The development and implementation of NHS Treatment Centres as an organisational innovation

Key messages

- The stakeholders involved in developing the eight Treatment Centres shared a common motivation to bring about improvement in patient care. However, the processes of development and implementation for each Treatment Centre were unique, resulting in a range of different models and variable outcomes for their continuing operation.

- The ‘innovation journey’ experienced by the eight Treatment Centres was similar to that undertaken by commercial companies: running from inception through to adoption or abandonment, with some common events but also unpredictable and unanticipated twists and turns in the journey.

- The development of the Treatment Centres was hampered by imprecise planning, financial setbacks and uncertainty about likely case mix and patient flows.

- Flexibility is vital for successful health care innovation. Centrally-driven programmes need to permit local change managers to reframe innovative models to meet local needs and priorities.

- Health care innovation cannot be introduced in a vacuum – the policy environment has a major influence on its journey. Success depends on stakeholders’ ability to contend with such volatility.

This research was commissioned by the NIHR Service Delivery and Organisation Programme (SDO) and followed the journey of eight NHS Treatment Centres, which were considered as ‘models of innovation’ (NHS Plan 2000), to learn how organisational and social factors influence the development and delivery of innovative models of health care.

It found that the implementation of this innovative health care model was unpredictable and was influenced by internal, external and national factors. The eight Treatment Centres (TCs) were diverse and varied from the original policy blueprint. The change they brought to the treatment of patients was less far-reaching than anticipated.

This paper will be of interest to policy makers who wish to encourage innovation within the NHS and to managers who wish to implement innovation within their NHS Trust.

The study was undertaken by a team from two academic institutions led by Professor Paul Bate at University College London.
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Background

Innovation in the NHS

The idea for Treatment Centres was first heralded in the NHS Plan (DH, 2000). From a planned small scale introduction of four ‘Diagnostic and Treatment Centres’ (soon renamed as Treatment Centres) in 2001, the plan was to increase the number, range of services and type of provider (with the introduction of the private sector) so that 50 TCs would be operational by 2004/05 (DH, 2002). Using the existing Ambulatory Care and Diagnostic Centre at Central Middlesex Hospital (London) and models of surgicentres (developed overseas) as prototypes, the TC model was innovative as it proposed a ‘one-stop shop’ for planned (non-emergency) care. Patients could obtain diagnostic and treatment services under one roof. TCs aimed to reduce inappropriate delays and waiting lists through the separation of elective surgery from emergency and unplanned treatment. By focusing on high volume and routine surgical procedures in orthopaedics, gynaecology, ophthalmology and cardiology, TCs sought to increase efficiency by delivering high volumes of activity and high quality health care using modern methods. This proposed service development was timely for NHS change managers who were seeking ways to make progress towards national waiting time targets and to introduce more patient-centred models of care. Whilst many had not previously considered the TC model, they were eager to explore its advantages at a local level.

By following eight TCs from their early stages through development to adoption, this study was able to identify and examine the organisational and social factors that influenced this service development. Major innovation in health care organisations has seldom been subject to close scrutiny. This study sought to provide a better understanding of how a centrally-driven initiative to meet NHS goals was adopted in practice. It also provided a timely opportunity to address gaps in research knowledge about innovation and change management.

Aims of the study

- To conduct a technical evaluation (incorporating mathematical modelling) of the concept and actual impact of TCs as an innovative way of delivering health care within the NHS.
- To undertake a qualitative study of the organisational and social factors associated with the development of TCs in order to explore how these influence the implementation of innovation.

The NHS Plan (DH, 2000) outlined a staggered programme of TC implementation with development starting in 2001. The timing of this three-year research project, which commenced in 2003, offered a unique opportunity to study the implementation of innovation in practice. Eight TCs still in their gestation stage agreed to participate in the study: together they provided a broad spectrum of different models that were studied from their development through to completion.

Practical findings

Treatment centres as models for the ‘innovation journey’

The challenge for the research team was to examine novel ways of organising and delivering health care services which questioned traditional practice and which had not yet been adopted on a national scale (SDO tender brief, 2002). The team chose to focus on the development and implementation of NHS Treatment Centres (TCs). These exemplified the increasingly complex and dynamic nature of health care service delivery, involving multiple professional and occupational groups as well as major technological and organisational change. The innovative characteristics of TCs were the separation of elective from emergency care and the focus on high volumes and high quality (modernised) care. TCs were central to the drive to meet Government targets on waiting times.
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It was the previously identified lack of service provision to rectify the under-utilisation of premises; for others, it was a shared belief that the new ways of working that they had used or witnessed elsewhere; for some, it was the need to rectify the under-utilisation of premises; for others, it was the previously identified lack of service provision in a particular specialism. However, there was a common goal of ‘improvement’.

The development of each TC (Box 1). During the development phase, different clusters and allegiances were formed and re-formed until a consensus for the design of the local TC emerged.

The phases of the ‘innovation journey’

What emerged from the research team’s examination of the literature on organisational innovation was a common picture of the non-linear ‘innovation journey’ which was non-sequential, iterative and often unpredictable, influenced by both internal and external events and activity. The team recognised that the ‘life cycle’ of the TC within the NHS imitated the key innovation phases found in the literature with a similar pattern of randomness and serendipity across the eight sites.

The initiation and planning phase: A number of health care trusts welcomed the Government’s announcement to provide funding for local programmes that addressed waiting times and enabled patient-centred care. They saw it as an opportunity to improve the local delivery of services and as a way of meeting targets (DH, 2000). The managers embraced the model of the TC: they hastily produced local business plans, often more designed to secure the funding than to address the prevailing health care needs of the local community. Consequently, they often overlooked the need to enlist full cooperation from the host strategic health authority and other stakeholders.

The development phase: Once the funding had been secured, the successful sites experienced a period of twists and turns which involved re-working local business plans to satisfy internal and external stakeholders and partners. This involved selecting those elements of the central design that met local needs; reframing plans to ensure modifications in the national criteria and shifts in the NHS priorities were catered for; and having to replace key managers on several occasions due to rapid turnover. Although no development phase was the same, the study found a number of common threads that weaved through the eight TCs.

- Each TC had a unique local ‘driver’ that provided the impetus for the development. For some, it was the need to rectify the under-utilisation of premises; for others, it was the previously identified lack of service provision in a particular specialism. However, there was a common goal of ‘improvement’.
- There was a shared belief that the new ways of working were timely and necessary. This helped identify local ‘champions’ to spearhead the development.
- Nonetheless, the level of support in the sites spanned a continuum from hostility towards the TC concept through to constructive partnerships which were committed to driving through its development.
- Four distinct groupings of players became apparent in the development of each TC (Box 1). During the development phase, different clusters and allegiances were formed and re-formed until a consensus for the design of the local TC emerged.

The implementation phase: All the eight TCs introduced new ways of working. For example:

- the provision of care in new, state-of-the-art premises which allowed for more flexible use, including evening and weekend surgery
- improved administrative pathways which facilitated a smoother patient flow from referral through booking and scheduling to treatment, and with PCTs providing planned intermediate care
- innovations in staffing models, with nurses frequently taking a more prominent or leading role in the provision of care.

However, the journey towards implementation and progress towards targets was not uneventful. Managers had to identify ways of overcoming a number of hurdles. These included how to encourage real teamwork and to convince clinical staff that the TC could bring real improvement to patient care; strategies to negotiate the continuous stream of reforms and changes being introduced into the NHS from the centre (Box 2); and the inability to estimate uptake and efficiently manage throughputs, especially when providing a range of treatments. As a result, the extent to which organisational change was incorporated via teamwork and to convince clinical staff that the TC could bring real improvement to patient care; strategies to negotiate the continuous stream of reforms and changes being introduced into the NHS from the centre (Box 2); and the inability to estimate uptake and efficiently manage throughputs, especially when providing a range of treatments. As a result, the extent to which organisational change was incorporated via

Box 1. Four types of local players who engaged with the TC development

- The Idealist – who saw an opportunity to improve patient care
- The Sceptic – who saw TCs as a short-lived ‘design of the day’ which would soon be superseded
- The Opportunist – who had an eye on the additional set-up funds that the development would bring to the local health economy
- The Pragmatist – who was prepared to accept the concept as long as it was not too disruptive
managers’ ability to forecast the effect of changes in the external market on the local TC and their vision to be able to select those elements of the ‘central’ blueprint of the TC that would most effectively meet local needs.

Box 2. Key contemporaneous government policies that impacted on the development, planning and implementation phases of the Treatment Centre

1. The Independent Sector Treatment Centre (ISTC) Programme followed behind the TC development programme. As the target figure for treatments within the independent sector rose, the level of concern that the ISTCs would undermine the viability of the NHS TCs grew.
2. Patient Choice: expectations of patients exercising their choice to use the TCs were, in some cases, over-optimistic. As waiting times fell amongst more traditional providers, the volume of ‘Choice’ patients opting for TCs also fell.
3. Payment by Results: when PbR was partially introduced in 2003, it was applied to the ‘core business’ of many TCs – elective procedures in areas where there were significant waiting lists such as cataracts and hips. In the early days, managers felt unconfident in their assessment of how the new financial system would impact on the stability of the TC and the wider local health economy.

The outcome and termination phase: The remit of this study did not include a quantitative assessment of health care outcomes. However, it found some examples of change and improvement to practice. These included a positive impact on patient flows with an increase in throughput and decrease in waiting times, and innovative (often nurse-led) processes of care (some of which are described above). Although not major in scale, improvements were evident despite varying levels of support and commitment, the shifting sands affecting the whole of the NHS and poor planning assumptions (Box 3). Within the TCs, the level of stakeholder satisfaction varied. Some were proud of positive local transformations but others expressed frustration that changes were incremental in character and not more revolutionary. This discordance of opinion and varying levels of change also affected the future ‘destination’ of the TCs. By the end of the three-year study, four sites had developed links with the private sector (with three sites being in discussion around ‘selling off’ aspects of the service and the fourth being ‘bought out’ completely by a private health care provider). Three sites remained within the NHS TC Programme (although the characteristics of two diverged considerably from the original blueprint). One site had closed completely.

Box 3. Reasons for poor planning assumptions

- Pressure to move fast at the bidding stage and a tendency to cut corners
- Lack of contingency plans that could cope with both predictable and unpredictable changing circumstances
- Lack of strategic planning and support from external partners (within the local health economy and beyond) who were not uniformly engaged nor committed to the TC model
- Inadequate support from internal stakeholders, including clinicians and managers within the TC
- Inability to market the envisaged advantages of the TC to patients from a wide catchment area

Can mathematical modelling facilitate strategic and operational planning?

It was envisaged that, by separating routine elective care from complex and emergency services, the introduction of TCs would improve the efficient use of capacity across the health service as a whole. To augment the qualitative findings of the study, members of the research team from the Clinical Operational Research Unit used a mathematical model to estimate whole-system capacity requirements (Figure 1). The aim of this exercise was to identify circumstances in which improvements could be expected due to the change in patient flows alone and others where, due to the complex interactions of variability in length of stay and economies of scale, it would be more difficult for the introduction of a TC to improve efficiency (Figure 2). Another aim of the quantitative research was to assess the opportunity provided by the controlled environment of the TC for using sophisticated planning and scheduling tools to improve efficiency within the TC. A number of potential applications were identified.

Figure 1. Expression for bed demand

However, the study found that there remained strong reluctance amongst managers to adopt mathematical modelling. This was due to a lack of understanding of how to use it effectively, and to other competing demands during what was a time of frenetic change whereby the local political and clinical context, motivations and priorities took precedence in the ‘innovative journey’.

**Box 4. Findings from the mathematical modelling exercise**

1. Separate delivery of routine elective care in a TC may bring benefits where it serves a catchment area in which there is co-operation between a number of non-TC hospitals and where it is possible to identify and attract patients who are likely to have shorter lengths of stay.
2. However, the separation of patient groups is not always enough. A TC may have a negative impact on the efficient use of capacity unless it is possible to considerably shorten hospital stays through improved patient management.

**Figure 2. Comparing capacity requirements**

By evaluating a large number of scenarios we identified...

...contexts where a TC may be an efficient use of capacity

The level of knowledge on how to implement innovation in health care is still sparse and the study identifies the need for further research in a number of areas:

- The impact and outcome of shifting the balance from centrally driven to locally generated innovations
- How to ensure that the innovation process maximises existing skills in the NHS whilst minimising service delivery disruption
- Greater understanding of how middle managers (such as managers of TCs and frontline NHS staff in general) learn from their contact with ‘innovation’ and how best to harness this learning to engage and involve them in managing change in the future
- The factors that influence decision-makers to sign up to innovation and the sources of evidence to support their actions
- How to identify common opportunities and barriers for change and strategies of how to overcome the barriers during the ‘innovative journey’

**Conclusions**

This study demonstrates a range of factors that influence the ‘innovation journey’ leading to successful adoption. Some of these are outside the control of stakeholders. As with organisational innovation in all commercial and service sectors, it suggests that the ‘innovation journey’ is likely to be beset with false turnings that limit the extent to which change can be planned with accuracy in advance and can be implemented in a linear and controlled fashion. Mathematical modelling can facilitate planning to bring improvements but this is only part of the solution. The other part is how to support managers to improve their capability to manage and control innovation when there are likely to be different levels of enthusiasm and scepticism ‘in house’ and high degrees of uncertainty and turbulence ‘outwith’. Given the limited change resulting from this particular ‘innovation journey’, the study questions whether major organisational change as an activity is inherently desirable. However, what became apparent is that successful implementation of innovative new models of service delivery requires flexibility: at the ‘centre’, policy makers need to permit change managers to reframe a proposed model to fit the needs of the local health economy and to bend to changing policy demands. At the local level, practitioners and managers need to recognise that a common characteristic of the innovation process is high levels of complexity, uncertainty and unpredictability, all of which require an approach that manages the complexity rather than seeks to resolve or ‘tame’ it. This can best be achieved where there is consensus at a local level that there is need for change to the delivery of local health care services. Progress further depends on good relationships between local internal and external partners and stakeholders. They need to be willing to work flexibly together with a blueprint which can be moulded and reshaped until an effective and efficient model emerges to meet local needs.
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The most appropriate planning and organisational technologies to support effective new organisational designs

The use of mathematical modelling needs to be further investigated to identify how it might be more widely accepted by managers as an aid to planning

The most appropriate methodological approach when studying an organisational entity that is subject to a range of diverse meanings and interpretations by policy makers, practitioners and the research team.

Methods used in the study
The selection of eight sites was informed through discussion with the promoters of the NHS Treatment Centre Programme nationally and through preliminary documentation collected by the research team. Appropriate selection criteria were developed to ensure a broad representation of TCs. The team of researchers from two institutions adopted a multi-method case study design (Eisenhardt, 1989; Yin, 1994). Fieldwork was undertaken over a 30-month period (from Spring 2003 onwards): the qualitative analysis included over 200 semi-structured interviews in two phases, non-participant observation of different types of meetings which involved both professionals and patients, and documentary analysis of key documents. (No patient interviews were conducted due to the focus of the research being on organisational and policy questions.) The mathematical modelling was based on probability and optimisation theory to identify circumstances in which the introduction of a TC could benefit a local health economy and means by which TCs could operate more efficiently. A review of the background literature on NHS Treatment Centres was carried out as an integral part of the study.

References

Further information
The full report, this research summary and details of current SDO research in the field can be downloaded at: www.sdo.lshtm.ac.uk

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Feedback
The SDO Programme welcomes your feedback on this research summary. To tell us your views, please complete our online survey, available at: www.sdo.lshtm.ac.uk/researchsummaries.html

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The Service Delivery and Organisation Programme (SDO) is part of the National Institute for Health Research (NIHR). The NIHR SDO Programme is funded by the Department of Health.

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This summary presents independent research commissioned by the National Institute for Health Research Service Delivery and Organisation Programme. The views expressed in this publication are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health.

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This report presents independent research commissioned by the National Institute for Health Research (NIHR). The views and opinions expressed therein are those of the authors and do not necessarily reflect those of the NHS, the NIHR, the 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 and 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