Channelling the Flow

Managing Demand in the NHS with Innovation in the Healthcare Estate

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BREAKING BARRIERS INNOVATIONS

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Introduction

Managing demand has been one of the prime functions of the NHS since its inception in 1948, and it remains one of the central challenges in the NHS today. In its simplest terms the challenges of managing demand or channelling patient flow have been characterised as matching resources and capacity to population needs. However, this is not, and probably never has been, a straightforward issue. This is due to various factors:

- **Changing population needs** – population needs differ across time and between areas. For example, these needs have shifted from the management of chronic communicable diseases to treating health problems that arise from lifestyle choices, inequalities and ageing.
- **Historical resource allocation** – resource allocations for healthcare have been characterised by historical patterns of investment and inherited hospital and community estates. Despite efforts by various governments to adjust the formulas by which health budgets are allocated, this has been largely ineffective in redressing the national imbalances in health service infrastructure. Resource allocations have also failed to address the problems associated with old and out-dated hospital facilities. For example, Lord Naylor concluded in his review of NHS property and estates that levels of capital investment in the NHS are insufficient to maintain the current estate or to fund the required transformation (Naylor, 2017)
- **The complexity of estate ownership** – there is an increasingly fragmented picture of ownership of NHS estates, for example, the NHS portfolio is divided across 233 NHS Trusts and Foundation Trusts, NHS Property Services and Community Health Partnerships, local authorities lease arrangements and private contracts such as those under the Private Finance Initiative (PFI). Within primary care many individual GP practices own their own premises.
- **Shifting political objectives** – the ability of NHS leaders to plan and act strategically on estates investment, management and transformation has been hampered by successive top-down re-organisations. These have often reflected shifting political objectives, which are not always made explicit with the result that there are high levels of public distrust about ensuring the future safety and delivery of NHS services.
- **Capacity constraints** – there are capacity constraints in the existing system that influence the ability of the NHS and local authorities to meet fluctuations in demand. These include historical and inflexible shift patterns, professional silos, limited use of data and information to predict accurate peaks in activity. They are further constrained by fixed capital assets that are no longer fit for purpose, limited social care options and the impact of funding cuts.

• [1]BBC Online - http://www.bbc.co.uk/news/health-42254413

Understanding Patient Flow

Traditional approaches to understanding patient flow and designing models to address constraints come from studies of traffic congestion:

"The fact that more congestion in a confined space means less speed, and less flow once a certain level of occupancy is reached, is well established in modelling of road traffic. Heavy congestion cannot be solved by asking people to drive faster, in fact, speed can only be increased by reducing congestion first." (Karakusevic, 2016)

However, this may be a limited analogy, as in congestion the constraints are visible and as participants at the roundtable observed, this is often not the case with respect to patient flow into and out of acute care.

"We need to analyse the constraints more in the relationship between capacity and demand. When the problems and constraints are visible it is easier to find solutions, but these are often hidden and demand is not consistent."

A number of the roundtable participants stated that measuring patient flow alone was not sufficient and that this needed to be matched to processes for adding value in addressing the problems:

"We need a consistent way of measuring patient flow so that it is more directly linked to value adding processes."

The ways in which patients seek to access care are also changing and creating inconsistencies in planned patterns of service delivery, in particular with respect to shifts in demand from primary care to Accident and Emergency:

"The reality is that A&E has become the first recourse of primary care."

The underlying causes may be multivariable and partially hidden, and so there is a need for greater predictability in assessments and discharge planning, as a number of participants explained:

"We need to get better at admissions, determine at the outset what is predicted and the likely discharge scenario, then have a real time response to that patient journey and anything that changes the prediction."

"How can we increase the certainty that what we do has the desired impact on discharge?"

In fact, many of the responses to managing patient flow have been directed at practices that are designed to increase predictability, such as supplementary triage and case managers placed in A&E.

However, while these have had some beneficial impacts in local areas their general applicability has been questioned:

"Reproduction of a successful intervention from one setting to another sometimes fails because the superficial aspects of the approach were adopted but not the underlying systems and processes that were responsible for the improvement." (Crisp, 2017).

One participant likened this to the Pareto rule[2] where by 80% of the effects are judged to come from only 20% of the causes. For example, evidence from the Hospital Episode Statistics (2016) reveals that while only 10% of patients stay in hospital over seven days, these patients use 65% of beds and generate 32% of income.

[2] Coined by management consultant Joseph M Juran, the Pareto principle is one of the key tools used in total quality control and Six Sigma techniques.

The constraints to transformational change

Many roundtable participants agreed that addressing the fundamental issues that act against resolution of the challenges for managing patient flow will require system leaders to address four constraints:

- **limitations in system leadership and strategy for estates**
- **the misalignment of financial levers and incentives**
- **organisational barriers and willingness to relinquish sovereignty**
- **historical barriers to estate reconfigurations.**

Limitations in System Leadership and Strategy for Estates

The roundtable participants highlighted the lack of a coherent system level strategy and highlighted the need for greater challenge and evidence of effectiveness, locally at board level and nationally within Sustainable Transformation Partnerships:

"We need to change the politics, process and unintended consequences of the current system for managing and measuring patient flow – and how to build challenge in the system at national and local board levels."

"We need system leadership – Sustainable Transformation Partnerships may help but it is not proven yet, and Accountable Care Organisation models are still being worked out."

"STP leaders lack the tactical tools to deal with the fundamental issues."

This was also thought to be significant in terms of accountability for planned transformation of the acute care sector:

"Who is the champion of the hospital acute sector? The STP is not sufficient for this, it is primary care focused; there is a lack of real engagement with the acute sector. We need a new accountability framework in place that can address this."

"Since STPs, the market is more confused, it is not clear who is accountable for commissioning and procurement."

Participants thought that Trust boards, in particular, struggled to focus on wider systemic change and that they were just 'firefighting':

"It is hard to get boards to be able to address the issues."

"How do we get an improved debate about these issues in the board room?"

The Misalignment of Financial Levers and Incentives

A number of participants suggested that many of the current financial levers in health and social care act as disincentives to transformational change. For example, there are little or no incentives for acute hospitals to provide step down beds:

"Why should the acute sector pay for step down beds? In the short-term it may be a cheaper bed to day cost, which could alleviate some of the pressures, provided that the CCG didn't just take this as a cut in procurement."

Financial incentives and levers were also thought to act against greater collaboration with local authorities on the provision of social care:

"Delayed Transfers of Care – the balance is 40%-60% – we can't discharge because there is no social care provision... Why would the local authority take them, there is no financial incentive."

"Why should the NHS act as a warehouse for the local authority? The local authority should face a financial penalty if it doesn't take people out of the acute system."

"We need to quickly find the methodology to unlock the financial disincentives that act against co-operation and joint planning between the NHS and local authorities."

The participants agreed that there is a need to unlock these financial barriers to enable a more flexible and integrated, system approach to resolving the issues. The solutions put forward by participants included taking a whole systems approach to the way in which different funding streams are allocated and move between organisations:

"The real differentiator in new models of provision is the clarity of the purse holder – who holds the money – we need mechanisms for transferring the money flow across organisational boundaries. It must be a whole system approach, not batting the ball between community, primary, acute care and the local authority."

In particular, participants thought that financial incentives should 'support collaboration' and prevent system leaders from 'gaming the system'.

Organisational Barriers and Sovereignty

Some participants commented that too many organisations remained focused on their organisational sovereignty and that this narrow, 'siloed way of thinking' hindered innovation:

"The key issue is persuading boards to relinquish their sovereignty so that they can be more innovative in working collaboratively."

New models such as Accountable Care Organisations were thought to provide a useful framework for addressing sovereignty issues. However, participants also thought that Trusts were not all at the same level of maturity and that this could prevent the development of new organisational models at scale:

"Different Trusts are in different places; you could have a good Foundation Trust for community services and a failing acute Trust in the same area, so they struggle to work together at the same pace and scale."

Some acute Trusts are located in more than one STP footprint and this could produce additional barriers. Some local authorities were also thought to have reservations about change being instigated through STPs and the potential to disrupt existing working relationships:

"STPs can be disruptive of long held relationships and roles, there is resistance amongst local authorities over this. There are competing interests, but also a perceived risk of disruption of what is good and has some historical value."

Historical Barriers to Estate Reconfigurations

Participants highlighted the rigid ways in which estates have been historically designed and commissioned. This was thought to be a significant barrier to enabling Trusts and other partners to change existing estates configurations, many of which have long histories:

"How the estate is framed, judgements are influenced by what had happened previously and this is reflected in the specification and contracting. We need to reconstitute the contract with the right measurements and learn from history."

Estate reconfiguration should be focused on creating value in service settings:

"We need to shift the focus of estates planning so that it is reflective of the cost effectiveness and value in the service setting."

This was thought to be especially important for unblocking historical barriers to estates transformation and enabling a longer-term focus on the use of buildings that recognised how 'building usage can change dramatically over time'.

Participants also questioned the historical cost model used by NHS Property Services and how this can reduce flexibility, by creating capital and revenue commitments that far outlast the length of contract terms:

"We need to think about use of flexible estate in community and how this is used – very little is actually owned by the trusts. A lot is not currently fit for purpose but we need NHS Property Services to be more flexible in use and their costs to make it work. It ends up taking a 30 year debt for a five year contract."

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A flexible, more responsive system

Participants identified four process parameters, 'the four As' that were deemed to be critical to more responsive and flexible approaches:

- **Availability** – what is actually on offer and is it enough to match needs?
- **Accessibility** – how are patients able to access what is on offer?
- **Adaptability** – how well do the services match patient needs?
- **Affordability** – how sustainable is the offer and what is the value; for example, how well do the finances, numbers, and commercial arrangements meet the above?

This has also been expressed in terms of matching population, capacity and process and how failure to adequately address one element can affect the others:

"The population-capacity-process triad emerged as a valuable concept for understanding the shortcomings of flow interventions. As observed, each variant of intervention failure was characterised by the neglect of one or more of its three essential components." (Kreindler, 2016).

It has been estimated that 20% of acute beds could be released if only 3% of patients were cared for differently (Karakusevic, 2016). Participants agreed that for the majority of patients more flexible access to rehabilitation, if provided quickly, would be the most effective way to enable earlier discharge and free up significant hospital space. However, this will require increased capacity and ability to scale-up systems in the short to medium term:

"What short to medium-term things can be done to improve the ability of system leaders to address the issues, for example, step down facilities that will alleviate immediate capacity issues and bring in rehabilitation."

"How do we become more responsive, more flexible so we can build capacity up and down as it is needed – a very flexible step up/step down model."

Flexible, modular estate design was highlighted as a potential solution:

"Modular construction provides a solution – how to have a fleet of convertible property solutions that can be put up and taken down as and where needed."

Participants thought that plans for creating a more flexible and responsive system could be hampered by a narrow focus on property services and that plans need to be more strongly linked with a full business case of what was viable:

"Take the property services out of the equation and do some business assessment of what is viable – this may work."

Including greater integration of services and going beyond co-location:

"It is not enough to just co-locate services, this by itself does not produce integration."

Greater flexibility also requires having the right thresholds for risk assessment at practitioner and local management levels, as one participant commented, these differ between the NHS and local authorities:

"The local authorities have a different level of risk assessment, more focused on functionality. The NHS are too focused at a higher level of risk assessment for discharge, and the risk appetite in the NHS needs to be addressed."

A number of participants identified constraints in capacity and the lack of resources as one of the biggest factors that restricts flexibility. These ranged from having to find a bed for someone late on a Friday afternoon to the need for additional capital and revenue to fund double running costs:

"Where are the resources to support effective discharge? The reality is that this is often a significant resource constraint, for example, people are having to phone around on a Friday afternoon to try and find a bed in the community."

"There is no capacity to double run in order to address the acute problems."

However, having sufficient flexibility in existing systems was viewed as being more influential on outcomes than simply addressing resource constraints. In order for flexible service responses to be effective, a number of participants felt that there needed to be a transformational shift in the current accountability structures. For example, one participant spoke about the model in Denmark whereby, primary care physicians control access to Accident and Emergency.

Others pointed to the need to focus on the whole housing system and not just the provision of care homes:

"Not just care homes, we need to look at the whole housing support system, including sheltered and supported housing provision."

This call for a wider system response matches the findings of others, who point out that too narrow a focus on the patient journey can impede patient flow and that this is often linked to the lack of a whole system approach:

"Typically, flawed initiatives focused on too small a segment of the patient journey to properly address the impediments to flow. The proliferation of narrowly focused initiatives, in turn, reflected a decentralised system in which responsibility for flow improvement was fragmented. Thus, initiatives' specific design flaws may have their roots in a deeper problem: the lack of a coherent system level strategy." (Kreindler, 2016).

A rehabilitation care solution to managing patient flow

Overcoming the above constraints to transformational change is not something that can be done by any single organisation acting on its own. It requires collaboration between the NHS, local authorities and the private sector, including care home providers, the construction industry and support service companies. Participants thought that this collaborative approach must also be clearly focused on rehabilitation, as part of a systemic solution to addressing patient flow that is able to encompass all of the potential and actual blocks in the care pathway. This should include:

- **Shared management and Administration** – based on collaboration across systems and organisational boundaries.
- **Joined up health and social care delivery** – including shared care protocols for admission and discharge planning.
- **Home Installation Services** – able to quickly assess and address practical equipment and installation issues that may prevent a home discharge.
- The establishment of **permanent and temporary step-down facilities** with appropriate support services – combining estate and facilities management to ensure a flexible mixed provision that can be scaled up or down as required.
- **Funding Management** – a single funding mechanism that is able address the dis-incentives to provision of appropriate services.
- **Maximising the potential use of digital technology** – greater innovation and use of digital technologies to support earlier discharge and remote home-based patient monitoring.

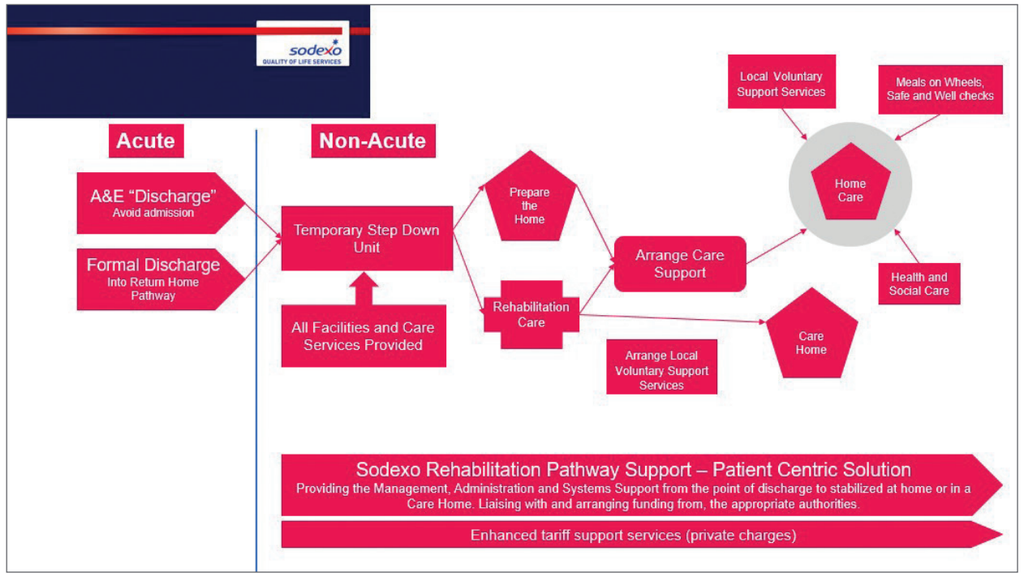
Sodexo Health UK have developed a model for a rehabilitation support pathway that can meet the above criteria (Holley et al, 2017).

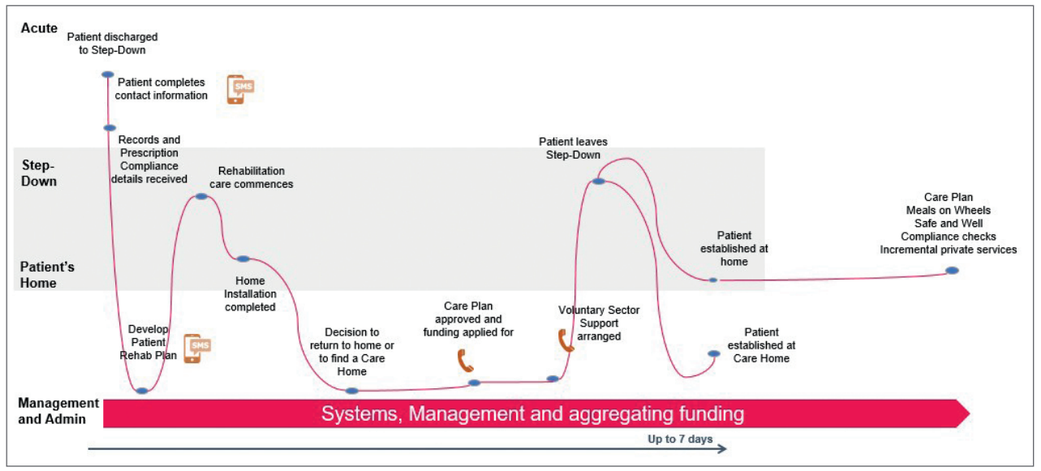
The Sodexo Rehabilitation Solution Model

The core attributes of the Sodexo model include:

- A fully maintained turnkey solution
- All facilities management
- A complete clinical care solution including a modular ward model with registration and qualified staff
- Rapid response/development – can be mobilised and operational within months of order
- Choice of modular wards units in multiples of 30/28 beds
- HTM compliant
- Costed on a bed day price with additional flexibility for temporary hire charges

The model allows for a managed patient flow solution for discharge from acute and emergency care:





Patient Flow for Discharge from Acute:
Sodexo would maintain registration of the units through its clinical arm – Nursing Prestige + Care. During the mobilisation period Sodexo would link with Trust clinical divisions to agree local operating procedures (LOP's) and governance requirements. Operational and clinical governance of patients will have to be clearly defined and agreed between parties prior to operational commencement.

This will include:

- applying the management and administration capability of Sodexo to enable a unified patient pathway from discharge to the establishment of care and support services outside of the acute environment, either through residence at home or in a care home
- provision of care services by either the Local Authority or by Sodexo with appropriate funding
- liaison, records management, and funding from the Acute Trust (discharge), through to the Local Authority for social care, home Installation and related services including as appropriate, the involvement of the voluntary sector
- Home Installation Services provided directly by Sodexo as part of its Hard Services operation and funded accordingly.

Once installed at Trust locations, Sodexo would service, operate and maintain the modular wards, including the clinical management of the Rehabilitation inpatient beds, providing Occupational Therapists and support to discharge. Although these units will be on Trust land, they will be managed and operate as a non-acute zone into which patients are discharged. Furthermore this turnkey solution could be used by Trusts for operational decant of wards to carry out backlog maintenance or other operational requirements.

Conclusion and recommendations

Managing patient flow cannot be understood as a single or simple process, it is affected by a variety of factors. There is a need to improve intelligence about patient flow and especially how to use information and data on demand to better predict both the nature and level of that demand. But also, how to ensure that the service responses are appropriate and have the intended consequence. The service responses that are required to address issues such as delayed discharges and fluctuations in demand require a whole system change, but there are constraints to this, including:

- limitations in system leadership and strategy for estates
- the misalignment of financial levers and incentives
- organisational barriers and willingness to relinquish sovereignty
- historical barriers to estate reconfigurations.

Although much of the focus on managing patient flow has been on Accident and Emergency departments and care homes, there is a need for much wider, whole systems change and leadership in addressing the issues. This is being led from within the Sustainable Transformation Partnerships, but these are relatively new systems and there is a need for the right level of expertise and leadership in estates to be effective. There is a perception that some STPs are too focused on change within hospitals and that there needs to be a broader approach that encompasses a range of community provision. There is a need for stronger leadership on estates transformation and the right level of expertise for this within STPs and at NHS Trust board levels. Accountability also needs to be clear, especially with respect to the transformation of the acute sector.

Current financial levers and incentives do not always support transformation. For example, there are few financial incentives for hospitals to take responsibility for step-down provision. There are also constraints in the way that financial levers operate between the NHS and local authorities and how these can act against greater collaboration.

These constraints are further aggravated by the unwillingness of Trusts and local authorities to relinquish organisational sovereignty. Organisational barriers to collaboration and integration are also affected by the differing degrees of maturity amongst organisations. This can increase fears about planned transformations disrupting existing working relationships and partnerships.

Historical configurations of the NHS estate can be a significant constraint. However, these are made more difficult to change through rigid cost models and lack of recognition about how estates use changes over time.

Addressing these constraints requires a more flexible and responsive system, especially with respect to short to medium term solutions that can alleviate the current pressures on primary and emergency care. This should include the flexibility to scale up and down interventions and service responses as required.

Estates planning and transformation is part of the solution, but this needs to be done in a way that meets the needs of patients, rather than through the sometimes narrow perspective of property services. For example, it is not just about changing buildings but more importantly changing services and behaviour. Culture change is needed in the way

that clinicians and care providers work, co-locating them in a new building is not sufficient. There is also a need to align different processes and practices between health and social care, for example, in how risk is assessed and managed.

Lack of capacity and resources are often thought to be one of the main barriers to a more flexible and responsive system. However, the more fundamental issue is how to change the way in which those resources are used as a means of increasing capacity. This will involve new accountability structures and a stronger focus on the whole patient journey, not just presentation in emergency care settings.

There are examples of good initiatives that demonstrate ways in which estates transformation can be a lever for wider system change that address the whole patient journey and enable more flexible and responsive services. The Sodexo Rehabilitation Care model is one such solution.

Recommendations

1 **System leadership** – There is a need for stronger system leadership for estates transformation. This needs to come from within STPs and at NHS Trust board levels. System leadership for estates transformation needs to be focused on the patient and not just the estate. Property services at the centre also need to support this shift in focus and to support regional and local areas to be more innovative in design solutions and models that are patient centred.

2 **Financial levers** – Central property services need to ensure that financial levers and incentives are aligned with the goals for transformation. Greater consideration should be made for the provision of double running costs and more flexibility in how NHS Trusts and local authorities can take joint responsibility for funding streams.

3 **Responsive and flexible service models** – STPs, NHS Trusts, local authorities and industry partners need to work collaboratively on designing flexible and responsive services that are focused on the patient journey and outcomes. There is a need for new models of service provision that take account of the whole system, encompassing the full range of patient needs including treatment and care, rehabilitation and practical support that enables people to live at home.

Appendix A: List of roundtable organisations

In order to facilitate this vital discussion, Breaking Barriers organised the Channelling the Flow Roundtable on the 28th of November, 2017 in Westminster. The event was attended by the following organisations:

- Berkshire Healthcare NHS FT
- Central & North West London NHS Foundation Trust
- East London NHS Foundation Trust
- Health Education England
- London Borough of Newham
- NHS Improvement
- North East Hampshire Farnham CCG
- Reappraise Consulting
- Royal Stoke University Hospital
- The Good Governance Institute
- Sodexo

References

Crisp, H, 2017. Delivering a national approach to patient flow in Wales. Learning from the 1000 Lives Improvement Patient Flow Programme. London: The Health Foundation.

Hospital Episode Statistics (2016) NHS Digital Online: http://content.digital.nhs.uk/hes

Holley, J; Gisbourne, N and Housden, D (2017) Proposal for a Patient Flow Solution (draft). London: Sodexo Quality of Life Services, Nationwide Hire and Prestige Nursing + Care.

Humphries, R; Thorlby, R; Holder, H; Hall, P and Charles, A. (2016) Social care for older people Home truths London: The Kings Fund and Nuffield Trust.

Karakusevic, S (2016) *Understanding patient flow in hospitals*. London: Nuffield Trust.

Kreindler, S.A. 2016. Six ways not to improve patient flow: a qualitative study. BMJ Quality & Safety Online First 10.1136/bmjqs-2016-005438.

Naylor, Sir, R (2017) *NHS Property and Estates: why the estate matters for patients*. An independent report by Sir Robert Naylor for the Secretary of State for Health London: DH.

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