

SUSTAINING OPERATIONS IMPROVEMENT IN HEALTHCARE: DRIVERS FOR CHANGE IN THE UK HEALTH AND WELLBEING SECTOR.

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Abstract

Savings of an unprecedented level are required in a sector which is critical for care and employment to a large proportion of the population of the UK. A survey was circulated to stakeholders within the sector to identify the variety / volume of initiatives, which methodologies were prevalent and known, whether they believed that improvements were being embedded and sustained within their organisations and what in their view needs to change. The outcomes from the research provide a compelling illustration of improvement initiatives in the NHS. The NHS needs a period of stability, to implement principles of operational excellence.

Keywords: Public sector improvement, Lean, Managing change

Introduction:

It has been recognised that quality of care must be at the heart of the NHS. The white paper published July 2010 aimed to make clear that quality can only be delivered through focusing on outcomes, empowering patients and ensuring the front line are accountable and have the means to deliver. These are all laudable targets; however as the demographics in the UK move towards an aging population, demands on the NHS are increasing in terms of volume and variety of care required. The Department of Health provides guidance on the efficiency savings required by the National Health Service in the UK - £20 Billion by 2015 through a focus on “quality, innovation, productivity and prevention”, a commitment has also been made to reinvest these savings in patient care. This accounts for a 4% saving per year (DoH, 2012). This clearly provides a sense of urgency, which improvement initiatives require (Kotter, 1995).

The QIPP programme (Quality, Innovation, Productivity and Prevention) has been a key driver to enabling the NHS to make these savings, however with the unprecedented proposed changes to NHS structures and a move to clinician focused commissioning, this paper seeks to examine how QIPP and indeed other drivers can continue to be a stimulation for improvement within the new structures and workings of the UK Health and Well Being sector.

This research aims to assess the key drivers for change and poses the overriding

question “Are improvements being sustained and embedded within the NHS?” Any intervention in a human activity system can be described as messy and dynamic. However this is compounded in the health and well being sector due to multiple stakeholders, private and public sector interfaces, complicated organisational structures, and policy changes.

One of the key drivers, QIPP, has been developed around a number of work streams to manage the delivery of improvements in the NHS. These have been divided into three areas: Commissioning and pathways (safe care, right care, long term conditions, urgent and emergency care, end of life care), Provider efficiency (back office efficiency and optimal management, procurement, clinical support, productive care, medicine use and procurement) and System Enablers (primary care commissioning)

At the time of writing the Department of Health website sites primary care commissioning as the system enabler, however with the move to clinical commissioning groups, this will be explored through the experiences of managers, commissioners and clinicians in the sector. The paper provides a critical review of performance improvement drivers, a contribution of the study to improvement research and provides a framework through which to compare findings of improvement initiatives in the NHS. The paper concludes with key messages for managers, clinicians and improvement practitioners in order to sustain best practice.

The literature supporting improvement in the public sector has enjoyed a greater prominence recently, with the unprecedented challenges of the NHS having to save between £15 – 20 billion by 2015. (The Kings Fund, 2011). Many support structures and initiatives have been put in place to enable the Sector to tackle the challenge. The Institute for Innovation and Improvement provides a repository for many best practices and interfaces between different elements of the NHS. Initiatives such as “Joined up care – delivering seamless care, the QIPP (Quality, Innovation, Productivity and Prevention) initiative, and the Productive care suite of initiatives are all cited as drivers for improvement.

A review of improvement methodologies in public services (Radnor, 2010) provided a view on the successes and shortcoming of applying improvement methodologies in this environment and helpful insights into how these methodologies can help to sustain improvement. Specifically in healthcare most of the literature appears to be USA focused (Brandao de Souza, 2009) with the main themes of improvement are lean, six sigma and business process re-engineering. Many benefits have been reported with waiting time improved from 23 days to 12 days (Radnor et al, 2006), reducing staff walking by 167 miles per year (Fosdick and Ellen, 2007) to name but a few. The service improvement tools and techniques currently used in the sector include process mapping, Plan Do Check Act cycle, demand and capacity planning, the use of statistics in statistical process control to explore variation in performance, six sigma (programme not a philosophy), clinical micro systems and lean (a set of principles and a philosophy of improvement not a programme). To provide a current view of initiatives and drivers, a survey was carried out with commissioners, directors, managers, clinicians and local authority professionals to identify where the challenge is being successful, and consequently how to drive through improvements to make them sustainable.

Operations Improvement in Healthcare

Operations’ improvement has a firm foundation in manufacturing and subsequently methodologies, tools and techniques have diffused and been embraced by public sector organisations (The Kings Fund, 2010, Radnor, 2010). The health and well being sector has also embraced methodologies for improvement with many having their origins in

the Toyota production system. Initiatives from the NHS institute for innovation and improvement, and initiatives from the Kings Fund have included the application of total quality management (TQM), Lean, Six Sigma, business process re-engineering, systems thinking, rapid improvement events amongst others.

Many initiatives in the NHS have taken a lean approach as their predominant philosophy. The idea of 'value' and what it means in the health care sector is not without its difficulties. With multiple stakeholders and differing views as to what is 'value' has made the application of lean problematic. This then draws us back to what are the key drivers for improvement and how does this affect the methodologies taken and outcomes. Many parts of the sector have been involved in value stream mapping, process mapping, visual management, 5S, standardising systems, root cause analysis; some real benefits have emerged with improving care in wards and theatres through the productive ward and theatre suite of programmes. Waiting times have been reduced in many areas; however the ability to sustain and embed improvements whilst expecting to make substantial savings is causing a strain on professionals and patient outcomes. The tools have been used for assessing current situations, such as process and care pathway mapping, for improving processes and environments and for monitoring performance. A review of evidence in the health and well being sector suggested that organisational readiness is critical if initiatives are to be sustained and embedded within the organisation.

Methodology

The key questions under review are:

What are the key drivers for improvement in the NHS?

Are improvements being sustained and embedded within the NHS?

How can operational improvements be sustained and embedded in the NHS?

The rationale for this research is clear. Savings of an unprecedented level required in a sector which is critical for care and employment to a large proportion of the population of the UK. The predominance of 'lean' as the improvement methodology of choice leads the question how improvements can be embedded and sustained within the health and well being sector. A multi approach to data collection and analysis was taken. These included: a desk based review of initiatives in the public domain, empirical evidence gathered from public sector commissioners, clinicians and managers to provide a rich view of improvement initiatives and successes on the ground. A survey was circulated to stakeholders within the health and well being sector to identify the variety and volume of initiatives being carried out, which methodologies were prevalent and known, whether they believed that improvements were being embedded and sustained within their organisations and what in their view needs to change. The outcomes from the review, empirical search and survey provided a compelling illustration of improvement initiatives in the NHS.

Data Analysis and Results

A sample of 25 managers, clinicians, directors, and commissioners provided their views on the key questions based on their experience of improvement projects and having the responsibility for driving through policy changes and improvements. 95% of the respondents were from the NHS with 5 % from the charitable and local government.

The sample provides a cross section of views of directors, managers and commissioners who have direct responsibility for driving through the improvements needed to meet the targets of an aging population, increasing care and medical costs. The drivers were divided into political, financial, social and patient centred factors.

Nearly 90% of respondents agree that the predominant driver for change is political and the sense of urgency created from the health and social care bill / liberating the NHS is key, in driving change in this sector. 82% of senior managers / clinicians surveyed agreed that the financial savings required to be invested back into services are key drivers for change.

The QIPP challenge accounts for 61% as key, with the financial burdens of increases in medicines and cost of treatments acknowledged as being important in the search for savings. Reducing agency savings was also mentioned by 5 % of respondents. The majority of respondents agreed that an ageing population is important, which highlights where improvements need to be made in specific pathways. Interestingly, even though the NHS constitution states it is owned by the ‘people’, patient centred issues including patient choice, desire to improve patient safety, Care delivered closer to home and awareness of services offered are important with 38% of respondents felt it was a major driver.

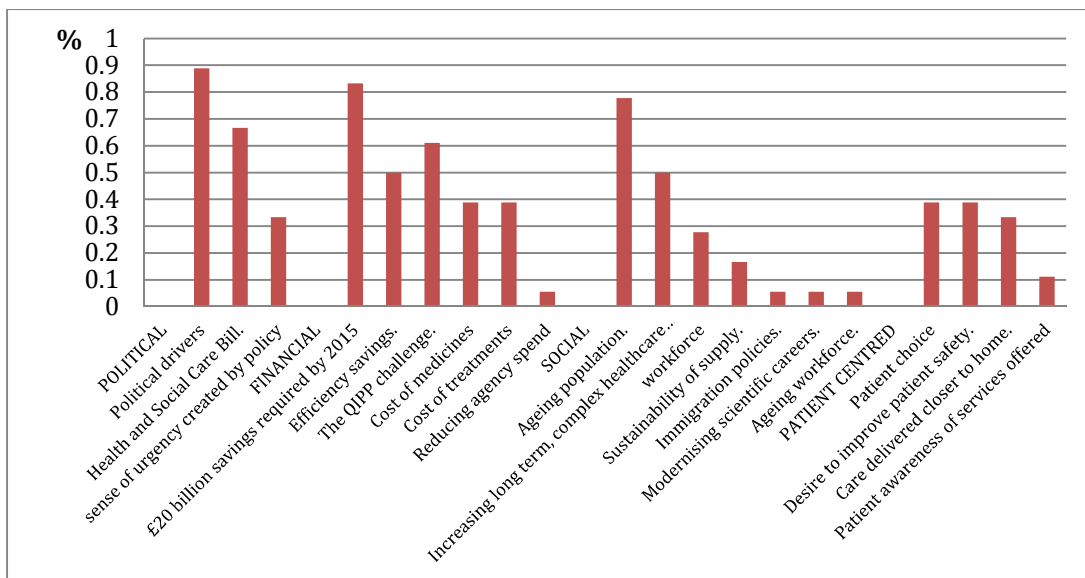


Figure 1 – Key drivers for change in the health and wellbeing sector / NHS 2012

One of the key questions posed in this paper are ‘are improvements being sustained and embedded in the sector, interestingly nearly 60% of respondents believe improvements are not, however a substantial 40% believe they are. This result needs to be further unpicked.

Following on from the above question, the respondents were asked how improvements are being embedded within the health and well being sector. The majority agreed that most improvements are cost driven, and many driven by the QIPP programme. An interesting finding considering the popularity of lean as a philosophy for improvement is the low percentage, who believe a value led approach is important. This is significant and rising, which provides a good foundation for building a sustainable improvement culture.

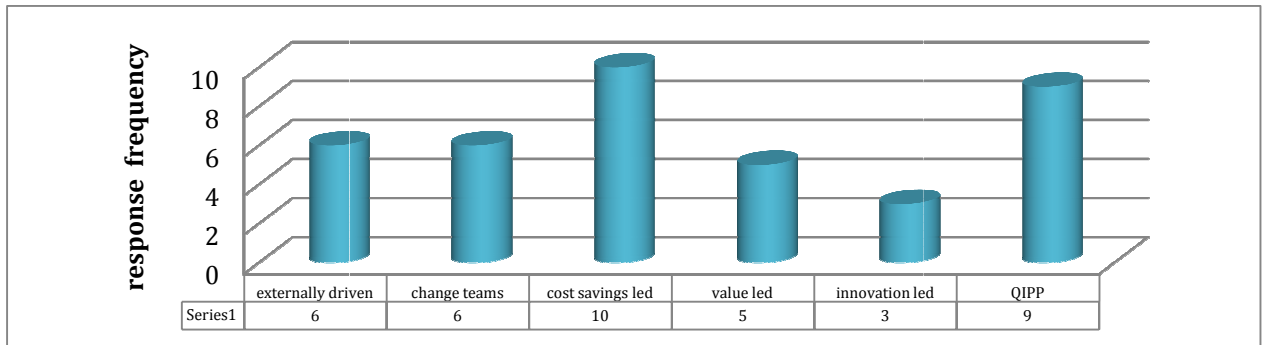


Figure 2 – How are improvements being embedded within the health and well being sector?

“What improvement methodologies are used within your organisation?” This question was posed to survey what types of methodologies were known and being used within different parts of the health and well being sector.

The most cited methodologies / programmes were the QIPP programme, LEAN, process mapping, demand and capacity planning, then value stream mapping and visual management. Systems thinking approaches including SSM, rich pictures, CATWOE and A3 reports are still relatively unknown based on our small sample.

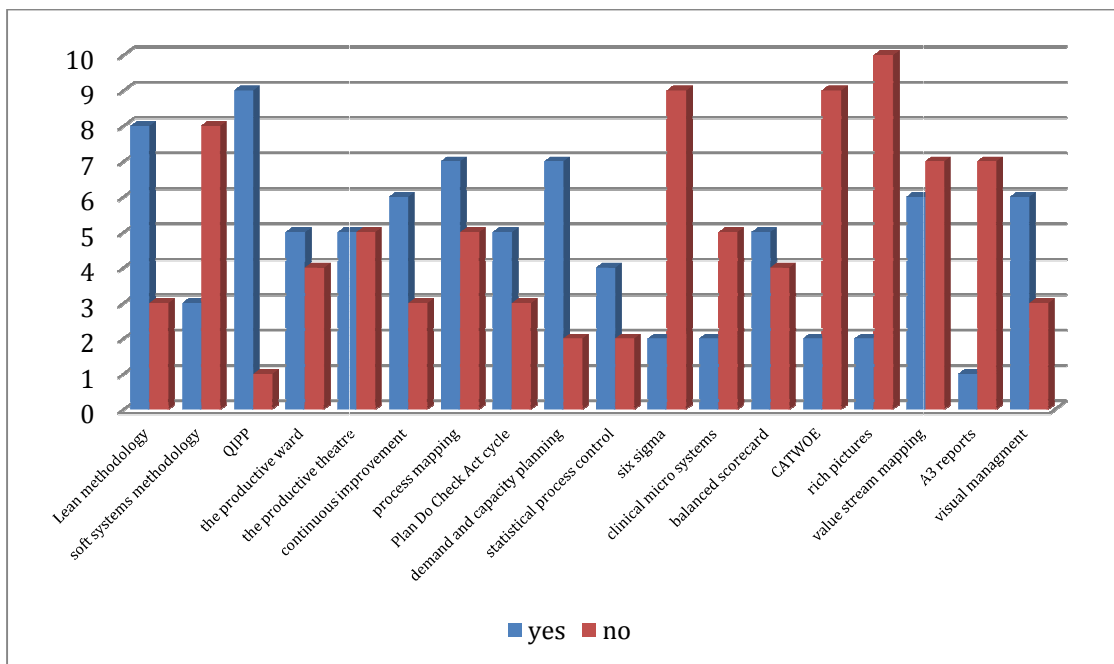


Figure 3 – What improvement methodologies are used within your organization?

To compare use and usefulness, attention moved to the full or partial implementation question. It is well known that partial implementation of initiatives leads to poorer outcomes, does not help with sustaining improvements or embedding changes within the organisation. The outcome of the survey is interesting as it shows that no consensus arises around full or partial implementation. It paints a diffused picture with lean and supporting techniques such as six sigma, value stream mapping and visual management being used but not fully.

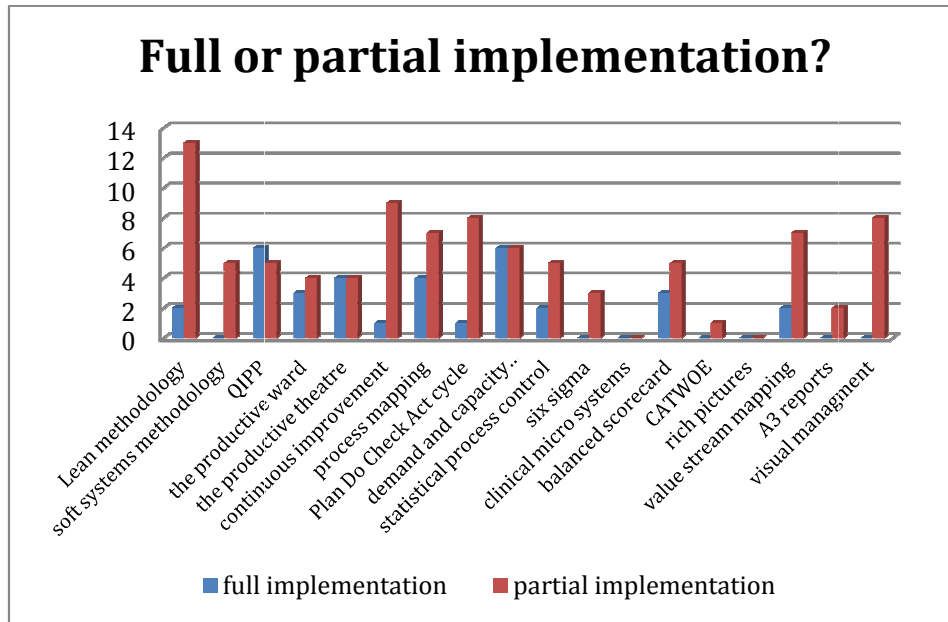


Figure 4 – full or partial implementation?

The report “Improving NHS productivity more with the same not more of the same” (The Kings Fund, 2010) highlights the significant opportunities for improving productivity from various areas: focusing on clinical decisions, and reducing variations in clinical practice. Therefore the initiatives taking place need to be aware of statistical tools to help assess and reduce variation. Improving quality and safety are cited as important. However, when you ask stakeholders in the sector what ‘quality’ means? It is very difficult to define; therefore a focus on “value” should perhaps become more important. The key for commissioners according to the kings fund report should be on reducing spending on low value interventions, redesigning pathways for long term conditions to avoid unnecessary hospital admissions. According to our survey the majority of stakeholders have more than 10 long term projects ongoing, every area included in the survey is contributing to the savings required.

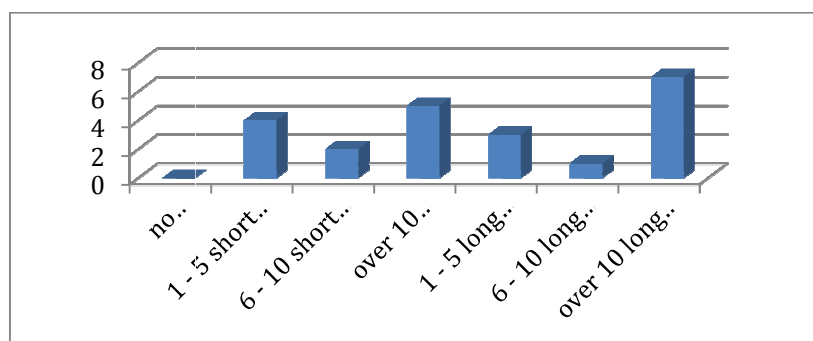


Figure 5 – Volume of improvement initiatives ongoing

“Value” we can argue should be at the centre of any driver for change / improvement. As part of this research, the stakeholders of the health and well being sector were asked to define ‘value’ from their perspective. The definitions that follow provide a rich landscape of how the sector is developing its approach to improvement, and highlights where ideas overlap.

Table 1 – Defining ‘value’

Political	Trust Vision: Best People, Best Service, Best Hospital.
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Financial	Return on Investment = numbers of patients treated x cost with attainment of access and quality targets. Improving quality of outcome for flat or decreasing financial spend. Cost effective benefit. Value for money - do things provide value for money Maintaining quality and user satisfaction, service need against agreed financial envelope. Benchmark unit price/hourly rate against similar organisations. We are trying to develop a robust cost/benefit analysis to demonstrate value to commissioners. Patients at the heart of service delivery, who receive safe services are included in the decision making process (No decision about me, without me) and that services remain within the financial envelope
Process	Through Productive Theatre Programme. Surgery, first time, on time, no mistakes.
Social	Feel completely devalued as tomorrow your job could go!
Patient centred	Successful outcomes for patients at an acceptable cost. Improvements in healthcare and health of population delivered in the most cost effective way Cost effective patient centred care Positive outcomes for those that use the service we provide. Patients at the heart of service delivery, who receive safe services are included in the decision making process (No decision about me, without me) and that services remain within the financial envelope I want to say the outcomes that our patients receive though in reality we often measure value from an efficiency perspective (more for less). appropriate care

The benefits achieved from the programmes currently running show an interesting landscape with many initiatives showing acceptable benefits, with a minority showing substantial benefits. Cost reduction is highlighted as the most significant benefits, and improving patient experience in line with many definitions of ‘value’ expressed above is also significant.

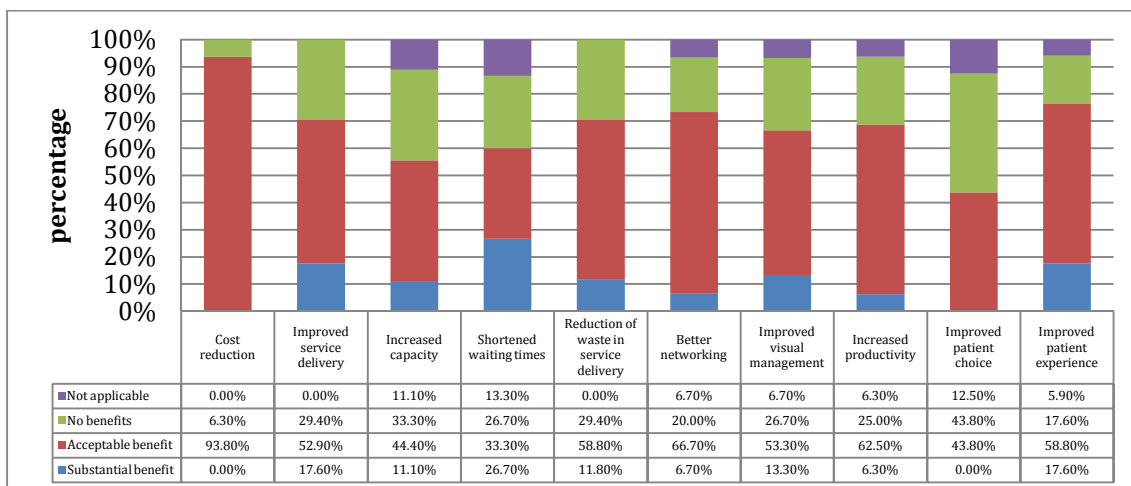


Figure 6 – Benefits achieved

This paper set out to explore current drivers for change and to explore ways of embedding and sustaining improvements in the sector in order to meet the QIPP challenge. The following responses were initially classified using the QIPP streams. However these were not varied enough to take into account the human factors involved in embedding and sustaining the improvements required. Therefore Kotters (1995) model was used to analyse the responses. The following question was posed to the stakeholders: “In your view, how can improvements be sustained and embedded in your

organisations culture?” Using Kotters’ (1995) model for analysis

Table 2 – how can improvements be sustained and embedded in your organisations culture?”

<p>1: Create urgency New management thinking competition. I think one of the previous questions hit the nail on the head with this one, the perception of what value means (in respect to what the improvements will bring) is vital to the successful implementation of improvements. Far too many staff I speak to cannot link the work they perform with the outcomes patients receives, instead focussing on the financial aspects of change/improvements. I personally feel that if patient benefits (and how ALL staff contribute) are at the core of all change management processes there will be a 'better' outcome.</p>
<p>2: Form powerful coalition Doctors are critical to the delivery of change as they are patient facing, leaders of service and clinically influential. I believe that improvements can be sustained through better engagement and partnership building between commissioners and clinical staff in the provider arms. I also believe that if the vast amount of reporting was significantly reduced then this would free up time for commissioners to do some creative thinking, redesign patient pathways and becoming more innovative</p>
<p>3: Create vision for change Recognising the value and investigating more in the workforce - less management tiers. Improving competencies in strategic planning. By actually focusing on the need to change culture rather than trying to implement change without looking at the culture or supporting actively for culture and mindsets to change - we just focus on the process change not that even if you re-tender a service it is still the same people delivering the service in probably a very similar way to how they've always done it, unless operationally they are supported to change and the leadership values espoused to sustain it.</p>
<p>4: Communicate the vision Engagement and development of clinicians leadership, planning and change management skills. Staff/clinician engagement-i.e. provide up to date information for staff, show staff improvements at shop floor. Organisation-wide communications concerning strategic and operational targets and benefits to patients and how employees may actively contribute to that process By making this the ethos that characterises the organisation and making this overt to staff and stakeholders.</p>
<p>5: Remove obstacles Sustained by evidence based outcomes, Process will only become embedded around this if discipline to follow evidence, rather than politics prevails. Involving the right level of staff in business planning processes. Time, with less urgency in the daily operational function. By all agencies working together to one common aim, by reducing organisational barriers, by putting patients at the heart of what we do, not the organisation. Greater involvement from staff at all levels and actually asking if staff feel they have been involved rather than assuming that because a number have attended various meetings/workshops etc that the process has been fully inclusive.</p>
<p>6: Create short term wins Celebrate success-rewards?</p>
<p>7: Build on the change When staff and Board can appreciate the value to the organisation (staff satisfaction, cost reduction, being able to provide additional service to make the organisation the service choice for users etc) and the value to patients, change and improvement is more easily sustained. Giving time to work through an improvement, learn the lessons and adapt is also beneficial rather than constant external drive for change</p>
<p>8: Anchor the change in corporate culture There needs to be ONE system for monitoring the overall performance of services, that creates action plans and follows up the implementation; implementing Plan, Do, Act. The culture of the organisation has to become one of accepting the risks involved with change. Allow the NHS to consolidate the changes occurring now and give them a chance to work. no more changes to the NHS for at least 10 years!</p>

Discussion and conclusions

The findings from the paper are as follows:

- QIPP has provided a foundation for improvement with systemic reporting structures and notable successes.

- How improvement can be sustained and made “how we do things around here” are not clear. Structures, roles, integration of services, loss of layers of management, are all contributing to difficulties in sustaining improvements.

- To ensure real progress is sustained, a period of settling and building foundations is needed.

- Context is everything – focusing on principles of improvements worked more successfully than trying to replicate a success from another site.

- Sustaining Improvement is possible with engaging the right stakeholders.

The results showed that many NHS organisations used improvement principles successfully, and that mechanisms are in place to share best practice. The challenges of saving £20 billion in the next 3 to 4 years, with a radical restructuring of the commissioning mechanisms of the NHS are not to be underestimated.

Relevance/contribution

The paper contributes to theory by exploring the current use of sustaining improvement techniques in the NHS, identifying key messages for managers and practitioners. The findings are considered in the light of the current literature and theoretical debate around performance improvement.

The report by the Kings Fund (2010) highlights 4 key areas for tackling the funding gap: quality, waiting times, capital and real pay and prices. To link these artefacts to performance improvement, one thing that strikes the authors is the question regarding quality and how much ‘variation in quality of care can be tolerated?’

Applying the principles of operational excellence which draws together all improvement methodologies, we need to clarify and tackle available capacity with demand. We can tackle demand in various ways by ensuring appropriate use of services, i.e. inappropriate use of Accident and Emergency, home treatments, ensuring advice is available remotely through phone and internet use. However this is assuming patients have the knowledge, skills and time to make the right choices, ensuring that vulnerable sectors of society can and do access services that they need should be a key driver for managing demand appropriately.

We have vast amounts of data which should tell us peaks and troughs in demand; these should be reflected in resource allocation, which in turn should bring down waiting times as inappropriate use is reduced. Capital allocation should be a long term commitment and not politicised. One of the key aspects to enabling and sustaining improvement in this sector is to provide a long period of stability, which in turn suggests that choices made should be non political, and based on best practice. The use of lean and the application of decisions based on value propositions should strengthen the long term future of the NHS and the health and well being sector.

Key messages: The funding gap is a real problem. NHS funding needed in 2013/14 is projected at £126 billion. The estimate of £21 billion as a short fall is based on the situation of no real rise in 2011/12, and no productivity improvement. This has been calculated from £3.5bn real pay and prices, improve quality £12bn, capital £1.6bn, demand drivers £1.8bn, clinical governance £0.4bn, and waiting times £1.4bn. Public sector pay is currently frozen for 2 years, reducing the target by £3.5bn, however the issue of waiting times has reared its head, with many of the improvements in 4 hour

A&E waiting times and maximum of 18 weeks for referrals having been eroded, this may increase the £1.4bn estimate, The Kings Fund (2012). A systemic view needs to be developed but based on sustainable improvement. To do this foundations must be allowed to bed in, core issues of balancing demand with available capacity should be at the forefront of savings.

The core principles of lean (Womack and Jones, 1996) provide clear guidelines how this can be done, however it is never that simple: **1 Specify value from the ‘customers’ perspective.** This is problematic in the health and well being sector. Who is the customer? The answer may be any or all of the following. The general public who pay through their national insurance contributions, patients, patients families, The Department of Health, Strategic health authorities, clinical commissioning groups, GPs, clinicians, commissioners, managers, the pharmaceutical industry? Therefore we have multiple stakeholders with multiple views. The key question is – as the NHS belongs to the public (NHS constitution) is the patient at the centre of all decisions and design of care pathways? Is this possible bearing in mind the constraints of the service? **2 Identify the value stream** for each outcome / service / product producing that value. This is being done to a certain extent with the QIPP pathways, however as Womack and Jones express (1996) ‘failure to specify value correctly before applying lean techniques can easily result in providing the wrong product or service in a highly efficient way’ in Radnor (2010). **3 Make the service / product flow freely,** removing blockages and waiting. This can be done by identifying runners, repeaters and strangers, and standardising processes whilst still having room for flexibility. Simple operational excellence ideas such as layout, correct use of information and physical transformation can help with this. Visual management techniques are very effective in enabling the flow of people, information and materials. Ensuring the ‘patient’ has the correct information and is not kept waiting indefinitely. **4 Introduce a pull system,** this entails triggering activity from customer demand, not triggered to a plan. **5 Aim for perfection,** reducing wasteful activity (activities that do not have a customer or organisational benefit). This is the stage that most organisations start with. This is why many lean interventions fail or do not deliver the benefits promised.

Limitations and further research

This research is based on a sample of 25 managers, commissioners, directors, clinicians located in the south of the UK. The views represented can be taken as valid, but to build more robustness into the findings the sample size could be increased. The findings should be debated and actions taken to enable the NHS to become more robust, with firm foundations, to ensure that improvements are embedded and sustained.

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