

BOARD MEETING

27th September 2018

Paper Title:	Quality Improvement System: Case for Investment
Section:	Public
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Agenda Item:	11
Presented For:	Approval
Paper Category:	Quality

Executive Summary:

Board has already approved the principle of adopting a Lean-based Quality Improvement System; this paper provides an evidence-based rationale, using concrete examples from other NHS Trusts of the simultaneous delivery of better quality and improved efficiency.

The paper makes the case for an external support partner and outlines the different responsibilities of that support partner and the 'in-house' team that we will also need to develop.

The paper provides evidence of how a QIS could help to improve our CQC rating.

The paper recommends that this is something the Trust should take forward on its own rather than partnering with other regional Trusts.

Recommendations:

That the Board

- Approves the engagement of an external support partner, as soon as possible, to help the Trust implement a Lean-based Quality Improvement System

Governance/Audit Trail:

Meetings where this item has previously been discussed (<i>please mark with an X</i>):					
Audit Committee		Quality & Safety Committee		Remuneration Committee	Finance, Business & Investment Committee
Executive Management Team	x	Directors		Chair of Committee Meetings	Mental Health Legislation Committee
Council of Governors					

This report supports the achievement of the following strategic aims of the Trust: (<i>please mark those that apply with an X</i>):	
Quality and Workforce: to provide high quality, evidence-based services delivered by a diverse, motivated and engaged workforce	x
Integration and Partnerships: to be influential in the development and delivery of new models of care locally and more widely across West Yorkshire and Harrogate STP	
Sustainability and Growth: to maintain our financial viability whilst actively seeking appropriate new business opportunities	x

This report supports the achievement of the following Regulatory Requirements: (<i>please mark those that apply with an X</i>):	
Safe: People who use our services are protected from abuse and avoidable harm	x
Caring: Staff involve people who use our services and treat them with compassion, kindness, dignity and respect	
Responsive: Services are organised to meet the needs of people who use our services	x
Effective: Care, treatment and support achieves good outcomes, helps to maintain quality of life people who use our services and is based on the best available evidence.	x
Well Led: The leadership, management and governance of the organisation make sure it's providing high-quality care that is based around individual needs, encourages learning and innovation, and promotes an open and fair culture.	x
NHSI Single Oversight Framework	

Freedom of Information:
<p>Publication Under Freedom of Information Act</p> <p>This paper has been made available under the Freedom of Information Act</p>

Quality Improvement System: Case for Investment

1. Background and Context

Board approved, in principle, the adoption of a formal Quality Improvement System (QIS), based on Lean methodology, at its meeting in public in July 2018.

At the same time, Board requested a 'case for investment' to come back to this, September 2018 meeting in public, in order to demonstrate, clearly, that a decision to invest public funds in a QIS could be justified from both quality improvement and value for money perspectives.

It must be acknowledged that a QIS is, first and foremost, about having a clear and consistent approach to driving quality improvements within an organization. If we do *not* adopt a formal QIS then we need to be able to articulate what our alternative strategy will be.

A traditional business case is difficult to frame for this investment. The benefits will be seen over a long period of time and could be attributed to multiple management and clinical interventions, projects or initiatives. QIS must be seen as an enabler to allow staff and leaders to deliver our quality objectives in a way that reduces waste, allows a focus on services users and what creates value for them and can enable an improvement culture (a mindset where everyone looks to improve their work) across the organization.

2. Project/Proposal

The NHS is facing significant financial and operational pressures, with services struggling to maintain standards of care. Now, more than ever, local and national NHS leaders need to focus on improving quality and delivering better-value care. All NHS organizations should be focused on continually improving quality of care for people using their services. This includes improving the safety, effectiveness and experience of care.

Quality Improvement – the use of methods and tools to continuously improve quality of care and outcomes for patients – should be at the heart of local plans for redesigning NHS services. NHS leaders have a vital role to play in making this happen – leadership and management practices have a significant impact on quality. Studies have shown that board commitment to Quality Improvement is linked to higher-quality care, underlining the leadership role of boards in this area.

Improving quality and reducing costs are sometimes seen as conflicting aims when they are in fact often two sides of the same coin. There are many opportunities in the NHS to deliver better outcomes at lower cost (improving value), for example by reducing unwarranted variations in care and addressing overuse, misuse and underuse of treatment. There are many examples across the NHS showing that even relatively small-scale quality improvement initiatives can lead to significant benefits for patients and staff, while also delivering better value.

The potential benefit is even greater if quality improvement techniques are applied consistently and systematically across organizations and systems. However, this is not currently the case. To deliver the changes that are needed to sustain and improve care, the NHS needs to move from pockets of innovation and isolated examples of good practice to system-wide improvement.

The preceding four paragraphs are the key messages from a recent report, jointly authored by the Kings Fund and the Health Foundation, "Making the case for quality improvement: lessons for NHS boards and leaders". This report has been provided, separately, to Board members as it is an excellent summary of the current case for investment.

From the experience of others and from our own learning of QIS methodologies there are a number of advantages to adopting a QIS. Some examples are as follows:

- Adopting a single approach and toolkit for improvement work that can be rolled out across the Trust
- Using the methodology to enable the rapid deployment of our strategic priorities, engaging staff at the earliest opportunity and providing opportunities for close communications, a clear focus on actions and an ability to hold to account and receive assurance (this will compliment crowd sourcing nicely)
- An ability to use the methodology for large scale and very local (even personal) improvement work
- A framework for encouraging staff to put forward improvement ideas and develop them using the tools and report back (complementing iCare)
- An ability for the Trust to target the elimination of waste in key areas and realise efficiency, productivity and ultimately quality and cost benefits.

It is proposed that BDCFT sources, as soon as possible, a high quality external support partner, with a proven track record in the NHS, to help us implement a Quality Improvement System, based on Lean methodology.

3. Evidence from other regional trusts

The Medical Director has been in contact with a number of QI leads from regional Trusts which are using a Lean-type approach. The following are examples of success which they have been willing to share:

Trust 1 (uses Lean)

"Abdominal Medicine & Surgery CSU achieved 100% improvement relating to the use of taxis to transport medication to patients after discharge eliminating this defect entirely.

Elective Orthopaedics: early mobilisation reducing their lead time from 17 hours 16 mins to just 4 hours 17 mins, a 76% improvement.

AMS Edans where preparing Edans on day of discharge went from 155mins to 3 mins = 98% productivity gain

74% productivity gain of nurse time by not having to process repeat pre-assessments.

Staff Walking Distance- Overall Improvement of 50% for our staff (e.g. bed manager gathering info went from a manual process to electronic eliminating the waste of motion (walking) in the process altogether = 100%)

Work removing waste, such as the inventory RPIW where we saved approximately £68 per case for instrument sterilisation confirming that we are streamlining our services to be the most efficient for the patient, financially sustainable and viable for the future.”

Trust 2 (uses Lean)

RPIW	Narrative	Improvement outcomes	Impact
End of life	There was no defined pathway with clear time frames for end of life patients within the xxx CCG area. Patients on average spent 3 weeks in hospital waiting for a continuing care assessment, meaning patients often died prior to being discharged to their preferred place of care.	<ul style="list-style-type: none"> • There is now a flow charts with clearly defined time frames and standards for assessment. • A dedicated end of life nurse specialist has been implemented. • A ‘discharged to assess’ model has been implemented for patient assessment within the home environment. 	<ul style="list-style-type: none"> • On average, 73 minutes of qualified nursing care time has been released for each end of life patient assessment. • LOS stay has been reduced by 2 weeks 6 days for each end of life patient on the pathway. • 95 patients have gone through the pathway – releasing 115 hrs 30 mins qualified nursing time and 1,900 bed days.
Fractured NOF	There were significant delays in starting trauma theatre 15 on time; the median time for starting was 09:31. In addition, theatre lists were frequently changed on the day and clinical priority patients were not listed first,	<ul style="list-style-type: none"> • Designed and created a protocol around the ‘golden patient’ fractured neck of femur going first on the list. • Standard work and clinically agreement for theatre start time for anaesthetics no later than 8:45 am. • Anaesthetic review and screening the day 	<ul style="list-style-type: none"> • Trauma Theatre 15 starting 51 mins earlier per day increasing core capacity • Achieved Fractured Neck of Femur best practice standard • Patient’s with the highest clinical need go to theatre first reducing mortality and increasing patient

	impacting on the 36 hour best practice tariff and patient safety.	prior to surgery to ensure plan for 'golden patient.'	<p>safety</p> <ul style="list-style-type: none"> Utilisation of Theatre 15 has increased 14.2% in the period January to June 2018 compared to the same period in 2017.
Non-medical recruitment	For 'like for like' recruitment posts, it took 59 days from the time a person handed in their notice to putting the job advert out. Nurse managers spent 2 hours 30 minutes during this process completing recruitment forms and relevant admin tasks.	<ul style="list-style-type: none"> The advert for 'like for like' can be placed directly by the recruiting manager same day. All admin communication is via the NHS jobs web site. The vacancy control panel process has been disbanded for 'like for like' posts. 	<ul style="list-style-type: none"> 2 hours 24 minutes of nurse manager time has been released for each 'like for like' recruitment request. Nurses are in post sooner delivering care for patients: candidates are in 58 days sooner than the previous process – potentially increasing nursing clinical time by 311 hours per candidate. The impact of this is that nurses are in post sooner delivering care for patients.
Datix	Within the Surgical and Medicine Divisions Low/ No harm datix incidents took on average 35 days to be reviewed and closed. In addition, there was a back log of 1227 incidents.	<ul style="list-style-type: none"> The datix fields were amended and reduced, mandatory fields were added to ensure completion of essential information (such as patient details). The datix manager was able to sign off low/ no harms following agreed standards work. A dashboard was devised showing incident numbers and status to enable Divisions to understand their status at a glance 	<ul style="list-style-type: none"> Released 23 mins of staff time per datix submission for Low/ No harm incidents. DOM average 660 incidents per month releasing 253 hrs (34 days) of staff time per month. DOS average 206 incidents per month releasing 79 hrs (10 ½ days) of staff time per month. Quality of investigations has increased. Staff time saved and prompt investigations as all details now present.

Pathology	<p>The Emergency Department (ED) send approximately 200 requests forms for blood analysis per day to the blood sciences department. The department should turn these around within an hour – prior to the RPIW only 88% of these achieve this standard and as a result impact on the Emergency Care 4hr Standard</p>	<ul style="list-style-type: none"> • The pneumatic air tube system has reviewed and agreement that all blood sample requests from the Emergency department have a priority route. • A 5s of the urgent bench was implemented to increase productivity, flow and clinical urgency of specimens. • Education within the Emergency Department around sample requesting and error proofing. 	<ul style="list-style-type: none"> • A reduction in the turnaround time of a blood sample from 16 minutes 30 seconds to 5 mins - saving a time of 11 mins 30 secs therefore blood results are available sooner. • A reduction in the number of patients categorised as “awaiting diagnostic” on the breach report. • Improvement to 93% turnaround time, supporting decision and assisting in achievement of the Emergency Care Standard.
Contenance	<p>Within the xxx CCG area there was an average of a 12 week wait for an initial continence assessment in the community, with a range of 4 weeks to 20 weeks. Care home standards were variable and there was evidence of patients being referred to ED for admission or treatment.</p>	<ul style="list-style-type: none"> • A full pathway redesign occurred and included the following: • An initial triage and telephone discussion review of continence symptoms, including medication, mobility and physical reviews with the patient; • Visit to continence advisor booked within 48 hours for bladder scan and comprehensive assessment to prescribe individual management plan; • 5/7 telephone follow up with a further 6 week and 12 week review. 	<p>The early indications have highlighted:</p> <ul style="list-style-type: none"> • 98% of patients have initial contact within 1 day, reducing patient anxiety and attendance at health care settings and providers. • Admin staff time release from telephone enquires – average 5 mins per call. • No patients defaulting to ED for continence type presentations.

Trust 3 (uses Lean)

Efficiency savings of £7m in adult services and £12m in older people services (**see detailed case study below**)

Rapidly developed, tested and implemented clinical pathways

78% reduction in length of time from referral to treatment in children and young people's services

Reduced orders of non-pay items by 40% with a 23% reduction in expenditure

Cost saving of £212k on printer cartridges in 2 years

Removal of 19 000 items from our supplies catalogue

By standardising and streamlining processes, patients are being seen, treated and discharged more quickly and the quality of care that we provide has been enhanced.

All improvement projects have clear targets and a key part of the preparatory phase is developing the baseline measurements in order that these can be re-measured at 30, 60 and 90 day and 12 month post-event. This allows the Trust to demonstrate whether the changes made by staff have led to an improvement and whether this improvement has been sustained at 12 months. All improvement projects are also monitored monthly by EMT enabling rapid deployment of counter-measures where sustainability is not being evidenced through robust metrics.

Trust has received broad recognition for approach including the HSJ award for Innovations in Mental Health.

4. A detailed case study

Focusing on the patient and not on cost, saving money in the long term: the Purposeful In-Patient Admissions Model

In 2008 the trust introduced a new way of working. In an effort to remove waste and maximise quality in the patient journey they implemented the Rapid Process Improvement Workshop (RPIW) method of facilitating change. One RPIW focussing on In-patient flows into an acute adult ward is estimated to have saved the Trust in excess of £20 million by simply asking one simple question "What adds value to the patient".

An RPIW is "is an improvement process that brings together a team of staff from multiple disciplines to examine a how a process flows, eliminate wastes, propose solutions, and implement changes"

Across two adult acute in-patient admission wards, the occupancy was running at a level up to 106% with an average length of stay ranging between 29 and 47 days. Issues identified on the value stream map showed:

Lack of a clear patient pathway

8 consultants covering 2 wards
Eight to ten ward rounds per week
Lack of consistency in multi-disciplinary team involvement on the wards
Above acceptable levels of patients being sent out of area
High sickness absence
High factor of ward based incidents

Preparation & Planning

The workshop leads assigned to the RPIW were the then Chief Operating Officer, Clinical Director and the Head of Kaizen Promotion Office.

Observations were undertaken reviewing objectively the current state of the ward. A value stream map was developed using on the ward "Gemba" observations as well as case notes from online reporting system.

Planning meetings were held over the space of 3 months, in these meetings the scope and targets for the event were set and the home and away teams were identified

The team chosen to take part in the week consisted of a full multi-disciplinary team including Consultants, Psychologists, Nurses and administration staff. The concept being that "staff know best" it's the task of management to give them the tools, methods and time to make improvements.

The team were presented with a number of key tools based on Lean methodology to support the work and idea's produced during the week. The modules presented to the team highlighted key philosophies covering:

Continuous flow (removal of batching)

The seven wastes

Visual control

5S workplace organisation

Standard work

The team were set a number of challenges by the sponsor, the Senior Clinical Director for Adult Mental Health Services, the key targets identified were:

Improve the experience for patients, families, carers and staff

Improve the flow of the inpatient pathway

Reduced occupancy levels and average length of stay

Clear decision-making processes

MDT working

Reduction in inappropriate admissions

Challenges

The event created a number of challenges for the team. To reach the desired goal the team would have to pick apart systems and processes that had been developed over many years.

The RPIW and new concepts would mean the team would also have to challenge themselves to change their views on what was best for the patient from their perspective and push them to look at value added and non- value added activity.

The new processes

The week was seen as a massive success, the team involved in the week fully embraced the Lean concepts.

The new process was entitled the Purposeful In-Patient Admissions model and set out a completely new way of working for the wards.

The improvements made included:

The elimination of the weekly ward-round and creation of a MDT daily report out. The aim of this was to remove all “batching” from the decision making process by making decisions daily. This process released nursing time to focus on clinical objectives and release time to care.

Visual control boards were introduced to the ward, visually mapping the patient journey through the service and ensuring all aims were met within the specified timescales

The introduction of the 72 hour formulation meeting, an MDT meeting to assess the patients’ current state and agree an aim and purpose of admission

A full 5S of the office and its patient literature, ensuring only necessary materials were on the ward and patient literature was up to date and relevant

The ward layout was changed to support a more productive flow on the ward.

Standard work was developed for every step of the patient journey, and for each staff member involved in the process.

Impact & results

The impact of the RPIW was felt throughout the Trust. The new way of working revolutionised the way in which staff worked.

In the 12 months following the RPIW the results were:

21% Reduction in bed numbers

22% reduction in bed occupancy

57% reduction in length of stay

63% reduction in sickness absence

79% reduction in violent incidents involving staff

72% reduction in reports of violence and aggression

100% reduction in patient complaints

A sustainable solution

The PIPA model has now been shared across other Adult and Older Peoples in-patient wards across the trust. It is estimated that the implementation of the PIPA model across the trust has saved £20 million in efficiency savings.

The model continues to be improved and further RPIW’s have been held to refine the model and ensure continuous improvement.

The BDCFT CEO, Medical Director and Nurse Director have personally seen the PIPA model in action and can attest to its simplicity and effectiveness.

5. Implications

5.1 Legal and Constitutional

None

5.2 Resource

External

The introduction of a new QI methodology is not something that can be learnt from a book or just by attempting to copy what has been done elsewhere; such an approach will fail (and has been the root cause of unsustainable QI initiatives in other trusts). Healthcare organizations which have successfully changed their culture and fostered an environment of continuous improvement have done so by engaging external expertise. Examples of the specific support provided by external experts include (i) bespoke training in the methodology to specific groups of staff including senior leaders, doctors, process owners and admin staff, (ii) setting up a Kaizen Promotion Office (or equivalent), (iii) mapping critical value streams, (iv) helping to improve Board awareness, (v) developing the staff compact. Clearly the level of support required will reduce over time until the trust is able to sustain the new approach on its own but evidence from similar-sized organizations suggests that it would be reasonable to budget for two full years of external support before flying solo. The estimated, associated costs were set out in the previous board paper (July 2018) and, in the main, relate to consultancy and training rather than direct employment costs. There is, currently, no identified budget and this would, therefore, represent a cost pressure.

The Trust has also had early discussions with the Chief Executive (the outgoing and the incoming CEOs) of the Kings Fund regarding some support and the opportunity to engage them in a longitudinal evaluation of our implementation of the QIS. They have offered to support this through their core funding (i.e. at no cost to us) on the basis they can publish their work. The approach will be designed to enable them to offer us feedback and support as the implementation progresses.

Internal

The trust would need to establish a Kaizen Promotion Office (or equivalent) and it is anticipated that this could be staffed from within existing resource as a mapping exercise has identified a number of individuals who already have a level of expertise in this area. There may be some gaps we are unaware of and, as referenced above, these would be expected to come to light as the external experts help us to establish our team. As a guide, the established KPO of a much larger, neighbouring mental health trust currently consists of 11 individuals between Bands 8c and 3 plus clinical support (so these are not big teams).

In time, and in anticipation of the kind of efficiencies achieved elsewhere, the QI system should easily deliver a significant return on the initial investment, becoming self-sustaining.

5.3 Quality and Compliance

The CQC has made it clear that it expects all trusts to adopt a formal QI approach, without being prescriptive about what that approach should be. We were asked this question at our last inspection and the subsequent report recommended that we should consider the introduction of a formal approach.

Board has asked if a QIS is likely to help improve our CQC rating; the following extracts are taken from the CQC reports of two highly rated mental health / community health providers:

Trust A:

“The trust had a Kaizen Promotion Office and clinical pathways team who worked to the chief operating officer. Kaizen is a shortened version of a rapid process improvement workshop (RPIW) and is used to make improvements in existing services. This team was established in 2007 and reflected the experience of Virginia Mason hospital Seattle which developed the Virginia Mason Production System, a lean management methodology. The team provided support including training, coaching and direct facilitation of improvement activity as well as the hosting of a number of programmes and projects. We saw evidence of the positive contribution this had made to practice in the core services. For example, acute wards and psychiatric intensive care units followed the principles of the ‘Virginia Mason Production System’ and part of this included a meeting on each ward called a ‘report out’. This was attended by staff in the morning on a daily basis where each patient was discussed using a visual control board looking at current care and risk factors and tasks were set for staff for the day. We attended five ‘report out’ meetings and found these to be an effective system for ensuring care was patient focussed, therapeutic and informed by risk.”

Trust B:

“Whilst the trust was rated outstanding at the last inspection, it had not stood still and had continued to challenge itself to make further improvements in a wide range of areas including Quality Improvement and patient participation. The trust had retained an overwhelmingly positive culture. Staff were largely very happy and said how much they enjoyed working for the trust. They valued the open culture and felt that when concerns were raised they were taken seriously and where possible addressed. They also felt supported by the trust’s ‘no blame culture’ and willingness to learn when things went wrong. This was reflected in the results of the staff survey where the trust overall staff engagement score was 3.90. It was better than the national average of 3.79 for trusts of a similar type. The trust recognised that not all teams were as positive as others, and was using the Quality Improvement methodology to enable those teams to make changes where needed. The trust had a dynamic and forward-thinking board. The chair enabled board members to use their skills and experience to provide appropriate levels of challenge when making difficult decisions. All board members were very passionate about their responsibility to ensure the delivery of high quality care. Quality improvement remained central to the work of the trust. The numbers of staff training and using the methodology had continued to grow. Staff could describe the wide range of projects they were working on. Quality Improvement methodologies were also being developed to

support some of the trust's strategic priorities such as improving care pathways and access to services."

Additional confirmation has been provided by the recent publication, by CQC, of "Quality improvement in hospital trusts: sharing learning from trusts on a journey of QI". A copy of this report has been provided separately to all Board members and is available at

<https://www.cqc.org.uk/publications/evaluation/quality-improvement-hospital-trusts-sharing-learning-trusts-journey-qi>

6. Risk Issues Identified

The main risk is failure to realise the benefits of a QIS / failure to sustain a QIS and Board has asked for information on why this has happened in some trusts and how we can prevent it happening in BDCFT.

The reasons for failure are well understood and can be summarised as:

- Lack of leadership; this relates primarily to inconsistent support from Board, especially when things get difficult or go wrong. QIS is not a panacea and there are times when specific initiatives fail. It is essential to maintain faith in the chosen methodology and essential for senior leaders to be seen walking the floor and living and breathing the chosen QIS.
- Not maintaining fidelity to the chosen system; this is another common trap. Some trusts have attempted to run parallel, or hybrid, methods but this does not work; it causes confusion. Successful QI will rely on all staff having a clear and unambiguous understanding of 'the Care Trust way' or 'how we do things here'.
- Attempting a 'DIY' system; some trusts have baulked at the cost of high-quality, external expertise and tried to go it alone based on a shallow understanding of their chosen method. As alluded to in paragraph 5.2, above, unless there is a deep well of expertise within an organisation, such an approach is highly unlikely to achieve the desired outcomes.

7. Communication and Involvement

There has been debate about what to call our new approach and how to communicate this to staff and service users; in particular, there is concern that the use of the term 'Lean' carries connotations of manufacturing production lines which may be anathema to some people involved in healthcare. It is suggested that we use terminology such as 'Care Trust QIS' or 'BDCFT QIS'. This accurately describes what is actually a management system, rather than just a method, and is very similar to the terminology chosen by most other trusts which have introduced Quality Improvement.

8. Working with other trusts

A final consideration, which Board has requested be addressed, is the possibility of combining with other West Yorkshire mental health trusts to institute a single QIS; this consideration is important given that we know both LYPFT and SWYPFT have indicated (separately) their intention to implement the Institute for Health Improvement (IHI) Model for Improvement (for SWYPFT, at least, based on the existence of senior level expertise in this method).

This option is based around online learning (buying licenses from IHI) rather than having the external support partner physically present (although IHI are able to offer this).

The possibility of a collaborative approach between our organisations was raised with IHI who responded that, because part of their intervention is around culture change, doing this across more than one organisation at the same time is something they have not done before although it is something they would be happy to explore further if there was a requirement to do so.

An inter-organisational QIS is, therefore, very much unknown territory, lacking any evidence base and should be considered a high risk approach which, even if possible, could take a long time to get started. It would also mean BDCFT agreeing to align with the other two trusts (i.e. adopt the Model for Improvement) when our preferred method is Lean (for reasons we have rehearsed in previous papers).

It is suggested that a better approach would be to implement our own QIS (*intra*-organisational culture change) but for neighbouring trusts to freely share successes and failures in order to inform improvement projects across West Yorkshire.

The West Yorkshire and Harrogate ICS has established an Innovation Sub-Group, chaired by the CEO of Mid Yorkshire NHS Trust (Lean organisation), it has been suggested that this group extends its scope to include responsibility for discussing Quality Improvement across the partnership. There could be useful opportunities to share best practices and experiences between Trusts, regardless of the methodologies being deployed.

9. Timescales

The option of implementing a formal QIS was first discussed nearly 12 months ago; should Board formally approve the sourcing of an external support partner, to help us introduce a Lean-based QIS, then that process will commence immediately.