NHS
Institute for Innovation and Improvement

Clinical Systems Improvement in NHS Hospital Trusts and their PCTs

- a snapshot of current practice

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Executive Summary

Introduction

This report summarises the findings of a survey of Hospital Trusts and their PCTs in England, based on a limited qualitative semi-structured interview based study. The survey assesses the level of use of evidence-based operations management techniques, Clinical Systems Improvement (CSI). Sites were chosen using a stratified sampling method based around length of stay for two common treatments, to obtain a sample of organisations representative of medium-sized or large Trusts in England. 19 Trusts and 10 PCTs participated in the survey, which in most cases involved a semi-structured telephone interview with one senior manager with local responsibility for process improvement or performance management.

Key Findings in Acute Trusts and PCTs

- Neither Acute trusts nor PCTs studied have clinical systems improvement culture or techniques embedded in their organisations.
- Strategy and improvement are poorly linked in most organisations
- Financial pressures and targets are the main drivers of strategy. Improvement therefore focuses on cost saving rather than quality. In PCTs there is also strong focus on keeping people in the community.
- Foundation trusts exhibit the greatest freedom in developing their own strategies
- There appears to be goodwill in working between Acute trusts and PCTs but these relationship are mostly based on specific projects. PCTs view the relationship more optimistically.
- The infrastructure for improvement is highly variable with only top performers having it embedded in the organisation and their staff. Many organisations in both Acute Trusts and PCTs have a service improvement team but this is often small
- Most service improvement is very focussed and tends to look at areas where there are targets
- Use of CSI tools and techniques (e.g. PDSA, process mapping, SPC, lean thinking, theory of constraints, capacity and demand management) is highly variable and is mostly project based but increasing use of SPC in routine reporting was seen in PCTs
- The best performers seem to exhibit the following characteristics;
    - Strong leadership that is able to implement difficult and sensitive change
    - Senior managers with a high level of awareness of the process and systems issues that they face
    - A workforce that is receptive to new ideas or lacks “change fatigue”
    - Strategies that are policy deployed, to reconcile conflicting priorities and tensions between short and long-term improvement pressures
    - A critical mass of people trained in the use of improvement tools and techniques
    - A management style that is able to harness staff-driven process improvement

- Command and control styles are still common and can obstruct engagement of front line staff in service improvement
- Methods of knowledge transfer are still based on traditional techniques and rarely use interactive learning. Both PCTs and Acute Trusts rarely mentioned staff involvement as a means of communication.

Key Recommendations for Acute Trusts and PCTs

The most successful Acute Trusts have clear leadership that provides a foundation for sustainable improvement rather than crisis management. This best practice needs to be cascaded to middle-ranked Trusts, to close the gap in practice. This may help to reinvigorate service improvement. The top-performing Trusts have clearly demonstrated that it is possible to develop an improvement capability that justifies the investment in people and processes that CSI requires. Similarly PCTs have very variable practices and best practices need to be shared.

In our opinion, the NHS Institute strategy needs to recognize that many Trusts still have the potential to realise additional quality and productivity gains from CSI and process redesign. Much of the work conducted by the NHS Institute should focus on this group of Trusts.

Initially we recommend that all Acute Trusts and PCTs should establish service improvement departments with a core of CSI trained individuals to promote the techniques and help support service improvement initiatives. Communication is key to the success of CSI; the NHS needs to look at how it can transfer knowledge more efficiently and effectively

- CSI techniques should be further adapted to the healthcare environment to promote and facilitate their uptake
- Clinicians and managers need access to CSI expertise to support their service improvement projects
- Increased awareness of CSI and its advantages is required by senior managers and policy makers
- Increased usage of CSI techniques in commissioning by PCTs may help the organisations and also help spread the message of the advantages of this approach.
- UK based case studies of successful CSI implementation are required
- An educational programme in CSI should be developed for NHS clinicians and managers to allow a continuous development of knowledge and skills from initial training to expert status
- Leadership and team working need to be incorporated in to future training
- A programme to disseminate best CSI practice should be established
- CSI needs more exposure in academic and health journals

Conclusion

Clinical Systems Improvement is being slowly adopted by the NHS with examples of consequent improvement in cost, quality and timeliness of care. There is a need to develop both local and national strategies to improve understanding of these techniques. At local level service more training and access to experts is required. At national level appreciation of CSI but also appreciation of the potential contradictory effects of some policy needs to be increased.

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1. Introduction

In a May 2005 report, the NHS Chief Executive stated that "service redesign and innovation is now widespread"[I], is "starting to take effect" and that he was "seeing good examples of local innovation and leadership". In December 2005[II] he re-iterated "how important it is to innovate and to reform the system" and stated an aim to "make innovation more widespread and support this for the future". This report focussed on new systems and benchmarking rather than infrastructure to support improvement and embed it in the system as a methodology for improving quality and productivity.

Recent events in the NHS have highlighted the large increase in income with relatively small increases in productivity. Whilst waiting times are decreasing, there are still marked inefficiencies in health delivery internationally e.g.

- Most developed countries report that one in ten patients will suffer harm whilst in hospital. 50% of these patient safety incidents could be avoided if lessons had been learnt from previous incidents. Poor communication of learning is a major problem. [NAO report[III]]
- A recent report by REFORM[IV] highlighted the negative effects of centralised medical manpower planning, a focus on quantity rather than quality and a total lack of regard of cost and economics. It criticisms are of waste such as the high levels of sickness absence and low morale compared to other sectors.
- A Kings fund report has highlighted the lack of change in working practices associated with the extra expenditure on the new consultant contract[V]
- A large study in US healthcare[VI] concluded that the "defect rate" in the technical quality of American healthcare is approximately 45%
- High rates of patients not attending appointments
- Cancellations of operations
- Widespread duplication across organisational boundaries

But many examples of improved efficiency have also been cited

- Reducing spending on agency staff saving £78milion
- The effects of the Gershon[VII] report, resulting in savings of £1.7bn through initiatives such as reducing the average hospital length of stay; cutting treatment costs; increasing day cases; improving proactive care of patients; reducing levels of staff sickness and renegotiating national procurement contracts.

Clinical Systems Improvement (CSI) is evidence based operations management for healthcare. The techniques used have been implemented in manufacturing and service industries for many years and have been one of the most important factors in improving productivity. Small pockets of CSI implementation are known to have occurred in the NHS and have resulted in similar benefits, but the uptake across the whole NHS is unknown. If CSI was adopted across the whole NHS then it is likely billions of pounds of benefits[VIII] and major quality improvement could be realised.

CSI teaching aims[IX] to enable staff to:

- Understand the relationship between strategy formulation and continuous improvement activity;
- Understand how they can help devise consistent performance measures that support sustainable improvement;
- Enhance quality measurement and improvement systems;
- Facilitate the design of new service processes;
- Create a vision for incremental redesign activity;
- Consolidate a process-based view of healthcare delivery;
- Help develop more effective medium-term capacity plans;
- Educate others in the basics of CSI techniques.

Clinical Systems Improvement (CSI) can be described as evidence–based operations management for healthcare. This term is used to describe a body of knowledge adapted from systems engineering, psychology and other disciplines to improve health systems and clinical processes at the heart of service delivery.

CSI encompasses generic improvement methods, such as lean thinking, six sigma, theory of constraints, reliability and safety engineering, as well as context specific improvement knowledge such as reducing hospital mortality, improving emergency flows in hospitals, and increasing productivity on wards and elsewhere.

The concept of Clinical Systems Improvement was developed by the Improvement Partnership for Hospitals (IPH) as a major component of the learning programme. It built on pioneering work of Modernisation Agency programmes such as the Cancer Service Collaborative and Emergency Services Collaborative. CSI was seen as the strategy for improving performance at clinical team or 'micro-system' level, and IPH also contained a major Organisation Development strategy to help create a receptive context within organisations (Figure 1: The IPH approach).

A Learning Programme was a substantial element of IPH, and as an important component of this Learning Programme, staff from the Medical and Business schools in Warwick University were commissioned to develop and run a 5 day training programme for Improvement Leaders. 9 courses were run, each with 30 participants, over a period of almost 2 years. Most of the 270 participants were staff from acute trusts, but some SHA staff and national improvement leaders also attended.

This survey was commissioned by the NHS Institute for Innovation and Improvement (The NHS Institute) to provide a snapshot of current practices within the NHS in England (in this case, looking at Acute and Primary Care Trusts). The following aims and objectives were set:

Aims

1. To understand current capabilities of acute and primary care trusts in clinical systems improvement
2. To inform a strategy for enhancing the CSI capability in the NHS in both service provision and in commissioning

Objectives

To assess for each NHS organisation studied

1. The focus of the organisation
2. The use of service improvement techniques and tools
3. The service improvement structures
4. The role of management in service improvement
5. The types of SI projects undertaken
6. Methods of spreading knowledge
7. Achievements of service improvement

2. Research Methods

A stratified sample was produced using a list of Acute Trusts, graded by length of stay as a proxy for Trust performance, for UTI and hip replacement as examples of medical and surgical streams (data from Dr Foster), so as to obtain a sample representative of all Acute Trusts.

After listing Trusts in ascending length of stay, every 15th Trust was selected down the list, discarding those Trusts with a significantly low procedure rate and replacing them with the following Trust in the list. This ensured that the sample contained a representative sample of high and low performing Trusts. Trusts were placed in alphabetical order within each stream and every other corresponding local PCT was chosen down the list giving a total sample of 22 Acute Trusts and 11 PCTs. One PCT and three Acute Trusts were not available to participate.

Each Trust was contacted through the Director of Operations or equivalent for Acute Trusts and Head of Commissioning or equivalent for PCTs with the option to refer to a more appropriate respondent within the Trust. Although the title of the individual varied, we always requested to interview the individual with Trust wide responsibility for service improvement. The timescale of the project prevented cross tabulation within organisations by undertaking multiple interviews. Semi-structured interviews were carried out over the phone with the following people and tape recorded with permission: The structure of the interviews is enclosed as Appendices A (Acute Trust) and B (Primary Care Trust)

Acute Trusts

Director of Service Improvement/SI Manager	7
Director of Operations or equivalent	5
Director of Performance or equivalent	4
Director of Planning or equivalent	2
Chief Executive	1
TOTAL TRUSTS	19

Response rate 19/22 (86%)

PCTs

Director of Service Improvement	3
Director of Commissioning and/or Modernisation/Planning	3
Director of Service	2
Director of Policy and Redesign	1
Chief Executive	1
TOTAL	10

Response rate = 10/11 (91%)

All participants were informed of the steps taken to ensure confidentiality and were given the opportunity to ask questions. The interview was semi-structured based on a questioning schedule (Appendix A&B). This schedule was developed by the research team in conjunction with the service transformation team of the NHS institute for Innovation and Improvement.

All interviews started with open questions to allow the interviewee to freely express their views. Closed questions were only utilised to clarify specific areas that were not answered in the open discussions. All interviews were transcribed. Thematic analysis of the data according to assigned criteria and a four-point maturity scale was undertaken. This scale was based on the framework:

1 Minimal uptake
2 Some uptake within the organisation
3 Localised to parts of the organisation
4 Systematised across the organisation

The exact nature of the score was modified according to the question and is described with each table. The maturity was assessed by one of the authors for each organisation.

Interviewees were asked questions about the following topics:

1 The Current improvement focus of the Trust
2 Impact of Trust strategy on improvement
3 The Role of the PCT in directing or engaging in improvement with the Trust
4 The Structure of service improvement in Trust
5 The types of service improvement projects implemented
6 CSI tools and techniques used by the Trust
7 Management style
8 Spreading best practice/internal communications
9 Examples of Benefits of CSI
10 Messages to the NHS Institute

PCTs were asked similar questions, but with attention paid to their possible dual roles of commissioners of care from Hospital Trusts and as providers of care within communities.

3. Results from Acute Trusts

3.1 The current improvement focus of the Trusts

Table 3.1 below details the main focus of improvement effort at each of the Hospital Trusts in the survey using the maturity scale:

Scale 1 No mention or engagement in this improvement priority at a strategy level
2 Some mention but not the main focus of improvement
3 A key element of the improvement focus
4 The dominant and most important improvement objective

Table 3.1 The Improvement Focus of Hospital Trusts

Trust	Govt. Targets in general	18-week target	Financial stability	"Hotspots" e.g. diagnostics	Other/Notes
1	1	1	4	1	PFI
2	4	2	1	3	A&E/diagnostics
3	3	1	2	1	Managing public expectation
4	4	2	2	2	None
5	4	1	1	2	PbR/LoS
6	2	1	4	1	Turnaround team in
7	1	1	4	1	3 sites, 2 underperforming
8	1	1	3	3	PbR/Tariff
9	2	2	4	1	Labour cost, HR Focus
10	1	2	1	1	PFI
11	1	1	4	1	Labour cost
12	4	1	3	1	PFI
13	1	1	4	3	
14	1	1	4	1	Focus on finance
15	1	3	1	4	
16	4	2	1	3	
17	1	4	1	1	
18	2	2	4	3 (A&E)	Trust in real trouble
19	1	1	4	1	Rural Trust spread thinly

Inevitably, partly due to the timing of the survey at the end of the financial year and in view of recent highly publicised events relating to the NHS overspend for the financial year, many respondents stated that the main improvement focus concerned the Trust's financial situation. Two Trusts were subject to a recovery team, with a further one awaiting recovery.

> *The biggie for us is the financial challenges that we are facing here (in the future).[10]*

> *Finance, finance, finance, finance. [19]*

> *"The financial pressures are not just within our trust they are across the whole health community." [11]*

Payment by results (PBR) and the tariff system got some blame for the financial situation. Trusts were finding it quite difficult to adapt to the new approach.

> *"We're finding it very different since we've been on PBR." [5]*

> *The pressures to improve come from all the national policies that are in place so everything to do with tariff and Payment by Results means that we've got to improve our services to make sure that we're operating at or below tariff …we've got to be the hospital of choice [8]*

> *"We're basically looking at performance against tariff in specialties and then targeting specialties where they're significantly over on the tariff." [5]*

The main criticism was that the tariff system is relatively crude, with "easy" and "difficult" cases sometimes attracting the same payment. There was some recognition that the financial pressures were a distraction and tended to discourage sustainable process improvement:

> *"I think it would probably be fair to say that a lot of the emphasis so far has been on what I would describe as 'slash and burn'" [19]*

One Trust without financial pressures saw how this allowed other improvement activity to take place:

> *"I suppose it is slightly different here with it being a relatively solvent hospital – so that takes the pressure of that so you are touching on other hot spots. [15]"*

Many other Trusts identified Government Targets as the main improvement focus. There was general frustration with the need to achieve targets or other interventions and they were clearly regarded by some as acting against Trusts' and patients' best interests:

> "*The organisation was…very distracted from the delivering for patients." [6]*

> *"How do you actually get the resource and the time to change things while you're trying to deliver targets at the same time? [16]"*

In particular, the emergency care target was one repeatedly mentioned as a cause for concern:

> *"Emergency care that's just by far the biggest absolute massive red light, [the] entire executive team [is] involved almost on a daily basis and I certainly am. [18]*

> "*The biggest one is the emergency bed pressures where we are still struggling with the 4 hour target". [2]*

Again, there was frustration with the imposition of the target and a lack of perception of value of the purpose of the target:

> "*We do have to question that the amount of time and energy that goes into chasing this one area of performance [the four-hour wait] is substantial and it is still a struggle for us. So despite the very close attention that gets paid to it then we are still struggling with it, fundamentally something is not quite right. [9]"*

However, there was increasing recognition that the problems seen in achieving the target was down to system behaviour, rather than A&E performance:

> *"In terms of the last couple of months performance around A&E that maybe we just have not got our systems set up right here." [9]*

> *"Due to big capacity, often having no empty beds and patients in A&E needing admission. Deep pressure there around managing discharge and managing patient flows in general." [2]*

Few interviewees stated a strategic vision as driving the improvement. Instead, where Trusts were not tackling finance or targets, interviewees selected "hotspots" as improvement themes. For example:

> *"The two top priorities for redesign are now CT and social service discharge." [2]*

The overall impression was that finance, targets and specific problems led to fire-fighting individual issues rather than focussing on a longer term strategy. This has led to patchy use of service improvement within organisations.

3.2 The impact of Trust strategy on improvement

There was very little evidence of policy deployment of strategy. Instead, improvement was either thematic (i.e. focusing on national initiatives such as cancer or radiology) or was driven by the Government Agenda. Even the most ambitious Trusts couched their improvement strategy relative to Government targets:

> *"As an organisation we have an ethos that we will do better than the national targets". [5]*

The quest for Foundation status emerged as the other agenda-driven link between strategy and improvement. Some managers used the Foundation Trust checklist as a guide for improvement, something that was seen as a good approach:

> *"The rigor associated with the FT application has really forced us to look at our activity and expenditure." [9]*

However, some Trusts appeared to have considered the links between strategy, policy and care:

> *"[The Trust] has an over all strategy and a vision for the next five years". [10]*

> *I did a number of seminar things about six months ago which were all about trying to make sense of the world. And getting people across the organisation to understand the strategic context that we were operating within. And understand the policy reform agenda and to try and make some linkages where linkages clearly did not exist. [3]*

Other linkages were either ad hoc or came from initiatives:

> *"Our Chief Executive does corporate objectives and service improvement is in every manager's objective and we expect to see a lead in all our directorates in service improvement." [5]*

> *"So I have all my managers that will be looking at service improvement and new ways of working looking at the ten high impact changes." [10]*

Table 3.2 identifies the qualitative links between Organisation Strategy and Improvement.

Table 3.2 Strategy and Improvement

Trust	Comments on Strategy
1	Strategy dominated by PFI. Improvement driven by need for profitability.
2	Strategy driven by a few key people. Trust engaged in large-scale redesign.
3	Clear understanding of wider strategic context; currently working on understanding links between this and provision of care.
4	Major improvement projects are policy deployed. CI just happens.
5	Strategy mainly about Govt. targets
6	Trust strategy driven by improvement activity which is thoroughly embedded
7	Major improvement project structured around 5 work streams linked to strategy
8	Improvement strategy based around national themes, Cancer, A&E, ISIP
9	Improvement projects around national themes
10	No comments recorded
11	Improvement driven by internal "recovery team"
12	PFI is driving new models of care with elective specialities as the focus
13	Board-driven improvement around high improvement potential (high cost) process streams
14	Dominated by cost-saving measures, particularly from PCT
15	Board-driven themes
16	Improvement driven by Foundation Trust diagnostic tool
17	Links between current ad hoc approach and strategy being developed
18	One of the country's worst performers with brand new board to turn it around
19	Severe financial difficulty is threatening service improvement activity and jobs

The role of an organisation wide strategy appears limited. National priorities seem to dominate the planning process rather than having a higher level strategy for the organisation which independently also achieves national priorities and targets as well as local priorities.

3.3 The role of the PCT in directing or engaging in improvement with the Trusts

Interviewees from Trusts were asked about the relationship between the Trust and one of the local PCTs. Table 3.3 records the opinions of Trust staff on the level of joint working with the PCT to effect improvement to the delivery of hospital-based care and related community support.

Table 3.3 Trust and PCT levels of Joint Working

Key 1 Joint working on required areas only
2 Specific projects
3 Work together
4 Plan together

Trust	Score	Comments
1	1	Not joint working
2	1	Trust excluded from local transformation board as FT; difficult relationship.
3	2	Working with PCT on integrating strategy but not an harmonious relationship.
4	1	Mainly annual planning process
5	1	Mainly national targets
6	3	Recent change to joint working and planning in several areas
7	1	Tend to set up separate projects, keeping in community
8	1	Target orientated
9	1	Target and keeping out of secondary care
10	2	Admissions avoidance
11	1	Avoiding admission. Question not asked specifically
12	2	Lot of joint projects
13	1	Given plans not jointly developed
14	3	PCT financially stretched – work closely to manage finance
15	2	Mostly target but some admission avoidance joint working
16	1	Performance management
17	1	Target orientated
18	2	Develop whole system maps but focussed on trouble areas
19	1	Performance management style

The vast majority of acute Trusts consider that PCTs are only involved in service improvement in areas related to targets or financial savings.

> *"[The PCT] will put pressure on in terms of meeting targets so for example when we breach the four hour A&E target because that's part of their old star rating with their, you know, the new Health check ratings, they get penalised for that as well; so where it directly impacts on them as an organisation relating to targets then yes pressure will be put upon us on that but other things generally not". [8]*

> *"I think the PCTs generally are feeling under some pressure in terms of what money they have actually got to commission. What they can reasonably do. And I guess we are just in the annual cycle of can we drive more out of the acute sector, we are working at full pelt". [9]*

Relationships were also affected by the financial state of either party:

> *We have just heard that our PCTs have run out of money so they stopped commissioning elective work in January – theatres are empty and people are twiddling their thumbs for two months – what the hell is that all about? [3]*

There was little mention of PCTs encouraging service improvement approaches within acute Trusts. Trust managers did not perceive PCTs as capable or willing to deliver the required system changes:

> *"[The PCT] just take the traditional [approach] – your problem you do something about it". [15]*
>
> *"They do not have a strategy to reshape the system". [19]*
>
> *"hands off". [18]*
>
> *"In terms of improvement work … there is quite little collaborative improvement work". [2]*
>
> *"There is no direct involvement of the PCT as a consequence of the Foundation status". [4]*

There were a few exceptions to this, where some collaborative working was reported:

> *"We are working very closely with our local Primary Care Trust and also other local trusts to redesign care pathways and redesign how care is provided". [11]*
>
> *"We're doing things like we have a massive workshop next Saturday with all our partners". [18]*
>
> *"We have been talking to our PCTs…because we have seen an increase in referrals when … should have been seeing … a reduction. [9]*

The above comments show the transactional nature of the existing relationship. The two organisations generally communicated for two main reasons: to negotiate contracts and to highlight real problem areas requiring attention:

> "*In admission avoidance and dealing with appropriate admissions rather than just bringing patients in". [10]*

Many feel that PCTs are working more along a performance management route than via service improvement. Some work is apparent around avoiding hospital admissions but the driver appears to be financial saving rather than added value and quality. Organisations who have reached rock bottom have had the opportunity to change their relationships with PCTs but are in the early stages of this change.

3.4 The structure of service improvement in Trusts

Interviewees were asked how service improvement roles fitted into the Trust organisation structure. Table 3.4 summarises these findings:

Table 3.4 Service Improvement Structure

Key
1 None
2 Service improvement activity performed by individuals
3 Dedicated Service Improvement team
4 Embedded process

Trust	Score	Notes
1	3	
2	3	Very small team
3	2-3	Very small team – wide network and improvement well integrated
4	3	
5	3	1 WTE - others work as a consultancy team though retain line roles
6	3-4	Undergoing transformation of all activity through turnaround team
7	3	
8	3	Team currently undergoing restructuring
9	3	
10	2	
11	1	Lack of resources - awaiting turnaround team
12	2	
13	3-4	Moving towards embedding improvement activity
14	2	Team in transition – numbers shrinking
15	3	
16	3	
17	2	
18	4	
19	3	Service Improvement seen as dispensable - currently facing job cuts

Few Trusts reported no improvement structure at all, but it was worrying that two Trusts stated that the costs of improvement could not be afforded. Trusts that lacked the financial resources to sustain a team, considered them dispensable in times of crisis. In those Trusts which had not yet been 'turned around', resources were currently used for fire-fighting which withdrew capacity from any kind of improvement activity or planning:

> *"I have got remnants of [a service improvement team] … it's probably going to not exist at all after this afternoon's executive board because we're going into head count reduction mode again." [19]*

> *"We don't have anybody and we don't have any money to do it." [11]*

Most trusts studied had a small dedicated Service Improvement team which reported to the Director of Operations or equivalent. The work conducted was planned on an ad hoc basis, rather than it being part of an improvement strategy:

> *"We've got lots of individuals on different projects". [5]*

> *"We've got lots of sort of individuals running projects but they weren't connecting, so we needed to find a way to pool it together". [5]*

> *"We've pulled them together and we call them the clinical redesign group and they work as a collective… almost as a consultancy within the organisation". [5]*

Where there was a lack of a dedicated team, this was mostly a strategic measure which encouraged the embedding of improvement activity throughout the Trust.

> *"Unless you mainstream service improvement you don't actually integrate the change". [18]*

> *"What we're trying to do … is to get it embedded into the core working of operations". [13]*

> *"I have a quite a strong belief that … your management role … involves quality i.e. quality, service improvement etc … and it's a belief for most of us in the organisation is you don't achieve sustained change unless its part of the ongoing management team". [18]*

Successful improvement activity without a dedicated team was dependent upon strong leadership from Executives, and the development of a climate in which individual clinicians and managers took collective responsibility for continuous improvement. This was most apparent in those Trusts being run by knowledgeable turnaround teams with a strong vision for the future:

> *"Well, while we have this Chief Exec it is embedded as part of the philosophy of the organisation". [14]*

> *"I am welcomed into everything and I'm invited into everything so… 'We've got a problem with readmission rates, can you come and help us, see what we've got to do? ... So I just feel that because I'm invited in all the time to help out with things that that's kind of an understanding that what we're trying to do". [8]*

> *"I wouldn't say people necessarily would equate some of the improvement with service improvement. I know that might sound a funny statement. I think that some people do see … that [as] their day job and I think that's great." [17]*

The role of service improvement teams is highly variable and was often relying on a few individuals.

3.5 The types of service improvement projects implemented

Table 3.5 shows the examples given by Trusts of their current foci in service improvement activity. Questions on current improvement work were designed to expose whether or not improvement was driven by targets, mainly consisted of small scale projects in priority areas or included wider, system-based continuous improvement activity.

Table 3.5 Trust Focus for Service Improvement and Examples of Current Projects

Trust	Notes
1	Projects based around targets; attempts made to sustain improvement.
2	Ultrasound, COPD admissions, reducing length of stay.
3	Care pathway development; pathology – use of Lean with LTCs
4	Focus on completing projects – project based improvement.
5	Wide-scale skilling up of all staff in improvement tools and techniques.
6	Wide reaching structural overhaul – systemic improvement creating a culture of continuous improvement.
7	Focus on length of stay, diagnostics, theatre utilisation, outpatients, cancer.
8	Cross-divisional work on elective care pathway involving almost all departments; choose and book etc.
9	Projects are target focussed e.g. 18 weeks; but also cross-functional work along pathways, theatre use, outpatients etc.
10	Pre-op patient pathway; orthopaedics
11	Lots of work on length of stay and emergency pathways. Emphasis on patient flow through whole organisation but generally project-based work without significant continuous improvement.
12	Some very specific projects but also improvement across local health economy.
13	Service improvement is both target and quality focussed.
14	Excellent improvement leadership in financially challenged environment. Work on pathways and LoS reduction.
15	Acknowledgement of benefits of continuous improvement including early implementation of Lean.
16	Lots of work on length of stay with an emphasis on redesigning process to meet targets.
17	Length of stay reduction. Improvement leadership is in transition – moving to a more systemic approach including enthusiasm for Lean.
18	Significant changes in improvement activity since turnaround began. Proactive management of targets etc.
19	Patient pathway redesign including modelling and forecasting. Continuous improvement is not sustained.

Almost all Trusts demonstrated both project-based work and some commitment to cross-functional improvement activity, although continuous improvement was generally not well sustained. Projects were commonly driven by targets and constituted one-off improvement processes with less provision for developing continuous improvement capabilities within clinical teams. The main examples of integrated projects were in Trusts with recovery plans or new senior management teams, brought in to turn around bad situations. These Trusts had the most ambitious improvement plans, but with the least evidence of achievement as yet due to the ongoing nature of the work.

3.6 CSI tools and techniques used by the Trust

All interviewees were asked about their use of the following CSI tools; responses are tabulated in table 3.6:

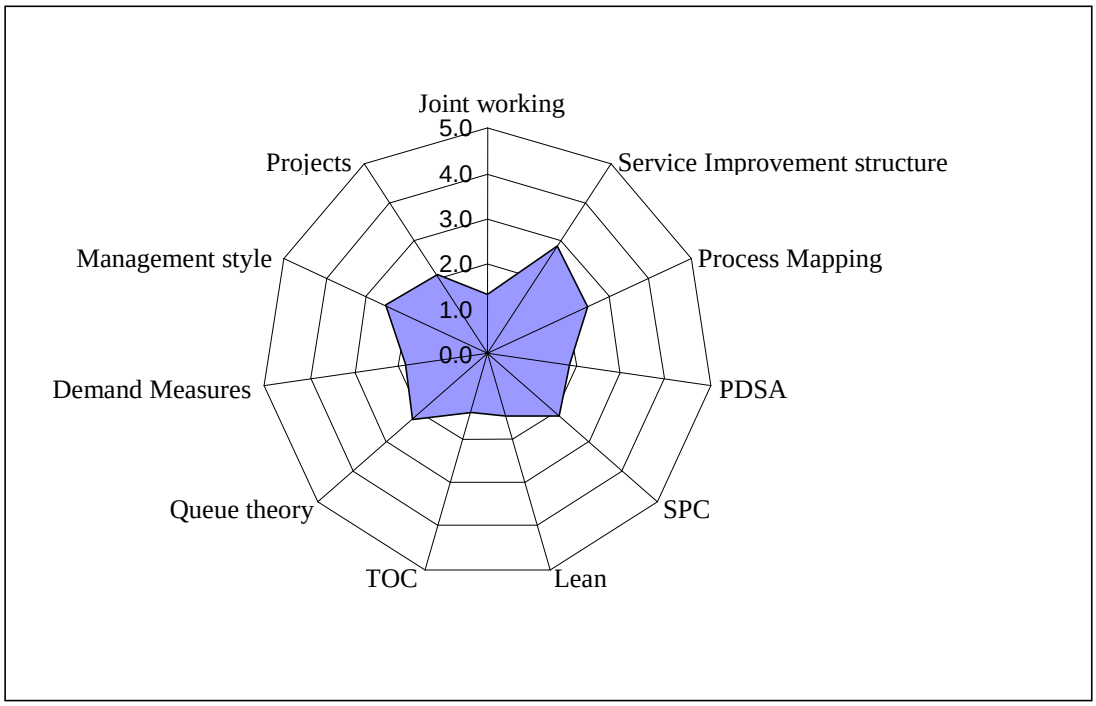
- Process Mapping
- PDSA (plan, do, study, act)
- Statistical Process Control
- Lean Thinking
- Theory of Constraints
- Demand Pooling and Queue theory
- Measurement of referral demand

Table 3.6 Levels of use of CSI Tools

Key 1 No use recorded/little use
2 Awareness and partial use
3 Good levels of use
4 Extensive use, probably at top of national practice standards

Trust	Process Mapping	PDSA	SPC	Lean	TOC	Queue theory	Demand Measures
1	3	2	2	2	2	1	1
2	3	2	3	2	2	3	3
3	2	2	2	2	1	1	1
4	3	3	3	2	4	3	3
5	3	2	3-4	1	2	4	3
6	3	2	1	1	1	1	1
7	2	2	2	1	1	2	1
8	2	2	2+	2	1	3	3
9	1	1	1	1	1	1	1
10	2	1	2	1	1	1	1
11	3	2	2	1	1	3	2
12	2	2	2	1	1	3	3
13	2	2	2	2	1	3	2
14	3	3	3	3	3	3	2
15	3	2	2	1	1	2	1
16	3	1	3	1	1	3	2
17	3	2	2	2	1	3	2
18	1	1	1	1	1	1	1
19	3	2	2	2	1	1	1

Figure 3.6 Radar chart demonstrates the average usage score of selected CSI tools:



3.6.1 Process Mapping

Process mapping is a technique of describing processes in terms of how activities within a process relate to each other, identifying different types of activities and the flow of materials or people or information through that process. Having drawn the map each activity can then be challenged in an attempt to improve the process.

Process mapping was the main tool used by Trusts, and the value of the technique was understood by many. People often saw the team-working and involvement benefits as well as the analytical properties:

> *"We like process mapping… it's a good tool to bring people to talk about the services". [5]*

> *"[When process mapping] you can see almost immediately when you start to look at 'why does it take that long?'". [9]*

In most of the Trusts sampled, only the patient pathways that were part of collaborative programmes such as Cancer, ESC and IPH have been mapped to any great extent:

> *"Process mapping … say 50% of the high volume ones. The … more difficult ones – no they've not been done". [5]*

> *"We did a lot of mapping around scheduled care and journeys through from wards through to theatre." [12]*

Few people interviewed had used process maps as a communication tool or part of real continuous improvement. The following comment sums up what many have done:

> *"[Process maps] We keep them filed away." [10]*

One of the issues that may affect their use in the future concerns the fatigue of going over the same mapping processes repeatedly over time:

> *I went to see the people to say 'Who would you like to go along to be involved in the [process] map?' and it was 'Oh we've done that before. Do we have to do it again?' [17]*

Overall, it is clear that few of the Acute Trusts interviewed use process maps fully, in a sophisticated way. However, most trusts studied have found some value in the tool, especially to create a process-based view of the healthcare system, although process maps were often limited to individual departments with no mention made of value stream mapping.

3.6.2 Plan, Do, Study, Act

The Plan-Do-Study-Act (PDSA) cycle is shorthand for testing a change - by planning it, trying it, observing the consequences, and then acting on what is learned from those consequences. The PDSA model thrives on trial and error. This challenges the traditional approach in healthcare of detailed planning over a long time period to introduce major change that is safe, with the risk of excessive risk aversion.

The improvement methodology PDSA has not been embedded in most of the Trusts interviewed. It is clearly seen as a collaborative tool, for use in programmes. The influence of the collaborative programmes was clear from the interviews:

> *"It's been a big feature of the cancer stuff ... The cancer lead manager's been really pushing that." [5]*

The following two quotes sum up the current situation regarding the use of PDSA:

> *"We have done in the past but we're not at the moment … We haven't got anyone to use them. [19]*

> *"We use[d] those [PDSA cycles] a lot around the emergency care calamities. Not so much recently but we have done in the past. [11]*

The use of PDSAs was associated by many interviewees with the Modernisation Agency collaborative events and it seems to have decreased since then.

3.6.3 Queue management

There was a lot of evidence of the influence of the Capacity and Demand training on Trust practices. The top-performing sites had made good progress towards implementation of queue reduction, especially for out-patient work:

"We virtually stopped a few years ago having referrals to particular consultants and in many areas referrals come in and are organised according to the shortest waiting lists." [12]

"Yes, we've got some of the best waiting times in the country, so I think actually you could actually learn quite a lot from what we do, so … I think you'd be hard pressed to find something we don't do. I won't say that we do it everywhere with everybody because we don't, but I'd say 80% of our waiting list practice is exemplar." [5]

A number of respondents saw a tension between the capacity and demand work and the new developments through the patient choice agenda:

There's lots of pooling done but that doesn't fit comfortably with choose and book.… When a patient is choosing to come somewhere its generally because they're choosing the place and the consultants so when you then say but actually we're going to put you in a pool and somebody else will treat you it doesn't sit very comfortably at all. [8]

We have lots of pooled service clinics like a hernia clinic, a breast clinic, but we also have… and this has been an active decision as an organisation, we also have named consultant clinics and we've had to do that … our local GPs are kind of insistent on that, so we try and do a combination of both and so far that's working for us. [5]

There appears to be a misunderstanding of how Choose and Book, choice, pooling and capacity and demand can work together. There was no mention of the differentiation between the choices available, e.g. the hospital, the consultant, the time. For example, for high volume conditions it is likely that a wider choice will exist and that choice between pools of consultants who are equally skilled will be possible.

3.6.4 Understanding Demand

Balancing capacity and demand is a fundamental step in achieving optimal flow in a system. It has been recommended in several situations in the NHS for many years (e.g. matching A&E staffing levels with patient attendances was recommended by the Audit Commission in 1996[X])

There was less understanding of demand patterns and the lack of working with PCTs was evident, for example,

"We've not done enough on GP referral patterns…"[5]

3.6.5 Statistical Process Control

SPC is recognised as a useful technique in healthcare process analysis but has been slow to be adopted. This may be for many reasons, including its lack of uptake in the specialty of medical statistics, a reluctance to accept industrial techniques and a reluctance to face the resulting challenges[XI]

Overall, the use of SPC was patchy. Some Trusts used it extensively, where local experts had championed the approach. In other cases, collaborative programmes had been the vehicle by which SPC was introduced:

> *"We've used it [SPC] ad hoc. It was one of the things that the Emergency Collaborative brought with them". [5]*

There were mixed reactions from Trust staff to the use of SPC. The popularity was influenced by the impact it had on local decisions:

> *"SPC is used extensively within PDSAs and for analysis of system behaviour. There is some resistance from clinicians where the SPC gives awkward answers." [4]*

Where SPC was used, its unbiased interpretation was valued, even where it sometimes provided unexpected results:

> *"She was going to use statistical process control to prove him wrong and actually he was right". [5]*

3.6.6 Lean Thinking and Theory of Constraints

Lean Thinking is an approach to Operations Management that emphasises the continual elimination of waste of all types, including an overall philosophy of approach to achieving this.

Theory of constraints is a philosophy that focuses attention on capacity constraints (bottlenecks) in an operation.

Despite the publicity about Lean Thinking and the level of application historically via the IHI and the collaborative programmes, there is only a level of awareness of Lean and no real evidence of practice. Many Trusts have tentatively looked at Lean as an improvement option and mainly failed to gain commitment:

> *"We talk about it but I think Lean it's too big a culture shift for us to get to at this moment in time". [5]*

> *"It's popped up now and again but I think there's probably a bit of cynicism [that] it's just another management toy." [19]*

> *I've got to get some input into the trust in terms of helping them understand what it is and what it isn't. [13]*

One Trust claimed to have successfully implemented the Theory of Constraints, as an alternative approach, but people saw that the same types of issues were often being addressed:

> *"Theory of Constraints has caused a massive reduction in the number of outliers. [4]*

> *"I have my own personal philosophy on Theory of Constraints and Lean Thinking and all the rest of it, in that really they're all the same and …they're just focusing on slightly different things". [17]*

Those Trusts that had used Lean tools during collaborative programmes saw difficulties in their application. There were also worries about the acceptability of the term 'Lean':

> *"We wouldn't say it we call it 'Lean Thinking' because otherwise they'd get upset but we're looking at how do you reduce the average length of stay, how do you get more out of your resource." [1]*

Overall, the tools studied were not used extensively. Process mapping and PDSA were used by many Acute trusts but not systematically throughout the organisation. Other techniques were not widely adopted.

3.7 Management style

Interviewees were set a test question about performance target breaches (e.g. the 4-hour A&E target) to establish the level of "command and control" management within the Trust. Table 3.7 summarises the interpretation of the answers received. It should be noted that the mentions of A&E performance within the table reflect the nature of the question posed, as opposed to any undue attention to this target measure specifically.

Some Trusts remain target-driven, or driven by Foundation Trust Status objectives. The immediate implication was that management style tended to be more centralised or 'command and control':

> *"A "command and control" situation? Yes, absolutely, and that tends to be around the key targets". [5]*

> *"When things start to get a bit hairy, when we are getting away from the targets, it tends to become more of a "command and control". [11]*

> *"If we have major crisis management issues, say we had six breaches…we call … a meeting of all the people concerned with the Chief Executive and myself [18]*

> *"[We've] got an escalation system within the organisation, so that once… by Wednesday of each week, if we've had more than fifteen breaches I'm aware of it". [5]*

Table 3.7 A Summary of Trust Management Style

Key
1 Trust predominantly fire-fighting with a "command and control" management style
2 Some effort to include appropriate teams in problem-solving initiatives
3 Significantly team-based approach to problem-solving
4 A considered response to target breaches, recognising the wider context and closely involving teams in developing improvement strategies

Trust	Score	Notes
1	2	Team based approach to long-term targets, 'command and control' on targets such as A&E.
2	3	
3	2/3	
4	3	
5	2	Little support from SHA to help maintain performance. Emphasis on "command and control" on borderline targets.
6	4	Understanding of breaches situated within wider context; effort to engage management with everyday activity in hospital.
7	2	Turnaround project over the past year has shifted management style from "command and control" to team based back to "command and control".
8	3	
9	3	
10	2	Hourly monitoring – combination of teamwork, resorting to "command and control" in times of crisis
11	2/3	Predominantly team based approach with "command and control" approach when under pressure on certain breaching targets.
12	2/3	Zero-tolerance policy on A&E breaches. Commitment to providing resources for breach management.
13	3	Significant team work around managing relationships within A&E.
14	2/3	Team based with recognition of wider structure e.g. discharge bottle necks in primary care etc
15	3	
16	1	
17	2	
18	4	Excellent example of best practice by new turnaround team. Hands-on executives with open-door policy.
19	1	

Poor performing Trusts were more likely to react with panic to their frequent target breaches and often micro-managed staff, particularly in A&E, demonstrating a zero-tolerance response to breaches.

> *"[A&E] is so nail biting now we are into point nought of percents so it is living breathing those people who are doing nothing but – the managers are down there it is performance managed hourly and that is when we're achieving them". [12]*

> *"Our managing director yesterday said I don't want 95% I want 100%... I said yesterday, you will not get 100%". [15]*

Those interviewed at poor performing Trusts were often critical of this approach but considered more team-based problem solving to be a luxury that they could not afford whilst experiencing such significant pressure to achieve financial and performance targets. The reactive approach was very much in evidence:

> *"We have bed management meetings twice a day so we would clearly know if there are any blips" [10]*

Most trusts studied demonstrated some attempt to involve teams in addressing target breaches although the level of team work was inversely proportional to the number of breaches experienced in any period of time.

A sustained team-based approach was particularly apparent in high performing Trusts with a history of achieving targets or those Trusts undergoing turnaround, in which a significant change in management style had occurred over the previous few months.

> *"It's…very non-hierarchal the new management, right from the Chief Executive to the Executives and then outwards it's very non-hierarchal. The Chief Executive's got a very much an open door policy, will go and talk to everybody involved not just the senior team if you see what I mean". [18]*

> *"What happened in the past was that any time there were breaches everybody was panicking, so the first thing to say is it's not a panic. What we need to do is make sure that we're planning. If we know we're going to have a five-day cold snap, what are we putting in place to proactively plan for this?" [6]*

> ***"****It is very much a team approach there. We realise it is not an A&E problem. It is not even just an organisational problem it goes right across the sub-economy". [2]*

Most trusts studied were making attempts at a team based problem solving approach but many resorted to fire fighting around key targets. Team based approaches were associated with higher performers**.**

3.8 Spreading best practice and internal communications

Interviewees were asked how improvement priorities, improvement activity and achievements were communicated. A particular focus was the way in which good practice in one area could be disseminated and potentially therefore replicated elsewhere in the Trust. Table 3.8 summarises these responses.

Table 3.8 Spreading Best Practice

Trust	Routes of dissemination in Trust	In wider community
1	Regular seminars; Monthly magazine; Link to clinical excellence awards	
2	Through Clinical Directors	
3	Awards events; regular lectures; dissemination through Executives	
4	Involve staff at all levels; Recognising excellence	Local network
5	Quarterly quality report; Reports to ops board	
6	Directorate structures but also via matrons	
7	In house magazine	
8	Internal network	
9	Annual awards; newsletters	
10	No comments recorded	
11	Newsletter	
12	Through directorate structure; team brief via e-mail	
13	Through managerial structure	
14	Monthly board report; safety related notices in canteen; high performing wards have graphs on display in public areas; quality improvement events	Public displays in hospital; public consultation forums
15	Newsletter; Suggestion scheme	
16	Team briefing	
17	Newsletters; posters	
18	Team briefing; newsletter	
19	Clinical network team	Uses MA collaborative events as means of networking

A first look at the qualitative evidence demonstrates the following points can be made from the opinions expressed:

- Most units spread good practice by team briefings and newsletters;
- There is some use of awards schemes;
- Little mention of spreading by involvement of staff from all levels;
- Very little mention of spreading across the wider community outside the Trust or via networks outside of the Learning Networks, such as the South West London SHA learning network mentioned by two Trusts.

Some respondents admitted there was a lack of communication, especially now that the collaborative programmes were no longer happening:

> *"I think what this trust is poor at is sharing its learning and its innovation externally – and that is a tension for me at times". [15]*

First generation knowledge management involves the capture of knowledge within the organisation. There was no site that gave the impression of a systematic approach to this collection. Individuals mostly had to feed this information up the managerial chain.
Second generation knowledge management looks at how knowledge is created and disseminated. The NHS appears to have a very simplistic approach to this with relation to service improvement using traditional methods such as cascade systems and newsletter. Successful organisations are more organic but many do not appear to recognise the concept that learning and doing are more important factors in organisational success than dissemination and imitation. Provoking curiosity to search for existing information is likely to be a more effective means of spreading service improvement knowledge than simply providing information on others' success.

Trusts often struggled to find the people in the right positions to champion change. This especially applied to clinical champions:

> *"We've got some brilliant champions and we've got some laggards like everybody I think." [5]*

The lack of peer pressure and the lack of evidence of other places persisting is still a potential cause of failure. There is still a point where people wait for a fad to be dropped:

> *"'Oh… here she comes again with another… big idea ... 'Don't worry … her balloon will pop and it'll pass', so that was an absolute flop for us." [5]*

3.9 The benefits of CSI working

Most sites were at the early stages of use of CSI tools and techniques. They were asked to identify improvements that had been made within a time span (of completion) of 12 months. They were asked for illustrative examples of key issues being tackled and how significant they perceived the changes have been. Table 3.9 summarises the examples received.

Many sites mentioned work around achieving the A&E target, reducing length of stay and keeping patients in the community. However many were described in such a way as to imply they were being managed in a performance management style rather than as a service improvement project. The examples above are where people have revealed use of service improvement methodologies. The examples of good practice are limited and diverse in their areas, implying that the techniques are not widespread in their uptake and may be related to individuals rather than organisations commitment to them.

Table 3.9 Benefits of CSI and where it has worked

Key 1 Minimal use of CSI in organisation
2 Some use of CSI in organisation
3 Localised use of CSI in organisation
4 Systematised use of CSI in organisation

Trust	Examples			Score
1	Lung cancer	A&E		2
2	Ultrasound	LOS in COPD		3
3	Admission avoidance			3
4	cancer	EAU project	LOS	2
5	Unscheduled care	Clinic pooling	Loads of others	3
6	Emergency care	Pathology		3
7	Pooling ultrasound demand			1
8	Whole elective care system	Pooling widespread		3
9	No specific examples just say lots			2
10	LoS			1
11	Long LOS			1
12	Pooling referrals	Rehabilitation beds		2
13	Endoscopy			2
14	LoS for COPD	Reduced diabetes referrals	Reduced waiting times for inpatient diagnostics	3/4
15	ENT	A&E		2
16	Orthogeriatric	A&E		2
17	radiology	Endoscopy		2
18	New proactive management of target breaches	Improvement in cancer waiting times		2/3
19	Predictive LOS			1

Some people were quite clear that the styles of working associated with continuous improvement had distinct benefits:

> *"The way we have achieved change and achieved savings has always been through service improvement." [11]*

One of the key benefits is the evidence that successful improvement systems provide about their own worth:

> *"In Radiology and Endoscopy [improvements have been] very clear… you can see how their waiting lists have come down…, it's very clear. We've also got good length of stay reductions we've … got graph evidence of that. [17]*

It is clear that although most Acute trusts have undertaken some service improvement projects, the techniques are not widely or systematically used.

4. Primary Care Trust Results

The following section outlines the results of interviews with PCTs. Interviews followed a similar structure to that of Acute Trusts, in order that conclusions could be drawn which focussed on the current working relationships between the two types of organisations.

4.1 PCT Improvement Focus

PCT interviewees were asked to identify the main focus for improvement activity. Table 4.1 shows a summary of the themes recorded:

Table 4.1 The Improvement Focus of PCTs

Trust	Examples of improvement priorities
21	Improvement activity driven by demands of NSFs
22	Substance misuse; financial savings
23	Finance, outpatients, developing community-based care in a rural area
24	Developing community care
25	Redirecting people out of secondary care; reduction in bed-blocking by elderly patients
26	Devolution of services to the community; financial savings; ISIP (e.g. focus on stroke pathways)
27	Increasing district nursing capabilities to support community-based care and reducing length of stay; reduction in outpatient diagnostics waiting time
28	Previous service redesign superseded by current focus on financial recovery
29	Activity fired by Government targets but integrated into internally driven projects

There were two main drivers for improvement activity. First, Government policy to move treatment away from hospitals into the community has influenced improvement as exemplified in *Bringing Healthcare to the Patient*[XII] and the White paper on health and care services in the community[XIII] This was linked to work in achieving the standards in the NSFs, which are linked to government policy

> *The vast majority of the improvement programmes have been linked to the NSF activity [21]*

Second, there was a clear perspective of local health needs, focusing on specific local issues. For example, PCTs within mainly rural communities tended to emphasise the availability of local services and recognised the need to develop out-of-hospital care to a greater extent than existing capabilities.

> *One simple example is we've now got ambulances taking people to our community hospital if they've got certain conditions so that it doesn't get taken straight to A&E, so they actually go into some step up beds at the community hospital. [28]*

> *Yes, we have done a lot of work around sexual health services locally. It was one of our local priorities as well as a national one and also mental health services…We've seen some real service improvements there. [23]*

> *So we've now sort of improved the system in a number of ways by putting new initiatives in place but also reviewing the sort of processes …Why delays happen in terms of…older people going into hospital and then ending up in a bed forever. We've done quite a lot of work on that. [24]*

It should be observed that as complex, in-hospital care services were not the main focus for improvement activity, hospital Trusts were not being put under as much pressure by the PCT to change these processes.

In many cases systems improvement activity was superseded by performance management, due to the pressure to achieve government targets. Many participants expressed frustration with the high numbers of measured targets and, like those from Acute Trusts, suggested that these directed resources away from improving systems and patient care:

> *The performance strategy of the PCT is of course driven by the Healthcare Commission… I think a lot of our time has to be geared around meeting national performance targets and Healthcare Commission assessments. [21]*

> *We're very keen in this PCT to put process in place if it's going to make a difference…that's why we challenge targets because [we ask ourselves] Is it going to make a difference? Are we challenging the right things? Are we…actually improving the quality of care? [25]*

> *So you hit the target because you've got to hit it. The fact it makes not a jot of difference to a patient is neither here nor there. [24]*

The continuing conflict between policies is evident in these answers with people wanting to achieve local services responsive to individuals as in 'Keeping the NHS Local'[XIV], choice initiatives[XV] and user involvement[XVI] but realising the main pressure being related to achieving financial and other targets[XVII].

Whilst others, in a similar response to those Acute Trusts undergoing FT diagnostics, acknowledged the potential benefits of targets which focus and motivate improvement activity:

> *Whilst having a focus on the sort of 2008 targets particularly sort of access related ones and that throws into very sharp focus the requirement for service improvement and new ways of working. [29]*

The PCT focus was similarly on financial issues and government targets but there was also an important agenda around keeping patients in the community and some local issues.

4.2 Strategy and Improvement

Table 4.2 Links between strategy and improvement

Trust	Comments on Strategy
21	Effort to connect strategy across whole local healthcare economy
22	Board manage improvement activity
23	No comments recorded
24	Clear links between acute strategy and improvement plans
25	Improvement well integrated into PCT strategy
26	Integrated strategy with emphasis on re-design
27	No comments recorded although PCT appears to be supporting improvement activity
28	Links weakened by patchy understanding of organisational roles amongst staff
29	Improvement activity mainstreamed within PCT

The responses were inconsistent, with few comments recorded showing direct links between strategy and improvement. Most PCT boards took an active interest in the improvement activity going on in the organisation but evidence of an explicit engagement at the level of a written strategy was sparse. This should not, however, be interpreted as evidence of an absence of a link but rather suggests that the links between strategy and improvement were largely informal. In two cases, there was clear evidence of some form of policy deployment:

> *There's a clear picture of what we're trying to do on the north side in particular, through the sort of acute strategy and again, through the programme board we try and performance manage that [24]*

> *Q: In your performance strategy as an organisation, do improvement priorities play a large role in that? A: Yes but obviously it's about transformation and not about new investment… The reality is that everywhere is stuck for money and actually we can do a lot with looking at what needs to change but that's both a provider and a commissioner role. [25]*

As in acute trusts, there appeared to be poor linkage between strategy and improvement work.

4.3 Joint Working

To compare with the Trusts perspectives of working with PCTs, the PCTs were asked their opinion of the extent of joint working with the Trusts. Table 3.3 compares the comments made by PCTs with those of their local Acute Trusts:

Table 4.3 Trust and PCT levels of Joint Working

Key 1 Joint working on required areas only
2 Specific projects
3 Work together
4 Plan together

PCT	Score	PCT Comments	Acute Trust Score	Acute Trust comment
21	3	Recent improvement in PCT/Trust working relationship	1	Not joint working
22	2	Local PFI affecting flexibility in Acute Trust/PCT relationship		
23	2		3	Recent change to joint working and planning in several areas
24	2/3	Hands-on change management of challenged acute Trust	2	Mostly target but some admission avoidance joint working
25	2	Challenged Trust in state of flux. Explicit efforts to increase partnership working	1	Performance management
26	3/2	Enthusiasm for joint working. Current collaboration is around existing projects		n/a
27	2/3	Current work on building relationships whilst helping Acute Trust be more independent	2	Lots of joint projects
28	2/3	Close relationship with main Acute provider, no comment made about other partners	3	PCT financially stretched – work closely to manage finance
29	4	Good working relationship	1	Mainly national targets

This was an aspect where much change is taking place. It was recognised that current relationships were relatively transactional, i.e. focussing on specific transactions in a simple commissioner-provider purchasing relationship, although PCTs presented a rosier picture of their relationships with Trusts than the Acute Trusts did of their PCTs. In some cases, Foundation status of the Acute Trusts also adversely influenced this relationship. One Acute Trust in particular commented that their local PCT prevented close working, due to its different legal status:

> *There is a county transformation board with the CE's from the different organisations across the county on it… But we are excluded from the structure apart from emergency care [because]…PCTs are saying as we are a foundation trust it is not appropriate to include us because they would not include an independent sector treatment centre [2].*

However, most PCTs reported a good, if somewhat inconsistent, working relationship with their largest hospital trust and in many cases this had improved over recent years:

> *Part of their [the leadership group]'s role in improvement was to provide an environment which improvement could be generated and tested out and sustained when successful so part of their role was to set up a really good relationship… The relationships vary from being that sort of partnership to being very much more acrimonious which is a shame. [28]*

> *I think we trust each other. We sort of know each other's business without crossing over the line. [29]*

In some cases the PCT closely monitored the activity of the acute trust:

> *We've got a performance framework that's on the intranet that we can see on a daily and weekly basis so we've got a really good idea of what's actually happening in the acute trust. [25]*

Whereas in other cases the emphasis was on stepping back and allowing the acute Trust to be more independent:

> *So for instance, a lot of the moving from inpatient elective to day care selective you know, we… we were attending the meetings for a while but actually it was quite clear that most of the issues were internal ones, so we're quite happy to let the Trust… to lead on that and just keep us posted really. [26]*

> *[When] we have a degree of work to do where that is joint,…some of the challenges are actually about recognising what a trust can do independently by itself. [26]*

The relationship between PCT and Acute Trusts seems to be reported more optimistically by the PCTs but still reflects a project based and target based approach to working rather than working towards an overall pre-agreed strategy.

4.4 The Structure of Service Improvement

PCTs were asked to explain how personnel involved in service improvement fitted into the organisation. Table 4.4 summarises the responses.

Two models for service improvement structure emerged. First, some PCTs have established small service improvement teams that operate independently of other functions or roles.

> *The way I want to structure it is that so we do have this sort of development redesign team that actually purely do redevelopment design…and they spend some time working in twos and threes, working on specific projects for a number of days …it's just sort of an internal contracting model. [24]*

Second, service improvement was seen to be part of the commissioning role:

> *We do actually have a whole department called service redesign, which is the commissioning function really – arm of the PCT. [23]*

This may be interpreted that service improvement is mainly about achieving change or cost reduction to services as part of a negotiation process, rather than active intervention in system redesign.

Table 4.4 Service Improvement Structure

Key 1 None
2 Service improvement activity performed by individuals
3 Dedicated Service Improvement team
4 Service improvement embedded in the organisation across all individuals

Trust	Score	Notes
21	3	Four people in SI team
22	2	Large commissioning team involved in SI
23	3	Service improvement team (12) part of commissioning etc also work closely with SHA
24	2	Internally commissioned to work in individual projects in small groups
25	2/3	Moving towards dedicated team internally commissioned to consult on projects
26	2	Full time SI manager – others retain line roles
27	3	Dedicated team of 7 – plus others brought in for specific projects
28	2	Team dismantled by financial pressures
29	2/4	Emphasis on breadth of improvement by involving all staff

The use of CSI as a cost-saving measure by some PCTs (and Acute Trusts) was contingent on having managers already well-versed in improvement activity.

> *One of the things we need to do with this service improvement is two things; we want to improve services but we want to save a lot of money to put it brutally. [24]*

This was in contrast to some of the more challenged trusts who had attempted to save money by cutting back on improvement staff:

> *My whole job is quality improvement and again up till relatively recently there were other people in the trust but again we have been through a redundancy process in the last year which has lost some of those people [28]*

It would appear that service improvement team structure is highly variable. Unfortunately it is seen by some as an area where cuts can be made when there is financial pressure. This implies that the organisations do not see a service improvement department that as an area that improves productivity and therefore required if financial pressures are present.

4.5 Use of CSI Tools

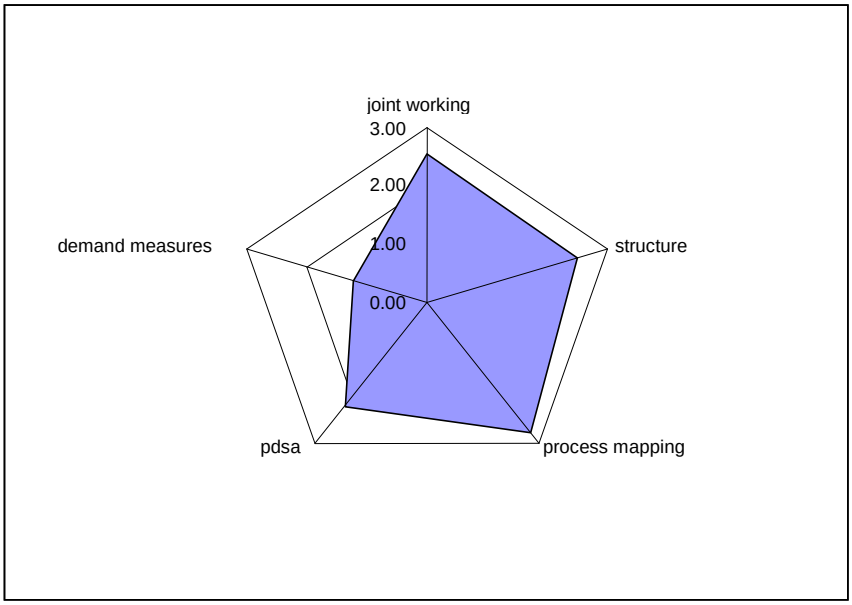
Interviewees were asked to report on the level of use of common process improvement tools and comparable holistic management approaches, such as Lean Thinking. Only those tools that recorded some level of awareness or use are reported in Table 4.5:

Table 4.5 Levels of use of CSI Tools

Key 1 No use recorded/little use
2 Awareness and partial use
3 Good levels of use
4 Extensive use, probably at top of national practice standards

Trust	Process Mapping	PDSA	Demand Measures	Other
21	2 cross-service pathway	2	1	
22	3	3	2	Lots of SPC
23	1	1	2	
24	3	2	1	
25	3	2/3	1	
26	3	2	1	SPC
27	3	2/3	1	SPC
28	3	3	1	Some SPC
29	3	2	1	

Figure 4.5 Radar plot to demonstrate the average score of usage of selected CSI tools:



Most PCTs were familiar with process mapping methodologies and many reported good levels of use:

> *With Primary Care the sort of process mapping stuff is the key for us, because one of the problems is that processes don't work [24]*

> *We've been trying to make sure that when we do a particular service area, that we do do the process mapping to understand exactly what's going on at the moment against where we want to be, because otherwise you can't make the change. [24]*

Some reference was made to the limitations of mapping which focussed on individual programmes and was not carried out across the local healthcare economy:

> *Yes in the past there has been process mapping. It has been overtaken by the ISIP now. So it is very much around looking at individual pathways or specialties where taking the sort of traditional approach we have done a bit of taking stock and scoping and then mapped the process. [29]*

> *Process mapping is very much limited to the individual programmes what I think we are lacking is that helicopter view of what is happening across the whole of health and social care. [21]*

Most PCTs reported that they used an improvement methodology, similar to PDSA, but in many cases this method was not given this acronym:

> *I think probably we still do do the PDSA cycle I don't think we call it that…I think there is a bit of a tarnished image of the Mod now for whatever reason in the service and I think people do use those methodologies…But maybe don't give it the labels that they once did. [27]*

The main surprise was the level of reported use of SPC. It is likely that this was influenced by courses previously run by the Modernisation Agency, but some local training was also reported.

> *Yes, I mean we basically SPC chart all of our contract performance monitoring, so we'll SPC chart excess bed day, we'll SPC chart referrals, we'll SPC chart not just collar outpatient activity. [26]*

Commitment to the use of SPC was maintained even in the face of resistance from other agencies:

> *Some of the difficulties that I have is that the social services for instance seriously don't understand it so when we do the SPC they go well 'why can't I just do the average?', so it sometimes takes a bit of time to get all the partners onboard as to the benefits of using that sort of statistical analysis. [25]*

> *I think with process mapping and SPC I think people think it's really difficult and the things that have been most powerful have been the very simple guides to it. [22]*

The most worrying aspect is the lack of reported use of capacity and demand theory although this may be either because the work is strongly led by the Acute trusts without PCT intervention or that the question was not always asked in interviews. If the lack of data does in fact reflect a disengagement from capacity and demand work in primary care, then this could have implications for the levels of activity commissioned by PCTs. Understanding of the demand for services and the capacity of various organisations to achieve this should be at the core of any commissioning process. Recorded exceptions to this include engagement with GPs in demand management:

> *There have been some really good examples there about where people have used improvement science to actually model on very, very simple things about levels of demand and numbers of appointments and all of those kinds of things. [22]*

Similarly, whilst there was widespread recognition of the benefits of Lean methodologies, no PCT had yet implemented it widely:

> *Everybody's talking about Lean Thinking. I'm not sure they know what they mean [24]*

> *My background is industry so I'd kind of come across the Lean Thinking stuff prior to that, but I'd say I don't think it's particularly taken hold as a way of thinking or methodology. [26]*

> *We've considered Lean Thinking and we were approached by a company who wanted to invest in our service [who]… described what a fantastic saving it can do and we know it can because we do transformation all the time but actually what they wanted to charge us was £160,000 to do it and that would be a waste of NHS money. [25]*

Once again, there is a great deal of variability in the use of improvement tools but it appeared that SPC in particular was increasing in its usage in PCTs.

4.6 Communication

Two aspects of communication were assessed. First, interviewees were asked to report on how best practice was communicated. Second, the extent of communication in the wider community was studied. They were given the opportunity to describe the range of communication methods.

Table 4.6 Stakeholder Involvement and Spreading Best Practice

Trust	Communication with GPs and Secondary Providers	In wider community
21	GP forum, newsletter	Conferences
22	Demand/patient management work with GPs	Public consultation forums
23	No comments recorded	No comments recorded
24	100% PBC – setting up clinical executive committee	No comments recorded
25	GPs on executive committee	Quarterly public stakeholder meetings
26	Professional Executive Committee including representative GPs are closely involved in decision-making. Quarterly stakeholder discussion forum on mental health	
27	No comments recorded	Website, patient forum
28	GP engagement on specific programmes	No comments recorded
29	Certain enthusiastic GPs engaged in inevitably limited way; local Oscar ceremony	Patient forums etc

There did not appear to be a pattern of formal collection and communication of best practice ideas. Instead, there appears to be a more passive information network that focuses on routine planning activities and general communication. The communication with stakeholders appears to be equally passive, despite an obvious commitment to involving both GPs and patients in improvement activity:

> *It's one of our five service principles about involving staff…, it is about involving staff at all sorts of levels in all sorts of ways and suggestion boxes are just one of those ways that we involve staff in improving services. [23]*

> *We've contacted all GPs and explained the process and asked them to flag up areas where they'd got a specialty interest, so we're incorporating them into those processes. [26]*

> *We've done a lot of work with service users around their views on how services were and how they are now. [23]*

It appears from these case studies that knowledge transfer techniques are still very simplistic in PCTs. There is no evidence of using more sophisticated techniques that are employed in many sectors now. Similarly there was little mention of the key role of staff involvement in projects to facilitate knowledge transfer.

4.7 Benefits of CSI

Interviewees were asked to provide examples of successful CSI-style improvement, preferably where the work had been completed within the last 12 months. Table 4.7 identifies the list of answers.

Table 4.7 Benefits of CSI and where it has worked

Trust	Example 1	Example 2
21	Emergency Department performance	Physiotherapy services
22	Improving management of long-term conditions	
23	Sexual health	Long-term conditions
24	Physiotherapy triage system - diverting back-pain out of Acute care	Elderly bed-blocking
25	Length of stay	Orthopaedic triage
26	Reduction in admission rates through support for district nursing	
27	External consultancy on cardiac care	
28	Developing cross-agency work on perinatal mortality	Ultrasound queues
29	Re-admission rates in general medicine	

The results show that there is a mix of examples from PCT/Trust joint working and those focused purely on PCT/Community service provision. The themes are partly influenced by the performance target agenda, such as work to help with A&E demand. There are also examples of attempts to reduce the costs of hospital-based care through LoS reduction and admission prevention. The interviewees did not so much stress the cost aspects of these improvements, but instead stressed the impact on local availability of services and diverting patients out of acute care:

> *We've got the award winning orthopaedic triage service where we've shifted seventy per cent of activity into primary care… And that is a really… good evidence of good demand management. [24]*

> *We've now got ambulances taking people to our community hospital if they've got certain conditions so that it doesn't get taken straight to A&E, so they actually go into some step up beds at the community hospital [24]*

> *There is evidence that we have made a substantial improvement to care in relation to patients in particular who have had emergency admissions [24]*

Financial issues were an important area for many PCTs. Recent media attention has focussed on redundancies in the NHS and this was raised by many organisations. However some did

highlight that service transformation can improve efficiency and so prevent work force reductions whilst improving quality:

> *Over the last 18 months we've done a massive financial recovery plan and transformation of services in that we haven't had to do any massive workforce reductions. [25]*

It is clear that most PCTs have undertaken service improvement projects but that the techniques are not widely used and the philosophy is not embedded in the organisations.

5. Conclusions

The following key themes have been drawn from this work:

1. Financial pressures and target achievement are still the main drivers of strategy in most NHS Trusts. This means that improvement strategies tend to focus more on cost-saving than quality improvement. The ability of CSI methods to deliver lower costs through the improvement of quality was not appreciated by some interviewees and reported to be unappreciated by some mangers in their organisations. There is a lack of link between global strategy and improvement, which is exemplified by the withdrawal of service improvement at times of financial constraint;*[sections 3.1, 4.1, 3.2, 4.2, 3.4]*

2. Foundation Trusts exhibited the greatest freedom to develop their own strategies that can focus on longer-term sustainability (although the number of Foundation Trusts in the sample is very small). The more ambitious non-Foundation Trusts tend to develop strategy that works towards the needs of Foundation achievement or target achievement. *[multiple sections]*

3. Most trusts studied and PCTs expressed goodwill and a willingness to work together to develop an effective healthcare supply network. A few Trusts had developed a strategic partnership with their local PCTs and were working closely and effectively. In the majority of cases, the relationship between Trusts and PCTs is currently being enhanced from a purely transactional relationship towards one of strategic partnership. PCTs are not always actively involved in Trust-based improvement, other than changes that occur during the usual commissioning process. There is an opportunity to further join up the improvement work being carried out in Trusts and PCTs; *[sections 3.3, 4.3]*

4. Trust Service improvement infrastructure varies widely and the approach very much depends upon the individual organisations. The top-performing Trusts (by star rating) are at a stage where continuous process improvement mechanisms are embedded in the organisation, such that CSI tools and techniques are considered part of routine working practice rather than used only for individual projects. In these cases there is no need to rely upon separate service improvement departments for incremental change. We see this as the ideal state that all Trusts should strive to achieve. Elsewhere service improvement is driven mainly by project-based teams. Some of these teams are small, but many report directly to board level. These departments have a useful role to maintain an improvement capability, up to the point where there is sufficient critical mass of support for people to continue this work on their own initiative. Consequently, average Trusts without Service Improvement departments should reconsider how service improvement can be supported and sustained; *[sections 3.4, 4.4]*

5. Service improvement currently mainly focuses on areas where targets are applied or on functional bottleneck processes such as Radiology. CSI can add value to the approach by moving the agenda on from departmental optimisation towards the ideal state of whole system change; *[section 3.5]*

6. Top-performing sites exhibit good practice in their use of CSI tools and techniques. There are also many other sites that demonstrate good practice, either with specific methodologies or in some work streams. The use of CSI tools can be summarized as:

    - All sites have used process mapping and have obtained value out of it
    - PDSA methodologies were seen to be valuable, but current practice is limited to top-performing sites. The term PDSA is not used frequently and there are probably other names that can be used instead (e.g. the "four quadrant approach")
    - Some Trusts have championed the use of SPC and have demonstrated its value to communicate the behaviour of processes and to assess the impact of process change in complex systems
    - There is good awareness of the term "Lean Thinking" and a recognition that it involves considerable effort to implement the approach successfully
    - The "Theory of Constraints" is one approach consistent with CSI principles that was seen to be successful at a research site. It should not be overlooked as a valuable improvement methodology. It appears to be especially attractive from the perspective of ease of implementation as it seems to fit more closely with current management styles
    - Capacity and demand theory was clearly the most successful CSI practice within the study. Many Trusts had made significant improvements to waiting time reductions and capacity yield using the methodology.
      [sections 3.6, 4.6]

7. The practice of CSI methodologies was seen to be at different levels across the NHS Trusts. When cross tabulated to the performance of the Trust by star rating the following themes were apparent:

    A small number of top-performing Trusts have the capability to deliver government targets within financial constraints through the use of CSI methods. Many of these will have also gained independence through Foundation status, allowing further strategic development. These Trusts have an embedded improvement culture that allows staff-driven process change to create sustainable changes to the performance capability of the healthcare system. The Trusts provide objective evidence of the value of CSI practices, sharing a number of common characteristics:

    - Strong leadership that is able to implement difficult and sensitive change
    - Senior managers that possess a high level of awareness of the process and systems issues that they face
    - A workforce that is receptive to new ideas or lacks "change fatigue"
    - Strategies that are policy deployed, to reconcile conflicting priorities and tensions between short and long-term improvement pressures
    - A critical mass of people trained in the use of improvement tools and techniques
    - A management style that is able to harness staff-driven process improvement

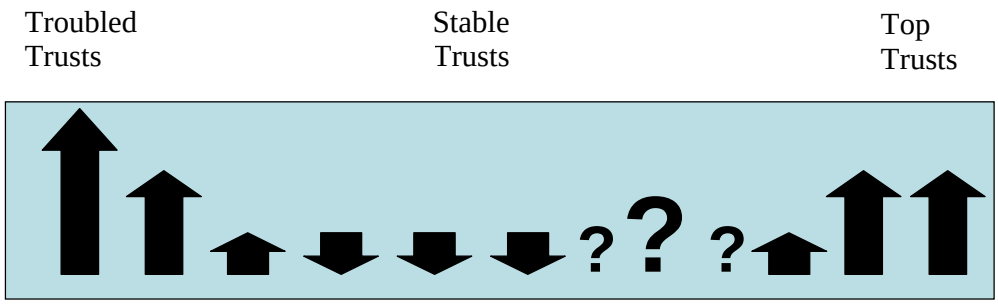
    Trusts that have historically had a very poor performance record have consistently appointed new management teams with intention to put them on a fast improvement trajectory. It will be important to follow-up on the progress these Trusts, to discover the valuable lessons concerning the implementation of process improvement in

potentially difficult situations. The survey gained the impression that the calibre of senior managers in these Trusts was extremely high when judged from their knowledge of CSI methods and practices in the interviews.

CSI practice is not as widespread in Trusts exhibiting average performance or below. There is even some suggestion of a reversal in CSI practice, as these organisations become distracted by financial pressures and target breaches. These sites need to be convinced that CSI improvement is a practicable way of implementing sustainable performance improvement in a timely manner. They may find that sites currently below them will soon overtake them through better use of CSI methods; *[all sections]*

Figure 5.1 shows an interpretation of the "improvement vector" of Trusts within the study.

Figure 5.1 Improvement Vectors across Trusts



8. CSI requires a management style that allows the engagement of front-line staff in improvement activity, as a basic principle of the acknowledge concepts behind philosophies such as lean thinking. Under the present performance management regime, Trust management style often reverts to "command and control" crisis management when pressure is applied, threatening the sustainability of change; *[section 3.7]*

9. Many Trusts are eager to keep up-to-date with "Best Practice" from within the healthcare community. The London Learning Network is reported to be a valuable source of learning that complements the work of the NHS Institute to disseminate knowledge. Most organisations use very traditional methods of knowledge dissemination and do not utilise methods to promote engagement and transfer rather than simple knowledge dissemination. At a national level, the coordination of such learning would be a valuable service to provide for Trusts, especially those outside of existing networks; *[sections 3.8, 4.6]*

10. Across all Trusts, there was very clear evidence of the good practice that had been embedded by previous Modernisation Agency collaborative programmes such as the Emergency Services Collaborative and the Improvement Partnership for Hospitals. It was frequently reported that the techniques had been learnt in these projects and they then seem to have been applied elsewhere. These programmes were useful for the ways they structured process-based improvement in practical work streams and for the extent of training in CSI tools. In our opinion, there was a clear, positive legacy of these programmes in above-average Trusts. Furthermore, some of these Trusts would have benefited from an additional 12 months or so of collaborative working to fully embed this good practice. In many cases, it is not yet too late to help sustain these gains, if the right external support is provided. *[sections 3.9, 4.6, 3.9, 4.7]*

6. Limitations of this Study

This study is a snapshot using limited qualitative case studies and therefore has the recognized limitations of these techniques including;

- Only one individual from each organisation
- Small sample size
- Use of illustrative examples
- Subgroup analysis may depend on very small numbers

Measures have been taken to minimize these limitations, such as stratification of Trusts before their selection. We therefore believe that the results are broadly generalisable across Acute Trusts and Primary Care Trusts in England. Knowledge of local factors will always be required to adopt the conclusions of this report in a specific locality. However the authors believe that the underlying principles and findings should be applicable.

7. Recommendations

These recommendations combine the results of this study with the pre-existing knowledge and expertise of the authors in the area of clinical systems improvement and recent literature in the area[XVIII].

CSI techniques are still only used for specific projects and in varying degrees, there was an implication that there were still only relatively few staff trained in CSI techniques in the organisations studied. Other than for the top-performing Trusts where improvement is already embedded into staff roles, we recommend that Trusts should establish service improvement departments with a core of individuals trained in CSI who can promote the techniques and help support service improvement initiatives. We believe that in the longer term, service improvement needs embedding in the training of all clinical and managerial staff so that it becomes part of all NHS staffs role to improve the service. Once it becomes embedded then there will be a realisation that in crisis the techniques are needed more not less. Capacity and Demand work is core to present changes in the NHS and the existing good work can be consolidated across the whole system through the integration of Primary and secondary care demand data.

Service improvement does not only rely on techniques and adopting approaches from other sectors, it is a whole philosophy. The culture, management style, team working, leadership and user involvement are all components of successful improvement culture. These need to be addressed in parallel to the adoption of new techniques in the NHS. Organisations need to develop their strategies and link these with their service improvement plans. Communicating good practice and change is undertaken in very traditional ways. We believe that the development of better knowledge transfer systems, e.g. improvement networks and knowledge transfer partnerships, is an important next step. The NHS needs to look at how it can transfer knowledge more efficiently and effectively via such networks and what support it should provide for them.

The evidence shows that Trusts can become distracted from CSI. Quality needs to be brought to the fore as the key driver that will not only improve outcomes but also improve the value for money of the service hence enabling targets to be achieved and financial balance to be secured. It is clear that most staff, especially important stakeholders such as senior clinicians, will embrace change that promotes quality as opposed to change that focuses purely on process efficiency. We believe that the role of CSI to improve quality for patients and to generate a better working environment for staff can be increased.

It is also important that policy makers are aware of the impact that clinical systems improvement could have on the NHS. It is important for them to realize that in the short term that over zealous performance management to focused targets may work against the adoption of CSI techniques and culture that could have longer terms greater befits in cost, quality and timeliness of healthcare.

Future CSI Training and Development needs

i) The top-performing Trusts should be engaged in a structured programme to codify and then disseminate their best practice. We suggest the idea of "Beacon" sites, similar to the successful programme in Local Government as one approach. We support establishing local improvement networks to enable improvement leaders to share skills, ideas and best practice in order to combat Trust isolation. Isolation and introspection amongst Trusts has significantly contributed to poor performance amongst those Trusts undergoing turnaround. The London Learning Network was cited by those Trusts involved as a successful example of a supportive partnership that has already facilitated the sharing of best practice in the South East. Similar models could be developed across the country.

ii) CSI methods can be further adapted to fit the healthcare environment, especially to use terms and language that engages clinicians more readily. Our experience suggests that many of the difficulties facing those trying to implement CSI-based changes within healthcare have been attributed to a lack of a common language between CSI adapted from manufacturing and that used in a healthcare setting. We believe that work to start the translation and modification of such tools should be started as soon as possible.

iii) CSI training courses now need UK-based, modern case examples. Particular care should be taken to provide examples of out-of-hospital care as this key agenda item for many PCTs is not currently covered by CSI training materials. Courses should acknowledge and include the particular and different needs of PCTs as opposed to Acute Trusts.

iv) We have experienced significant demand for in-house training on CSI techniques. This allows the development of a local critical mass of trained people and can also focus learning on local improvement priorities and strategy. Tailor-made local courses will demonstrate to staff the potential effect of CSI techniques on their own Trust's particular priorities and pressures. As a practical step, there is scope to convert the existing 5-day full CSI programme into a modular course, offering 1-day focused training on specific themes. This approach would retain the level of content and the integration of material across topic areas, but it could be redesigned to allow individuals the flexibility to match training to their own personal needs and availability constraints. Consequently, we would hope that more senior managers and clinicians would participate in CSI training.

v) For senior managers, there appears to be a need to focus CSI training around leadership of staff-driven change, the value of process improvement and strategy and policy deployment to achieve an integrated approach to sustainable system improvement. Most effective deployment of CSI appears to occur when change processes are driven from the bottom up. Managers need expert training on empowering staff at all levels to develop and manage their own process redesign.

vi) Managers need better access to simple, relatively prescriptive methodologies in some of these areas. We recommend that organisations establish infrastructure to ensure staff have access to the appropriate expertise to undertake service improvement projects using CSI techniques. Trust managers and clinicians may

also find additional training and knowledge support in the following areas to be helpful, in order to act as a knowledge resource of advanced operations management techniques:

- Demand measurement and Medium/Long-term capacity management
- Lean Thinking and the Theory of Constraints
- Advanced Process Redesign Methodologies
- New Facilities Capacity & Supply Network
- Flow and System Dynamics

These advanced techniques will develop on existing skills-bases in order to bring about further advantages and rigorous system redesign.

vii) In order to increase their external credibility, CSI methods require increased exposure in academic and other journals. This would help both clinicians and managers assess the value of the approach and gain necessary additional support.

Clinical Systems Improvement is being slowly adopted by the NHS with examples of consequent improvement in cost, quality and timeliness of care. There is a need to develop both local and national strategies to improve understanding of these techniques. At local level service more training and access to experts is required. At national level appreciation of CSI but also appreciation of the potential contradictory effects of some policy needs to be increased.

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8. Appendices

8.1 Appendix A: Acute Trust interview question guide

1 The commissioner-provider relationship

What aspects of performance improvement do you discuss with your PCT commissioner?

a) Cost issues (financial pressures)

- In which ways is the PCT measuring perceived cost performance?
- How far are you above or below tariff?
- Are there specific reasons why cost performance is regarded to be good/poor?

For example:

Unit costs
Tariff rates above/below
Management costs
Pharmacy costs
Other overhead rates
Annual cost down targets
Financial stability/Financial reserves
Other

b) Quality

General waste issues
Medical errors
Mortality rates
Thrombolysis
Patient focus issues
Customer Service quality e.g. patient empathy/satisfaction
Admin errors – examples?
Other errors e.g. pharmacy

c) Waiting list targets (speed)

Out-patient delays
In-patient delays
Radiology delays
Pathology delays
Failure to achieve waiting targets
Capacity availability
Temporary closures

d) Flexibility issues

Seasonal demand factors
Responsiveness
Range of services
Types of service offered/not offered
Staff sickness

e) **Dependability issues**
f)

Appointment cancellations
In-patient cancellations
Cancelled operations

2 CSI

Developing the ability to generate sustained improvement

a) Assessing the prevalence of small-scale team-based improvement activity that uses evidence to identify the degrees of success of the change

- Do you use PDSA? (Plan, Do, Study, Act)
- Do you use other problem-solving tools
- Do you use simple improvement measures (e.g. quality control, charting, statistical process control)
- Do members of staff work in teams on the improvement? What examples do you have of group CI activity?
    - multi-disciplinary working
    - suggestion boxes
    - quality circles
    - quality improvement teams.

How do teams set goals?

How do teams manage their improvement process?

b) Role of leadership

Who provides CI leadership?

- In your experience, how far do managers intervene in response to CI suggestions by the service improvement teams?

- Do leaders formally recognise improvement work?
    - What rewards are you getting? – (e.g. pride in your work, public acknowledgements of successful ideas (rather than pay-related benefits)).
- Do leaders lead by example (not dictatorship on bottom-up projects)
- What happens when targets are not hit? (blame culture).

3 Understanding the structure of the improvement system

Do you have a service improvement department? How is it structured?

Understanding the service improvement structure in the Trust

a) Inputs

- What are the inputs to process improvement?

You are the service improvement manager:

- Who you report to?
- Who you manage etc?
- What is the organisational structure?
    - Where are the people involved?
    - Is there a service improvement lead?
    - Is there a service improvement department?
    - Is the Chief Executive committed to service improvement?
    - Have staff members been on process improvement courses?
    - Do staff members have specified time to devote to service improvement?

4 Continuous Improvement

a) Is there a link between the strategy of the organisation and the type of process improvement?

- Are improvement priorities clearly labelled in the performance strategy?
- Are strategic objectives used to drive & prioritise improvements?
- How far are formal strategies communicated to teams?
    - What are teams being told about the sorts of changes they are being expected to produce?
- Are changes assessed against improvement priorities?
- How do groups measure their progress?

Intrinsic vs extrinsic?

5 Spreading the Word

a) <u>Continuous improvement across teams</u>

- Are teams cross-functional?
- Do people share a view of the process?
- Do you use internal/external customers' terminology?
- Do you have an idea of who your customer is?
- Do you engage patients in the CI process as co-producers?
- Do you use external consultants?
    - In what capacity?:
        - One-off improvement processes?
        - For developing internal capabilities for service improvement?

- Have you had a recovery team in? (only ask if they appear to be a poor performing trust)? Did they help or hinder?
- Are there CI representatives at all levels of organisation?
- Do you involve people from all levels: porters?

b) Process Redesign/BPR

- What proportion of major pathways have been mapped in depth?
- Where are the process maps kept?
    - Where all staff can see it
    - In a process room
    - By the program manager
    - Elsewhere (does not exist)

c) Improvement methodologies

- **What kinds of methodologies are being used to improve?**
    - SPC
    - Lean Thinking e.g. value stream mapping
        - Do you know your throughput efficiency?
    - Theory of Constraints/OPT

6 Capacity and Demand

What effort has been made to understand the demand?

Do you use activity statistics to assess demand?

- Have you researched/understand GP referral patterns well?
- Have you done capacity and demand work in terms of queue management?
    - Waiting list initiatives? (mostly?)
    - Pooling demand in new patient clinics/other waiting lists?
    - Reducing queues in radiology through carve out?
    - Pooling non-urgent queues e.g. mixed sessions in radiology?
    - Pooling discharges?
    - Pooling ward space?
    - Load smoothing elective lists?

Any activity to reduce variation?

7 Improving the CI system

What CI information is reported to the board? How is it presented?

a) Making changes to the CI system

Recent changes to improvement strategies

Is the improvement system monitored and improved?

- Do you have a cyclical planning process for improvement activity?
- Do you make a periodic review of CI system?
- Is CI sufficiently resourced?
- Where does CI fit within the organisation structure?
- What changes are assessed for impact upon CI?

b) Walking the talk

Does the leadership style reflect commitment to values?

- Is the leadership style command and control?
- [If interviewing senior leaders: If you identify a problem, how do you go about organising the improvement team? Do you set one up? Ask people to volunteer?]
- What happens if you have a performance target breach?
    - Response to crises?
    - Blame or improvement?
    - Is there a shared belief in incremental improvement?

8 Building the learning organisation

Do you capture experiences of successful improvement and translate that into action elsewhere?

- Do people seek out learning opportunities?
- Is learning is shared across departments?
- Is learning is captured?
- Do leaders act on learning?

- How is learning communicated?
- Is learning part of OD activity

Is CSI mainstream?

9 Outcomes/Outputs

What have been the performance improvement changes in the last 12 months in terms of cost/time/quality?

- Cost
    - Do you have measures of reduced unit cost?
- Time
    - Do you have measures of queue reduction?
    - Do you have measures of waiting list reduction?
- Quality
    - Do you have measures of a change in mortality?
    - Do you have measures of an increase in technical quality (e.g. re-admission rate?)
    - Do you have an accuracy rate for pharmacy prescriptions?

8.2 Appendix B: PCT interview question guide

1 The PCT as Provider

What are your current internal service improvement priorities as a provider of healthcare?

a) Cost issues
- Moving in-hospital work into primary care?
- Costs of community work?
- Demand levels

b) Quality issues
- Internal waste
- Patient focus
- Customer service
- Error rates

c) Access/Speed issues
- 48 hour GP access
- Out of hours access
- Access to community services
- Other

d) Target achievement
e) Other

2 Understanding the structure of the improvement system

a) Who has executive responsibility for service improvement within the PCT?

b) How does service improvement sit within the PCT organisation structure?

c) Is there a service improvement department?

- How many people
- Are they seconded roles?
- What is their background?
- To whom do they report?
- Have they received formal CI training? If so from whom?

3 PCT Strategy

Is there a link between the strategy of the organisation and improvement?

- Are improvement priorities clearly labelled in the performance strategy?
- Are strategic objectives used to drive & prioritise improvements?
- Are changes assessed against improvement priorities?
- How do groups measure their progress?

4 The PCT as Commissioner

What are the main service improvement challenges for your largest provider hospital trust?

a) Cost issues (financial pressures)

- Are there specific reasons why cost performance is regarded to be good/poor?

For example:

Unit costs
Tariff rates
Management costs
Pharmacy costs
Other overhead rates
Annual cost down targets
Financial stability
Other

b) Quality

General waste issues
Medical errors
Mortality rates
Patient focus issues
Customer Service quality e.g. patient empathy
Admin errors
Other errors e.g. pharmacy

c) Waiting list targets (speed)

Out-patient delays
In-patient delays
Radiology delays
Pathology delays
Failure to achieve waiting targets
Capacity availability
Temporary closures

d) Flexibility issues

Seasonal demand factors
Responsiveness
Range of services
Types of service offered/not offered

e) Dependability issues

Appointment cancellations
In-patient cancellations

Probe questions

- Are you satisfied with the progress that your provider is making in achieving these improvements?

- To what extent are you actively involved in influencing process change at the Trust?

- What are you doing to facilitate that improvement?

5 CSI

Have you used service improvement tools and techniques promoted by the former Modernisation Agency?

- Do you use PDSA? (Plan, Do, Study, Act)

- Do you use process mapping?
  - What proportion of the process flows have been mapped
  - Who does this?
  - Are the maps visible
  - Are they shared across organisations

- Do you use other problem-solving tools

- Do you use simple improvement measures (e.g. quality control, charting, statistical process control)

- Do members of staff work in teams on the improvement? What examples do you have of group CI activity?

  - multi-disciplinary working

  - suggestion boxes

  - quality circles

  - quality improvement teams.

c) Role of management & GPs

- Do managers or GPs participate in CI suggestions?
- Does management lead by example (not dictatorship on bottom-up projects)
- What happens when targets are not hit? (blame culture).

6 Spreading the Word

a) Do you have CI teams?

- Are teams cross-functional?
- Do people share a view of the process?
- Do you use internal/external customers' terminology?
- Do you have an idea of who your customer is?
- Do you use external consultants?
    - In what capacity?:
        - One-off improvement processes?
        - For developing internal capabilities for service improvement?

7 Capacity and Demand

What effort has been made to understand the demand?

Do you use activity statistics to assess demand?

- Do you use first appointment after GP referral to assess demand?
- Have you done capacity and demand work in terms of queue management?
- Do your GPs use "Advanced Access" effectively? (What is their performance?)

8 Management Style

Does the management style reflect commitment to values?

- Is the management style command and control?
- [If interviewing senior management: If you identify a problem, how do you go about organising the improvement team? Do you set one up? Ask people to volunteer?]
- What happens if you have a performance target breach?
    - Response to crises?
    - Blame or improvement?
    - Is there a shared belief in incremental improvement?

9 Building the learning organisation

Do you capture experiences of successful improvement and translate that into action elsewhere?

10 Outcomes/Outputs

What have been the performance improvement changes in the last 12 months in terms of cost/time/quality?

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