he takes action. 0 1 2 3 4
### 21 Acts in ways that build my respect.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 22 Concentrate his/her full attention on dealing with mistakes, complaints, and failures.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 23 Considers the moral and ethical consequences of decisions.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 24 Keeps track of all mistakes.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 25 Displays a sense of power and confidence.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 26 Articulates a compelling vision of the future.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 27 Directs his/her attention toward failures to meet standards.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### THE PERSON I AM RATING...

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 28 Avoids making decisions.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 29 Considers me as having different needs, abilities, and aspirations from others.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 30 Gets me to look at problems from many different angles.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 31 Helps me to develop my strengths.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 32 Suggests new ways of looking at how to complete assignments.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 33 Delays responding to urgent questions.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 34 Emphasises the importance of having a collective sense of mission.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 35 Expresses satisfaction when I meet expectations.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 36 Expresses confidence that goals will be achieved.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 37 Is effective in meeting my job-related needs.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 38 Uses methods of leadership that are satisfying.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 39 Gets me to do more than I expected to do.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 40 Is effective in representing me to higher authority.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 41 Works with me in a satisfactory way.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

### 42 Heightens my desire to succeed.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>

---

*Queen’s Printer and Controller HMSO 2010*
<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>Is effective in meeting organisational requirements.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>Increases my willingness to try harder.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Leads a group that is effective.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Section 2  Leadership Behaviour**

The following scale contains statements about this manager’s leadership behaviour. Please indicate to what extent you agree with these statements. *(Circle only one number on each line)*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Fully Disagree</th>
<th>Partially Disagree</th>
<th>Neither</th>
<th>Partially Agree</th>
<th>Fully Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always promotes safety during site visits</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Is good at establishing informal dialogue with the workforce on safety issues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Establishes good relationships with the safety reps? Professionals/ risk managers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Clearly demonstrates a personal passion for safety during site visits</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Always listens to workforce concerns</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Responds quickly and with clarity to workforce concerns</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Always checks whether the workforce are satisfied with the response to their concerns</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Celebrates safety performance as actively as in other targets</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Reacts strongly to poor safety performance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Safety performance has a strong impact on the way he/ she appraises my performance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Section 3  Personal Commitment and Attitudes**

The scale below contains six statements about how this manager appears to feel about safety, please indicate to what extent you agree with them. *(Circle only one number on each line)*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Fully Disagree</th>
<th>Partially Disagree</th>
<th>Neither</th>
<th>Partially Agree</th>
<th>Fully Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearly conveys his/ her safety expectations in line with the Trust policy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Clearly shows that safety is his/her core personal principle 1 2 3 4 5
Makes time for safety discussions when under pressure 1 2 3 4 5
His/ her safety beliefs are viewed sincerely by the management team 1 2 3 4 5
Wants all procedures to be followed even if it means tasks take longer. 1 2 3 4 5
Frequently discusses/assesses performance against safety compared with other organizational targets 1 2 3 4 5

Section 3 cont. Personal Commitment and Attitudes

If this manager were to fail to improve on the following organizational targets, please rank in order which failures you think would affect him/her most? (Please rank 1st 2nd 3rd and 4th) Do not use tied ranks.

_____ Cost leadership
_____ Waiting lists
_____ Reputation
_____ Patient safety

Section 4 Leadership Communication

The following scale measures this manager’s communication. For each item below please circle the response you think answers the question most accurately for him. (Circle only one response on each line).

How much confidence and trust is shown in subordinates? Virtually none Some Substantial amount A great deal

How free do subordinates feel to talk to him/her about safety issues? Not very free Somewhat free Quite free Very free

How often are subordinates’ safety ideas sought and used constructively? Seldom Sometimes Often Very frequently

How is his/her communication accepted? With suspicion Possibly with suspicion With caution With a receptive mind

How accurate is his/her communication to the Board?? Usually inaccurate Often inaccurate Often accurate Almost always accurate

Any other comments?

Queen’s Printer and Controller HMSO 2010
Appendix 3.12  Best Practice Guidelines

360 Degree Feedback
BEST PRACTICE GUIDELINES
These guidelines were produced with the active support and funding of the following organisations:

- Chartered Institute of Personnel and Development, South West London Branch
- SHL
- The British Psychological Society
- The Department of Trade and Industry
- University of Surrey Roehampton

The following contributed to the development of the guidelines:

- Aine Gray, SHL
- Antonia Lewis, SHL
- Clive Fletcher, BPS, Division of Occupational Psychology
- Eugene Burke, SHL
- John Mackey, Small Business Service, Department of Trade and Industry
- Mark Kuazzu, Management Best Practice Directorate, Department of Trade and Industry
- Pat Lindsey, BPS Steering Committee on Test Standards
360 degree feedback is a process whereby an individual (the recipient) is rated on their performance by people who know something about their work (the raters). This can include direct reports, peers and managers and in some cases customers or clients, in fact anybody who is credible to the individual and is familiar with their work can be included in the feedback process. This is usually in addition to completing a self-assessment on performance. The resulting information is presented to the individual with the aim of helping them to gain a better understanding of their skills and development areas. Each source can provide a different perspective on the individual’s skills, attributes and other job-relevant characteristics and thus help to build up a richer, more complete and accurate picture than could be obtained from any one source.

How does 360 degree feedback compare to other organisational interventions?

As a process, 360 degree feedback sits alongside a number of other processes used in organisations to harness the potential of individuals. Indeed, although not intended to replace any of these processes, it does draw on specific strengths of each, bringing them together in a new form.

Assessment and Development Centres

- 360 degree feedback builds on the principles of structured and rigorous assessment against competencies, which is the core of assessment and development centres.

Employee Surveys

- 360 degree feedback draws on the principles of wider involvement and consultation evident in employee attitude and opinion surveys, but with a focus on individual performance rather than organisational culture and climate.

Performance Appraisals

- 360 degree feedback builds on the principle of regular feedback on performance evident in performance appraisals, but because a wider range of people are involved can be seen as flatter and more credible.

Coaching, Counselling and Career Development Interventions

- Fundamental to 360 degree feedback is the objective of increasing self-awareness, which is one of the key objectives of coaching, counselling and career development activities.
**360 CHECKLIST**

**PLANNING**
- Establishing the purpose
  - Does the organisational culture support the introduction of 360 degree feedback?
  - Are the purpose and objectives clear?
- Establishing the process
  - Is there senior management commitment?
  - Have those taking part been involved at the planning stage?
  - Has a clear process for identifying the criteria been agreed?
  - Does the questionnaire relate to job performance and describe relevant behaviours?
  - Is it a simple and valid instrument?
  - Is the feedback presented in a useful and sensitive way?
- Establishing resources
  - Have the resources for subsequent development been considered at the planning stage and is there an appropriate balance between the resources devoted to development and those to implementing the 360 degree feedback?
  - Where computerised tools are being used, has the security of the system been considered?

**PILOTING**
- Is the questionnaire meeting its purpose?
- If it has not been used before, is it reliable and valid?
- Are the resource estimates for the rollout realistic?

**IMPLEMENTATION**
- Is there clear communication to all involved?
- Is there a clear owner responsible for administering the process?
- Is there a "helping" or clear point of contact?
- Are the deadlines clear and who monitors whether they are being met?
- How are the teams being briefed?
- Have those giving the feedback been trained in the relevant skills?

**FEEDBACK**
- Will the feedback be communicated face-to-face?
- Is there appropriate support for those receiving the feedback?
- Has appropriate and sensitive timing been considered as part of the process?

**REVIEW**
- Has the review process been considered at the planning stage?
- Has the 360 degree feedback met its purpose?
- Has it resulted in improvement in performance?
Establishing the resources

When planning a 360 degree feedback process, it is important to have an accurate view of the time and resource needed to roll it out effectively. This includes the time needed to set up and manage the programme, the administrative time in gathering the feedback and compiling reports, the time needed for those providing the feedback, and the time and resource involved in giving that feedback to the individual and in supporting subsequent action.

Resources for development

Where 360 degree feedback is being used to encourage development, it is important to have considered in advance the resources needed to support such activity. It is very easy to concentrate on the mechanics of organising the process and lose sight of the original purpose of the feedback. The gathering of the 360 degree information is just the starting point in the development cycle. Considering the resources for subsequent development activity early in the process will help keep a focus on the overall objective. The feedback will provide a new understanding of development needs, but if there are no resources available to address these needs, it will be a frustrating experience for those involved.

The role of technology in 360 degree feedback

Increasingly, computers are used to support 360 degree feedback processes, and have considerable advantages in reducing the administration and in gathering feedback where people work on different sites and in different countries. When gathering information in this way, particularly where the Internet is the medium, it is important to ensure the process is secure and that the information will remain confidential to the agreed people involved in the process.
When it comes to the implementation stage of the programme, all of the lessons learned through the pilot should be considered. Any alterations and adaptations that will make implementation smoother should be made.

The most critical part of the implementation process is ensuring that everybody involved in the process is clear about what it involves and their specific role(s).

To ensure this occurs:

- Clear and positive communication is pivotal.
- A point of contact for participants to refer to can help the roll out process, for example a ‘helpline’ for queries and concerns.
- It is beneficial to pinpoint an individual, or team, to take on responsibility for the administration of the system – this helps ensure that the procedure is running smoothly and any issues are resolved swiftly.
- One of the key roles of the administrator is to ensure people with low returns, either the person being rated or the people who are doing the rating, are followed up, and are completing the questionnaires. This is to keep up the momentum and is critical to the success of implementation. Technology based systems can help to reduce the workload involved in this.
- Deadlines need to be established and communicated to all participants, including information on when and how responses will receive feedback.
- Constant monitoring of completion rates is recommended, this will help ensure that deadlines are met.

Evidently briefing those who will receive feedback is crucial. It is also important to consider setting the rates on the objectives of the scheme and some basic tips for completing the questionnaire, for example highlighting the importance of making observed behaviour rather than ‘just facts’.

It is also necessary to consider, ideally prior to implementation, the resource implications of providing feedback. Setting out a timetable for monitoring questionnaire completion and provision for feedback can help ensure that realistic outcomes are set at the beginning of the programme.
Reviewing the success of the programme is a widely overlooked part of the implementation process. Too often, organisations assume that by introducing a process it will automatically be a success. The key question is whether the 360 degree feedback met its original purpose. If the original purpose was to improve performance, have relevant development needs been identified? If it was to support the performance appraisal process, has the process supplied the required information in a fair and credible way?

From an organisational perspective, if the 360 degree process is repeated, an invaluable indicator of the effectiveness of the process is the extent to which the ratings of performance improve over time. Moreover, it is easy, from an individual perspective, to make people aware that while their performance might improve, their ratings might not fully reflect the degree of improvement that they have made. This is because the very fact of doing 360 degree feedback raises expectations and increases knowledge of expected behaviour. The dynamic means that individuals are unlikely to become complicit, but it needs to be managed carefully.

Planning

By considering the review at the planning stage, it is possible to introduce measures to gather feedback on the wider process as it is being rolled out. Following the job, this can be done in a structured way through feedback forms, although care needs to be taken in not asking too much to the burden of form filling.

Qualitative Review

Once the process has been rolled out, a qualitative review with the key people involved will provide invaluable information on whether it has met its purpose. This includes those receiving feedback, those doing the rating, those facilitating the feedback and the line managers of those involved. It might also be appropriate to gather a more strategic view of the impact of the feedback. The timing of the review will depend on the original purpose, with more time needed where the purpose was development. Practicability is very relevant at this stage of the review.

Does the programme allow raters sufficient time to complete the questionnaires?

How easy is it to manage the feedback process?

How comfortable are recipients with the feedback given?
The Questionnaire

While the technical qualities of the instrument will be examined in the pilot, greater numbers will be available once the process has been rolled out. The key question here is does the questionnaire measure what it set out to measure?

- Is it consistent with and link to other relevant indicators of performance in the organisation?
- Do individuals gather development information?
- Do ratings use the rating system effectively?
- Is it reliable?
- Does it “look right”?

The aggregate data from the questionnaires can provide useful information in identifying patterns of strengths and development needs across the participating group. This information can be used to feed into development planning at a strategic level, to ensure that the organisation has people with the relevant skills to meet its objectives.
1. **Demographics details**
   a. What is your year of birth? ___
   b. What is your gender
      - Male
      - Female
   c. What is your marital status (Tick)
      - Single
      - Married
      - Widowed
      - Divorced/separated
      - Other
   d. Number of children
   e. Years since qualification
   f. Years working in current workplace
   g. Nursing grade
   h. Ward type
      - Medical
      - Surgical
      - Please specify

2. **Education level** (Tick and give details)
   - Certificate
   - Diploma
   - Degree
   - Higher Degree
   - Please specify

3. **Do you have a university degree?**
   - No
   - Yes
   - Please give details
4. Shift pattern worked:
   - Fixed days
   - Fixed nights
   - Rotating shifts (not including nights)
   - Rotating shifts (including nights)

5. Length of shifts:
   - Eight hours
   - Twelve hours
   - Other: Please specify

6. How many hours a week do you spend working for pay?

The following questions concern absenteeism in the past 6 months:

7. Have you stayed away from work in the past 6 months due to illness?
   YES  NO

8. How often have you stayed away from work in the past 6 months due to illness?
   ________ (Give the NUMBER of instances/times)

9. How many calendar days have you been ill in the past 6 months?
   ________ days (Give the TOTAL number of days)
## Errors and Incidents

<table>
<thead>
<tr>
<th>10 Errors and near misses</th>
<th>None</th>
<th>1-2</th>
<th>3-5</th>
<th>6-10</th>
<th>More than 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>a In the last month, how many errors or near misses did you see that could hurt PATIENTS?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b In the last month, how many errors or near misses did you see that could hurt STAFF?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11 During the last year have you been injured or felt unwell as a result of the following problems at work?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Moving and handling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b Needlestick and sharps injuries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c Slips, trips or falls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d Exposure to dangerous substances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e Work related stress</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12 To what extent do you agree with the following?</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a I often think about leaving my current employer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b I will probably look for a new job in the next year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c As soon as I can find another job, I will leave my current employer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d If I leave my current job, I would want to stay in the NHS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Job Satisfaction (Parke 1982)

How satisfied are you with the following aspects of your job?

For each of the items below, please circle a number on the scale to indicate your satisfaction with that particular aspect of your work.

<table>
<thead>
<tr>
<th></th>
<th>Very dissatisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physical working conditions (e.g. lighting, noise, temperature)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. The people you work with</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3. The way your organisation is run</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>4. The working hours and shift arrangements</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5. The interest and skill involved in your job</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6. The way your abilities are used</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>7. Your future work prospects</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8. Your salary</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9. The extent to which you are consulted about changes in the work situation</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10. Your job as a whole, taking everything into consideration</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Job Content Survey

1) **INSTRUCTIONS**: Please answer each question by checking off the one answer that best fits your job situation. Sometimes none of the answers fits exactly. Please choose the answer that comes closest.

2) **FOR THE QUESTIONS BELOW, PLEASE TICK THE BOX WITH THE ANSWER THAT COMES CLOSEST.**

3) My job requires that I learn new things.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Agree
   - [ ] Strongly Agree

4) My job involves a lot of repetitive work.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Agree
   - [ ] Strongly Agree

5) My job requires me to be creative.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Agree
   - [ ] Strongly Agree

6) My job allows me to make a lot of decisions on my own.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Agree
   - [ ] Strongly Agree

7) My job requires a high level of skill.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Agree
   - [ ] Strongly Agree

8) On my job, I have very little freedom to decide how I do my work.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Agree
   - [ ] Strongly Agree

9) I get to do a variety of things on my job.
   - [ ] Strongly disagree
   - [ ] Disagree
   - [ ] Agree
   - [ ] Strongly Agree

10) I have a lot of say about what happens on my job.
    - [ ] Strongly disagree
    - [ ] Disagree
    - [ ] Agree
    - [ ] Strongly Agree

11) I have an opportunity to develop my own special abilities.
    - [ ] Strongly disagree
    - [ ] Disagree
    - [ ] Agree
    - [ ] Strongly Agree

12) My job requires working fast.
    - [ ] Strongly disagree
    - [ ] Disagree
    - [ ] Agree
    - [ ] Strongly Agree

13) My job requires working very hard.
    - [ ] Strongly disagree
    - [ ] Disagree
    - [ ] Agree
    - [ ] Strongly Agree

14) My job requires lots of physical effort.
    - [ ] Strongly disagree
    - [ ] Disagree
    - [ ] Agree
    - [ ] Strongly Agree

15) I am not asked to do an excessive amount of work.
    - [ ] Strongly disagree
    - [ ] Disagree
    - [ ] Agree
    - [ ] Strongly Agree
6. I have enough time to get the job done.
   - Strongly disagree
   - Disagree
   - Agree
   - Strongly Agree

7. I am often required to move or lift very heavy loads on my job.
   - Strongly disagree
   - Disagree
   - Agree
   - Strongly Agree

8. My work requires rapid and continuous physical activity.
   - Strongly disagree
   - Disagree
   - Agree
   - Strongly Agree

9. I am free from conflicting demands that others make.
   - Strongly disagree
   - Disagree
   - Agree
   - Strongly Agree

10. My supervisor is concerned about the welfare of those under him.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree
    - I have no supervisor

11. My supervisor pays attention to what I am saying.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree
    - I have no supervisor

12. I am exposed to hostility or conflict from my supervisor.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree
    - I have no supervisor

13. My supervisor is helpful in getting the job done.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree
    - I have no supervisor

14. My supervisor is successful in getting people to work together.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree
    - I have no supervisor

15. People I work with are competent in doing their jobs.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

16. People I work with take a personal interest in me.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

17. I am exposed to hostility or conflict from the people I work with.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

18. People I work with are friendly.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

19. The people I work with encourage each other to work together.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree

20. People I work with are helpful in getting the job done.
    - Strongly disagree
    - Disagree
    - Agree
    - Strongly Agree
SECTION II

DURING THE PAST 12 MONTHS, HAVE YOU EXPERIENCED THE FOLLOWING:

1) How often do you become tired in a very short period of time?
   - Often
   - Sometimes
   - Rarely
   - Never

2) Do you have trouble with aches in the lower back?
   - Often
   - Sometimes
   - Rarely
   - Never

3) Do you have trouble with aches in the neck or upper back?
   - Often
   - Sometimes
   - Rarely
   - Never

4) Do you have trouble breathing?
   - Often
   - Sometimes
   - Rarely
   - Never

5) Do you have trouble with pains, jabs, or a feeling of constriction in your chest?
   - Often
   - Sometimes
   - Rarely
   - Never

6) Do you have trouble with sweaty hands which feel damp and clammy?
   - Often
   - Sometimes
   - Rarely
   - Never

7) Do you have trouble with feeling nervous, fidgety, or tense?
   - Often
   - Sometimes
   - Rarely
   - Never

8) Do you have trouble with poor appetite?
   - Often
   - Sometimes
   - Rarely
   - Never

9) Do you have trouble getting to sleep?
   - Often
   - Sometimes
   - Rarely
   - Never

10) Do you have trouble staying asleep?
    - Often
    - Sometimes
    - Rarely
    - Never

11) Do you have high blood pressure?
    - Yes
    - No
    - Don’t know

12) Do you take tranquilizers or sleeping pills?
    - Often
    - Sometimes
    - Rarely
    - Never

13) Do you smoke?
    - No
    - Yes
    - Less than 10
    - 10-20
    - More than 20
Work-related questions (Q1-12 have been answered previously)

For each of the following statements, please indicate if you agree or disagree with it. If there is an answer behind your answer please indicate how much you are generally distressed by this situation. Thank you for answering all statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have control over the pace at which I work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have many interruptions and distractions in my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have a lot of responsibility in my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have often been pressured to work overtime.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job is fairly demanding.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over the next few years, my job has become more and more demanding.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I receive the respect I deserve from my colleagues.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I experience feeling support in difficult situations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am treated unfairly at work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My job position prospects are poor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have experienced or I expect to experience an undesirable change in my work situation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My pay rate is poor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My current occupational position adequately reflects my education and training.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considering all my efforts and achievements, I receive the respect and position I deserve at work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considering all my efforts and achievements, my work prospects are adequate.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considering all my efforts and achievements, my ability/competence is adequate.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Work-related questions continued

Please indicate to what extent you personally agree or disagree with these statements. Thank you for answering all statements.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. I get easily overwhelmed by time pressures at work.

30. As soon as I get up in the morning, I start thinking about work problems.

31. When I get home, I can easily relax and turn off work.

32. People at work have had trouble it was a busy day.

33. Work rarely lets me go, it is still on my mind when I go to bed.
Personal Reaction Inventory

Below you will find a series of statements. Please read each statement carefully and decide if the statement describes you or not. If it describes you, check the word, "true". If not check "false".

1. I sometimes litter
   TRUE □ FALSE □
2. I always admit my mistakes openly and face the potential negative consequences
   TRUE □ FALSE □
3. In traffic I am always polite and considerate of others
   TRUE □ FALSE □
4. I have tried illegal drugs (for example, marijuana, cocaine etc.).
   TRUE □ FALSE □
5. I always accept other's opinions, even when they don't agree with my own
   TRUE □ FALSE □
6. I take out my bad moods on others now and again
   TRUE □ FALSE □
7. There has been an occasion when I took advantage of someone else
   TRUE □ FALSE □
8. In conversations I always listen attentively and let others finish their sentences
   TRUE □ FALSE □
9. I never hesitate to help someone in case of emergency
   TRUE □ FALSE □
10. When I have made a promise, I keep it - no ifs and no buts.
    TRUE □ FALSE □
11. I occasionally speak badly of others behind their back
    TRUE □ FALSE □
12. I would never lie off other people
    TRUE □ FALSE □
13. I always stay friendly and courteous with other people even when I am stressed out
    TRUE □ FALSE □
14. During arguments I always stay objective and matter-of-fact.
    TRUE □ FALSE □
15. There has been at least one occasion when I failed to return an item I borrowed
    TRUE □ FALSE □
16. I always eat a healthy diet
    TRUE □ FALSE □
17. Sometimes I only help because I expect something in return
    TRUE □ FALSE □
Profile of Mood States

Subject Initials: 
Birth date: 
Date: 
Subject Code No.: 

Directions: Dear the HOW YOU FEEL RIGHT NOW by checking one space after each of the words listed below:

<table>
<thead>
<tr>
<th>FEELING</th>
<th>Not at all</th>
<th>A little</th>
<th>Mod.</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Tense</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Angry</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Worn Out</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Unhappy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Clear-headed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Lively</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Confused</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Sorry for things done</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Shaky</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Liable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Perked</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Considerate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Sad</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Active</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>On edge</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Grouchy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Blue</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Energetic</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Panicky</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Hopeless</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Relaxed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Lowenergy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Spinful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Sympathetic</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Uppy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Restless</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Unable to concentrate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Fatigued</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Emotion</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Helpful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annoyed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discouraged</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarcastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nervous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lonely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mischievous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheerful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fierce</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhausted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambitious</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ready to fight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good-natured</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gloomy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desperate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Happily</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopeless</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newborn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alert</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deserved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furtive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effusives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trusting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full of pep</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bad-tempered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worthless</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forgiving</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carefree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terrified</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guilty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vigorous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertain about</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bushed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# GENERAL HEALTH QUESTIONNAIRE (GHQ-12)

Name:  
Date:  

Please read this carefully.

We should like to know if you have had any medical complaints and how your health has been in general, over the last few weeks. Please answer ALL the questions simply by underlining the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past.

It is important that you try to answer ALL the questions.

Thank you very much for your co-operation.

<table>
<thead>
<tr>
<th>Have you recently . . . .</th>
<th>Better than usual</th>
<th>Same as usual</th>
<th>Less than usual</th>
<th>Much less than usual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. been able to concentrate on whatever you're doing?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. lost much sleep over worry?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. felt that you are playing a useful part in things?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. felt capable of making decisions about things?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. felt constantly under strain?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. felt you couldn't overcome your troubles?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. been able to enjoy your normal day-to-day activities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. been able to face up to your problems?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. been feeling unhappy and depressed?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. been losing confidence in yourself?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. been thinking of yourself as a worthless person?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. been feeling reasonably happy, all things considered?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© Goldberg, 1977 Reproduced with the kind permission of the author and the publishers, UPER-MELDON. This manual is part of Measures in Health Psychology: A Users' Portfolio, written and compiled by Professor Marie Johnston, Dr Stephen Wright and Professor John Wellman. Once the invoice has been paid, it may be photocopied for use within the purchasing institution only. Published by The UPER-MELDON Publishing Company Limited, Denville House, 2 Oxford Street East, Windsor, Berkshire SL4 1DF, UK. Code 4520 03 4
POSITIVE AND NEGATIVE
AFFECT SCHEDULE

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
<th>Record Number:</th>
</tr>
</thead>
</table>

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt that way in the past few weeks.

Use the following scale to record your answers:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>very slightly</td>
<td>a little</td>
<td>moderately</td>
<td>quite a bit</td>
<td>extremely</td>
</tr>
<tr>
<td>or not at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- interested
- distressed
- excited
- upset
- strong
- guilty
- scared
- native
- enthusiastic
- proud
- irritable
- alert
- ashamed
- inspired
- nervous
- determined
- attentive
- jumpy
- active
- afraid

*Insert appropriate item instructions above from page 2*


This measure is part of Measure in Health Psychology, a series of measures written and compiled by Professor Marie Johnson, Dr. Stephen Wright and Professor John Weinman. Once the invoice has been paid, it may be photocopied for use within the purchasing institution only. Published by The NIHR Journals Publishing Company Ltd, Barnes House, 9 Oxford Road, Maidenhead, Berkshire SL6 2PY, UK.

Code 4620 29-4

Queen's Printer and Controller HMSO 2010
Appendix 3.13 Staff well-being access letter

Date

Name
NHS Trust
Address
Address

Dear

Re: "Understanding the dynamics of organisational culture change: creating safe places for patients and staff".

This study has been funded recently (start date October 2005) by the NHS Service Delivery Organisation Research & Development programme. This multidisciplinary, multi-method research aims to explore links between organisational culture change and domains of patient safety and staff well-being. We plan to mix qualitative and quantitative perspectives to investigate complex interactions and organisational factors influencing high and low performance in these domains. Four strands of research will be undertaken.

Strand 1: Determining Culture: Organisational Climate Measures and the Healthcare Commission NHS Staff Survey database (NSS)

Strand 2: Development of In-depth Comparative Cases

Strand 3: Senior Managers’ Leadership and Safety

Strand 4: Staff well-being: Effort, Reward and Control: Nursing in Different Work Cultures
The aim of strand 4 of this study is to explore the effects of working in a demanding work setting on nurse well-being and performance. This strand of the study will use traditional questionnaires and work-based diaries to examine the impact of personally significant clinical incidents in the worksetting on nurse well-being and self-rated performance. This strand of the study is being carried out in 4 NHS Trusts across England. Selected Trusts differ in terms of the stage of development of strategies in relation to staff well-being and patient safety.

My purpose in writing to you, is to seek an internal nurse advocate or sponsor to support strand 4 of this research, i.e. Staff well-being: Effort, Reward and Control: Nursing in Different Work Cultures. We require permission to approach a random sample of 300 nurses in medical and surgical settings, identified from personnel records, to seek participation in this study in this [NHS Trust X]. Past experience in recruiting trained nurses in such settings, suggests that recruitment rates are likely to be low. We have a target of 75 nurses to complete traditional questionnaires and work-based diaries over a four week period in [month, year].

We intend to seek participants from the sample of 300 nurses, until we have obtained 75 nurse participants in this NHS Trust. This may require us to approach more than 300 nurses to achieve this level of participation. We are targeting medical and surgical nurses, given their comparative large numbers. Recruitment of two relatively homogeneous groups of nurses in each of 4 Trusts, will assist us in attributing any differences in staff perceptions of Effort, Reward and Control, nurse well-being, work performance to the setting rather than to occupational role (if we were to recruit from a wider range of nurse specialities).

Participation in this study will involve each nurse completing an initial series of questionnaires, with participant nurses then carrying and completing a work-based diary using a handheld computer for three successive shifts. Involvement in this part of the study will total a maximum of three and a quarter hours for each nurse, 1 hour to complete a questionnaire and 45 mins during each of 3 shifts for hand held
computer input. We anticipate that the data collection phase of the study will happen over a 4 week period in [date, month] in your Trust. The work-based diary on handheld computer is quick and easy to complete and has been used successfully in other NHS settings.

Our intended work schedule can be seen below.

8. Write to nursing management to gain support for study, identify a sponsor/advocate for the study and gain permission to approach nursing staff from medical and surgical settings in each Trust. [MJ/Research assistant: date, month].

9. Once this permission has been obtained, I will contact Personnel in each NHS setting to identify procedures to allow us to approach a random sample of 300 nurses, to enable our recruitment target of 75 participants. Clarify whether Personnel will provide us with a list of those trained nurses working in medical and surgical settings in each Trust, or whether they will they circulate to those on a list. [MJ/Research assistant date, month].

10. Obtain list/access list early in study. [MJ/Research assistant date, month]

11. Send an initial request for participation in work-based diary element of [date, month] for strand 2 of the study to 300 randomly select nurses working in medical and nursing settings. (Study Research fellow) [date, month].

12. Once consent forms returned and recorded (Study Research fellow), send out pack of questionnaires. Participants return to a negotiated local collection point in the Trust (Study Research fellow). Questionnaires must be before behavioural diary part of study. [date, month].

13. Identify 75 nurses willing to take part and derive shift patterns (Diary RA). [date, month].

14. Derive plan of action to deliver diaries over 4 weeks. We have 20 handheld behavioural diaries. We need to collect 20 per week, 3 days per diary. [date, month].

I will contact you at a convenient time to discuss this further and to clarify any issues that you may wish to raise [date, month] regarding us approaching 300 randomly selected medical and surgical nurses to take part in this study. I hope that you are
able to act as our research advocate or sponsor for this strand, or suggest a senior nurse who can fulfil this important role.

Yours sincerely

Dr Martyn Jones
Senior Lecturer in Nursing

Appendix 3.14  Staff well-being participant information sheet

Participant information sheet

Part 1

“Understanding the dynamics of organisational culture change: creating safe places for patients and staff”.

An invitation to participate in a research project.

You are being invited to take part in strand 4 of this research study (Staff well-being: Effort-Reward and Control: Nursing in Different Work Cultures). Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully, and carefully consider whether you want to take part.

- Part 1 tells you the purpose of the study and what will happen to you if you take part.
- Part 2 gives you more detailed information about the conduct of the study

Ask us if there is anything that is not clear or if you would like more information.

What is the purpose of this study?

This research aims to explore links between organisational culture change, patient safety and staff well-being in a number of ways. We plan to mix qualitative and quantitative research approaches to investigate the organisational factors that influence high and low performance in patient safety and staff well-being. Four strands of research will be undertaken.
Strand 1: Determining Culture: Organisational Climate Measures and the Healthcare Commission NHS Staff Survey database (NSS)

Strand 2: Development of In-depth Comparative Cases

Strand 3: Senior Managers’ Leadership and Safety

Strand 4: Staff well-being: Effort, Reward and Control: Nursing in Different Work Cultures

The aim of strand 4 of this study is to explore the effects of working in a demanding work setting on nurse well-being and performance. This strand of the study will use questionnaires and work-based diaries to examine the impact of personally significant clinical incidents in the work setting on nurse well-being and self-rated performance. This strand of the study is being carried out in 4 NHS Trusts across England. Selected Trusts differ in terms of the stage of development of strategies in relation to staff well-being and patient safety.

Why have I been chosen?

A random sample of trained nurses working in medical and surgical settings in this [NHS Trust X] will be asked to take part in this study. This will involve the initial completion of a series of seven questionnaires and then to carry and complete a work-based diary using a handheld computer for three successive shifts.

Do I have to take part?

Your participation in this strand of the study is strictly voluntary. You may withdraw from this study at any point.

What will happen to me if I take part?

If you decide to take part you will be asked to complete a series of seven questionnaires and then to carry and complete a work-based diary on hand-held computer for three days. Your time involvement in this part of the study will total three and a quarter hours, 1 hour to complete a questionnaire and 45 minutes during each of 3 shifts for hand held computer input.

The work-based diary on hand-held computer is quick and easy to complete and has been used successfully in other NHS settings.

What do I have to do?
• If you decide to take part in strand 4 of this study, you should return a completed consent form to [research assistant] (using an enclosed self-addressed envelope).

• Following this, a coded set of questionnaires will be sent to you at work to fill in. We are using a Personal Identifier Number (PIN) to enable us to link the various pieces of data you provide. This PIN code will be held securely in University of Aberdeen by Professor DW Johnston, and your responses will remain completely anonymous. On receipt of the questionnaires you will be asked to fill them in and return to a secure collection point in the Trust. A random sample of trained nursing staff in medical and surgical units in [NHS Trust] will be asked to take part. Permission to approach you has been obtained from nursing managers. We intend to seek participants, until we have obtained our target number of 75 participants.

• Following the questionnaire element of this strand of the study, you will be asked to fill a work-based diary for 3 successive shifts. The diary will be presented on handheld computer, and participants will be prompted to fill this on average every 90 minutes over three successive shifts. At the end of each shift you will be asked to provide a 30 word description of the most personally significant clinical incident which occurred during the shift. A personally significant clinical incident is a “clinical” situation that has a subsequent significant impact on your thoughts, feelings, physical well-being and behaviour. Examples in previous studies have included bed and staff shortages, working with critically ill patients, patient and staff aggression. You will also have the opportunity to record incidents as they happen during the shift. You will also be asked whether you have witnessed any errors or near misses on each shift. This diary will take a maximum 45 minutes to complete over a shift. Previous pilot work has shown that the diary does not disrupt participant work schedules. You will receive training in the use of the handheld computer from the diary study research assistant [name].

What are the advantages and disadvantages of taking part?

• This strand of the study (Staff well-being: Effort-Reward and Control: Nursing in Different Work Cultures) is designed to capture the ongoing effects of working in a demanding healthcare work setting on trained nurses, and possible effects on patient care. We hope to identify aspects of the work setting that may have an influence on care delivery.

• We intend to develop guidelines for the design of individual, team and work-based interventions aimed at improving occupational health for trained nurses working in general medical and surgical settings.

• We intend to suggest work-based strategies to maximise the quality of patient care provided by trained nurses working in difficult conditions.

• The only disadvantage relates to the additional demands it places on busy practitioners in filling out a work-based diary for 3 successive shifts. The work
based diary has been piloted successfully in other NHS Trust settings and is easy to complete and is not intrusive.

Part 2

Will my taking part in this study be kept confidential?

In accordance with the Data Protection Act 1998 any data provided by you in the questionnaire part of the strand 4 of this study (Staff well-being: Effort-Reward and Control: Nursing in Different Work Cultures), or the work-based diary element will remain confidential and no one’s name or workplace setting will never be used in any discussion or publication of the findings.

However, it should be noted that any evidence of an issue of a serious nature relating to patient safety and/or staff well-being could be disclosed to an appropriate Trust contact.

What will happen to the results of the research study?

- We intend to develop guidelines for the design of individual, team-working and work-based interventions aimed at improving occupational health for trained nurses working in general medical and surgical settings.
- We will suggest work-based strategies to maximise the quality of patient care provided by trained nurses working in difficult conditions.
- The results from this strand of the study will feed into the larger study and be incorporated into our overall report to NHS Service Delivery and Organisation Research and Development programme, Department of Health.
- We also hope to disseminate the findings of this study to the wider nursing audience via conference presentations and journal articles. All information provided by participants will remain confidential and no name will ever be used in any discussion or publication of the findings.

Who is organising and funding the research?

This study has been organised by Dr. Martyn C Jones, University of Dundee, School of Nursing and Midwifery, and Professor Derek W Johnston, School of Psychology,
University of Aberdeen. Both have considerable experience in research in this area. This research is funded by NHS Service Delivery and Organisation Research and Development programme, Department of Health. Senior Nurse [name, position, Trust] has agreed to be a research advocate/sponsor for this study.

Who has reviewed the study?

This has been reviewed by [NHS MREC] who have given ethical permission for this study. Each of the strands of research in this study have been peer refereed as part of the NHS Service Delivery and Organisation Research and Development programme commissioning process.

What do I have to do now?

If you want more information about this study, please contact Dr Martyn Jones. If you decide to take part, you should now fill out the consent form attached to this information sheet, and return it to [secure location] using the self-addressed envelope provided. You will then receive a series of questionnaires via your worksetting. Once you have completed the questionnaires and returned it to [secure location], you will be approached to take part in the behavioural diary/interview part of the study. This will happen during the period [time].

Thank you for taking the time to read this invitation to take part in this strand of the study (Staff well-being: Effort-Reward and Control: Nursing in Different Work Cultures). Further information regarding this study can be obtained from:

Signature:

Dr Martyn Jones
Senior Lecturer in Nursing
School of Nursing and Midwifery
University of Dundee
11 Airlie Place,
DUNDEE, DD1 4HJ
Phone: 01382 388656
Appendix 3.15    Staff well-being participant consent form

Centre number:
Study number:
Participant Identification Number for this study:

Participant consent form

Title of study: “Understanding the dynamics of organisational culture change: creating safe places for patients and staff”.

Researcher: Dr Martyn Jones
The participant should complete this form him/herself.

Please initial box
1. I confirm that I have read and understood the information sheet dates (Version 2: August 2006)
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving and reason and without this affecting my employment in any way
3. I have received enough information about the study
4. I agree to take part in the above study

Name of participant       Date       Signature

........................................

Name of researcher       Date       Signature

........................................

When completed, 1 for participant, 1 for researcher site file, 1 (original kept in Aberdeen)
Appendix 3.16 Staff well-being questionnaire pack

QUESTIONNAIRE PACK

Study title: "Understanding the Dynamics of Organisational Culture Change: Creating Safe Places for Patients and Staff."

Dear Participant

- Please ensure that you have read the Participant Information Sheet and signed a consent form before filling in this questionnaire.
- Once you have completed the questionnaires and returned it to [secure location], you will be approached to take part in the behavioural diary/interview part of the study.
- This will happen during the period [time].
- Thank you for agreeing to take part in this strand of the study (Staff Well-Being: Effort-Reward and Control: Nursing in Different Work Cultures). Further information regarding this study can be obtained from

Signature:

Dr Martyn Jones
Senior Lecturer in Nursing
School of Nursing and Midwifery
University of Dundee
11 Arisaig Place, DUNDEE, DD1 4HJ
Phone: 01382 348886
Fax: 01382 348905
Email: m.jones@dundee.ac.uk
Appendix 3.17  Staff well-being participant information sheet

Participant information sheet

Part 1

“Understanding the dynamics of organisational culture change: creating safe places for patients and staff”.

An invitation to participate in a research project.
You are being invited to take part in strand 4 of this research study (Staff well-being: Effort-Reward and Control: Nursing in Different Work Cultures). Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully, and carefully consider whether you want to take part.

- Part 1 tells you the purpose of the study and what will happen to you if you take part.
- Part 2 gives you more detailed information about the conduct of the study

Ask us if there is anything that is not clear or if you would like more information.

What is the purpose of this study?
This research aims to explore links between organisational culture change, patient safety and staff well-being in a number of ways. We plan to mix qualitative and quantitative research approaches to investigate the organisational factors that influence high and low performance in patient safety and staff well-being. Four strands of research will be undertaken.

Strand 1: Determining Culture: Organisational Climate Measures and the Healthcare Commission NHS Staff Survey database (NSS)
Strand 2: Development of In-depth Comparative Cases
Strand 3: Senior Managers’ Leadership and Safety
Strand 4: Staff well-being: Effort, Reward and Control: Nursing in Different Work Cultures
The aim of strand 4 of this study is to explore the effects of working in a demanding work setting on nurse well-being and performance. This strand of the study will use questionnaires and work-based diaries to examine the impact of personally significant clinical incidents in the work setting on nurse well-being and self-rated performance. This strand of the study is being carried out in 4 NHS Trusts across England. Selected Trusts differ in terms of the stage of development of strategies in relation to staff well-being and patient safety.

Why have I been chosen?
A random sample of trained nurses working in medical and surgical settings in this [NHS Trust X] will be asked to take part in this study. This will involve the initial completion of a series of seven questionnaires and then to carry and complete a work-based diary using a handheld computer for three successive shifts.

Do I have to take part?
Your participation in this strand of the study is strictly voluntary. You may withdraw from this study at any point.

What will happen to me if I take part?
If you decide to take part you will be asked to complete a series of seven questionnaires and then to carry and complete a work-based diary on hand-held computer for three days. Your time involvement in this part of the study will total three and a quarter hours, 1 hour to complete a questionnaire and 45 minutes during each of 3 shifts for hand held computer input.

The work-based diary on hand-held computer is quick and easy to complete and has been used successfully in other NHS settings.

What do I have to do?
- If you decide to take part in strand 4 of this study, you should return a completed consent form to [research assistant] (using an enclosed self-addressed envelope).
- Following this, a coded set of questionnaires will be sent to you at work to fill in. We are using a Personal Identifier Number (PIN) to enable us to link the various pieces of data you provide. This PIN code will be held securely in University of Aberdeen by Professor DW Johnston, and your responses will remain completely anonymous. On receipt of the questionnaires you will be asked to fill them in and return to a secure collection point in the Trust.
random sample of trained nursing staff in medical and surgical units in [NHS Trust] will be asked to take part. Permission to approach you has been obtained from nursing managers. We intend to seek participants, until we have obtained our target number of 75 participants.

- Following the questionnaire element of this strand of the study, you will be asked to fill a work-based diary for 3 successive shifts. The diary will be presented on handheld computer, and participants will be prompted to fill this on average every 90 minutes over three successive shifts. At the end of each shift you will be asked to provide a 30 word description of the most personally significant clinical incident which occurred during the shift. A personally significant clinical incident is a “clinical” situation that has a subsequent significant impact on your thoughts, feelings, physical well-being and behaviour. Examples in previous studies have included bed and staff shortages, working with critically ill patients, patient and staff aggression. You will also have the opportunity to record incidents as they happen during the shift. You will also be asked whether you have witnessed any errors or near misses on each shift. This diary will take a maximum 45 minutes to complete over a shift. Previous pilot work has shown that the diary does not disrupt participant work schedules. You will receive training in the use of the handheld computer from the diary study research assistant [name].

What are the advantages and disadvantages of taking part?

- This strand of the study (Staff well-being: Effort-Reward and Control: Nursing in Different Work Cultures) is designed to capture the ongoing effects of working in a demanding healthcare work setting on trained nurses, and possible effects on patient care. We hope to identify aspects of the work setting that may have an influence on care delivery.
- We intend to develop guidelines for the design of individual, team and work-based interventions aimed at improving occupational health for trained nurses working in general medical and surgical settings.
- We intend to suggest work-based strategies to maximise the quality of patient care provided by trained nurses working in difficult conditions.
- The only disadvantage relates to the additional demands it places on busy practitioners in filling out a work-based diary for 3 successive shifts. The work based diary has been piloted successfully in other NHS Trust settings and is easy to complete and is not intrusive.
Part 2

Will my taking part in this study be kept confidential?
In accordance with the Data Protection Act 1998 any data provided by you in the questionnaire part of the strand 4 of this study (Staff well-being: Effort-Reward and Control: Nursing in Different Work Cultures), or the work-based diary element will remain confidential and no one’s name or workplace setting will never be used in any discussion or publication of the findings.

However, it should be noted that any evidence of an issue of a serious nature relating to patient safety and/or staff well-being could be disclosed to an appropriate Trust contact.

What will happen to the results of the research study?
- We intend to develop guidelines for the design of individual, team-working and work-based interventions aimed at improving occupational health for trained nurses working in general medical and surgical settings.
- We will suggest work-based strategies to maximise the quality of patient care provided by trained nurses working in difficult conditions.
- The results from this strand of the study will feed into the larger study and be incorporated into our overall report to NHS Service Delivery and Organisation Research and Development programme, Department of Health.
- We also hope to disseminate the findings of this study to the wider nursing audience via conference presentations and journal articles. All information provided by participants will remain confidential and no name will ever be used in any discussion or publication of the findings.

Who is organising and funding the research?
This study has been organised by Dr. Martyn C Jones, University of Dundee, School of Nursing and Midwifery, and Professor Derek W Johnston, School of Psychology, University of Aberdeen. Both have considerable experience in research in this area. This research is funded by NHS Service Delivery and Organisation Research and Development programme, Department of Health. Senior Nurse [name, position, Trust] has agreed to be a research advocate/sponsor for this study.
Who has reviewed the study?
This has been reviewed by [NHS MREC] who have given ethical permission for this study. Each of the strands of research in this study have been peer refereed as part of the NHS Service Delivery and Organisation Research and Development programme commissioning process.

What do I have to do now?
If you want more information about this study, please contact Dr Martyn Jones. If you decide to take part, you should now fill out the consent form attached to this information sheet, and return it to [secure location] using the self-addressed envelope provided. You will then receive a series of questionnaires via your worksetting. Once you have completed the questionnaires and returned it to [secure location], you will be approached to take part in the behavioural diary/interview part of the study. This will happen during the period [time].

Thank you for taking the time to read this invitation to take part in this strand of the study (Staff well-being: Effort-Reward and Control: Nursing in Different Work Cultures). Further information regarding this study can be obtained from:

Signature

Dr Martyn Jones
Senior Lecturer in Nursing
School of Nursing and Midwifery
University of Dundee
11 Airlie Place
DUNDEE
DD1 4HJ
Phone: 01382 388656
Fax: 01382 388533 Email: m.c.jones@dundee.ac.uk
Appendix 4 MREC ethics approval

11 September 2006

Professor Lorna McKee
Professor of Management Studies/Programme Director
Health Services Research Unit
University of Aberdeen
Polwarth Building
Foresterhill
ABERDEEN AB25 2ZD

Dear Professor McKee

Full title of study: Understanding the Dynamics of Organisational Culture Change: Creating Safe Places for Patients and Staff.

REC reference number: 06/MRE09/35

Thank you for your letter of 31 August 2006, responding to the Committee’s request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair (Dr P R Kelsey) and the Alternate Vice-Chair / Medical Statistician (Dr E B Faragher).

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised.

Ethical review of research sites

The Committee has designated this study as exempt from site-specific assessment (SSA). There is no requirement for [other] Local Research Ethics Committees to be informed or for site-specific assessment to be carried out at each site.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td></td>
<td>10 May 2006</td>
</tr>
<tr>
<td>Investigator CV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Central Office for Research Ethics Committees is responsible for the operational management of Multi-Centre Research Ethics Committees.
Research governance approval

You should arrange for the R&D department at all relevant NHS care organisations to be notified that the research will be taking place, and provide a copy of the REC application, the protocol and this letter.

All researchers and research collaborators who will be participating in the research must obtain final research governance approval before commencing any research procedures. Where a substantive contract is not held with the care organisation, it may be necessary for an honorary contract to be issued before approval for the research can be given.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.
With the Committee’s best wishes for the success of this project.

Yours sincerely,

Dr P R Kelsey
Chair

Email: northwest.mrec@northwest.nhs.uk

Enclosures: Standard approval conditions

Copy to: Dr Elizabeth Rattray
         University of Aberdeen
         University Office
         Regent Walk
         ABERDEEN
         AB24 3SX
Appendix 5 Analysis and Discussion of Action Workshop

In April 2008 an Action Workshop was organised at the Aston Business School. Participants included twenty representatives from seven Trusts, the project team and representatives from NIHR SDO (Stephen Davies and Professor Huw Davies). This workshop delivered aggregated findings generated across all Trusts and set out to transfer knowledge and learning in the following ways:

- Formal presentation of study findings followed by chaired discussion sessions in which Trust participants questioned and commented on the study findings.
- Master class presentations by Professor Rhona Flin (Patient safety in a wider context of safety at work) and Professor Michael West (Human resource management in health care: why it matters).
- Structured interactive sessions in which Trust representatives could share and exchange knowledge and expertise in tackling problems associated with patient safety and staff well-being.
- Creation of an environment to enable personal networks between Trust representatives to ensure continued sharing and transfer of knowledge.

These activities focused on transferring knowledge and learning by encouraging participants to engage in both sense making and sense giving activities. Formal presentations focused on giving sense of the issues pertaining to patient safety and staff well-being. While, the interactive discussion sessions set out to optimise learning by engaging in recursive sense making and sense giving. In these sessions Trust participants were split into groups and asked to respond to the following questions:

1. What are the key cultural features of your Trust that enable and destabilise (a) staff well-being (b) patient safety?
2. How well do you feel that you are able to assess the level of patient safety in your Trust?
3. What do you see as the key challenges to patient safety and staff well-being, now and in the future in your Trust.
4. How might we ensure that our research findings reach key audiences and what dissemination strategies are most appropriate?

Project team members acted as facilitators within each group. Group members discussed the questions and nominated a member to present the group response. After each group response comments and discussion from the audience were fielded by a designated chair person. Permission was gained for electronic recording of the group discussions. Representatives from NIHR SDO acted as observers of these sessions. Project team members also took written notes of these proceedings.
To provide a holistic understanding of the study and deliver preliminary findings. Analysis of the ‘Action Workshop’ aims:

How relevant was the workshop to your needs?

<table>
<thead>
<tr>
<th></th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>23%</td>
<td>46%</td>
<td>31%</td>
</tr>
</tbody>
</table>

Analysis of the ‘Action Workshop’ aims:

To provide a holistic understanding of the study and deliver preliminary findings

<table>
<thead>
<tr>
<th></th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>31%</td>
<td>38%</td>
<td>31%</td>
</tr>
</tbody>
</table>

To access your views concerning the best practices to achieve patient safety and staff well-being

<table>
<thead>
<tr>
<th></th>
<th>Fair</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To access your views concerning the most useful and appropriate methods of delivering our projects findings

<table>
<thead>
<tr>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>38%</td>
<td>46%</td>
<td>16%</td>
</tr>
</tbody>
</table>

To build bridges between researchers and NHS staff

<table>
<thead>
<tr>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>16%</td>
<td>61%</td>
<td>23%</td>
</tr>
</tbody>
</table>

To promote research which targets key challenges facing the NHS

<table>
<thead>
<tr>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>16%</td>
<td>61%</td>
<td>23%</td>
</tr>
</tbody>
</table>

How would you rate the presentations

<table>
<thead>
<tr>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>46%</td>
<td>54%</td>
</tr>
</tbody>
</table>

Q&A Session with the Project Team

<table>
<thead>
<tr>
<th>No answer</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>8%</td>
<td>15%</td>
<td>53%</td>
<td>24%</td>
</tr>
</tbody>
</table>

What were the most useful parts of the workshop for you, and why?

- Q&A all parts very good
- Final session
- All parts of the day were informative
- Very interesting in an area of difficult correlation. Links with staff survey; Q&A was interesting
- Presenting the final findings/thoughts
- Preliminary findings. Discussion with colleagues
- Networking
- Human factors in safety in healthcare
• Findings from research from nursing in different xxx cultures: nurses obtaining more control – what can be put in place to facilitate nurses’ autonomy?
  Training knowing their roles very interesting
• Feedback on data but links to others settings i.e. aviation
• The whole event was extremely good and informative
• Presentations from industry comparisons

Which topics required greater emphasis for you?

• Staff motivation for quality / patient safety
• Cultural issues and HR
• Perhaps more time to discuss themes that were presented in the morning. We needed to “warm up” so perhaps some table by table discussions to get us going?
• Implications
• Feedback + “toolkits”
• None, balance was very good
• Some further thinking on what ‘demotivates’ staff

Were there any parts of the workshop which you feel were additional to your requirements?

• Team working and relationship
• No

How would you rate the following?

<table>
<thead>
<tr>
<th></th>
<th>No answer</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venue</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Catering</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Workshop</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Documentation</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Organisation</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Programme</td>
<td>17</td>
<td>17</td>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td>Overall %</td>
<td>17</td>
<td>17</td>
<td>38</td>
<td>28</td>
</tr>
</tbody>
</table>
Why did you come to the workshop?

- To hear the early findings and network
- For feedback from research and most common factors contributing to the results
- Continuing our work on patient safety
- Receive feedback on initial findings; check to see if there are other things my Trust could/should be doing with its patient safety programme
- To get a clear picture of where we are
- To receive feedback and network
- Curiosity and thirst for feedback
- To find out more about the “Project”
- Because the Trust I am now CEO of was invited and I wanted to find out more about what this research may give me about the Trusts patient safety culture/practice
- Leading on patient safety so wanted to understand the cultural and organisational issues in the study

Please provide any other comments or suggestions for future provision

- Please follow-up the feedback to the staff who undertook the PDA study
- Useful to establish a more formal network of the participating Trusts
- Would like individual feedback
- Can you consider how this work connects with the improving patient safety with NHS Institute
- Update at near completion of the study final report
Appendix 6  Breakdown of Organisational strand participants per Trust

<table>
<thead>
<tr>
<th>Interview identifiers</th>
<th>Participant roles Trust A</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI1</td>
<td>T. Union Secretary</td>
</tr>
<tr>
<td>AI2</td>
<td>Community Midwife</td>
</tr>
<tr>
<td>AI3</td>
<td>Risk Manager</td>
</tr>
<tr>
<td>AI4</td>
<td>Governance Support Manager</td>
</tr>
<tr>
<td>AI5</td>
<td>Matron Maternity</td>
</tr>
<tr>
<td>AI6</td>
<td>Lead Nurse Medicine</td>
</tr>
<tr>
<td>AI7</td>
<td>Senior Matron</td>
</tr>
<tr>
<td>AI8</td>
<td>Director of Operations</td>
</tr>
<tr>
<td>AI9</td>
<td>Chief Pharmacist</td>
</tr>
<tr>
<td>AI10</td>
<td>Senior Matron</td>
</tr>
<tr>
<td>AI11</td>
<td>Joint Medical Director</td>
</tr>
<tr>
<td>AI12</td>
<td>Manager Occupational Therapy</td>
</tr>
<tr>
<td>AI13</td>
<td>Complaints Manager</td>
</tr>
<tr>
<td>AI14</td>
<td>Director Nursing</td>
</tr>
<tr>
<td>AI15</td>
<td>Chief Executive</td>
</tr>
<tr>
<td>AI16</td>
<td>Director Infection Control</td>
</tr>
<tr>
<td>AI17</td>
<td>Governance Manager</td>
</tr>
<tr>
<td>AI18</td>
<td>Finance Director</td>
</tr>
<tr>
<td>AI19</td>
<td>PALS Manager</td>
</tr>
<tr>
<td>Interview identifiers</td>
<td>Participant roles Trust B</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>BI1</td>
<td>Junior Doctor</td>
</tr>
<tr>
<td>BI2</td>
<td>Manager PCT</td>
</tr>
<tr>
<td>BI3</td>
<td>Directorate Manager</td>
</tr>
<tr>
<td>BI4</td>
<td>Ward Sister</td>
</tr>
<tr>
<td>BI5</td>
<td>Director Finance and Performance</td>
</tr>
<tr>
<td>BI6</td>
<td>Chief Executive</td>
</tr>
<tr>
<td>BI7</td>
<td>Directorate Manager</td>
</tr>
<tr>
<td>BI8</td>
<td>Legal Services Manager</td>
</tr>
<tr>
<td>BI9</td>
<td>Deputy Director of Nursing</td>
</tr>
<tr>
<td>BI10</td>
<td>Director of Human Resources</td>
</tr>
<tr>
<td>BI11</td>
<td>Manager of Occupational Health</td>
</tr>
<tr>
<td>BI12</td>
<td>Clinical risk Co-ordinator</td>
</tr>
<tr>
<td>BI13</td>
<td>Head of Learning and Development</td>
</tr>
<tr>
<td>BI14</td>
<td>Business Development (Managing External Relationships)</td>
</tr>
<tr>
<td>BI15</td>
<td>Head of Patient Experience</td>
</tr>
<tr>
<td>BI16</td>
<td>Non Executive Director</td>
</tr>
<tr>
<td>BI17</td>
<td>Head Of Midwifery</td>
</tr>
<tr>
<td>BI18</td>
<td>Deputy Director of Performance Management</td>
</tr>
<tr>
<td>BI19</td>
<td>Internal Auditor</td>
</tr>
<tr>
<td>BI20</td>
<td>Manager Risk and Legal Services</td>
</tr>
<tr>
<td>BI21</td>
<td>Director of Nursing</td>
</tr>
<tr>
<td>BI22</td>
<td>Senior Infection Control Nurse</td>
</tr>
<tr>
<td>BI23</td>
<td>PALS Co-ordinator</td>
</tr>
<tr>
<td>BI24</td>
<td>Radiologist</td>
</tr>
<tr>
<td>BI25</td>
<td>Director of Operations</td>
</tr>
<tr>
<td>Interview Identifiers</td>
<td>Participant roles Trust B</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>BI26</td>
<td>Clinical Midwifery Manager</td>
</tr>
<tr>
<td>BI27</td>
<td>Patient Services Manager Health and Safety Lead</td>
</tr>
<tr>
<td>BI28</td>
<td>Lead patient Safety and public involvement</td>
</tr>
<tr>
<td>BI29</td>
<td>Clinical risk Co-ordinator</td>
</tr>
<tr>
<td>BI30</td>
<td>Medical director</td>
</tr>
<tr>
<td>BI31</td>
<td>Consultant Pathologist Head of Dept</td>
</tr>
<tr>
<td>BI32</td>
<td>Anaesthetists</td>
</tr>
<tr>
<td>BI33</td>
<td>Practice Nurse</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interview Identifiers</th>
<th>Participant roles Trust C</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI1</td>
<td>Service Manager</td>
</tr>
<tr>
<td>CI2</td>
<td>General Manager Rural and Neurology Services</td>
</tr>
<tr>
<td>CI3</td>
<td>Clinical Governance Manager</td>
</tr>
<tr>
<td>CI4</td>
<td>Service nurse / manager</td>
</tr>
<tr>
<td>CI5</td>
<td>Medical director</td>
</tr>
<tr>
<td>CI6</td>
<td>Assistant Director of Corporate and Legal affairs</td>
</tr>
<tr>
<td>CI7</td>
<td>Radiology Service manager</td>
</tr>
<tr>
<td>CI8</td>
<td>Matron</td>
</tr>
<tr>
<td>CI9</td>
<td>Acting Director Clinical governance</td>
</tr>
<tr>
<td>CI10</td>
<td>Safety Manager</td>
</tr>
<tr>
<td>CI11</td>
<td>Clinical Director Surgery</td>
</tr>
<tr>
<td>CI12</td>
<td>Chief Pharmacist</td>
</tr>
<tr>
<td>CI13</td>
<td>Director of Operations</td>
</tr>
<tr>
<td>CI14</td>
<td>Head of Nursing</td>
</tr>
<tr>
<td>CI15</td>
<td>Staff Side Chairman</td>
</tr>
<tr>
<td>CI16</td>
<td>Matron cardiology</td>
</tr>
<tr>
<td>CI17</td>
<td>Director of Facilities</td>
</tr>
<tr>
<td>CI18</td>
<td>Matron</td>
</tr>
<tr>
<td>CI19</td>
<td>Senior safety manager</td>
</tr>
<tr>
<td>CI20</td>
<td>Director of Nursing</td>
</tr>
<tr>
<td>CI21</td>
<td>Deputy Director Infection Prevention</td>
</tr>
<tr>
<td>CI22</td>
<td>Head of Nursing</td>
</tr>
<tr>
<td>CI23</td>
<td>Finance director</td>
</tr>
<tr>
<td>CI24</td>
<td>Director of Corporate and Legal Affairs</td>
</tr>
<tr>
<td>CI25</td>
<td>Safety Manager</td>
</tr>
<tr>
<td>CI26 – Notes No Transcript</td>
<td>Women’s General Manager</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interview identifiers</th>
<th>Participant roles Trust D</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI/1</td>
<td>Chief Executive</td>
</tr>
<tr>
<td>DI/2</td>
<td>Deputy Head Clinical Risk</td>
</tr>
<tr>
<td>DI/3</td>
<td>Ward manager</td>
</tr>
<tr>
<td>DI/4</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td>DI/5</td>
<td>Medical Director</td>
</tr>
<tr>
<td>DI/6</td>
<td>Divisional Manager</td>
</tr>
<tr>
<td>DI/7</td>
<td>Director Governance</td>
</tr>
<tr>
<td>DI/8</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td>DI/9</td>
<td>Director of HR</td>
</tr>
<tr>
<td>DI/10</td>
<td>Director of Strategy</td>
</tr>
<tr>
<td>DI/11</td>
<td>Head of Health and Safety</td>
</tr>
<tr>
<td>DI/12</td>
<td>Deputy Director of Nursing</td>
</tr>
<tr>
<td>DI/13</td>
<td>PALS manager</td>
</tr>
<tr>
<td>Interview identifiers</td>
<td>Trust E participant roles</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>EI/1</td>
<td>Head of Occupational Health</td>
</tr>
<tr>
<td>EI/2</td>
<td>Patient Safety Lead</td>
</tr>
<tr>
<td>EI/3</td>
<td>Director Of Nursing</td>
</tr>
<tr>
<td>EI/4</td>
<td>Risk Manager</td>
</tr>
<tr>
<td>EI/5</td>
<td>Matron</td>
</tr>
<tr>
<td>EI/6</td>
<td>Director Of Estates</td>
</tr>
<tr>
<td>EI/7</td>
<td>Senior Nurse Infection Control</td>
</tr>
<tr>
<td>EI/8</td>
<td>Director of HR</td>
</tr>
<tr>
<td>EI/9</td>
<td>Acting Medical Director</td>
</tr>
<tr>
<td>EI/10</td>
<td>Acting CEO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interview identifiers</th>
<th>Participant roles Trust F</th>
</tr>
</thead>
<tbody>
<tr>
<td>FI/1</td>
<td>Midwifery Dept Manager</td>
</tr>
<tr>
<td>FI/2</td>
<td>Health and Safety Risk Advisor</td>
</tr>
<tr>
<td>FI/3</td>
<td>Director of Facilities</td>
</tr>
<tr>
<td>Interview identifiers</td>
<td>Participant roles Trust G</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>FI/4</td>
<td>Head of Occupational Health</td>
</tr>
<tr>
<td>FI/5</td>
<td>Deputy Chief Executive</td>
</tr>
<tr>
<td>FI/6</td>
<td>Medical Director</td>
</tr>
<tr>
<td>FI/7</td>
<td>Acting Matron</td>
</tr>
<tr>
<td>FI/8</td>
<td>Director of Nursing and Head of Patient Safety</td>
</tr>
<tr>
<td>FI/9</td>
<td>Head of Risk Management</td>
</tr>
<tr>
<td>FI/10</td>
<td>Director of Personnel</td>
</tr>
<tr>
<td>FI/11</td>
<td>Consultant Micro-Biologist</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interview identifiers</th>
<th>Participant roles Trust H</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI/1</td>
<td>Acting CEO</td>
</tr>
<tr>
<td>GI/2</td>
<td>Director of Corporate affairs</td>
</tr>
<tr>
<td>GI/3</td>
<td>Risk manager</td>
</tr>
<tr>
<td>GI/4</td>
<td>Infection Control manager</td>
</tr>
<tr>
<td>GI/5</td>
<td>Governance manager</td>
</tr>
<tr>
<td>GI/6</td>
<td>Chief Operating &amp; Nursing Officer</td>
</tr>
<tr>
<td>GI/7</td>
<td>Head of Estates</td>
</tr>
<tr>
<td>GI/8</td>
<td>Director Of Clinical Education</td>
</tr>
<tr>
<td>GI/9</td>
<td>Deputy Director Of Nursing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interview identifiers</th>
<th>Participant roles Trust H</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI/001</td>
<td>Ward Sister</td>
</tr>
<tr>
<td>HI/002</td>
<td>Consultant</td>
</tr>
<tr>
<td>HI/003</td>
<td>Medical Technical Services Manager</td>
</tr>
<tr>
<td>HI/004</td>
<td>Deputy Director Pharmacy</td>
</tr>
<tr>
<td>HI/005</td>
<td>Clinical Lead</td>
</tr>
<tr>
<td>HI/006</td>
<td>CEO</td>
</tr>
<tr>
<td>--------</td>
<td>--------------</td>
</tr>
<tr>
<td>HI/007</td>
<td>Medical Director</td>
</tr>
<tr>
<td>HI/008</td>
<td>Director Nursing</td>
</tr>
<tr>
<td>HI/009</td>
<td>Head of Risk and Legal Services</td>
</tr>
<tr>
<td>HI/010</td>
<td>Director HR</td>
</tr>
<tr>
<td>HI/011</td>
<td>Matron</td>
</tr>
<tr>
<td>HI/012</td>
<td>Clinical Governance Coordinator</td>
</tr>
<tr>
<td>HI/013</td>
<td>Clinical director</td>
</tr>
<tr>
<td>HI/014</td>
<td>Clinical Director Surgery</td>
</tr>
</tbody>
</table>
## Appendix 7 Comparative case study analysis summaries

**a. ‘Resilient Trusts’**

<table>
<thead>
<tr>
<th>Perceptions of patient safety</th>
<th>Trust A perceptions</th>
<th>Trust H perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical environment limits patient safety</td>
<td>• Staff involved in clinical governance</td>
<td>• Robust clinical governance, risk analysis and complaints analysis undertaken</td>
</tr>
<tr>
<td>• Use of analysis tools</td>
<td>• Emphasis on risk assessment</td>
<td>• High performing Trust</td>
</tr>
<tr>
<td>• Incident reporting good</td>
<td>• Nurses good at reporting incidents</td>
<td>• Proactive approach to patient safety</td>
</tr>
<tr>
<td>• Emphasis on risk assessment</td>
<td>• Recent outbreak of C-Difficile</td>
<td>• Staff report incidents and near misses</td>
</tr>
<tr>
<td>• Proactive</td>
<td>• Staffing levels a source of concern</td>
<td>• Nursing staff more engaged than medical staff</td>
</tr>
<tr>
<td>• Staffing levels a source of concern</td>
<td></td>
<td>• Doing it right every time – making sure that everyone knows how to do it right every time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Perceptions of Staff Well-being</th>
<th>Trust A perceptions</th>
<th>Trust H perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff turnover low</td>
<td>• Short term sickness a problem</td>
<td>• Risk aware</td>
</tr>
<tr>
<td>Staff Long tenure</td>
<td>• Experience of adverse incidents produces high levels of stress</td>
<td>• We always do an investigation</td>
</tr>
<tr>
<td>Short term sickness a problem</td>
<td>• Staff workload relentless</td>
<td></td>
</tr>
<tr>
<td>Experience of adverse incidents produces high levels of stress</td>
<td>• Agenda for change causes policy dissatisfaction</td>
<td></td>
</tr>
<tr>
<td>Staff workload relentless</td>
<td>• Agenda for change implemented well</td>
<td></td>
</tr>
<tr>
<td>Agenda for change causes policy dissatisfaction</td>
<td>• Staff suffer from patient violence</td>
<td></td>
</tr>
<tr>
<td>Staff for change implemented well</td>
<td>• Staff worried about livelihoods</td>
<td></td>
</tr>
<tr>
<td>Staff suffer from patient violence</td>
<td>• Positive local culture</td>
<td></td>
</tr>
</tbody>
</table>

| Dissatisfaction with Agenda for Change policy | |
| Staff feel respected and valued | |
| Optimistic local cultural influence | |
| Fears for job security |

---

*Queen’s Printer and Controller HMSO 2010*
<table>
<thead>
<tr>
<th>Perceptions of Trust Leadership</th>
<th>Trust A perceptions</th>
<th>Trust H perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior team stable longstanding relationships</td>
<td>Participative and devolved leadership</td>
<td></td>
</tr>
<tr>
<td>Open communication</td>
<td>Leadership training for Matrons, ward managers and staff nurses.</td>
<td></td>
</tr>
<tr>
<td>Good team work – work well together</td>
<td>Chief Executive style ‘an odd mixture’ both directive and consensual.</td>
<td></td>
</tr>
<tr>
<td>Everyone has the right to question</td>
<td>Chief Executive has many informal networks</td>
<td></td>
</tr>
<tr>
<td>No ivory towers</td>
<td>Chief Executive approachable, visible and highly respected.</td>
<td></td>
</tr>
<tr>
<td>Goals are team focused</td>
<td>Chief Executive uses a range of informal communication techniques – sends messages to staff.</td>
<td></td>
</tr>
<tr>
<td>Respectful relationships</td>
<td>Senior Executive Team very stable – seven of the five members in post for more than ten years.</td>
<td></td>
</tr>
<tr>
<td>Chief executive empowers staff, buffers the organisation ‘keeps an umbrella over the organisation, sets clear goals, possesses political competency in tackling ‘noise in the corridors’ which indicated deep seated problems.</td>
<td>Chief Executive - No –one in team allowed to dominate and accesses every members viewpoint</td>
<td></td>
</tr>
<tr>
<td>Chief Executive advocates the development of a cultural mindset which encouraged staff engagement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trust Relationships</th>
<th>Trust A perceptions</th>
<th>Trust H perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>Strong clinical involvement in management</td>
<td></td>
</tr>
<tr>
<td>Nursing staff promoted to leadership roles breaks down staff differentials</td>
<td>Clinicians enthusiastic about involvement but complain of the massive demands on their time</td>
<td></td>
</tr>
<tr>
<td>Consultant and nursing staff relationships respectful</td>
<td>Strong team working relationships.</td>
<td></td>
</tr>
<tr>
<td>Communication viewed as top down</td>
<td>Difficulties of nursing staff in ‘asking their superiors for clarity’ (H13)</td>
<td></td>
</tr>
<tr>
<td>Informal relationships – use of first names</td>
<td>Multiple levels of communication necessary.</td>
<td></td>
</tr>
<tr>
<td>No ivory towers</td>
<td>Use of multi-level marketing – designated staff to deal with queries, newsletters, posters, team briefings, daily job lists, team ward rounds, informal chats in allocated social space, innovative road shows</td>
<td></td>
</tr>
<tr>
<td>Longstanding tenure</td>
<td>Important for senior staff to signal responsibility</td>
<td></td>
</tr>
<tr>
<td>Matrons key communicators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High clinical involvement in management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple forms of communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal communication encouraged</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of Organisational Learning</td>
<td>Trust A perceptions</td>
<td>Trust H perceptions</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Use of analysis tools to identify patient safety problems</td>
<td>Parts of the Trust viewed as insular. Matrons viewed as key communicators of patient safety awareness. Clinical governance structures were a key method to disseminate learning across all directorates.</td>
</tr>
<tr>
<td></td>
<td>Time lags between reporting and feedback</td>
<td>Use of clinical governance bulletins, clinical skills laboratories, simulation centre, audits of training and Clinical governance Review Group a key structure in reporting and transmitting new learning and practice.</td>
</tr>
<tr>
<td></td>
<td>Risk management, incident reporting and governance linked</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directorate staff involved with risk reviews, analysis and governance</td>
<td></td>
</tr>
<tr>
<td>Priorities</td>
<td>High Priority patient safety</td>
<td>Patient safety a high priority and Chief Executive viewed that patient safety had to be balanced against other priorities – calculated risks on the basis of staff consultation. More recently patient safety is made an explicit strategy.</td>
</tr>
<tr>
<td></td>
<td>Criticism of targets</td>
<td>Staff viewed that the Trust needed to find a balance between prioritising targets and patient safety.</td>
</tr>
<tr>
<td></td>
<td>Targets not contextually sensitive</td>
<td>• Staff consistently involved in incident reporting, risk analysis and clinical governance.</td>
</tr>
</tbody>
</table>

Priorities

- High Priority patient safety
- Criticism of targets
- Targets not contextually sensitive

Trust H perceptions

- Parts of the Trust viewed as insular.
- Matrons viewed as key communicators of patient safety awareness. Clinical governance structures were a key method to disseminate learning across all directorates.
- Use of clinical governance bulletins, clinical skills laboratories, simulation centre, audits of training and Clinical governance Review Group a key structure in reporting and transmitting new learning and practice.
<table>
<thead>
<tr>
<th>Attitudes to Organisational Change</th>
<th>Trust A perceptions</th>
<th>Trust H perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural mindset where change is a norm</td>
<td>Chief Executive advocates a ‘gradualist approach to change’ – Chipping away and getting ice shavings off that one that sank the Titanic and not actually moving the iceberg’.</td>
<td></td>
</tr>
<tr>
<td>Empowering change</td>
<td>Tackling culture change head on was unproductive. Culture change achieved gradually by a range of micro-strategies.</td>
<td></td>
</tr>
<tr>
<td>Chief Executive advocates a ‘gradualist approach to change’ – Chipping away and getting ice shavings off that one that sank the Titanic and not actually moving the iceberg’.</td>
<td>Devolved leadership mobilises organisational change. Consultative and participative approaches to organisational change advocated.</td>
<td></td>
</tr>
<tr>
<td>Tackling culture change head on was unproductive. Culture change achieved gradually by a range of micro-strategies.</td>
<td>Multiple communication media advocated to ‘intervene in staff members thought processes’.</td>
<td></td>
</tr>
<tr>
<td>Devolved leadership mobilises organisational change. Consultative and participative approaches to organisational change advocated.</td>
<td>Trust high performance for patient safety and meeting targets limits urgency for change.</td>
<td></td>
</tr>
<tr>
<td>Multiple communication media advocated to ‘intervene in staff members thought processes’.</td>
<td>Senior team stability creates complacency</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Perceptions of External Influences</th>
<th>Trust A perception</th>
<th>Trust H perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of targets – important in taking the pulse of a large organisation</td>
<td>PCT relationships positive and pragmatic. Lack of standardised reporting to SHA’s makes reporting complex.</td>
<td></td>
</tr>
<tr>
<td>Government targets too narrow</td>
<td>Greater patient safety priority for PCTs.</td>
<td></td>
</tr>
<tr>
<td>Future changes in PCT inevitable</td>
<td>Competition from private sector was picking off ‘easy services’ leaving the trust with providing for the most complex type of services.</td>
<td></td>
</tr>
<tr>
<td>MONITOR inflicts reporting bureaucracy</td>
<td>Strong relationships with NPSA to support training and learning.</td>
<td></td>
</tr>
<tr>
<td>Difficulties anticipated in the capacity of community services to deliver.</td>
<td>Media perceived as sensationalising patient safety and negatively which made patients tense and fearful.</td>
<td></td>
</tr>
<tr>
<td>Re-configured PCTs</td>
<td>Trust contributing £2million to help resolve the PCTs projected deficit</td>
<td></td>
</tr>
</tbody>
</table>
### Process influences

- Highly developed incident reporting
- Reporting dramatically increased
- Reporting and risk analysis feeds into clinical governance systems
- Ancillary and nursing staff report near misses
- Nurses report to protect them from litigation
- Doctors poor at reporting
- Time lags for feedback
- Use of analysis tools

- Refined and integrated structures and processes to support patient safety.
- Rationalisation of the number of patient safety incident definitions from 7000 to 300.
- Analysis of incidents - Identifying risk bundles; targeting of risks; use of RCA and cultural assessment tools.
- Involvement of senior management in infection control, clinical governance, risk reporting.
- Strong capability to generate useful feedback to staff.
- PALS, risk analysis, risk reporting, clinical governance coordinated to develop procedures.
- Use of facilitators in Clinical governance and Risk Review Committees to support managers and clinicians.

### b. Adaptive Trusts

<table>
<thead>
<tr>
<th>Perceptions of patient safety</th>
<th>Trust C perceptions</th>
<th>Trust D perceptions</th>
<th>Trust F perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantial improvement in advancing infection control</td>
<td>Patient safety performance regarded as average by senior leadership team</td>
<td>Infection control was perceived as a major challenge</td>
<td></td>
</tr>
<tr>
<td>Staffing pressures has major implications for patient safety</td>
<td>Risk manager sees Trust as a ‘front runner in investigating incidents’</td>
<td>Areas of key concern were maternity and elderly services.</td>
<td></td>
</tr>
<tr>
<td>Financial constraints affect patient safety</td>
<td>Most serious incident captured in system</td>
<td>Comparison of patient complaints against incidents raised by incident reporting was perceived as a litmus test for measuring the effectiveness of incident reporting and organisational learning from patient safety.</td>
<td></td>
</tr>
<tr>
<td>Focus on analysis and unpicking of patient complaints to identify patient safety issues</td>
<td>Recognition that near misses not captured in reporting</td>
<td>Patient safety support infrastructure improving as reporting of incidents was high</td>
<td></td>
</tr>
</tbody>
</table>

| Queen’s Printer and Controller HMSO 2010 | 355 |
### Perceptions of Staff Well-being

<table>
<thead>
<tr>
<th>Perceptions of Staff Well-being</th>
<th>Trust C perceptions</th>
<th>Trust D perceptions</th>
<th>Trust F perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Turnover settling down</td>
<td>• Anxiety and stress caused by job insecurity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Trust experienced downsizing</td>
<td>• Low morale caused by vacancy freezes and displacement of staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Staff worried about security</td>
<td>• Limited time for training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Re-deployment of nurses</td>
<td>• Heavy workload for nursing staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Loss of educators impacts on training</td>
<td>• Nurses team working mitigates staff shortages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Staff find it difficult to access training</td>
<td>• High levels of violence and abuse of staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Violence and abuse of staff increasing</td>
<td>• Agenda for Change created staff dissatisfaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Boost to staff morale from success in tackling C- Difficile outbreak</td>
<td>• Nursing staff were described as having sickness problems and musculatory disorders were reported as the common reason for absence.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes
- Stress was also linked to sickness levels - Occupational Health Director
- Stress was linked to staff harassment, bullying and poor communication between work colleagues.
- Positive action taken to mitigate workplace stress by training managers to recognise stress in their subordinates and then take effective supportive action.
- A target focused culture was also linked to creating stress and ill health for staff.
- It was also conceded that targets may also provide guidance and build confidence and resilience.
- Some staff reported skill mixes as acceptable within this Trust as skill mix reviews had been undertaken and skill mix problems addressed.
- Limitations in the skills of Midwives were also linked to inadequate training of Midwives.
- It was posited that establishment levels for staffing in maternity services had failed to match with demand for services within maternity services and thus needed urgent review
- Increased activity and workload demands
### Trust C perceptions
- Distinctive cultures within clinical directorates
- Budgeting constraints caused friction
- Nurses and doctors separate accountabilities and communication structures
- Team working good
- Use of a range of communication tools – staff forums, core brief, Ask the Boss, staff induction
- Staff swamped with communications

### Trust D perceptions
- Two sites different cultures
- Failures in communicating
- Lack of staff engagement
- Labour ward forums and risk groups not well attended
- Problems accessing computers
- Handover problems
- Failure to communicate minor problems leads to escalation
- Patients identify staff attitude and communication failures as the most common complaints – Too much paperwork
- Failure to record information in

### Trust F perceptions
- All Trust staff held positive views with regard to the quality of relationships within the trust.
- **Terms used to describe Trust relationships included:**
  - Friendly, informal, co-operative, team working, mutually respectful.
  - Clinical relationships were perceived as good and Trust management were especially proud of the high level of clinical engagement in decision-making.
- Emphasis was given to the strong relationships forged between the senior team and clinical directors.
- Consultant’s relationships with management were perceived as generally very collaborative and supportive
- Mutual respect was seen as the cornerstone of the open and, inclusive and friendly culture which permeated all levels of the Trust.

<table>
<thead>
<tr>
<th>Staff relationships</th>
<th>Trust C perceptions</th>
<th>Trust D perceptions</th>
<th>Trust F perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Distinctive cultures within clinical directorates</td>
<td>Two sites different cultures</td>
<td>All Trust staff held positive views with regard to the quality of relationships within the trust.</td>
</tr>
<tr>
<td></td>
<td>Budgeting constraints caused friction</td>
<td>Failures in communicating</td>
<td><strong>Terms used to describe Trust relationships included:</strong> Friendly, informal, co-operative, team working, mutually respectful. Clinical relationships were perceived as good and Trust management were especially proud of the high level of clinical engagement in decision-making.</td>
</tr>
<tr>
<td></td>
<td>Nurses and doctors separate accountabilities and communication structures</td>
<td>Lack of staff engagement</td>
<td>Emphasis was given to the strong relationships forged between the senior team and clinical directors.</td>
</tr>
<tr>
<td></td>
<td>Team working good</td>
<td>Labour ward forums and risk groups not well attended</td>
<td>Consultant’s relationships with management were perceived as generally very collaborative and supportive</td>
</tr>
<tr>
<td></td>
<td>Use of a range of communication tools – staff forums, core brief, Ask the Boss, staff induction</td>
<td>Problems accessing computers</td>
<td>Mutual respect was seen as the cornerstone of the open and, inclusive and friendly culture which permeated all levels of the Trust.</td>
</tr>
<tr>
<td></td>
<td>Staff swamped with communications</td>
<td>Handover problems</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure to communicate minor problems leads to escalation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Patients identify staff attitude and communication failures as the most common complaints – Too much paperwork</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure to record information in</td>
<td></td>
</tr>
</tbody>
</table>

*Queen’s Printer and Controller HMSO 2010*
### Leadership

<table>
<thead>
<tr>
<th>Trust C perceptions</th>
<th>Trust D perceptions</th>
<th>Trust F perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Loss of Chief Executive creates shock and uncertainty</td>
<td>• Instability of senior leadership</td>
<td>• Senior executive team viewed as:</td>
</tr>
<tr>
<td>• Chief Executive was respected, visible, approachable</td>
<td>• Seven Chief Executives in six years’</td>
<td>Cohesive,</td>
</tr>
<tr>
<td>• Chief executives leadership style – consensual and inclusive</td>
<td>• Disruption caused by changes in management</td>
<td>Consensual</td>
</tr>
<tr>
<td>• Stable senior team</td>
<td>• Positive about new Chief Executive</td>
<td>Creates a safe environment,</td>
</tr>
<tr>
<td>Senior team not a strong team but a group of strong highly competent characters</td>
<td>• Senior leadership – visible, involved in walkabouts and informal meetings</td>
<td>Capable and draws in decision making</td>
</tr>
<tr>
<td>• Senior team highly focused operating in silos</td>
<td>• Chief Executive style – democratic, consensual, trusting, no game playing,</td>
<td>Open and approachable</td>
</tr>
<tr>
<td>• Chief Executive leads on infection control</td>
<td>approachable, welcomes consultants knocking on his door, engenders healthy respectful</td>
<td>Physically remote/not visible</td>
</tr>
<tr>
<td></td>
<td>relations in senior team, Innovative communicator uses – communications tools from</td>
<td>Problems with leadership communication</td>
</tr>
<tr>
<td></td>
<td>industry such as ‘Your right to be Heard’</td>
<td>Actively involve clinicians in decision making</td>
</tr>
<tr>
<td></td>
<td>• Chief Executive targets staff well-being and focuses on building external</td>
<td>The Executive team members and other senior managers also confirmed that the executive team were actually</td>
</tr>
<tr>
<td></td>
<td>relationships</td>
<td>actively engaged in involving clinicians in decision making</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The medical Director drew attention to how this relationship with Clinical Directors was being</td>
</tr>
<tr>
<td></td>
<td></td>
<td>developed and promoted by providing the clinical Directors with management training and support.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chief Executive Leadership style viewed as Inclusive, not visible, open, honest, respected</td>
</tr>
</tbody>
</table>
<pre><code>                                                                                 |                                                                                     | Proactive, supportive, facilitative, calm and trusted                                                  |
</code></pre>

---

**Queen’s Printer and Controller HMSO 2010**
<table>
<thead>
<tr>
<th>Priorities</th>
<th>Trust C perceptions</th>
<th>Trust D perceptions</th>
<th>Trust F perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• High priority patient safety</td>
<td>• Doctors and nurses see patient safety as the highest priority</td>
<td>• Staff generally viewed that Trust prioritised achieving targets and financial performance over patient safety. Priority for patient safety was rising up the Trust agenda and for some it related to quality services</td>
<td></td>
</tr>
<tr>
<td>• Patient safety priority driven by infection control failures</td>
<td>• Managers not perceive patient safety highest priority</td>
<td>• Most staff highlighted the problems and implications of prioritising performance and achieving targets. Examples were given of how targets created bottlenecks in patient processes, led to escalation of patient safety incidents and created ‘Cinderella’ services.</td>
<td></td>
</tr>
<tr>
<td>• Financial constraints impact on tackling patient safety</td>
<td>• Manager priority achieving targets – staffing levels depleted staff not able to maintain training</td>
<td>• Risk management which in recent years has become fully integrated into Trust governance systems.</td>
<td></td>
</tr>
<tr>
<td>• Leadership involved in patient safety initiatives</td>
<td></td>
<td>• Greater emphasis on patient safety and patient focus was also attributed to the publics growing awareness of patient safety:</td>
<td></td>
</tr>
<tr>
<td>• Priority for good clinical governance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Attitudes to organisational change

<table>
<thead>
<tr>
<th></th>
<th>Trust C perceptions</th>
<th>Trust D perceptions</th>
<th>Trust F perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Criticism of Agenda for Change implementation</td>
<td>• Organisation in transition</td>
<td>• Change was viewed as bewildering while others reflected that constant change meant that staff had become accustomed to change and hence were less fearful more resilient.</td>
</tr>
<tr>
<td></td>
<td>• Difficulties in implementing large scale change</td>
<td>• A basket case</td>
<td>• Agenda for change had been implemented well and consultation with regard to the building of the new cardio-thoracic centre had produced positive results</td>
</tr>
<tr>
<td></td>
<td>• Use of a range of communications media</td>
<td>• Consultation with staff in designing service re-configuration with regard to movement to a new hospital site in 2010</td>
<td>• The Trust was good at developing plans but was not accomplished at implementation which involved consultation with staff.</td>
</tr>
<tr>
<td></td>
<td>• Staffing review massive cost cutting exercise</td>
<td>• Much public consultation and participation in designing change</td>
<td>• Difficulties in managing change were also attributed to the Trusts inability to effectively communicate negative performance and hence create urgency and need for change.</td>
</tr>
<tr>
<td></td>
<td>• Changed managed slowly</td>
<td>• Agenda for Change implemented well – Trust possesses a ‘good system for picking up anomalies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• A disabling level of change</td>
<td>• A tick box approach to change</td>
<td></td>
</tr>
</tbody>
</table>

SDO Project (08/1501/92)
### Perceptions of Organisational Learning

<table>
<thead>
<tr>
<th>Trust C perceptions</th>
<th>Trust D perceptions</th>
<th>Trust F perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open communication</td>
<td>Table Top investigations – an innovative technique for analysing incidents, mobilising problem solving and disseminating learning</td>
<td>Trust was successfully engaging to develop and transmit learning with regard to Serious Untoward Incidents (SUI).</td>
</tr>
<tr>
<td>Staff confident to ask questions</td>
<td>High volume of reported incidents limit learning and feedback</td>
<td>Staff members were confident that organisational learning developed from clinical incidents had been achieved and that each directorate was effectively feeding back learning to Trust staff.</td>
</tr>
<tr>
<td>High awareness of safety</td>
<td>Blame culture exists</td>
<td>The most effective organisational learning occurred from personal experience of an incident.</td>
</tr>
<tr>
<td>Staff accountable for actions</td>
<td>PALS involvement high lights patient safety problems and is used as a source of learning</td>
<td>Trust staff identified a range of behaviours which promoted organisational learning which included: A questioning attitude; participation of staff in investigation of incidents and production of new procedures and policy;</td>
</tr>
<tr>
<td>Electronic reporting encourages reporting</td>
<td></td>
<td>Development of extra-organisational links with other Trusts and government agencies (NPSA)</td>
</tr>
<tr>
<td>Diverse communications media – safety bulletins, safety alerts, reconstruction of incidents, virtual patient safety forum</td>
<td></td>
<td>The development of a mindset were check lists were used and use of analysis tools</td>
</tr>
<tr>
<td>Engaged with Patient Investigation forum, SHA and NPSA</td>
<td></td>
<td>Good feed back to staff was seen as reinforcing staff engagement with incident reporting.</td>
</tr>
<tr>
<td>Much attention focused on analysis of failures and development of new practices</td>
<td></td>
<td>Systems to enable organisational learning or 'Closing the loop' were identified at mainly Directorate level.</td>
</tr>
<tr>
<td>Analysis identifies difficulty in communication across professional domains - 'Translating information to other worlds'</td>
<td></td>
<td>Particular activities were highlighted which improved infection control. These included: ‘look back’ investigations, writing new policies and policing practice.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proactive attempts by the Trust management to standardise reporting across all directorates</td>
</tr>
<tr>
<td>Perceptions of External Contextual Influences</td>
<td>Trust C perceptions</td>
<td>Trust D perceptions</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>• Massive external shocks</td>
<td></td>
<td>• Violence and aggression increasing in society</td>
</tr>
<tr>
<td>• PCTs reducing services</td>
<td></td>
<td>• A dangerous Trust – recent experience of a ‘hostage taking situation’</td>
</tr>
<tr>
<td>• Disruption of PCT reconfiguration</td>
<td></td>
<td>• Positive relationships with PCT – ‘A relationship to die for’</td>
</tr>
<tr>
<td>• Financial shocks – cost saving programme</td>
<td></td>
<td>• Shortage of qualified nurses in labour market</td>
</tr>
<tr>
<td>• PFI project shelved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Working with local media - Media supportive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Perception that shocks are inevitable</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processes</td>
<td>Trust C Perceptions</td>
<td>Trust D Perceptions</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>• High focus on analysis of patient safety incidents</td>
<td>• Good reporting processes</td>
<td>• Directorates feeding back learning to Trust staff</td>
</tr>
<tr>
<td>• Integration of governance, risk management</td>
<td>• Improvements necessary in near miss reporting</td>
<td>• Participation of staff in investigation of incidents and production of new procedures and policy;</td>
</tr>
<tr>
<td>• Task forces Patient safety and Infection control</td>
<td>• Incidents often need to be upgraded</td>
<td>• Staff participation in incident investigations and developing new procedures was seen as promoting safe behaviours.</td>
</tr>
<tr>
<td>• Directorates operating in silos</td>
<td>• Nurses risk assess</td>
<td>• Development of extra-organisational links with other Trusts and government agencies (NPSA).</td>
</tr>
<tr>
<td>• Development of extra-organisational links</td>
<td>• Infrastructure for managing risk good at corporate level but not at directorate level</td>
<td>• Developing a mindset were check lists are constantly employed to confirm and dissemination</td>
</tr>
<tr>
<td>• Use of electronic reporting</td>
<td>• Differences in Trust policies and practices at different Trust sites</td>
<td>• Understanding of learning and application of analysis tools to identify patient safety trends.</td>
</tr>
<tr>
<td>• Staff not fearful of reporting</td>
<td></td>
<td>• Systems to enable organisational learning or ‘Closing the loop’ were . Look back investigations, writing new policies and policing practice</td>
</tr>
<tr>
<td>• Strong safety culture</td>
<td></td>
<td>• Formal methods of reporting complaints and incidents were also employed to transfer knowledge from the corporate risk team to the directorate mangers responsible for risk.</td>
</tr>
<tr>
<td>• Near misses reported</td>
<td></td>
<td>• Proactive attempts by the Trust management to standardise reporting across all directorates was also undertaken.</td>
</tr>
<tr>
<td>• Excellent reporting</td>
<td></td>
<td>• Reporting of incidents was considered high</td>
</tr>
<tr>
<td>• Improved doctors engagement in reporting</td>
<td></td>
<td>• 11. Nurses were better at reporting than doctors.</td>
</tr>
<tr>
<td>• Electronic reporting improves level of reporting</td>
<td></td>
<td>• 12. Doctors were perceived as more likely to discuss incidents with medical colleagues and under reporting of violence and abuse of staff by patients was recognised as under reported as were prescribing errors.</td>
</tr>
<tr>
<td>• Infection control nurses not report – damages team work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Existence of patient safety group and infection control team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Directorate level risk analysis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
c. ‘Passive Trust’

<table>
<thead>
<tr>
<th>Trust E Perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceptions of patient safety</strong></td>
</tr>
<tr>
<td>• Out standing results patient mortality</td>
</tr>
<tr>
<td>• Centre E much safer than other trusts</td>
</tr>
<tr>
<td>High performing</td>
</tr>
<tr>
<td><strong>Perceptions of staff wellbeing</strong></td>
</tr>
<tr>
<td>• Stressed</td>
</tr>
<tr>
<td>• Challenged</td>
</tr>
<tr>
<td>• Pressured</td>
</tr>
<tr>
<td>• Supportive Occupational Health systems</td>
</tr>
<tr>
<td>• Training well structured</td>
</tr>
<tr>
<td><strong>Trust relationships</strong></td>
</tr>
<tr>
<td>• String community affiliation</td>
</tr>
<tr>
<td>• Longstanding tenure of staff</td>
</tr>
<tr>
<td>• Strong collegial relationships</td>
</tr>
<tr>
<td>• Existence of a dominant clinical powerful elite</td>
</tr>
<tr>
<td>• Committed staff</td>
</tr>
<tr>
<td>• Strong clinical involvement in management</td>
</tr>
<tr>
<td><strong>Perceptions of trust leadership</strong></td>
</tr>
<tr>
<td>• Senior team remote</td>
</tr>
<tr>
<td>• Directorates working in silos</td>
</tr>
<tr>
<td>• Bureaucratic style of leadership</td>
</tr>
<tr>
<td>• Beautiful plans but difficulty putting plans into practice</td>
</tr>
<tr>
<td>• Slow decision making</td>
</tr>
<tr>
<td>• Leadership reactive trying to move forward on too many fronts</td>
</tr>
<tr>
<td>• Chief Executive recently left has left a vacuum</td>
</tr>
<tr>
<td>• Instability and uncertainty</td>
</tr>
<tr>
<td>• Acting Chief Executive seen in a positive light</td>
</tr>
</tbody>
</table>
## Trust E Perceptions

| Organisational Learning | • Support for learning  
• No restriction on training  
• Development of a corporate curriculum  
• Fair blame culture more relevant  
• Poor feedback from incident reporting  
• Front line worker need to get back to practicing the basics of nursing care and develop soft communication skills to build relationships with patients  
• Failure in transmitting learning |
|-------------------------|---|
| Priorities              | • Performance culture focusing on achievement of targets  
• A resource led organisation  
• Patient safety not on management agenda |
| Attitudes to organisational change | • Agenda for change disruptive generates low morale  
• Reactive – fire fighting  
• Emphasis on continuity rather than innovation  
• Overwhelmed and severely challenged  
• Involvement in the ‘Productive ward Initiative  
• Implementation of deep cleaning programme |
<table>
<thead>
<tr>
<th>Trust E Perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceptions of external influences</td>
</tr>
<tr>
<td>• Performance targets create a vicious circle</td>
</tr>
<tr>
<td>• Target culture compromises safety</td>
</tr>
<tr>
<td>• Performance targets lead to crisis management</td>
</tr>
<tr>
<td>• Training of junior doctors limits their expertise</td>
</tr>
<tr>
<td>• Junior doctors training limits continuity of care</td>
</tr>
<tr>
<td>• High patient expectations</td>
</tr>
<tr>
<td>• 3% reduction in PCT services</td>
</tr>
<tr>
<td>• Compromise reached with PCT</td>
</tr>
<tr>
<td>Processes</td>
</tr>
<tr>
<td>• Doctors not report</td>
</tr>
<tr>
<td>• Nurses scared of the consequences for not reporting</td>
</tr>
<tr>
<td>• Staff less likely to report their own errors</td>
</tr>
<tr>
<td>• Existence of a blame culture</td>
</tr>
<tr>
<td>• Time consuming reporting</td>
</tr>
</tbody>
</table>
d. Trusts ‘In Recovery’

<table>
<thead>
<tr>
<th>Perceptions of patient safety</th>
<th>Trust G perceptions</th>
<th>Trust B perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• A major transformational change strategy encompassing a wide range of initiatives</td>
<td>• MRSA levels improving</td>
</tr>
<tr>
<td></td>
<td>• Infection initiatives feeding a monster</td>
<td>• Trust ‘numbed to safety’ ‘tolerant of errors’</td>
</tr>
<tr>
<td></td>
<td>• Patient safety and quality agendas achieved through adopting ‘Lean thinking management approaches’</td>
<td>• Medical staff risk averse</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Patient safety not understood as an explicit strategy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Error often difficult to identify</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Perceptions of Staff well-being</th>
<th>Trust G perceptions</th>
<th>Trust B perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Staff well being recovering after staff made redundant</td>
<td>• Poor staff morale</td>
</tr>
<tr>
<td></td>
<td>• Staff goodwill</td>
<td>• High levels of stress</td>
</tr>
<tr>
<td></td>
<td>• Staff stressed, pressured and overworked</td>
<td>• Dissatisfaction with Agenda for Change</td>
</tr>
<tr>
<td></td>
<td>• Distrust of senior leadership</td>
<td>• High levels of incidents elderly care</td>
</tr>
<tr>
<td></td>
<td>• Negative affect on staff caused by</td>
<td>• ‘A toxic Trust environment’</td>
</tr>
<tr>
<td></td>
<td>• displacement and poor staffing levels</td>
<td>• Staff anxious with regard to future jobs</td>
</tr>
<tr>
<td></td>
<td>• Staff not access training</td>
<td>• Staff stressed and overloaded</td>
</tr>
<tr>
<td></td>
<td>• Longstanding tenure of Trust staff</td>
<td>• Vacancy control measures in operation</td>
</tr>
<tr>
<td></td>
<td>• Fears for staff security</td>
<td>• Establishment levels need revision</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Displacement of staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Heavy workload</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Violence and aggression increasing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cohesive and supportive staff relationships</td>
</tr>
<tr>
<td>Perceptions of Trust Leadership</td>
<td>Trust G perceptions</td>
<td>Trust B perceptions</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>• Short tenure senior team</td>
<td>• Devolved directorate leadership no longer operates</td>
</tr>
<tr>
<td></td>
<td>• Volatility in leadership</td>
<td>• Severe Trust trauma causes control to be diverted to corporate team</td>
</tr>
<tr>
<td></td>
<td>• Senior team highly experienced and skilled</td>
<td>• Directorates disenfranchised</td>
</tr>
<tr>
<td></td>
<td>• Staff distrustful of leadership</td>
<td>• Senior team stable</td>
</tr>
<tr>
<td></td>
<td>• Senior management communication not reaching wards</td>
<td>• Bad behaviours tolerated</td>
</tr>
<tr>
<td></td>
<td>• Chief Executive perceived as – Flexible, clear communicator, clear about communicating expectations, gives autonomy, communicates passion, possesses staff selection skills, visible and engages well with staff, recognises problems</td>
<td>• Senior team not a cohesive group – dysfunctional</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Powerful factions in senior team</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chief Executive turnover high</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chief Executive – able communicator, visible respected, enables strong relationships with clinicians</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chief Executive fails to operationalise policy</td>
</tr>
<tr>
<td>Trust Relationships</td>
<td>Trust G perceptions</td>
<td>Trust B perceptions</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>Improvements in clinical engagement with management but clinicians overloaded</td>
<td>Long standing tenure of staff</td>
</tr>
<tr>
<td></td>
<td>Historically consultants clash with managers</td>
<td>Informal long established relationships permeate organisation</td>
</tr>
<tr>
<td></td>
<td>Family culture – cohesive relationships</td>
<td>Senior clinical involvement in management</td>
</tr>
<tr>
<td></td>
<td>Pockets of good multi-disciplinary team work</td>
<td>Consultant and medical powerbase eroding</td>
</tr>
<tr>
<td></td>
<td>Clinicians longstanding tenure provides continuity</td>
<td>Nursing leadership role in decision making increasing</td>
</tr>
<tr>
<td></td>
<td>Problems cascading information</td>
<td>Matrons high profile role championing nurses</td>
</tr>
<tr>
<td></td>
<td>Nurses not engaged and questioning</td>
<td>Junior doctors embracing a team orientated approach</td>
</tr>
<tr>
<td></td>
<td>Existence of blame culture</td>
<td>Long standing tenure of staff</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organisational Learning</th>
<th>Trust G perceptions</th>
<th>Trust B perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Shock – loss of corporate memory</td>
<td>Open and honest attitude to identifying breaches in safety</td>
</tr>
<tr>
<td></td>
<td>Failures in feedback – a tick box culture</td>
<td>Difficulties with blame culture</td>
</tr>
<tr>
<td></td>
<td>Directorate control of risk analysis – not sharing learning</td>
<td>Failure to transmit learning from directorates – ‘a culture of secrecy’</td>
</tr>
<tr>
<td></td>
<td>Access to training difficult</td>
<td>Direct experience of safety incident is the most effective learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failures in learning – more analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More engagement with patients</td>
</tr>
<tr>
<td>Priorities</td>
<td>Trust G perceptions</td>
<td>Trust B perceptions</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>• Patient safety an emerging priority</td>
<td>• Trust complacent patient safety</td>
<td></td>
</tr>
<tr>
<td>• Solving financial problems first</td>
<td>• Risks placed on risk register not addressed</td>
<td></td>
</tr>
<tr>
<td>• Patient choice driving patient safety priority</td>
<td>• Patient safety issues tackled reactively</td>
<td></td>
</tr>
<tr>
<td>• Lip service paid to patient safety (Risk Manager)</td>
<td>• Nurses to busy to focus on patient safety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Staffing regularly reported as an incident but not tackled by Trust Leadership</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Directorate managers failed to meet deadlines for risk reporting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Trust regarded as good at hitting targets</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudes to Organisational Change</th>
<th>Trust G perceptions</th>
<th>Trust B perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Closed, apathetic, not easy with change</td>
<td>• Dissatisfaction with poor implementation of Agenda for Change</td>
<td></td>
</tr>
<tr>
<td>• Staff overwhelmed by change</td>
<td>• Top down process approach for implementing change</td>
<td></td>
</tr>
<tr>
<td>• Low staff turnover linked to conservative approach and resistance to change</td>
<td>• Failure of staff to participate in change</td>
<td></td>
</tr>
<tr>
<td>• Adoption of ‘Lean management tools builds confidence in tackling change</td>
<td>• Conservative and resistant to change</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Chief Executive champions service change</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Local community influence ‘parochial’ resistant to change</td>
<td></td>
</tr>
<tr>
<td>Perceptions of External Influences</td>
<td>Trust G perceptions</td>
<td>Trust B perceptions</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>PCT relationships poor in past</td>
<td>Massive External Shocks</td>
</tr>
<tr>
<td></td>
<td>Building new bridges with PCTs</td>
<td>Disputes with PCTs</td>
</tr>
<tr>
<td></td>
<td>Much competition – lost plastic surgery speciality</td>
<td>Reconfiguration of PCTs</td>
</tr>
<tr>
<td></td>
<td>Media relationships improving</td>
<td>Trust forced to cut services</td>
</tr>
<tr>
<td></td>
<td>History of media relationships as being ‘a killer’</td>
<td>Loss of jobs down sizing</td>
</tr>
</tbody>
</table>

| Process influences                | Patient safety under reported | Nurses confident at reporting incidents |
|-----------------------------------| Blame culture exists          | SUI’s incorrectly graded |
|                                   | Improvements integrating clinical governance and risk analysis | Directorate structures dominate reporting, analysis, investigation and feedback. |
|                                   | Poor systems for supporting staff | Systems convoluted |
Appendix 8 NPSA Advice

NPSA guidance on NHS Chief Executives’ personal contribution to delivering safety healthcare (2004)

<table>
<thead>
<tr>
<th>Leadership activity</th>
<th>Key features</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Build a safety culture</td>
<td>▪ Baseline assessment&lt;br&gt;▪ Review incidents&lt;br&gt;▪ Process for staff so they can talk about incidents and are treated fairly</td>
</tr>
<tr>
<td>2. Lead and support staff</td>
<td>▪ Hold patient safety briefings&lt;br&gt;▪ Have mechanisms that encourage staff to report and suggest ideas for improvement&lt;br&gt;▪ Develop communication and feedback mechanisms&lt;br&gt;▪ Clearly identify roles and responsibilities for risk management and patient safety</td>
</tr>
<tr>
<td>3. Integrate risk management activity</td>
<td>▪ Is patient safety integrated in organizational strategy?&lt;br&gt;▪ Do pt safety objectives feature in the clinical governance and plan&lt;br&gt;▪ Is patient safety on ‘equal footing’ with</td>
</tr>
<tr>
<td>4. Promote reporting</td>
<td>▪ Encourage staff to report pt safety problems and near misses&lt;br&gt;▪ Link reporting system to National Reporting and Learning System&lt;br&gt;▪ Aim to reduce the severity of incidents and monitor action plans to achieve this</td>
</tr>
<tr>
<td>5. Involve patients and the public</td>
<td>▪ Produce a policy and obtain board level support for it&lt;br&gt;▪ Involve patients and families in incident investigation&lt;br&gt;▪ Involve patients and families in recommendations made and solutions developed</td>
</tr>
<tr>
<td>6. Learn and share safety lessons</td>
<td>▪ Use root cause analysis&lt;br&gt;▪ make sure up to eight key staff are trained in how to use it&lt;br&gt;▪ analyse frequency, type &amp; severity of incidents and lessons learned, report this to the board&lt;br&gt;▪ Share with other Trusts?</td>
</tr>
<tr>
<td>7. Implementing solutions</td>
<td>▪ Review practice in relation to NPSA alerts, recommendations and findings of local, regional &amp; national enquiries&lt;br&gt;▪ Use the clinical governance committee to steer action plans&lt;br&gt;▪ Establish a network to learn from others who have successfully implemented patient safety solutions</td>
</tr>
</tbody>
</table>
Appendix 9 Upward appraisal questionnaire

Safety climate (management commitment) (alpha from the present study: 0.75)

1. I trust my CEO
2. My CEO has good 'people skills'
3. My CEO is genuinely concerned about the health and safety of workers in our hospital(s)/ healthcare institutions
4. My CEO acts promptly on patient safety concerns
5. If you say too much about patient safety, the CEO might fire you
6. I receive no communication in any form about patient safety from my CEO

Safety leadership behaviours. Factor structure from Bryden (2006), alpha ratings from the present study.

Manifest safety behaviours (0.73)
He/she clearly shows that safety is his core principle
He/she makes time for safety discussions when under pressure
His/her safety beliefs are viewed sincerely by his team
He/she wants all procedures to be followed even if it means jobs take longer
He/she frequently discusses/assesses performance against safety compared with other single business issues

Safety Advocacy (0.84)
He/she always promotes safety during site visits
He/she clearly demonstrates a personal passion for safety during site visits
HSE performance has a strong impact on the way he/she appraises my performance

Safety response (0.69)
He/she celebrates safety performance as actively as in other business areas
He/she responds quickly and with clarity to workforce concerns
He/she always checks whether the workforce are satisfied with his/her response to their concerns
## Appendix 10  Coding Framework (1)

**NPSA guidance on NHS Chief Executives’ personal contribution to delivering safety healthcare (2004)**

<table>
<thead>
<tr>
<th>Leadership activity</th>
<th>Key features</th>
</tr>
</thead>
</table>
| **8. Build a safety culture** | - Baseline assessment  
- Review incidents  
- Process for staff so they can talk about incidents and are treated fairly |
| **9. Lead and support staff** | - Hold patient safety briefings  
- Have mechanisms that encourage staff to report and suggest ideas for improvement  
- Develop communication and feedback mechanisms  
- Clearly identify roles and responsibilities for risk management and patient safety |
| **10. Integrate risk management activity** | - Is patient safety integrated in organizational strategy?  
- Do pt safety objectives feature in the clinical governance and plan  
- Is patient safety on ‘equal footing’ with |
| **11. Promote reporting** | - Encourage staff to report pt safety problems and near misses  
- Link reporting system to National Reporting and Learning System  
- Aim to reduce the severity of incidents and monitor action plans to achieve this |
| **12. Involve patients and the public** | - Produce a policy and obtain board level support for it  
- Involve patients and families in incident investigation  
- Involve patients and families in recommendations made and solutions developed |
| **13. Learn and share safety lessons** | - Use root cause analysis  
- make sure up to eight key staff are trained in how to use it  
- analyse frequency, type & severity of incidents and lessons learned, report this to the board  
- Share with other Trusts? |
| **14. Implementing solutions** | - Review practice in relation to NPSA alerts, recommendations and findings of local, regional & national enquiries  
- Use the clinical governance committee to steer action plans  
- Establish a network to learn from others who have successfully implemented patient safety solutions |
## Appendix 11 Coding Framework (2)

### Transformational/ transactional/ passive leadership framework

<table>
<thead>
<tr>
<th>Style</th>
<th>Definition</th>
</tr>
</thead>
</table>
| **Transformational leadership** | i. Idealised leaders provide their followers with a sense of purpose intended to move them to achieve more than they would normally expect to achieve. They articulate shared goals regarding the core values of the organization and instil self-confidence and self-belief in subordinates.  
ii. The leader behaves in ways that are congruent with the attributes above. They act with integrity, doing what is (morally) right rather than most expedient.  
iii. Inspirationally motivating leaders articulate a mutually attractive vision for future performance in their organization. They provide context-specific meaning for this attractive future state (i.e. an organization where employees are never injured) symbolically and through story-telling in order to motivate others to achieve performance beyond expectations  
iv. Intellectually stimulating leaders encourage followers to challenge assumptions and question traditional approaches to work (i.e. not relying on yesterday's solutions). They encourage employees to discuss problems and communicate with each other.  
v. Individually considerate leaders emphasise the importance of each employee to the success of the organization. They understand followers' individual capabilities and development needs (i.e. specific training, gaining new experience, mentoring) in order to build loyalty and motivate followers to higher levels of effort at work. They also take an active interest in the well-being of individuals in areas such as work-life balance, stress, and safety. |
| **Transactional leadership** | i. Transactional leaders emphasise setting and enforcing standards. Contingent reward is setting goals and targets, making it clear who is responsible for delivering them, and what they will receive if and when goals are met. The recognition can either be explicit (contractual) or implied. Implied recognition for achieving agreed levels of performance, such as words of praise provide a source of strong, non-financial reinforcement for effective behaviours.  
ii. Leaders who employ active management-by-exception focus on deviations from standards and irregularities e.g. non-compliance with safety rules. They seek out problems. |
| **Passive leadership** | i. Leaders who engage in the passive version of management-by-exception wait for deviations from agreed performance standards to manifest as problems or incidents before taking action. ‘Action’ usually involves blaming individuals. This is a reactive style of leadership and generally considered to be ineffective.  
ii. Laissez-faire is the abdication or absence of leadership. |
### Appendix 12  Integrated results of the leadership interviews

<table>
<thead>
<tr>
<th>Transformational leadership</th>
<th>Unique to low-rated Trusts’ leaders</th>
<th>Common to both groups</th>
<th>Unique to high-rated Trusts’ leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Communication</td>
<td>Communication</td>
<td>Communication</td>
</tr>
<tr>
<td></td>
<td>• Encouraging constructive challenge</td>
<td>• Listening to others opinions</td>
<td>• Encouraging open communication</td>
</tr>
<tr>
<td></td>
<td>• Debating issues and come to a conclusion</td>
<td>• Leadership style</td>
<td>• Communicating messages directly</td>
</tr>
<tr>
<td></td>
<td>• Being aware of self as a role-model</td>
<td>• Approachable</td>
<td>• Sharing personal understanding with others</td>
</tr>
<tr>
<td></td>
<td>• Ensuring a no blame culture</td>
<td>• Open</td>
<td>• Explaining why change is necessary</td>
</tr>
<tr>
<td></td>
<td>• Using a facilitative style to get ideas from others</td>
<td>• Trusting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Influencing the culture around MRSA</td>
<td>• Being inclusive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Letting personnel set their own standards</td>
<td>• Influencing teams to understand the big picture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Preferring people come to their own conclusions</td>
<td>• Having a team who can deliver so the CEO does not have to be involved in all tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Focusing on standards</td>
<td>• Being supportive of staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Setting the safety agenda, ethos and culture</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Being visible to executive directors</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Queen’s Printer and Controller HMSO 2010*
### Transactional Leadership

<table>
<thead>
<tr>
<th>Unique to low-rated Trusts’ leaders</th>
<th>Common to both groups</th>
<th>Unique to high-rated Trusts’ leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clarity</strong></td>
<td><strong>Leadership style</strong></td>
<td></td>
</tr>
<tr>
<td>Making it clear how I expect people to behave</td>
<td>Treating people fairly</td>
<td>Being unforgiving when there has been departure from policy and agreed direction</td>
</tr>
<tr>
<td>Making sure people understand what I want</td>
<td>Understanding the detail about what is happening</td>
<td>Dealing with people who have stepped out of line</td>
</tr>
<tr>
<td>Setting clear goals and expecting people to achieve them</td>
<td>Taking action immediately when standards are not adhered to</td>
<td>Being tough when required</td>
</tr>
<tr>
<td>Being clear about what I want from the executive directors</td>
<td>Holding people to account and taking action</td>
<td>Engaging in too much detail on occasion</td>
</tr>
<tr>
<td>Having transparent objectives on the intranet</td>
<td>Moving into a command and control mode when the team needs my leadership to deliver</td>
<td>(there is not a consistent attitude between leaders on this issue)</td>
</tr>
<tr>
<td>Make sure people understand that I am not running a democracy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Leadership style

- Agreeing plans for improvement and reviewing progress against them
- Developing indicators for patient safety
- Getting angry if people have not done what they are responsible for
- Seeing and responding to every patient complaint
- Monitoring performance at the sharp end
- Randomly attending meetings to see what is on the agenda
- Setting the standards the board expects and telling people we will accept no lower than those standards
- Monitoring progress against board’s action plan
- Speaking my mind
- Spending time marshalling the team and coordinating activities
- Shouting only when there is persistent failure and no valid excuse.
<table>
<thead>
<tr>
<th>Unique to low-rated Trusts’ leaders</th>
<th>Common to both groups</th>
<th>Unique to high-rated Trusts’ leaders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Passive</strong></td>
<td><strong>-none-</strong></td>
<td><strong>-none-</strong></td>
</tr>
<tr>
<td>• Not driving initiatives hard enough</td>
<td></td>
<td>• Distant from day-to-day operations (as a risk of using a devolved style)</td>
</tr>
<tr>
<td>• Being indecisive in certain situations</td>
<td></td>
<td>• Paying insufficient attention to detail</td>
</tr>
<tr>
<td><strong>Emergent leadership themes</strong></td>
<td></td>
<td><strong>Aware of the financial consequences of not enough transactional leadership</strong></td>
</tr>
<tr>
<td>• Spending less time being visible on the shop floor than I should</td>
<td></td>
<td>• Leadership style is adaptable depending on the circumstances</td>
</tr>
<tr>
<td>• Would never declare that we are 100 per cent in compliance with rules and regulations</td>
<td></td>
<td>• Personally driven in terms of standards and quality of service</td>
</tr>
<tr>
<td>• Developing balanced scorecard</td>
<td></td>
<td>• Leadership involvement in risk assessment</td>
</tr>
<tr>
<td>• Would struggle to adapt to a new style</td>
<td></td>
<td>• Refuse to give ground on the things I think are important</td>
</tr>
<tr>
<td>• Community aspect to leadership as the board are seen as representatives of the local people</td>
<td></td>
<td>• Meeting all staff in inductions</td>
</tr>
<tr>
<td>• Influencing other managers to convey my style and vision</td>
<td></td>
<td>• Conceptual issues regarding discriminating preventable from non-preventable harm</td>
</tr>
<tr>
<td>• Increased incidents demonstrate that people are more aware rather than the hospital is less safe</td>
<td></td>
<td>• “CEOs get the sack for waiting list numbers or money, not from running a crap service. Would have to have a disaster in terms of safety to get the sack, it is not yet given to me as a priority”</td>
</tr>
<tr>
<td>• Emphasising that we are very much responsible for our own performance, our own decisions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Having a right to be angry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Aspiring to zero incidents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Integrating failures into the new cost management system</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix 13  Responses to key questions by leaders in ‘high’ Trusts

<table>
<thead>
<tr>
<th>Trust A</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5: Are there any leaders from the past or from history that you admire and take lessons from?</td>
<td>Nelson Mandela admired for humane approach to adversity. Senior leaders need to be humane in times of trial, not look for people to blame.</td>
</tr>
<tr>
<td>Q6: What, if anything, would you change about your leadership style?</td>
<td>No particular changes. Considers own leadership style sufficiently flexible and adaptable to handle diverse situations.</td>
</tr>
<tr>
<td>Q7: If you look at the Trust what aspects do you have control over or influence over?</td>
<td>CEO is personally responsible for governance - includes patient safety. Organisational responsibility to set in place systems and processes for safe operation.</td>
</tr>
<tr>
<td>Q8: Is there anything you do not have any influence over?</td>
<td>CEO cannot influence individuals’ work habits but can influence systems that should set culture</td>
</tr>
<tr>
<td>Q11: Can you describe the safety culture in the Trust?</td>
<td>Focused; sound reporting systems; learn from incidents; not a blame culture, empowers everyone to work safely. Trust is motivated to investigate weakness as well as implement changes to overcome identified weakness.</td>
</tr>
<tr>
<td>Q15: Do you think it is possible to avoid all adverse events?</td>
<td>Impossible to avoid all adverse events. If no events are reported, then suspects problems with reporting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trust B</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5: Are there any leaders from the past or from history that you admire and take lessons from?</td>
<td>Lesson from history is that all leaders are flawed. It’s good to read about others’ weaknesses and strengths- increased awareness allows individuals to monitor themselves.</td>
</tr>
<tr>
<td>Q6: What, if anything, would you change about your leadership style?</td>
<td>His/her attention to detail. The CEO doesn’t need to review every budget line etc… Prefers to focus on bigger picture. Engaging and listening to staff that manage the ‘trivial and boring’ bits does not come naturally/easily.</td>
</tr>
<tr>
<td>Q7: If you look at the Trust what aspects do you have control over or influence over?</td>
<td>Tries to signal engaged form of leadership which hopes will lead to engagement with people and issues. Walk Rounds are valued as they allow direct communication/delivery of messages. Set objectives, try to create culture and support systems, measure systems and take action to correct weaknesses. Training</td>
</tr>
<tr>
<td>Q8: Is there anything you do not have any influence over?</td>
<td>The individual interventions that go on every day and whether people have safety in mind. We need systems and a culture to guarantee that.</td>
</tr>
<tr>
<td>Q11: Can you describe the safety culture in the Trust?</td>
<td>“We don’t have a safety culture” - we maintain a decent clinical culture and a good standard system for reporting incidents, acting on failures and following through action plans. However, we are not proactive or systematic and a normative levels of harm has become tolerated in the NHS which needs to change.</td>
</tr>
<tr>
<td>Q15: Do you think it is possible to avoid all adverse events?</td>
<td>By definition it is possible to reduce avoidable incidents to zero. However, there is no short term prospect for the NHS to reduce avoidable incidents to zero.</td>
</tr>
<tr>
<td>Q5: Are there any leaders from the past or from history that you admire and take lessons from?</td>
<td>Mike Breely, the England Cricket Captain in 1980s. He was strongly focused on motivation and involvement with teams.</td>
</tr>
<tr>
<td>Q6: What, if anything, would you change about your leadership style?</td>
<td>Would delegate more explicitly sooner, run a more directive approach on performance management, and focus on objectives rather than letting them objectives drift when operating democratic, conversational style of management.</td>
</tr>
<tr>
<td>Q7: If you look at the Trust what aspects do you have control over or influence over?</td>
<td>Has influence over, “the totality of it…responsibility for the whole spectrum of performance ranging from clinical performance and quality, national compliance with codes (and requirements of monitors)… right through to financial and operational performance” Influence is exerted through setting policy and procedures.</td>
</tr>
<tr>
<td>Q8: Is there anything you do not have any influence over?</td>
<td>Individual behaviours and actions</td>
</tr>
<tr>
<td>Q11: Can you describe the safety culture in the Trust?</td>
<td>It is evolving, moving from simply reporting to understanding personal safety roles. Is striving for a “lived and practised” safety culture with learning, action, change, audits and improvements.</td>
</tr>
<tr>
<td>Q15: Do you think it is possible to avoid all adverse events?</td>
<td>Not every adverse event can be prevented, however, many more could be prevented by consistent application of policy, procedure and common sense.</td>
</tr>
</tbody>
</table>
Appendix 14  Responses to key questions by leaders in 'low' Trusts

<table>
<thead>
<tr>
<th>Trust F</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5: Are there any leaders from the past or from history that you admire and take lessons from?</td>
<td>Previous xxx Manager who was inspirational and popular at a time the organisation performed well and led in style similar to interviewee’s own (a strong team player, approachable, engaging, fair)</td>
</tr>
<tr>
<td>Q6: What, if anything, would you change about your leadership style?</td>
<td>Dealing with confrontational situations, “Some believe that I lack a “harder edge in ... management style”</td>
</tr>
<tr>
<td>Q7: If you look at the Trust what aspects do you have control over or influence over?</td>
<td>Makes sure that the system of safe practice is in place and influences the safety strategy as a member of governance committee. Holds executive directors accountable for delivering the safety agenda and seeks to identify trends within incident and governance reports too investigate</td>
</tr>
<tr>
<td>Q8: Is there anything you do not have any influence over?</td>
<td>Would like more influence on the behaviour of the local primary care organisations- commissioners of services as PCT is driven by targets and deadlines at expense of patient interests. Wishes had more influence on the Health Ministers and Department of Health.</td>
</tr>
<tr>
<td>Q11: Can you describe the safety culture in the Trust?</td>
<td>A ‘no blame’ culture – seeks to identify near miss trends as well as incidents. Encourage reporting of incidents and view increased incident reports as reflecting increased awareness (rather than a decrease in safety). Working to very clear service standards/frameworks and have significant clinical governance. Supportive of staff safety, there are zero tolerance posters displayed visibly about staff safety from patient attacks. Recognizes the need to improve tracking system for medical equipment.</td>
</tr>
<tr>
<td>Q15: Do you think it is possible to avoid all adverse events?</td>
<td>It may be possible to eradicate avoidable adverse events, however probably not in the NHS system due to high turnover of key staff and lack of continuity in care. Require very good communication to avoid repeat incidents/accidents.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trust D</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5: Are there any leaders from the past or from history that you admire and take lessons from?</td>
<td>David Nicholson, the current Chief Executive of NHS in England who is very credible and has a “rare combination of ability to be supportive and challenging simultaneously”. He provides guidance in times of trouble and conveys respect for ability/autonomy of those he helps. He is also “very funny” and personable.</td>
</tr>
<tr>
<td>Q6: What, if anything, would you change about your leadership style?</td>
<td>Would pay more attention to organisational dynamics Would try to engage with clinicians on more informal one-on-one basis to actually identify and work through issues and hear their ideas for the future – more than just visibility. To take a more detailed interest in matters where personal interest is needed (i.e., got involved in issue of infection control)</td>
</tr>
</tbody>
</table>
### Questions and Responses

| Q7: If you look at the Trust what aspects do you have control over or influence over? | Controls the bigger picture: configuration of service, allocation of resources and service developments through “the use of information, performance management systems and devolving management to clinical divisions then holding divisions to account for performance” |
| Q8: Is there anything you do not have any influence over? | Do not have control over what people do on a day to day basis, particularly clinical staff. |
| Q11: Can you describe the safety culture in the Trust? | “Patchy” and lacks consistency. There is insufficient organisational learning from near misses and mistakes. Critical incidents are rigorously followed up but need to go further. A safety philosophy exists however is not completely embedded. |
| Q15: Do you think it is possible to avoid all adverse events? | It is possible to avoid a great proportion of adverse events but is doubtful if it is possible to eliminate them, however that should be the aim. |

**Trust G**

| Q5: Are there any leaders from the past or from history that you admire and take lessons from? | Bill Clinton, Margaret Thatcher and royals like Elizabeth I. |
| Q6: What, if anything, would you change about your leadership style? | Impatient, occasionally gets angry – has worked through the impact she has on others. Recognizes need to deal with problems objectively. |
| Q7: If you look at the Trust what aspects do you have control over or influence over? | Has influence over “all of it, ultimately. As accountable officer, ultimately everything that take place” Concerned with governance and putting accountability systems in place. His/ her responsibility to ensure the correct people with proper skills and competence are employed. |
| Q8: Is there anything you do not have any influence over? | No lack of influence. Reiterates that the CEO has influence on everything- “ultimately all roads lead back to this office” |
| Q11: Can you describe the safety culture in the Trust? | “It doesn’t exist….It’s not safety driven”. There are no risk assessments before procedures and a failure to share information regarding patient risks with team members |
| Q15: Do you think it is possible to avoid all adverse events? | Should aspire to avoid adverse events - if it is avoidable we should be able to eradicate. |
Appendix 15  Interview coding according to the NPSA (2004) guidance on NHS Chief Executives’ personal contribution to delivering safety healthcare.

<table>
<thead>
<tr>
<th>Leadership activity</th>
<th>Key features</th>
</tr>
</thead>
</table>
| **1. Build a safety culture** | • Work to very clear service standards... it is very much part of the culture  
• The safety culture is patchy and inconsistent  
• Zero tolerance isn’t embedded  
• It is not a culture of non-compliance  
• There is a lack of discipline on safety – if something isn’t done right nothing much happens about it  
• Visible walking about, talking to people rather than sitting down with clinicians talking about their ideas for the future  
• Make a monthly video for the intranet because I cannot be visible to all  
• Organised a systematic walkabout programme  
• I do the inductions so I meet all new staff  
• The safety culture doesn’t exist – it’s not safety driven  
• The chairman and I go on safety walkabouts and when we find something unacceptable we fix it  
• The board will set the safety agenda, ethos and culture  
• We are moving our direction to safety – 5 year cost management strategy now focuses on system failure, falls and drug error, infection  
• Gave consultant a warning for not following hygiene policy  
• Cascade message? Ward sister example |
| **2. Lead and support staff** | • Supportive of individuals and assist them in making decisions  
• Each clinical directorate develops a clinical governance framework which is performance managed  
• Encourage staff to consider taking action if they are abused by patients or visitors  
• Zero tolerance for abuse of staff  
• Responsibility shared by medical director and nursing director  
• People want to do the right things but need consistency, the intention is there  
• Don’t spend a lot of time in dialogue with clinicians on the front line, the strategy director does that  
• I’m supportive in terms of discussing things even things not going well  
• I am the accountable officer so have influence over everything that takes place  
• Take immediate action to rectify safety hazards  
• Work in the Trust/ convert to walkarounds  
• Role model |
3. **Integrate risk management activity**

- Central coordinating team look after corporate and clinical risk
- Differentiate between risk policy and strategy, and delivery of risk management
- Have an independent assessment of risk management for patient safety
- Risk assessing patients on admission
- All policies on clinical safety endorsed by the governance committee
- Head hunted one director who I knew was excellent at putting those systems in place
- Staff do not conduct or record risk assessments or share risk information within the team
- Develop indicators for the board on patient safety
- 5 year cost management strategy now focuses on failure in systems, falls, drug error

4. **Promote reporting**

- Encourage reporting of incidents and that is typified by an upward trend
- Take a detailed interest in one or two things each year, such as MRSA, and sorting out emergency care
- We need good feedback systems that produce a lot of information
- We limit ourselves about what can be achieved. Why can’t I have zero incidents? If it is avoidable we should be able to eradicate
- Our incident reporting is going up because we have been under-reporting

5. **Involve patients and the public**

- Patients are watching us – we are the role models and must live and breath what is discussed at board meetings
- I go out and look with my own eyes, listen and talk to patients who don’t know who I am.

6. **Learn and share safety lessons**

- Scope for local innovation and practice
- Very well organized process for investigation, reporting back and then going round the loop of learning in those situations
- There isn’t sufficiently wide organisational leading from near misses and mistakes
- Follow up critical and serious untoward incidents rigorously with action planning/ review
- Find out what we have learnt and what we need to put in place to improve
- Two of my senior people have been on a patient safety course
- We have discovered that where there are financial problems there are governance issues
- Starting to improve what we do now internally improves the experience for patients and staff
- Doing things right first time reduces cost
- I am going on a course this week to learn tools for patient safety – to look at patient notes
<table>
<thead>
<tr>
<th>Leadership activity</th>
<th>Key features</th>
</tr>
</thead>
</table>
| **7. Implementing solutions** | - Creating a new governance structure  
- Create the Members’ Council to hold the board of directors to account  
- Have freedom to determine how we operate in line with national standards as long as the outcomes are good  
- We have an IV team which achieved a targeted reduction in infection |
| **8. Build a safety culture** | - Work to very clear service standards… it is very much part of the culture  
- The safety culture is patchy and inconsistent  
- Zero tolerance isn’t embedded  
- It is not a culture of non-compliance  
- There is a lack of discipline on safety – if something isn’t done right nothing much happens about it  
- Visible walking about, talking to people rather than sitting down with clinicians talking about their ideas for the future  
- Make a monthly video for the intranet because I cannot be visible to all  
- Organised a systematic walkabout programme  
- I do the inductions so I meet all new staff  
- The safety culture doesn’t exist – it’s not safety driven  
- The chairman and I go on safety walkabouts and when we find something unacceptable we fix it  
- The board will set the safety agenda, ethos and culture  
- We are moving our direction to safety – 5 year cost management strategy now focuses on system failure, falls and drug error, infection  
- Gave consultant a warning for not following hygiene policy  
- Cascade message? Ward sister example |
| **9. Lead and support staff** | - Supportive of individuals and assist them in making decisions  
- Each clinical directorate develops a clinical governance framework which is performance managed  
- Encourage staff to consider taking action if they are abused by patients or visitors  
- Zero tolerance for abuse of staff  
- Responsibility shared by medical director and nursing director  
- People want to do the right things but need consistency, the intention is there  
- Don’t spend a lot of time in dialogue with clinicians on the frontline, the strategy director does that  
- I’m supportive in terms of discussing things even things not going well  
- I am the accountable officer so have influence over everything that takes place  
- Take immediate action to rectify safety hazards  
- Work in the Trust/ convert to walkarounds  
- Role model |
<table>
<thead>
<tr>
<th>Leadership activity</th>
<th>Key features</th>
</tr>
</thead>
</table>
| 10. Integrate risk management activity | - Central coordinating team look after corporate and clinical risk management  
- Differentiate between risk policy and strategy, and delivery of risk management  
- Have an independent assessment of risk management for patient safety  
- Risk assessing patients on admission  
- All policies on clinical safety endorsed by the governance committee  
- Head hunted one director who I knew was excellent at putting those systems in place  
- Staff do not conduct or record risk assessments or share risk information within the team  
- Develop indicators for the board on patient safety  
- 5 year cost management strategy now focuses on failure in systems, falls, drug error |
| 11. Promote reporting | - Encourage reporting of incidents and that is typified by an upward trend  
- Take a detailed interest in one or two things each year, such as MRSA, and sorting out emergency care  
- We need good feedback systems that produce a lot of information  
- We limit ourselves about what can be achieved. Why can’t I have zero incidents? If it is avoidable we should be able to eradicate  
- Our incident reporting is going up because we have been under-reporting |
| 12. Involve patients and the public | - Patients are watching us – we are the role models and must live and breath what is discussed at board meetings  
- I go out and look with my own eyes, listen and talk to patients who don’t know who I am. |
| 13. Learn and share safety lessons | - Scope for local innovation and practice  
- Very well organized process for investigation, reporting back and then going round the loop of learning in those situations  
- There isn’t sufficiently wide organisational leading from near misses and mistakes  
- Follow up critical and serious untoward incidents rigorously with action planning/ review  
- Find out what we have learnt and what we need to put in place to improve  
- Two of my senior people have been on a patient safety course  
- We have discovered that where there are financial problems there are governance issues  
- Starting to improve what we do now internally improves the experience for patients and staff  
- Doing things right first time reduces cost  
- I am going on a course this week to learn tools for patient safety – to look at patient notes |
- Create the Members’ Council to hold the board of directors to account  
- Have freedom to determine how we operate in line with national standards as long as the outcomes are good  
- We have an IV team which achieved a targeted reduction in infection |
Appendix 16  Staff well-being strand Tables (1-35)

Table 1  Relationship between job content questionnaire scales and EMA equivalents.

<table>
<thead>
<tr>
<th>Questionnaire Measure</th>
<th>EMA Measure</th>
<th>Coefficient</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>JCQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand</td>
<td>Demand</td>
<td>0.010</td>
<td>0.018</td>
<td>1.11</td>
</tr>
<tr>
<td></td>
<td>(Working Hard)</td>
<td>0.002</td>
<td>0.022</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>(Working Fast)</td>
<td>0.02</td>
<td>0.02</td>
<td>2.00*</td>
</tr>
<tr>
<td>Control</td>
<td>Control</td>
<td>0.009</td>
<td>0.012</td>
<td>1.50</td>
</tr>
<tr>
<td>Strain (D/C)</td>
<td>Strain (D/C)</td>
<td>0.460</td>
<td>0.601</td>
<td>1.32</td>
</tr>
</tbody>
</table>

*p<.05,**p<.01,***p<.001

Table 2  Relationship between ERI Questionnaire measures and EMA equivalents

<table>
<thead>
<tr>
<th>Questionnaire Measure</th>
<th>EMA Measure</th>
<th>Coefficient</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effort</td>
<td>Demand</td>
<td>0.021</td>
<td>0.022</td>
<td>1.91</td>
</tr>
<tr>
<td></td>
<td>(Working Hard)</td>
<td>0.13</td>
<td>0.24</td>
<td>1.18</td>
</tr>
<tr>
<td></td>
<td>(Working Fast)</td>
<td>0.30</td>
<td>0.24</td>
<td>2.50*</td>
</tr>
<tr>
<td>Reward</td>
<td>Appreciation</td>
<td>0.034</td>
<td>0.016</td>
<td>4.25***</td>
</tr>
<tr>
<td>Overcommitment</td>
<td>Desire for Control</td>
<td>0.054</td>
<td>0.035</td>
<td>3.00**</td>
</tr>
<tr>
<td>ERI</td>
<td>ERI</td>
<td>0.449</td>
<td>0.306</td>
<td>2.87**</td>
</tr>
</tbody>
</table>

*p<.05,**p<.01,***p<.001

Table 3  Relationship between PANAS measures of NA and PA and EMA equivalents

<table>
<thead>
<tr>
<th>Questionnaire Measure</th>
<th>EMA Measure</th>
<th>Coefficient</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>PANAS</td>
<td>NA</td>
<td>0.919</td>
<td>0.265</td>
<td>6.81***</td>
</tr>
<tr>
<td></td>
<td>PA</td>
<td>0.865</td>
<td>0.267</td>
<td>6.60***</td>
</tr>
</tbody>
</table>

*p<.05,**p<.01,***p<.001
Table 4  Relationships between PCQ and ERIQ measures and EMA NA.

<table>
<thead>
<tr>
<th>Questionnaire Measure</th>
<th>Coefficient</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>0.417</td>
<td>0.323</td>
<td>2.52*</td>
</tr>
<tr>
<td>Decision Latitude</td>
<td>-0.194</td>
<td>0.188</td>
<td>2.02*</td>
</tr>
<tr>
<td>Strain (D/C)</td>
<td>21.979</td>
<td>13.039</td>
<td>3.30**</td>
</tr>
<tr>
<td>Effort</td>
<td>1.022</td>
<td>0.365</td>
<td>5.49***</td>
</tr>
<tr>
<td>Reward</td>
<td>-0.444</td>
<td>0.190</td>
<td>4.58***</td>
</tr>
<tr>
<td>Overcommitment</td>
<td>0.926</td>
<td>0.439</td>
<td>4.13***</td>
</tr>
<tr>
<td>ERI</td>
<td>12.792</td>
<td>4.643</td>
<td>5.40***</td>
</tr>
</tbody>
</table>

* p<.05, **p<.01, ***p<.001

Table 5  Testing the effects of Demand, Control and Demand by Control interaction.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift</td>
<td>-0.379</td>
<td>0.686</td>
<td>1.08</td>
</tr>
<tr>
<td>Obs</td>
<td>0.283</td>
<td>0.219</td>
<td>2.53*</td>
</tr>
<tr>
<td>Demand</td>
<td>2.316</td>
<td>0.358</td>
<td>12.87***</td>
</tr>
<tr>
<td>Control</td>
<td>-2.793</td>
<td>0.447</td>
<td>12.24***</td>
</tr>
<tr>
<td>D x C</td>
<td>-0.899</td>
<td>0.225</td>
<td>7.89***</td>
</tr>
<tr>
<td>PA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift</td>
<td>-0.838</td>
<td>0.884</td>
<td>1.85</td>
</tr>
<tr>
<td>Obs</td>
<td>-2.468</td>
<td>0.359</td>
<td>13.50***</td>
</tr>
<tr>
<td>Demand</td>
<td>1.707</td>
<td>0.480</td>
<td>5.95***</td>
</tr>
<tr>
<td>Control</td>
<td>2.773</td>
<td>0.563</td>
<td>11.31***</td>
</tr>
<tr>
<td>D x C</td>
<td>-0.460</td>
<td>0.349</td>
<td>2.58**</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, ***p<.001

Key: Obs=Observation
**Table 6**  Testing Demand/Effort, Reward and Demand/Effort by Reward Interaction

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coeff</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift</td>
<td>-0.591</td>
<td>0.704</td>
<td>1.65</td>
</tr>
<tr>
<td>Obs</td>
<td>0.297</td>
<td>0.229</td>
<td>2.54*</td>
</tr>
<tr>
<td>Demand/Effort</td>
<td>2.333</td>
<td>0.372</td>
<td>12.28***</td>
</tr>
<tr>
<td>Reward</td>
<td>-2.128</td>
<td>0.496</td>
<td>8.41***</td>
</tr>
<tr>
<td>D/E x R</td>
<td>-0.585</td>
<td>0.284</td>
<td>4.03***</td>
</tr>
</tbody>
</table>

**PA**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coeff</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-0.803</td>
<td>0.862</td>
<td>1.83</td>
</tr>
<tr>
<td>Obs</td>
<td>-2.516</td>
<td>0.359</td>
<td>13.75***</td>
</tr>
<tr>
<td>Demand/Effort</td>
<td>1.535</td>
<td>0.555</td>
<td>5.42***</td>
</tr>
<tr>
<td>Reward</td>
<td>2.928</td>
<td>0.507</td>
<td>10.06***</td>
</tr>
<tr>
<td>D/E x R</td>
<td>-0.259</td>
<td>0.418</td>
<td>1.22</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, ***p<.001

**Table 7**  Testing the independent effects of demand, control, desire for more control and the interactions demand x control and control x desire for more control.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coeff</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift</td>
<td>-0.513</td>
<td>0.628</td>
<td>1.59</td>
</tr>
<tr>
<td>Obs</td>
<td>0.245</td>
<td>0.195</td>
<td>2.45*</td>
</tr>
<tr>
<td>Demand</td>
<td>1.527</td>
<td>0.320</td>
<td>9.57***</td>
</tr>
<tr>
<td>Control</td>
<td>-2.218</td>
<td>0.384</td>
<td>11.26***</td>
</tr>
<tr>
<td>Desire for More Control</td>
<td>2.220</td>
<td>0.417</td>
<td>10.37**</td>
</tr>
<tr>
<td>DxC</td>
<td>-0.382</td>
<td>0.226</td>
<td>3.29**</td>
</tr>
<tr>
<td>CxDfC</td>
<td>-0.739</td>
<td>0.304</td>
<td>4.77***</td>
</tr>
</tbody>
</table>

**PA**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coeff</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-0.799</td>
<td>0.945</td>
<td>1.79</td>
</tr>
<tr>
<td>Obs</td>
<td>-2.467</td>
<td>0.367</td>
<td>13.19</td>
</tr>
<tr>
<td>Demand</td>
<td>1.836</td>
<td>0.566</td>
<td>6.35**</td>
</tr>
<tr>
<td>Control</td>
<td>2.653</td>
<td>0.478</td>
<td>10.87**</td>
</tr>
<tr>
<td>Desire for More Control</td>
<td>-0.515</td>
<td>0.425</td>
<td>2.37*</td>
</tr>
<tr>
<td>DxC</td>
<td>-0.540</td>
<td>0.351</td>
<td>3.02**</td>
</tr>
<tr>
<td>CxDfC</td>
<td>-0.191</td>
<td>0.345</td>
<td>1.09</td>
</tr>
</tbody>
</table>

***p<.001, ** p<.01, * p<.05
Table 8  Testing the independent main effects of demand, control, desire for more control and reward

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Coeff</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift</td>
<td>-0.633</td>
<td>0.623</td>
<td>1.99*</td>
</tr>
<tr>
<td>Obs</td>
<td>0.270</td>
<td>0.194</td>
<td>2.72**</td>
</tr>
<tr>
<td>Demand</td>
<td>1.802</td>
<td>0.339</td>
<td>10.42***</td>
</tr>
<tr>
<td>Control</td>
<td>-1.329</td>
<td>0.419</td>
<td>6.21***</td>
</tr>
<tr>
<td>Desire for More Control</td>
<td>2.554</td>
<td>0.433</td>
<td>11.56**</td>
</tr>
<tr>
<td>Reward</td>
<td>-1.420</td>
<td>0.423</td>
<td>6.57**</td>
</tr>
<tr>
<td><strong>PA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shift</td>
<td>-0.839</td>
<td>0.845</td>
<td>1.94</td>
</tr>
<tr>
<td>Obs</td>
<td>-2.468</td>
<td>0.361</td>
<td>13.41**</td>
</tr>
<tr>
<td>Demand</td>
<td>1.607</td>
<td>0.590</td>
<td>5.34**</td>
</tr>
<tr>
<td>Control</td>
<td>2.024</td>
<td>0.555</td>
<td>7.15**</td>
</tr>
<tr>
<td>Desire for More Control</td>
<td>-0.470</td>
<td>0.439</td>
<td>2.10*</td>
</tr>
<tr>
<td>Reward</td>
<td>2.338</td>
<td>0.596</td>
<td>7.69**</td>
</tr>
</tbody>
</table>

***p<.001,  ** p<.01, * p<.05

Table 9  Effect of incident characteristics on negative affect immediately after the incident in standard diary entries.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>0.395</td>
<td>.240</td>
<td>3.19**</td>
</tr>
<tr>
<td>Shift</td>
<td>-0.508</td>
<td>.830</td>
<td>-1.20</td>
</tr>
<tr>
<td>Incident-immediate</td>
<td>1.956</td>
<td>1.19</td>
<td>3.23**</td>
</tr>
<tr>
<td>Seriousness</td>
<td>0.074</td>
<td>.33</td>
<td>4.35**</td>
</tr>
<tr>
<td>Incid-imm x seriousness</td>
<td>0.070</td>
<td>.040</td>
<td>3.68**</td>
</tr>
</tbody>
</table>

* p<.05   **p<.005   ***p<.001

NB. Incident happen coded 0 before incident and 1 only for the standard entry immediately following the reported time of the worst incident.
Table 10  Effect of incident characteristics on negative affect for the remainder of the shift in standard diary entries.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>0.348</td>
<td>.280</td>
<td>2.43**</td>
</tr>
<tr>
<td>Shift</td>
<td>-0.527</td>
<td>.823</td>
<td>-1.68</td>
</tr>
<tr>
<td>Incident-rest of shift</td>
<td>-1.065</td>
<td>1.36</td>
<td>-1.53</td>
</tr>
<tr>
<td>Seriousness</td>
<td>0.061</td>
<td>.033</td>
<td>3.59**</td>
</tr>
<tr>
<td>Incid-rest x seriousness</td>
<td>0.073</td>
<td>.037</td>
<td>3.84**</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

NB. Incident-rest coded 0 before incident and 1 for standard entries for remainder of shift

Table 11  The effect of incident and managerial support on negative affect immediately after the worst event.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>0.400</td>
<td>0.25</td>
<td>3.20**</td>
</tr>
<tr>
<td>Shift</td>
<td>-0.507</td>
<td>0.95</td>
<td>1.05</td>
</tr>
<tr>
<td>Incident-immediate</td>
<td>2.139</td>
<td>1.31</td>
<td>3.19**</td>
</tr>
<tr>
<td>Managerial support</td>
<td>3.620</td>
<td>3.06</td>
<td>2.32*</td>
</tr>
<tr>
<td>MS x Incident-immed</td>
<td>1.608</td>
<td>3.58</td>
<td>0.88</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

NB. Incident happen coded 0 before incident and 1 only for the standard entry immediately following the reported time of the worst incident

Table 12  The effect of incident and managerial support on nurse well-being for remainder of shift.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>0.364</td>
<td>0.28</td>
<td>2.56*</td>
</tr>
<tr>
<td>Shift</td>
<td>-0.644</td>
<td>0.95</td>
<td>-1.33</td>
</tr>
<tr>
<td>Incident-rest of shift</td>
<td>1.041</td>
<td>1.41</td>
<td>1.45</td>
</tr>
<tr>
<td>Managerial support</td>
<td>0.402</td>
<td>2.79</td>
<td>0.28</td>
</tr>
<tr>
<td>MS x Incident-rest</td>
<td>4.381</td>
<td>3.23</td>
<td>2.66**</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

NB. Incident-rest coded 0 before incident and 1 for standard entries for remainder of shift
Table 13  The effect of incident and colleague support on nurse NA immediately after the worst event.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>0.404</td>
<td>0.25</td>
<td>3.21***</td>
</tr>
<tr>
<td>Shift</td>
<td>-0.934</td>
<td>0.96</td>
<td>-1.91</td>
</tr>
<tr>
<td>Incident-immediate</td>
<td>2.613</td>
<td>1.88</td>
<td>2.72*</td>
</tr>
<tr>
<td>Colleague support</td>
<td>0.782</td>
<td>1.95</td>
<td>0.79</td>
</tr>
<tr>
<td>CS x Incident-immed</td>
<td>-0.626</td>
<td>2.27</td>
<td>0.54</td>
</tr>
</tbody>
</table>

* p<.05   **p<.005   ***p<.001

NB: Incident happen coded 0 before incident and 1 only for the standard entry immediately following the reported time of the worst incident.

Table 14  The effect of incident and managerial support on Nurse NA for remainder of shift

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>0.349</td>
<td>0.29</td>
<td>2.39*</td>
</tr>
<tr>
<td>Shift</td>
<td>-0.816</td>
<td>0.94</td>
<td>-1.20</td>
</tr>
<tr>
<td>Incident-rest of shift</td>
<td>2.024</td>
<td>1.85</td>
<td>2.15*</td>
</tr>
<tr>
<td>Colleague support</td>
<td>0.941</td>
<td>1.88</td>
<td>0.98</td>
</tr>
<tr>
<td>CS x Incident-rest</td>
<td>-1.018</td>
<td>2.32</td>
<td>-0.86</td>
</tr>
</tbody>
</table>

* p<.05   **p<.005   ***p<.001

NB Incident coded 0 before incident and 1 for standard entries for remainder of shift

Table 15  DC predictors of Negative Affect reported in worst incident

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-0.193</td>
<td>2.15</td>
<td>0.18</td>
</tr>
<tr>
<td>Demand</td>
<td>4.207</td>
<td>2.73</td>
<td>3.02**</td>
</tr>
<tr>
<td>Control</td>
<td>-6.536</td>
<td>2.55</td>
<td>-5.02***</td>
</tr>
<tr>
<td>Demand x Control</td>
<td>1.784</td>
<td>2.95</td>
<td>1.18</td>
</tr>
</tbody>
</table>

* p<.05   **p<.005   ***p<.001

Table 16  DC predictors of Positive Affect reported in worst incident

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95% CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-0.162</td>
<td>2.43</td>
<td>-0.13</td>
</tr>
<tr>
<td>Demand</td>
<td>2.618</td>
<td>3.00</td>
<td>1.71</td>
</tr>
<tr>
<td>Control</td>
<td>7.061</td>
<td>2.79</td>
<td>4.96***</td>
</tr>
<tr>
<td>Demand x Control</td>
<td>-0.517</td>
<td>3.26</td>
<td>0.31</td>
</tr>
</tbody>
</table>

* p<.05   **p<.005   ***p<.001
Table 17  ERI predictors of Negative Affect reported in worst incident (random intercept and fixed slope model throughout)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-0.391</td>
<td>2.17</td>
<td>-0.36</td>
</tr>
<tr>
<td>Demand/Effort</td>
<td>4.236</td>
<td>8.30</td>
<td>2.93**</td>
</tr>
<tr>
<td>Reward</td>
<td>-2.192</td>
<td>4.30</td>
<td>-1.94</td>
</tr>
<tr>
<td>Effort x Reward</td>
<td>-2.746</td>
<td>2.34</td>
<td>-2.30*</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

Table 18  ERI predictors of Positive Affect reported in worst incident

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>0.084</td>
<td>2.44</td>
<td>0.067</td>
</tr>
<tr>
<td>Demand/Effort</td>
<td>1.758</td>
<td>3.02</td>
<td>1.14</td>
</tr>
<tr>
<td>Reward</td>
<td>6.444</td>
<td>2.30</td>
<td>5.49***</td>
</tr>
<tr>
<td>Effort x Reward</td>
<td>1.223</td>
<td>2.48</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

Table 19  The effect of recovery and managerial support on negative affect

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-0.087</td>
<td>2.17</td>
<td>-0.08</td>
</tr>
<tr>
<td>Recovery</td>
<td>-0.054</td>
<td>0.017</td>
<td>-1.50</td>
</tr>
<tr>
<td>Manager support</td>
<td>9.676</td>
<td>6.40</td>
<td>2.96**</td>
</tr>
<tr>
<td>Man supp x recovery</td>
<td>-0.370</td>
<td>0.27</td>
<td>-2.68*</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

Table 20  The effect of recovery and managerial support on positive affect

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>0.372</td>
<td>2.47</td>
<td>0.30</td>
</tr>
<tr>
<td>Recovery</td>
<td>0.160</td>
<td>0.08</td>
<td>4.00***</td>
</tr>
<tr>
<td>Manager support</td>
<td>-0.544</td>
<td>7.16</td>
<td>-0.15</td>
</tr>
<tr>
<td>Man supp x recovery</td>
<td>-0.019</td>
<td>0.30</td>
<td>-0.12</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

Table 21  The effect of recovery and colleague support on negative affect

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-0.349</td>
<td>2.20</td>
<td>-0.31</td>
</tr>
<tr>
<td>Recovery</td>
<td>-0.075</td>
<td>0.11</td>
<td>-1.36</td>
</tr>
<tr>
<td>Colleague support</td>
<td>2.252</td>
<td>4.30</td>
<td>1.03</td>
</tr>
<tr>
<td>Coll supp x recovery</td>
<td>-0.002</td>
<td>0.14</td>
<td>-0.03</td>
</tr>
</tbody>
</table>
Table 22  The effect of recovery and colleague support on positive affect

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>0.410</td>
<td>2.46</td>
<td>0.33</td>
</tr>
<tr>
<td>Recovery</td>
<td>0.148</td>
<td>0.12</td>
<td>2.47*</td>
</tr>
<tr>
<td>Colleague support</td>
<td>1.430</td>
<td>4.70</td>
<td>0.59</td>
</tr>
<tr>
<td>Coll supp x recovery</td>
<td>0.015</td>
<td>0.15</td>
<td>0.20</td>
</tr>
</tbody>
</table>

*p<.05   **p<.005   ***p<.001

Table 23  Inter-rater reliabilities in high scoring and low scoring Trusts

**High Scoring Trusts**

<table>
<thead>
<tr>
<th></th>
<th>Alpha</th>
<th>LL95%CI</th>
<th>UL95%CI</th>
<th>Units</th>
<th>Observers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Run 1-S1</td>
<td>.6599</td>
<td>.5687</td>
<td>.7512</td>
<td>126.000</td>
<td>2.0000</td>
</tr>
<tr>
<td>Run 1-S2</td>
<td>.6434</td>
<td>.4396</td>
<td>.8472</td>
<td>22.000</td>
<td>2.0000</td>
</tr>
<tr>
<td>Run 2</td>
<td>.8506</td>
<td>.7866</td>
<td>.9075</td>
<td>148.000</td>
<td>2.0000</td>
</tr>
<tr>
<td>combined</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sub-theme analysis**

|                      |       |         |         |       |           |
| Demand               | .9088 | .8328   | .9696   | 148.000 | 2.0000    |
| Control              | .8716 | .7866   | .9429   | 148.000 | 2.0000    |
| Support              | .9021 | .7553   | 1.0000  | 148.000 | 2.0000    |
| Error                | .9150 | .8016   | 1.0000  | 144.000 | 2.0000    |
| Health               | 1.0000| 1.0000  | 1.0000  | 144.000 | 2.0000    |
| Reciprocity          | .6609 | .0000   | 1.0000  | 148.000 | 2.0000    |

**Agreement on six themes**

| Factor              |       |         |         |       |           |
|                     | .8966 | .8309   | .9530   | 148.000 | 2.0000    |

**Low Scoring Trusts**

<table>
<thead>
<tr>
<th></th>
<th>Alpha</th>
<th>LL95%CI</th>
<th>UL95%CI</th>
<th>Units</th>
<th>Observers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run 1-S3</td>
<td>.8056</td>
<td>.6501</td>
<td>.9611</td>
<td>29.000</td>
<td>2.0000</td>
</tr>
<tr>
<td>Run 1-S4</td>
<td>.6809</td>
<td>.5633</td>
<td>.7985</td>
<td>66.000</td>
<td>2.0000</td>
</tr>
<tr>
<td>Run 2</td>
<td>.9199</td>
<td>.8627</td>
<td>.9771</td>
<td>95.000</td>
<td>2.0000</td>
</tr>
<tr>
<td>combined</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sub-theme analysis**

|                      |       |         |         |       |           |
| Demand               | .9362 | .8510   | 1.0000  | 95.000 | 2.0000    |
| Control              | .9110 | .8220   | .9778   | 95.000 | 2.0000    |
| Support              | 1.0000| .0000   | 1.0000  | 95.000 | 2.0000    |
| Error                | .9542 | .8625   | 1.0000  | 95.000 | 2.0000    |
| Health               | 1.0000| .0000   | 1.0000  | 95.000 | 2.0000    |
| Reciprocity          | 1.0000| .0000   | 1.0000  | 95.000 | 2.0000    |

**Agreement on six themes**

| Factor              |       |         |         |       |           |
|                     | .9353 | .8706   | .9838   | 95.000 | 2.0000    |
Table 24  Effect of shift climate (DC) on work performance following the worst event

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-9.631</td>
<td>8.11</td>
<td>-2.33*</td>
</tr>
<tr>
<td>Demand</td>
<td>4.287</td>
<td>10.19</td>
<td>0.82</td>
</tr>
<tr>
<td>Control</td>
<td>24.147</td>
<td>9.51</td>
<td>4.98***</td>
</tr>
<tr>
<td>Demand x Control</td>
<td>11.905</td>
<td>11.03</td>
<td>2.11*</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

Table 25  Effect of shift climate (ERI) on work performance following the worst event

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-8.615</td>
<td>8.15</td>
<td>-2.07*</td>
</tr>
<tr>
<td>Effort</td>
<td>2.224</td>
<td>10.39</td>
<td>0.42</td>
</tr>
<tr>
<td>Reward</td>
<td>17.568</td>
<td>8.03</td>
<td>4.29***</td>
</tr>
<tr>
<td>Effort x Reward</td>
<td>12.104</td>
<td>8.57</td>
<td>2.77**</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

Table 26  The effect of recovery and NA on work performance following the worst event

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-7.278</td>
<td>8.04</td>
<td>-1.77</td>
</tr>
<tr>
<td>Recovery</td>
<td>0.584</td>
<td>0.26</td>
<td>4.46***</td>
</tr>
<tr>
<td>NA</td>
<td>-0.507</td>
<td>0.35</td>
<td>-2.80**</td>
</tr>
<tr>
<td>Recovery x NA</td>
<td>-0.000</td>
<td>0.01</td>
<td>0.0005</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

Table 27  The effect of recovery and PA on work performance following the worst event

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-7.895</td>
<td>7.94</td>
<td>1.95</td>
</tr>
<tr>
<td>Recovery</td>
<td>0.481</td>
<td>0.26</td>
<td>3.64***</td>
</tr>
<tr>
<td>PA</td>
<td>0.621</td>
<td>0.32</td>
<td>3.79***</td>
</tr>
<tr>
<td>Recovery x PA</td>
<td>-0.008</td>
<td>0.008</td>
<td>2.00*</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001
Table 28  The influence of NA and managerial support on nurse performance following the worst event

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-7.29</td>
<td>8.23</td>
<td>1.74</td>
</tr>
<tr>
<td>NA</td>
<td>-0.686</td>
<td>0.38</td>
<td>-3.55***</td>
</tr>
<tr>
<td>Managerial support</td>
<td>10.335</td>
<td>24.34</td>
<td>0.83</td>
</tr>
<tr>
<td>NA x Man support</td>
<td>0.589</td>
<td>0.93</td>
<td>1.24</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

Table 29  The influence of PA and managerial support on nurse performance following the worst event

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-8.064</td>
<td>8.15</td>
<td>-1.94</td>
</tr>
<tr>
<td>PA</td>
<td>0.799</td>
<td>0.33</td>
<td>4.78***</td>
</tr>
<tr>
<td>Managerial support</td>
<td>17.607</td>
<td>53.65</td>
<td>0.64</td>
</tr>
<tr>
<td>PA x Man support</td>
<td>-0.908</td>
<td>1.03</td>
<td>-0.38</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001

Table 30  The influence of NA and colleague as support on performance following the worst incident.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-9.505</td>
<td>8.041</td>
<td>-2.21*</td>
</tr>
<tr>
<td>NA</td>
<td>-1.474</td>
<td>0.58</td>
<td>-4.95***</td>
</tr>
<tr>
<td>Colleague as support</td>
<td>-15.580</td>
<td>24.14</td>
<td>-1.27</td>
</tr>
<tr>
<td>NA x Coll as support</td>
<td>1.253</td>
<td>0.67</td>
<td>3.64***</td>
</tr>
</tbody>
</table>

* p<.05  ** p<.005  ***p<.001

Table 31  The influence of PA and colleague as support on work performance following the worst incident.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-7.734</td>
<td>8.08</td>
<td>-1.88</td>
</tr>
<tr>
<td>PA</td>
<td>0.914</td>
<td>0.49</td>
<td>3.64***</td>
</tr>
<tr>
<td>Colleague as support</td>
<td>26.37</td>
<td>31.63</td>
<td>1.63</td>
</tr>
<tr>
<td>PA x Coll as support</td>
<td>-0.223</td>
<td>0.59</td>
<td>-0.74</td>
</tr>
</tbody>
</table>

* p<.05  **p<.005  ***p<.001
Table 32  The effect of colleague as problem and NA on work performance

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-8.624</td>
<td>8.20</td>
<td>-2.06*</td>
</tr>
<tr>
<td>NA</td>
<td>-0.514</td>
<td>0.454</td>
<td>-2.22*</td>
</tr>
<tr>
<td>Colleague as problem</td>
<td>-4.007</td>
<td>26.05</td>
<td>-0.30</td>
</tr>
<tr>
<td>NA x Coll as problem</td>
<td>-0.084</td>
<td>0.68</td>
<td>-0.24</td>
</tr>
</tbody>
</table>

* p<.05   **p<.005   ***p<.001

Table 33  The effect of colleague as problem and PA on work performance

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-8.452</td>
<td>8.04</td>
<td>-2.06*</td>
</tr>
<tr>
<td>PA</td>
<td>0.557</td>
<td>0.38</td>
<td>2.92**</td>
</tr>
<tr>
<td>Colleague as problem</td>
<td>-48.382</td>
<td>34.02</td>
<td>-2.79**</td>
</tr>
<tr>
<td>PA x Coll as problem</td>
<td>0.737</td>
<td>0.637</td>
<td>2.27*</td>
</tr>
</tbody>
</table>

* p<.05   **p<.005   ***p<.001

Table 34  The effect of patient involvement and NA on nurse performance

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-8.272</td>
<td>8.18</td>
<td>-1.98*</td>
</tr>
<tr>
<td>NA</td>
<td>-.634</td>
<td>0.45</td>
<td>-2.78**</td>
</tr>
<tr>
<td>Patient as problem</td>
<td>-3.983</td>
<td>24.83</td>
<td>-0.31</td>
</tr>
<tr>
<td>NA x Pat as problem</td>
<td>0.128</td>
<td>0.66</td>
<td>0.38</td>
</tr>
</tbody>
</table>

* p<.05   **p<.005   ***p<.001

Table 35  The effect of patient involvement and PA on nurse performance

<table>
<thead>
<tr>
<th>Measure</th>
<th>Coefficient</th>
<th>95%CI</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift</td>
<td>-8.161</td>
<td>8.10</td>
<td>-1.98*</td>
</tr>
<tr>
<td>PA</td>
<td>0.698</td>
<td>0.39</td>
<td>3.51***</td>
</tr>
<tr>
<td>Patient as problem</td>
<td>-14,094</td>
<td>32.70</td>
<td>-0.84</td>
</tr>
<tr>
<td>PA x Pat as problem</td>
<td>0.244</td>
<td>0.61</td>
<td>0.78</td>
</tr>
</tbody>
</table>

* p<.05   **p<.005   ***p<.001
Not for Distribution

Healthcare Commission

NHS National Staff Survey 2006

What is this survey and why are we asking you to complete it?

This is an independent survey of your experience of working at your Trust. The overall aim is to gather information that will help us to improve the working lives of NHS staff and so provide better care for patients.

The survey results will be used for different purposes:

- Your Trust will be able to use results of the survey to improve working conditions and practices at a local level
- The Healthcare Commission will use the survey findings in their Annual Health Check, as part of the assessment of your Trust's compliance with Department of Health core standards
- The Department of Health will be able to use the results to assess the effectiveness of NHS staff policies (such as training, flexible working and safety at work policies) and inform future developments in this area

Please complete the survey for your current job, or the job you do most of the time. If you work across two or more employers in the NHS, please answer in relation to the Trust that pays your salary. Please read each question carefully, but give your immediate response by ticking the box which best matches your personal view.

Who will see my answers?

The survey is being conducted by XXX, on behalf of Aston University and the Healthcare Commission.

Your answers will be treated in confidence. No one outside the research team - and certainly no one in your Trust - will be able to identify individual responses.

The survey findings will be analysed by XXX, Aston University and the Healthcare Commission, and the results will be presented in a summary report in which no individual's answers can be identified.

Please return this questionnaire, in the envelope provided, to:

XXX
YYY
ZZZ

For office use only

If you have any queries about this questionnaire please contact the National Staff Survey Advice Centre at Aston University on 0121 359 2491

NHS
WORK-LIFE BALANCE

1. Working hours.

a. How many hours a week are you contracted to work?
   - [ ] Up to 29 hours
   - [ ] 30 or more hours a week

b. On average, how many additional PAID hours do you work per week for this Trust, over and above your contracted hours?
   Please include paid overtime, bank shifts, and additional paid hours on-call.
   - [ ] 0 hours per week
   - [ ] 11-15 hours per week
   - [ ] Up to 5 hours per week
   - [ ] 16-20 hours per week
   - [ ] 6-10 hours per week
   - [ ] More than 20 hours per week

c. On average, how many additional UNPAID hours do you work per week for this Trust, over and above your contracted hours?
   Please include unpaid overtime and additional unpaid hours on-call.
   - [ ] 0 hours per week
   - [ ] 11-15 hours per week
   - [ ] Up to 5 hours per week
   - [ ] 16-20 hours per week
   - [ ] 6-10 hours per week
   - [ ] More than 20 hours per week

2. Do you agree with the following statements?
   I work more than my contracted hours in this Trust...

   Please tick Yes or No for each statement

   a. ...because it is necessary to meet deadlines.
   b. ...because it is necessary to get ahead in my career.
   c. ...because I also work bank shifts at this Trust.
   d. ...because it is expected by my immediate manager.
   e. ...because it is expected by my colleagues.
   f. ...because I enjoy my job.
   g. ...because it is impossible to do my job if I don’t.
   h. ...because I want to provide the best care I can for patients / service users.
   i. ...because I don’t want to let down the people I work with.
   j. ...because I want to earn extra money.
   k. ...to cover for staff shortages at this Trust.

3. To what extent do you agree or disagree with the following?

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. My Trust is committed to helping staff balance their work and home life.</td>
<td>[ ] 1</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
<td>[ ] 4</td>
<td>[ ] 5</td>
</tr>
<tr>
<td>b. My immediate manager helps me find a good work-life balance.</td>
<td>[ ] 1</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
<td>[ ] 4</td>
<td>[ ] 5</td>
</tr>
<tr>
<td>c. I can approach my immediate manager to talk openly about flexible working.</td>
<td>[ ] 1</td>
<td>[ ] 2</td>
<td>[ ] 3</td>
<td>[ ] 4</td>
<td>[ ] 5</td>
</tr>
</tbody>
</table>
4. In your job at this Trust, do any of the following statements about flexible working apply to you?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I work flexi-time (e.g. able to vary start &amp; finish times)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>b. I work reduced hours (e.g. part time)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>c. I work from home in normal working hours</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>d. I work annualised hours (working an agreed number of hours over the year)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>e. I work during school term-time only</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>f. My team makes their own decisions about rotas</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>g. I job share with someone else</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

5. Dependents

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Is there anyone, either living with you or not living with you, who you look after or to whom you give special help?</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Please exclude any caring you do as part of your paid work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If NO, go to Question 7; If YES, please answer part b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Who do you look after or give special help to? Please tick all that apply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Child(ren) under 5 years old</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2. Child(ren) between 5 and 18 years old</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>3. Elderly dependant(s)</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>4. Disabled dependant(s)</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

6. Which of the following care options does your Trust offer?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Access to childcare coordinator</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>b. Provision of subsidised childcare</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>c. Provision of childcare vouchers</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>d. Other childcare support</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>e. Support for carers of other dependants</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>

APPRAISAL

7. Appraisals

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Have you had an appraisal or performance development review in the last 12 months?</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>If NO, go to Question 9; if YES, answer questions b to d below</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Was your appraisal or performance development review useful in helping to improve how you do your job?</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>c. Did you agree clear objectives for your work during the appraisal / review?</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>d. Did the appraisal or performance development review leave you feeling your work is valued by your Trust?</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
### 8. Personal development plans

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Too early to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. In the past 12 months, as part of your appraisal or performance development review, did you agree a Personal Development Plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Have you received the training, learning and development that was identified in that plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. Has your immediate manager supported you in accessing this training, learning and development?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

### TRAINING, LEARNING AND DEVELOPMENT

5. In the past 12 months, have you taken part in any of the following types of training, learning or development, paid for or provided by your Trust?

- Taught courses (internal or external)
- Any supervised on-the-job training
- Having a mentor
- Shadowing someone
- E-learning/Online training
- Keeping up to date with developments in your type of work (e.g. by reading books or journals, or by attending seminars or workshops)
- Other methods of training, learning or development (please specify)

### 10. Have you had any training, learning or development (paid for or provided by your Trust, in the following areas?  

<table>
<thead>
<tr>
<th></th>
<th>Yes, in the last 12 months</th>
<th>Yes, more than 12 months ago</th>
<th>No</th>
<th>Not applicable to me</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Health and safety (e.g. fire training, manual handling)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. What to do if there is a major incident or emergency</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c. How to prevent or handle violence and aggression to either staff, patients or service users</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>d. Infection control (e.g. guidance on hand-washing)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>e. Computer skills (e.g. using Trust systems, spreadsheets, databases, internet, email etc)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>f. How to handle confidential information about patients / service users</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>g. How to ask patients / service users about their use of alcohol or drugs (including illegal drugs)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>h. How to handle patients / service users who are drunk or under the influence of drugs (including illegal drugs).</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>i. How to give information to patients / service users on diagnosis, medication, side effects etc.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
### 11. Have you received any training, learning or development (paid for or provided by your Trust) in any of the following areas?

- **Equal opportunities**
- **Racial awareness**
- **Gender awareness**
- **Disability awareness**
- **Harassment and bullying awareness**
- **Religious awareness**

Please include both taught courses and more informal ways of learning such as supervised on-the-job learning, e-learning, shadowing, reading journals/manuals etc.

<table>
<thead>
<tr>
<th>Yes, in the last 12 months</th>
<th>Yes, more than 12 months ago</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
</tr>
</tbody>
</table>

### 12. Thinking of any training, learning or development that you have done in the past 12 months (paid for or provided by your Trust), to what extent do you agree or disagree with the following statements?

Please include both taught courses and more informal ways of learning such as supervised on-the-job learning, e-learning, shadowing, reading journals/manuals etc.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
</tr>
</tbody>
</table>

### AGENDA FOR CHANGE

#### 13. Questions concerning Agenda for Change

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Don't know</th>
<th>Not applicable to me</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
</tr>
</tbody>
</table>

- a. Have you received your new job outline or description under Agenda for Change?
- b. Do you think the Agenda for Change re-bandung you have received is fair?

#### 14. To what extent do you agree or disagree with the following?

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Not applicable to me</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
</tr>
<tr>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
<td>□ 5</td>
<td>□ 6</td>
</tr>
</tbody>
</table>

- a. Agenda for Change has been implemented successfully in my Trust
- b. I have taken on increased responsibilities in my job as a result of Agenda for Change
- c. I am satisfied with the information I have received from the Trust about Agenda for Change
## YOUR JOB

15. The following questions are about team working and relate to the group of people that you work with most closely.

a. Do you work in a team?  
   - [ ] Yes  
   - [ ] No

   If NO, go to Question 15.
   If YES, please answer the following questions about the main team or group you work in:

b. Does your team have clear objectives?  
   - [ ] Yes  
   - [ ] No

c. Do you have to work closely with other team members to achieve the team's objectives?  
   - [ ] Yes  
   - [ ] No

d. Does the team meet regularly to discuss its effectiveness and how it could be improved?  
   - [ ] Yes  
   - [ ] No

e. How many people (the core members) are there in your team?  
   - [ ] 2-5  
   - [ ] 6-9  
   - [ ] 10-15  
   - [ ] More than 15

16. To what extent do you agree or disagree with the following?

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. I have clear, planned goals and objectives for my job.  
   - [ ] 1  
   - [ ] 2  
   - [ ] 3  
   - [ ] 4  
   - [ ] 5

b. I often have trouble working out whether I am doing well or poorly in this job.  
   - [ ] 1  
   - [ ] 2  
   - [ ] 3  
   - [ ] 4  
   - [ ] 5

c. I am involved in deciding on the changes introduced that affect my work area/team/department.  
   - [ ] 1  
   - [ ] 2  
   - [ ] 3  
   - [ ] 4  
   - [ ] 5

d. I cannot meet all the conflicting demands on my time at work.  
   - [ ] 1  
   - [ ] 2  
   - [ ] 3  
   - [ ] 4  
   - [ ] 5

e. I am asked to do work without adequate resources to complete it.  
   - [ ] 1  
   - [ ] 2  
   - [ ] 3  
   - [ ] 4  
   - [ ] 5

f. I am required to do unimportant tasks which prevent me completing more important ones.  
   - [ ] 1  
   - [ ] 2  
   - [ ] 3  
   - [ ] 4  
   - [ ] 5

17. To what extent do you agree or disagree with the following?

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. I often think about leaving this Trust.  
   - [ ] 1  
   - [ ] 2  
   - [ ] 3  
   - [ ] 4  
   - [ ] 5

b. I will probably look for a new job at a new organisation in the next 12 months.  
   - [ ] 1  
   - [ ] 2  
   - [ ] 3  
   - [ ] 4  
   - [ ] 5

c. As soon as I can find another job, I will leave this Trust.  
   - [ ] 1  
   - [ ] 2  
   - [ ] 3  
   - [ ] 4  
   - [ ] 5

d. If I leave my current job, I would want to stay in the NHS.  
   - [ ] 1  
   - [ ] 2  
   - [ ] 3  
   - [ ] 4  
   - [ ] 5

e. If you are considering leaving your job, please indicate why this would be:

1. [ ] Career development  
2. [ ] Unhappy with current job  
3. [ ] Don't want to work in NHS  
4. [ ] Change of career  
5. [ ] Family or personal reasons  
6. [ ] Retirement  
7. [ ] Would like more pay  
8. [ ] Entering full time education  
9. [ ] Other reason

Page 5
18. How satisfied are you with each of the following areas of your job?

<table>
<thead>
<tr>
<th>Area</th>
<th>Very satisfied</th>
<th>Dissatisfied</th>
<th>Neither satisfied or dissatisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. The recognition I get for good work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. The support I get from my immediate manager.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. The freedom I have to choose my own method of working.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. The support I get from my work colleagues.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. The amount of responsibility I am given.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. The opportunities I have to use my abilities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. The extent to which my Trust values my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19. To what extent do you agree or disagree with the following?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I always know what my responsibilities are.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. I am consulted about changes that affect my work area/team/department.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. I do not have time to carry out all my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. I get clear feedback about how well I am doing my job.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Relationships at work are strained.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. I can decide on my own how to go about doing my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

20. To what extent do you agree with the following statements about your immediate manager?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. My immediate manager...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. ...encourages those who work for her/him to work as a team.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. ...can be counted on to help me with a difficult task at work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. ...gives me clear feedback on my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. ... asks for my opinion before making decisions that affect my work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. ... is supportive in a personal crisis.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21. Shift working

<table>
<thead>
<tr>
<th>Statement</th>
<th>Yes, regularly</th>
<th>Yes, occasionally</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Do you work rotating shifts?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Do your working hours include any time between 7pm and 7am?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### YOUR ORGANISATION

#### 22. To what extent do you agree or disagree with the following?

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Managers here try to involve staff in important decisions.</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
<tr>
<td>b. Communication between management and staff is effective.</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
<tr>
<td>c. Managers encourage staff to suggest new ideas for improving services.</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
<tr>
<td>d. On the whole, the different parts of the Trust communicate effectively with each other.</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
<tr>
<td>e. Care of patients / service users is my Trust's top priority.</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
<tr>
<td>f. If I were a patient of this Trust, I would be happy with the standard of care provided.</td>
<td>☐ 1</td>
<td>☐ 2</td>
<td>☐ 3</td>
<td>☐ 4</td>
<td>☐ 5</td>
</tr>
</tbody>
</table>

#### 23. Equal opportunities

- a. Does your Trust act fairly with regard to career progression / promotion, regardless of ethnic background, gender, religion, sexual orientation, disability or age?  
  - Yes [☐ 1]  
  - No [☐ 2]  
  - Don’t know [☐ 3]

- b. Have you experienced discrimination at this Trust in the last 12 months?  
  If YES, please answer part c below; if NO, go to Question 24
  - Yes [☐ 1]  
  - No [☐ 2]

- c. On which grounds have you experienced discrimination? Please tick all that apply.
  1. Ethnic background
  2. Religions
  3. Disability
  4. Gender
  5. Sexual orientation
  6. Age
  Other (please specify) [☐]

#### 24. Whistle-blowing

- a. If you were concerned about negligence or wrongdoing by staff in this Trust, would you know how to report your concerns?  
  - Yes [☐ 1]  
  - No [☐ 2]  
  - Don’t know [☐ 3]

- b. Is there a system to report such concerns confidentially?  
  - Yes [☐ 1]  
  - No [☐ 2]  
  - Don’t know [☐ 3]

### OCCUPATIONAL HEALTH AND SAFETY

#### 25. During the last 12 months have you been injured or felt unwell as a result of the following problems at work?

- a. Moving and handling [☐ 1]  
- b. Needlestick and sharps injuries [☐ 1]  
- c. Slips, trips or falls [☐ 1]  
- d. Exposure to dangerous substances [☐ 1]  
- e. Work related stress [☐ 1]  
- f. Other [☐]

---

**Page 3**
### 26. Support for staff

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Do you have access to counselling services at work?</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>b. Do you have access to occupational health services at work?</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

### HARASSMENT, BULLYING AND VIOLENCE

#### 27. In the last 12 months have you experienced physical violence from any of the following?

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Patients / service users</td>
<td>[ ]</td>
</tr>
<tr>
<td>b.</td>
<td>Relatives of patients / service users</td>
<td>[ ]</td>
</tr>
<tr>
<td>c.</td>
<td>Manager / team leader</td>
<td>[ ]</td>
</tr>
<tr>
<td>d.</td>
<td>Colleagues</td>
<td>[ ]</td>
</tr>
<tr>
<td>e.</td>
<td>If you have answered YES to any of the above, did you report this physical violence?</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

#### 28. In the last 12 months have you experienced harassment, bullying or abuse from any of the following?

*For example, the use of inappropriate words or non-physical behaviour that caused you distress*

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Patients / service users</td>
<td>[ ]</td>
</tr>
<tr>
<td>b.</td>
<td>Relatives of patients / service users</td>
<td>[ ]</td>
</tr>
<tr>
<td>c.</td>
<td>Manager / team leader</td>
<td>[ ]</td>
</tr>
<tr>
<td>d.</td>
<td>Colleagues</td>
<td>[ ]</td>
</tr>
<tr>
<td>e.</td>
<td>If you have answered YES to any of the above, did you report this harassment, bullying or abuse?</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

#### 29. If you experienced an incident of violence, harassment, bullying or abuse, would you know how to report it?

[ ] Yes  [ ] No

#### 30. To what extent do you agree or disagree with the following? My Trust...

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Takes effective action if staff are physically attacked.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Takes effective action if staff are bullied, harassed or abused.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Takes effective action if staff are racially harassed.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Takes effective action if staff are sexually harassed.</td>
<td>[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### INFECTION CONTROL AND HYGIENE

<table>
<thead>
<tr>
<th>Question</th>
<th>Always</th>
<th>Most of the time</th>
<th>Sometimes</th>
<th>Never</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Patients / service users</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Visitors to the Trust</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ERRORS, NEAR MISSES AND INCIDENTS

<table>
<thead>
<tr>
<th>Statement</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. In the last month, I have seen errors, near misses, or incidents that could hurt patients / service users</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. In the last month, I have seen errors, near misses, or incidents that could hurt staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. I know how to report errors, near misses or incidents</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### The last time you saw an error, near miss or incident, did you or a colleague report it?

<table>
<thead>
<tr>
<th>Response</th>
<th>Yes</th>
<th>No</th>
<th>Don't know</th>
<th>Have never seen any errors, near misses or incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>y</td>
<td>n</td>
<td>d</td>
<td>h</td>
</tr>
</tbody>
</table>

### To what extent do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. My Trust treats fairly staff who are involved in an error, near miss or incident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. My Trust encourages us to report errors, near misses or incidents.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. My Trust treats reports of errors, near misses or incidents confidentially.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. My Trust blames or punishes people who make errors, near misses or incidents.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. When errors, near misses or incidents are reported, my Trust takes action to ensure that they do not happen again.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. We are informed about errors, near misses and incidents that happen in the Trust.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. We are given feedback about changes made in response to reported errors, near misses and incidents.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## BACKGROUND DETAILS

We would like to know some of your background details. Answers will be treated in confidence and no one outside the research team will be able to identify individual responses.

### 35. About you

**a. Gender:**
- [ ] Male
- [ ] Female

**b. Age:**
- [ ] 16-20
- [ ] 21-30
- [ ] 31-40
- [ ] 41-50
- [ ] 51-65
- [ ] 66+

### 36. What is your ethnic group?

#### White
- [ ] British
- [ ] Irish
- [ ] Other White background

#### Mixed
- [ ] White and Black Caribbean
- [ ] White and Black African
- [ ] White and Asian
- [ ] Any other mixed background

#### Asian/Asian British
- [ ] Indian
- [ ] Pakistani
- [ ] Bangladeshi
- [ ] Other Asian background

#### Black/Black British
- [ ] Caribbean
- [ ] African
- [ ] Any other Black background

#### Chinese and other ethnic group
- [ ] Chinese
- [ ] Any other ethnic group (please state)

### 37. Do you manage others within the Trust?
- [ ] Yes
- [ ] No

### 38. How many years have you worked for this Trust?

*If your Trust has merged with another or changed its name, please include in your answer all the time you have worked with this Trust and its predecessors*

- [ ] Less than 1 year
- [ ] 1-2 years
- [ ] 3-5 years
- [ ] 6-10 years
- [ ] 11-15 years
- [ ] More than 15 years

### 39. Do you have any long-term illness, health problem or disability which substantially limits your daily activities or the work you can do?
- [ ] Yes
- [ ] No
40. What is your occupational group?

Please tick one box only

**Admin & Clerical**
- [ ] Admin & Clerical (including Medical Secretary)

**Allied Health Professionals / Healthcare Scientists / Scientific and Technical**
- [ ] Clinical Psychology
- [ ] Occupational Therapy
- [ ] Pharmacy
- [ ] Physiotherapy
- [ ] Radiography
- [ ] Other qualified Allied Health Professionals (e.g. chiropody / podiatry, dietetics, orthotics, art therapy)
- [ ] Other qualified Scientific and Technical or Healthcare Scientists (e.g. haematology, clinical biochemistry, microbiology)
- [ ] Support to Allied Health Professionals (e.g. support worker, therapy helper, therapy assistant or student)
- [ ] Support to Scientific and Technical or Healthcare Scientists (e.g. technicians, assistants or students)

**Ambulance (operational)**
- [ ] Paramedic
- [ ] Ambulance Technician
- [ ] Ambulance Control Staff
- [ ] Patient Transport Service (e.g. ambulance drivers, support staff)

**Medical and Dental**
- [ ] Medical / Dental - Consultant
- [ ] Medical / Dental - In Training (e.g. Foundation Y1, SHO / Foundation Y2, SpRs)
- [ ] Medical / Dental - Other (e.g. Staff and Associate Specialists / Non-consultant career grades)

**NHS Infrastructure**
- [ ] Central Functions / Corporate Services (e.g. HR, Finance, Information Systems, Information Technology)
- [ ] Maintenance / Ancillary (e.g. housekeeping, domestic staff, maintenance, facilities, estates)

**Registered Nurses and Midwives**
- [ ] Adult / General
- [ ] Mental health
- [ ] Learning disabilities
- [ ] Children
- [ ] Midwives
- [ ] Health Visitor
- [ ] District / Community
- [ ] Other Registered Nurses

**Nursing or Healthcare Assistants**
- [ ] Nursing auxiliary / Nursing assistant / Healthcare assistant (including Health / Clinical / Nursing Support Worker)

**Social Care**
- [ ] Social workers / Residential social workers
- [ ] Social care managers
- [ ] Social care support staff

**General Management**
- [ ] General Management (N.B. If you are a manager and can choose a group from elsewhere in the list, please select that other occupational group)
- [ ] Other occupational group (please specify)

41. If you have any additional comments about working in this organisation, please write these below, or on a separate page.

Thank you for your time and effort in completing this questionnaire. The information will be used to improve the working lives of NHS staff and so improve the quality of patient care.
5a. In which country of the UK will the lead R&D office be located?
- [ ] England
- [ ] Scotland
- [ ] Wales
- [ ] Northern Ireland

4. Which review bodies are you applying to?
- [ ] NHS Research and Development offices
- [ ] Research Ethics Committee
- [ ] Patient Information Advisory Group (PIAG)
- [ ] Ministry of Justice (MoJ)

5. Will any research sites in this study be NHS organisations?
- [ ] Yes
- [ ] No

6. Do you plan to include any participants who are children?
- [ ] Yes
- [ ] No

7. Do you plan to include any participants who are adults unable to consent for themselves through physical or mental incapacity? The guidance notes explain how an adult is defined for this purpose.
- [ ] Yes
- [ ] No

8. Do you plan to include any participants who are prisoners or young offenders in the custody of HM Prison Service in England or Wales?
- [ ] Yes
- [ ] No

9. Is the study, or any part of the study, being undertaken as an educational project?
- [ ] Yes
- [ ] No

10. Is this project financially supported by the United States Department for Health and Human Services?
- [ ] Yes
- [ ] No

11. Will identifiable patient data be accessed outside the clinical care team without prior consent at any stage of the project (including identification of potential participants)?
- [ ] Yes
- [ ] No
IS THE SITE HOSTING THIS RESEARCH A NHS SITE OR A NON-NHS SITE? NHS SITES INCLUDE HEALTH AND SOCIAL CARE ORGANISATIONS IN NORTHERN IRELAND. THE SITES HOSTING THE RESEARCH ARE THE SITES IN WHICH OR THROUGH WHICH RESEARCH PROCEDURES ARE CONDUCTED. FOR NHS SITES, THIS INCLUDES SITES WHERE NHS STAFF ARE PARTICIPANTS.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS site</td>
<td></td>
</tr>
<tr>
<td>Non-NHS site</td>
<td></td>
</tr>
</tbody>
</table>

This question must be completed before proceeding. The filter will customise the form, disabling questions which are not relevant to this application.

ONE SITE-SPECIFIC INFORMATION FORM SHOULD BE COMPLETED FOR EACH RESEARCH SITE AND SUBMITTED TO THE RELEVANT R&D OFFICE WITH THE DOCUMENTS IN THE CHECKLIST. THE FORM SHOULD ALSO BE SUBMITTED TO THE LOCAL REC FOR SITE-SPECIFIC ASSESSMENT IF REQUIRED FOR THIS RESEARCH. SEE GUIDELINES NOTES.

THE DATA IN THE BOX IS POPULATED FROM PART A:

- **Title of research:** The Effectiveness of Early Lens Extraction with Intraocular Lens Implantation for the treatment of Primary Angle Closure Glaucoma: A Randomised Controlled Trial.
- **Short title:** EAGLE (Effectiveness, in Angle-closure Glaucoma, of Lens Extraction)
- **Chief investigator:** Dr. A. Atura-Bianco
- **Name of NHS Research Ethics Committee to which application for ethical review is being made:** North of Scotland Research Ethics Committee 2
- **Project reference number from above REC:** 08/S0603/153

1. Give the name of the NHS organisation responsible for this research site

Sanford & West Birmingham Hospitals NHS Trust

1. In which country is the research site located?

- England
- Wales
- Scotland
- Northern Ireland

0 2280/24109/6/693/6181/100275
1. Is the research site a GP practice or other Primary Care Organisation?

☐ Yes ☐ No

2. Who is the Principal Investigator or Local Collaborator for this research at this site?

Select the appropriate title: ☐ Principal Investigator ☐ Local Collaborator

Title Forename/Initials Surname
Dr. Winfred Nolan
Post Consultant Ophthalmologist in Glaucoma
Qualifications MB ChB, FRCOphth, MD
Organisation Sandwell & West Birmingham Hospitals NHS Trust
Work Address Birmingham and Midland Eye Centre
Dudley Road
Birmingham
Postcode B18 7QU
Work E-mail winnie_nolan@yahoo.com
Work Telephone 07920 522685
Mobile
Fax

a) Approximately how much time will the person allocate to conducting this research? Please provide your response in terms of Whole Time Equivalents (WTEs). Approximately 25% (1 hours/week)

b) Does this person hold a current substantive employment contract, Honorary Clinical Contract or Honorary Research Contract with the NHS organisation or accepted by the NHS organisation? ☐ Yes ☐ No

A copy of a current CV for the Principal Investigator (maximum 2 pages of A4) must be submitted with this form.

3. Please give details of all locations, departments, groups or units at which or through which research procedures will be conducted at this site and describe the activity that will take place.

Please list all locations/departments etc where research procedures will be conducted within the NHS organisation, describing the involvement in a few words. Where access to specific facilities will be required these should also be listed for each location.

Name the main location/unit first. Give details of any research procedures to be carried out off site, for example in participants' homes.

<table>
<thead>
<tr>
<th>Location</th>
<th>Activity/facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The Eye Clinic, Sandwell Hospital and Birmingham and Midland Eye Centre</td>
<td>Routine examination: assessment of eligibility for EAGLE; laser treatment; follow-up visits (no additional visits – as per usual care)</td>
</tr>
<tr>
<td>2 Ward at Sandwell Hospital and Birmingham and Midland Eye Centre</td>
<td>Pre-assessment for lens extraction</td>
</tr>
<tr>
<td>3 Day Case Theatre and Main Operating Theatres at</td>
<td>Lens extraction surgery</td>
</tr>
</tbody>
</table>
5. Please give details of all other members of the research team at this site.

<table>
<thead>
<tr>
<th></th>
<th>Title</th>
<th>Forename/Initials</th>
<th>Surname</th>
<th>Work Email</th>
<th>Employing Organisation</th>
<th>Post</th>
<th>Qualifications</th>
<th>Role in Research Team</th>
<th>Other (please specify)</th>
<th>Co-investigator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Velets</td>
<td>Sung</td>
<td><a href="mailto:velets.sung@swbh.nhs.uk">velets.sung@swbh.nhs.uk</a></td>
<td>Sandwell &amp; West Birmingham Hospitals NHS Trust</td>
<td>Consultant Ophthalmologist</td>
<td>FPCS (Ed), FFROphth</td>
<td>Co-investigator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a) Approximately how much time (approximately) will this person allocate to conducting this research? Please provide your response in terms of Whole Time Equivalents (WTE). Approximately 2.5% (1 hours/week)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>b) Does this person hold a current substantive employment contract, Honorary Clinical Contract or Honorary Research Contract with the NHS organisation or accepted by the NHS organisation?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td><a href="mailto:stephanie.harley@swbh.nhs.uk">stephanie.harley@swbh.nhs.uk</a></td>
<td>Sandwell &amp; West Birmingham Hospitals NHS Trust</td>
<td>Glaucoma Specialist Nurse</td>
<td>Registered nurse</td>
<td>Research Co-ordinator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Diploma in Advanced Nursing (Adult)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BSc(Hons) Nursing (ophthalmo)</td>
<td>Presently undertaking MSc. Advanced Practice which includes two modules specific to glaucoma.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a) Approximately how much time (approximately) will this person allocate to conducting this research? Please provide your response in terms of Whole Time Equivalents (WTE).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>b) Does this person hold a current substantive employment contract, Honorary Clinical Contract or Honorary Research Contract with the NHS organisation or accepted by the NHS organisation?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
5. Does the Principal Investigator or any other member of the site research team have any direct personal involvement (e.g. financial, share-holding, personal relationship etc) in the organisation sponsoring or funding the research that may give rise to a possible conflict of interest?

☐ Yes  ☐ No

If Yes, please give further details:

---

7. What is the proposed local start and end date for the research at this site?

| Start date: | 02/02/2009 |
| End date:   | 31/10/2013 |
| Duration (Months): | 56 |

---

9-1. Give details of all non-clinical intervention(s) or procedure(s) that will be received by participants as part of the research protocol. (These include seeking consent, interviews, non-clinical observations and use of questionnaires.)

Columns 1–4 have been completed with information from A18 as below:

1. Total number of interventions/procedures to be received by each participant as part of the research protocol.
2. If this intervention would have been routinely given to participants as part of their care, how many of the total would have been routine?
3. Average time taken per intervention (minutes, hours or days)
4. Details of who will conduct the procedure, and where it will take place

Please complete Column 5 with details of the names of individuals or names of staff groups who will conduct the procedure at this site.

<table>
<thead>
<tr>
<th>Intervention or procedure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeking Consent</td>
<td>1</td>
<td>0</td>
<td>10</td>
<td></td>
<td>Consultant ophthalmologists and EAGLE study clinicians.</td>
</tr>
<tr>
<td>Completion of Study</td>
<td>5</td>
<td>0</td>
<td>15</td>
<td></td>
<td>Local EAGLE team members (ophthalmologists, study coordinator as appropriate)</td>
</tr>
<tr>
<td>Questionnaires about quality of life, visual function and health care utilisation costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

8-2. Will any aspects of the research at this site be conducted in a different way to that described in Part A or the protocol?

☐ Yes  ☐ No

If Yes, please note any relevant changes to the information in the above table.

Are there any changes other than those noted in the table?
9.1. Give details of any clinical intervention(s) or procedure(s) to be received by participants as part of the research protocol. (These include uses of medicinal products or devices, other medical treatments or assessments, mental health interventions, imaging investigations and taking samples of human biological material, include procedures which might be received as routine clinical care outside of the research.)

Columns 1–4 have been completed with information from A19 as below:

1. Total number of interventions to be received by each participant as part of the research protocol
2. If this intervention would have been routinely given to participants as part of their care, how many of the total would have been routine?
3. Average time taken per intervention (minutes, hours or days)
4. Details of who will conduct the procedure, and where it will take place

Please complete Column 5 with details of the names of individuals or names of staff groups who will conduct the procedure at this site.

<table>
<thead>
<tr>
<th>Intervention or procedure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The patients randomised to the lens extraction group will receive lens extraction surgery</td>
<td>1</td>
<td>0</td>
<td>30 mins</td>
<td>A fully qualified ophthalmologist in the operating theatre</td>
<td>Winfried Nolan / Velota Sung</td>
</tr>
<tr>
<td>The patients randomised to standard treatment will receive standard care, which primarily includes laser in situ keratomileusis (once)</td>
<td>1</td>
<td>1</td>
<td>5 mins</td>
<td>A fully qualified ophthalmologist at the eye clinic</td>
<td>Winfried Nolan / Velota Sung</td>
</tr>
<tr>
<td>All participants will receive visual function testing (visual acuity, 5 mins x 3 times; and visual field testing, 15 mins x 6 times)</td>
<td>3-6</td>
<td>3-6</td>
<td>5-15 mins</td>
<td>A trained optometrist or nurse at the eye clinic</td>
<td>Winfried Nolan / Velota Sung / Trained Orthoptist or Visual Function Technician</td>
</tr>
<tr>
<td>A standard ocular examination</td>
<td>6</td>
<td>6</td>
<td>15 mins</td>
<td>A fully qualified ophthalmologist at the eye clinic</td>
<td>Winfried Nolan / Velota Sung</td>
</tr>
<tr>
<td>Gonioscopy</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>A fully qualified ophthalmologist at the eye clinic</td>
<td>Winfried Nolan / Velota Sung</td>
</tr>
<tr>
<td>Ocular biopsy</td>
<td>1</td>
<td>1</td>
<td></td>
<td>A fully qualified ophthalmologist at the eye clinic</td>
<td>Winfried Nolan / Velota Sung / Trained Orthoptist or Visual Function Technician</td>
</tr>
</tbody>
</table>

9.2. Will any aspects of the research at this site be conducted in a different way to that described in Part A of the protocol?

☐ Yes ☐ No

If Yes, please note any relevant changes to the information in the above table.

Are there any changes other than those noted in the table?
10. How many research participants/samples is it expected will be recruited/obtained from this site?

Approximately 20 over the course of the entire study.

11. Give details of how potential participants will be identified locally and who will be making the first approach to them to take part in the study.

Patients will be referred to the Eye Clinic as per usual practice (usually by GPs and community optometrists). On attendance the patients will be reviewed by an ophthalmologist and their eligibility for EAGLE will be ascertained. The treating ophthalmologist will explain the study to any patients identified as having PACG, and who meet the other eligibility criteria. Patients will be provided with the patient information leaflet and issued with a return clinic appointment. It would be necessary for patients to return to the clinic to initiate treatment, whether or not they participate in EAGLE.

12. Who will be responsible for obtaining informed consent at this site? What expertise and training do these persons have in obtaining consent for research purposes?

<table>
<thead>
<tr>
<th>Name</th>
<th>Expertise/training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Winifred Nolan</td>
<td>Has extensive experience in eye research through participation in several research studies. Has completed good clinical practice (GCP) training.</td>
</tr>
<tr>
<td>Dr Velota Sung</td>
<td>Has extensive experience in eye research through participation in several research studies. Has completed good clinical practice (GCP)</td>
</tr>
<tr>
<td>Stephanie Hartley</td>
<td>Has extensive experience in eye research through participation in several research studies. Has completed good clinical practice (GCP)</td>
</tr>
</tbody>
</table>

13–1. Is there an independent contact point where potential participants can seek general advice about taking part in research?

Patients can seek advice from the coordinating trials unit (Centre for Healthcare Randomised Trials, Aberdeen) and/or the local hospital via the R&D Department.

In addition, participants may contact the independent chairman of the EAGLE steering committee through the EAGLE study office about any concerns they may have about the study.

13–2. Is there a contact point where potential participants can seek further details about this specific research project?

The EAGLE website: www.chartrials.abdn.ac.uk/eagle

16. Are there any changes that should be made to the generic content of the information sheet to reflect site-specific issues in the conduct of the study? A substantial amendment may need to be discussed with the Chief Investigator and submitted to the main REC.

No

Please provide a copy of the headed paper of the participant information sheet and consent form that will be issued locally. Unless indicated above, this must be the same generic version submitted to/approved by the main REC for the study while including relevant local information about the site, investigator and contact points for participants (see guidance notes).
17. What local arrangements have been made for participants who might not adequately understand verbal explanations or written information given in English, or who have special communication needs? (e.g. translation, use of interpreters etc.)

As this is an international study, translations of study documents will be made to traditional and modern Chinese. These could be used locally, if required. We do not anticipate translating into any other language and therefore any patient who cannot understand verbal or written information in English or Chinese will be excluded.

Patients who are unable to give informed consent (e.g. due to Alzheimer’s) will be excluded.

18. What local arrangements will be made to inform the GP or other health care professionals responsible for the care of the participants?

Participants will be informed and will be consented to their GP being notified that they are participating in the study. A copy of their consent form, summary details of the trial, and contact details for an EAGLE team member will be filed in their hospital record.

19. What arrangements (e.g. facilities, staffing, psychosocial support, emergency procedures) will be in place at the site, where appropriate, to minimise the risks to participants and staff and deal with the consequences of any harm?

The Eye Clinic has all necessary equipment and expertise to undertake the trial interventions. All procedures proposed in the trial are performed in the Department regularly, and all surgical equipment is thus available.

Participants will be advised about post-treatment expectations and what to do in the event of any problems (as they would be following any medical treatment).

Details of any complications will be recorded throughout the trial.

21. What external funding will be provided for the research at this site?

☐ Funded by commercial sponsor
☐ Other funding
☐ No external funding

Please give details of the funding:
The trial is funded by the UK MRC. Research funding for the site is available as detailed below.

<table>
<thead>
<tr>
<th>Type of funding</th>
<th>Details (including breakdown over years if appropriate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Block grant</td>
<td>Set up fee of £5000.</td>
</tr>
<tr>
<td>(ii) Per participant</td>
<td>£1500 per participant (£500 on randomisation and £500 when 1 year follow-up has been completed).</td>
</tr>
<tr>
<td>(iii) Other (give details)</td>
<td>Equipment (ETDRS charts and gonioscopy) – £900 (if required).</td>
</tr>
</tbody>
</table>

Which organisation will receive and manage this funding?
Sandwell and West Birmingham Hospitals NHS Trust

23. Authorisations required prior to R&D approval
This section deals with authorisations by managers within the NHS organisation. It should be signed in accordance with the guidance provided by the NHS organisation. This may include authorisation by clinical supervisors, line managers, service managers, support department managers, pharmacy, data protection officers or finance managers, depending on the nature of the research. Managers completing this section should confirm in the text what the authorisation means, in accordance with the guidance provided by the NHS organisation.

This section may also be used by university employers or research support staff to provide authorisation to NHS organisations, in accordance with guidance from the university.

1. Type of authorisation:
Divisional Director

Title: Forename/Initials Surname
Mr. Shash Aggarwal
Post: Consultant Ophthalmological and Clinical Director
Qualifications: MBBS(Lor):FRCS(Edin):FRCOphth
Organisation: Sandwell & West Birmingham Hospitals NHS Trust
Work Address: Birmingham and Midland Eye Centre: Dudley Road
Birmingham
Postcode: B1 7DU
Work E-mail: shash.aggarwal@swbh.nhs.uk
Work Telephone: PA is 0787532138
Mobile: 
Fax: 

Signature: 

Date: 

Declaration by Principal Investigator or Local Collaborator:

1. The information in this form is accurate to the best of my knowledge and I take full responsibility for it.

2. I undertake to abide by the ethical principles underpinning the World Medical Associations Declaration of Helsinki and relevant good practice guidelines in the conduct of research.

3. If the research is approved by the main REC and NHS organisation, I undertake to adhere to the study protocol, the terms of the application for which the main REC has given a favourable opinion and the conditions requested by the NHS organisation, and to inform the NHS organisation within local timelines of any subsequent amendments to the protocol.

4. If the research is approved, I undertake to abide by the principles of the Research Governance Framework for Health and Social Care.

5. I am aware of my responsibility to be up to date and comply with the requirements of the law and relevant guidelines relating to the conduct of research.

6. I undertake to disclose any conflicts of interest that may arise during the course of this research, and take responsibility for ensuring that all staff involved in the research are aware of their responsibilities to disclose conflicts of interest.
7. I understand and agree that study files, documents, research records and data may be subject to inspection by the NHS organisation, the sponsor or an independent body for monitoring, audit and inspection purposes.

8. I take responsibility for ensuring that staff involved in the research at this site hold appropriate contracts for the duration of the research, are familiar with the Research Governance Framework, the NHS organisation's Data Protection Policy and all other relevant policies and guidelines, and are appropriately trained and experienced.

9. I undertake to complete any progress and/or final reports as requested by the NHS organisation and understand that continuation of permission to conduct research within the NHS organisation is dependent on satisfactory completion of such reports.

10. I undertake to maintain a project file for this research in accordance with the NHS organisation’s policy.

11. I take responsibility for ensuring that all serious adverse events are handled within the NHS organisation’s policy for reporting and handling of adverse events.

12. I understand that information relating to this research, including the contact details on this application, will be held by the R&D office and may be held on national research information systems, and that this will be managed according to the principles established in the Data Protection Act 1998.

13. I understand that the information contained in this application, any supporting documentation and all correspondence with the R&D office and/or the REC system relating to the application will be subject to the provisions of the Freedom of Information Acts and may be disclosed in response to requests made under the Acts except where statutory exemptions apply.

Signature of Principal Investigator
or Local Collaborator:

Print Name:
Date:

11 2280/241006/693/618/1 100275
Appendix 18   Project team dissemination

Conferences

- Professor Johnston and Dr Jones delivered a poster presentation to support the methodological models used in the nursing strand at the Annual Conference of the British Psychological Society at the University of Nottingham in September 2007.

- Professor McKee delivered a poster presentation at the World Health Organisations recent event in Portugal in September 2007.

- Christine Miles presented project findings at the NIHR SDO Annual Conference in June. This presentation elicited much interest. Researchers from the NIHR King’s Patient Safety and Service Quality Research Centre, Kings College London, extended invitations to the project team to develop closer links.

- Kathryn Charles presented preliminary findings generated from the ‘Organisational’ strand at the Health Care Systems, Ergonomics and Patient Conference in Strasbourg, June 24th-27th 2008. This conference was organised by the ‘International Ergonomics Association’ and was endorsed by the European Union, European Parliament and diverse associated national scientific societies and institutions.

- Dr Martyn Jones presented findings generated from the ‘Staff Well-being’ strand at the British Psychological Society, Health Psychology Annual Conference to be held at the University of Bath from 9th-12th September 2008.

- Dr Steven Yule presented findings generated from the ‘Leadership’ strand at the 52nd Annual Meeting of the Human Factors and Ergonomics Society, September 22nd-26th, New York.

- Professor Rhona Flin presented findings generated from the ‘Leadership’ strand at the Health Organisation and Service Delivery Conference, Making Connections and Building Bridges: Mobilising Organisational Research into service Delivery, at The Linklater rooms, Kings College University of Aberdeen, 18th November 2008.

Other forms of knowledge transfer and dissemination:

- Dissemination and knowledge transfer is enabled by Professor McKee’s membership of the NIHR King’s Patient Safety and Service Quality Research Centre, International Scientific Advisory Board.

- Links and knowledge transfer is also facilitated with the NPSA as representatives of the NPSA are members of our ‘Advisory Group’ (Dr Beverly Norris and Dr Jennifer Martin).

- Engagement with academic research users has been maintained via a range of specialist research networks. These include:
1. The Scottish Patient Safety Research Network led by Professor Flin and including Professor McKee and Dr Yule.
2. The Health Organisational Research Network, a network of academics from the Universities of Aberdeen, Glasgow, Edinburgh, Dundee and St Andrews.
3. The Nordic Patient Safety Network, a network of researchers from Norway, Sweden, Finland and Denmark.
4. Informal contact with the Irish Patient Safety Network and the Kings College Patient Safety and Service Quality Centre.
Disclaimer

This report presents independent research commissioned by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, the NIHR SDO programme or the Department of Health. The views and opinions expressed by the interviewees in this publication are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, the NIHR SDO programme or the Department of Health.

Addendum

This document was published by the National Coordinating Centre for the Service Delivery and Organisation (NCCSDO) research programme, managed by the London School of Hygiene & Tropical Medicine.

The management of the Service Delivery and Organisation (SDO) programme has now transferred to the National Institute for Health Research Evaluations, Trials and Studies Coordinating Centre (NETSCC) based at the University of Southampton. Prior to April 2009, NETSCC had no involvement in the commissioning or production of this document and therefore we may not be able to comment on the background or technical detail of this document. Should you have any queries please contact sdo@southampton.ac.uk.