



NHS Lothian Quality Strategy

Annual update report - 2018-19

This report describes progress between 2018-19 to implement the NHS Lothian Quality Strategy (2018-2023). It includes description of spread and adoption of Quality Management against key milestones and supporting actions to optimise our 'Quality Climate'.

The report was created by those delivering the work described, with support from the Quality Directorate

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“When one understands who depends on me, then I may take joy in my work”

William Edwards
Deming

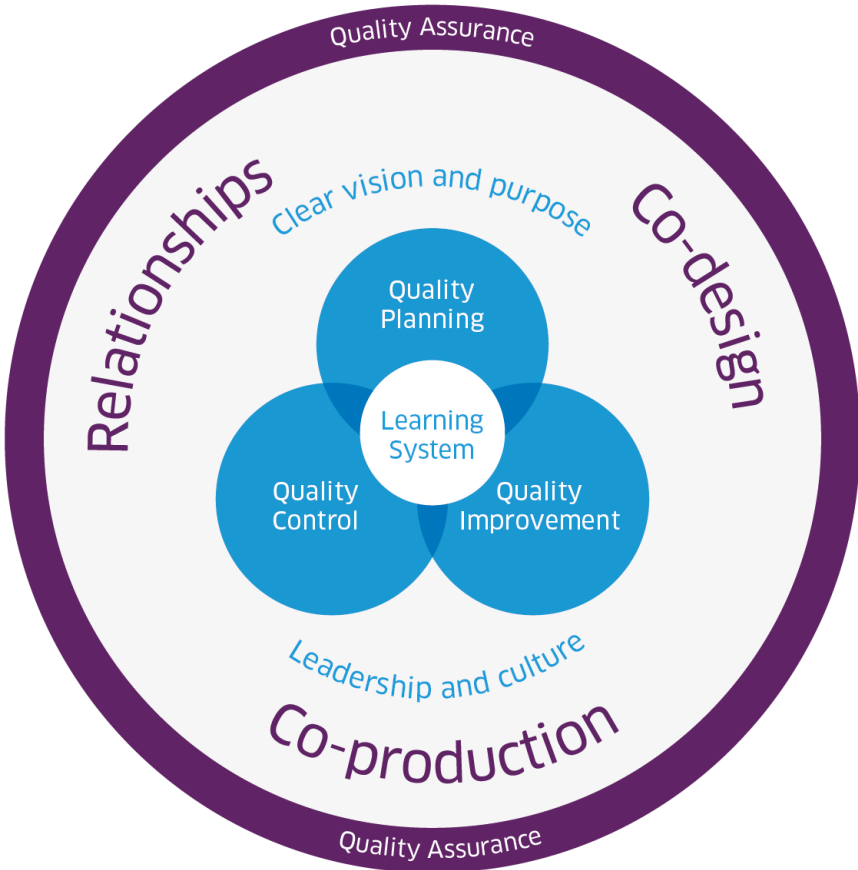


Context

The Strategy is founded upon Quality Management becoming NHS Lothian's standard approach for managing continuous day-to-day improvement across the organisation. This requires an effective, robust and accessible approach to managing quality, which is described below.

NHS Lothian's Quality Management System

Diagrammatic representation of our Quality Management System



Reproduced with permission from Healthcare Improvement Scotland

Quality Planning

A 'diagnostic' process to systematically identify critical processes and then assess how well they perform compared to desired performance. A plan for a service to either a) monitor or b) actively change and improve processes arises from this diagnostic process. Quality planning should be led by someone in a recognised position of leadership and authority and be done collaboratively with the wider team and stakeholders.

Quality Control

Processes that are performing satisfactorily are monitored managed through scheduled audits to ensure quality is maintained. If performance deteriorates below a stated standard, a process is moved from Quality Control to Quality Improvement.

Quality Improvement

Processes that are performing unsatisfactorily are improved through a standardised approach involving through structured tests of change repeated as necessary until sustained satisfactory performance is achieved. At this point, the process is then management by Quality Control.

Relationships, co-design and co-production

The approach relies on a very close collaborative partnership between leaders, managers and teams within a supportive organisational culture. The Board is already asked to provide Assurance on the outputs of key processes. Moving forward, Assurance should also be sought on the effectiveness of all elements of Quality Management.

Development and endorsement of the model

This model is based on the 'Juran Trilogy' approach to Quality Management, well-established for decades across many industries. It has been the basis of our work on Quality Management from the outset. The model has many conceptual similarities with the clinical care approaches used every day by clinicians. The elaborated and expanded version shown in the previous diagrammatic representation was developed and endorsed by Healthcare Improvement Scotland.

The Quality Management System model in practice; Cardiac Arrest Reduction in Acute Hospitals

Background

Whilst the Quality Strategy aims to spread this approach to new areas, across the organisation, there are notable examples of using quality management as a new approach to pre-existing issues of quality and safety. A good illustration is work in the Acute Division to reduce the number of cardiac arrests across our Acute sites.

A review of cardiac arrest rates across NHS Lothian in 2017, demonstrated that all three acute adult hospitals in NHS Lothian had a cardiac arrest rate that sat around the Scottish average but over the years of the improvement work undertaken through the Scottish patient safety program, NHS Lothian had seen only an 8% overall reduction in cardiac arrest rate from baseline. Our aim was to reduce that significantly and which therefore required a focused program of work utilising a quality management approach.

Cardiac arrest reduction; Quality Planning

A large-scale review of Cardiac Arrests on all 3 acute sites was carried out in order to identify potential themes for learning. This allowed identification of the clinical areas with the highest cardiac arrest rates. Reviews were conducted by ward based clinical teams with support from QIST and led to engagement and increased understanding of their own local processes and areas for improvement. While the majority of cardiac arrests on all sites occurred suddenly and without evidence of previous deterioration, the strongest themes to emerge from reviews was around the opportunity to improve anticipatory planning with patients nearing end of life and to improve early recognition of deterioration through more reliable observations. Key learning from the review informed an initial improvement plan including an NHS Lothian Driver Diagram for change and generation of a list of Programme change ideas.

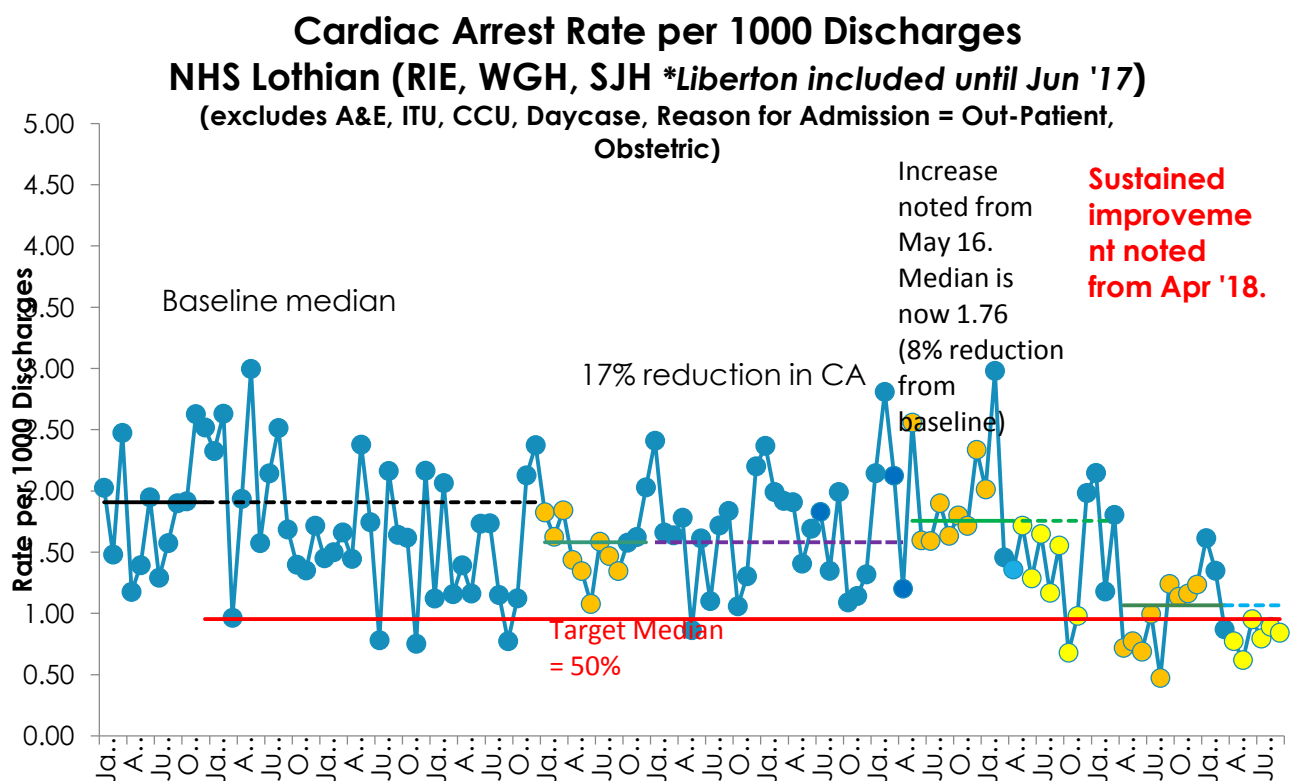
Cardiac arrest reduction; Quality Improvement

The Quality Improvement Support Team (QIST) provided ward-based improvement coaching and data interpretation with individuals and teams to address any identified areas for improvement with the wards with highest cardiac arrest rates prioritised for improvement support. Each ward has worked with QIST to develop improvements in line with their local data and formulated a deteriorating patient

quality improvement charter so ward based teams 'own' their own data and improvement plan.

Focused site-based improvement activity has seen reduction in rates of cardiac arrests on all sites with sustained improvement on the Western General site since November 2017. The number of inpatient areas now engaged in activity related to improving care of deteriorating patients has increased on all sites, RIE now has 71% involved (up from 28% in 2017); WGH has 64% (up from 25%); and SJH has 42% (up from 8%).

Outcome data has evidenced a sustained 57% reduction on one site (WGH) and a positive impact on patients with much of the improvement coming from reliable discussions with patients and families regarding their ongoing care needs. Overall we have seen a 44% reduction in Cardiac Arrests in NHS Lothian



Cardiac arrest reduction; Quality Control

A quality management approach has continued to be used to ensure that all emergency calls are reviewed with learning themes and required actions and

improvement identified (quality planning), that improvement work is prioritised to clinical areas with high numbers of cardiac arrest calls and supported by site based quality improvement support teams (quality improvement). Weekly progress is shared at site safety huddles and site based reports are shared and actioned by site-based management teams on a bimonthly basis). Pan-Lothian progress is reported to Acute CMG on a quarterly basis. (Quality Control and Assurance)

Progress against milestones for 2018-19

The milestones

The 2018 Quality Strategy included a description of the milestones for the period 2018-19: -

1. Expand the Primary Care Quality Network
2. Expand the Mental Health Quality Network
3. Establish a Clinical Quality Network on the Western General Site
4. Establish Quality Programmes for A&E at RIE and SJH
5. Establish Corporate Services Quality Programme
6. Expand the reach and output of the Quality Academy and Coaching Network
7. Establish a Quality Programme on the SJH Site, focussed on frailty

Expanding the Primary Care Network

In 2017 NHS Lothian embarked upon an ambitious programme to establish a Quality Management Network across Primary Care. This has built upon existing relationships created by participation of GPs and Practices in the Scottish Patient Safety Programme. The Quality Directorate undertook a consultation exercise with key stakeholders in Primary Care across Lothian. This identified a need for targeted support for a facilitated learning network and training in Quality Management as principle needs. These were provided and the network has flourished to become unique in terms of participation and coordinated activity within Scotland.

This network was developed within the context of the new national General Medical Services Contract and the Scottish Government document 'Improving Together: A national framework for quality and GP clusters in Scotland'. The network operates across Lothian and is a key enabler for supporting the implementation of the principles set out in these documents.

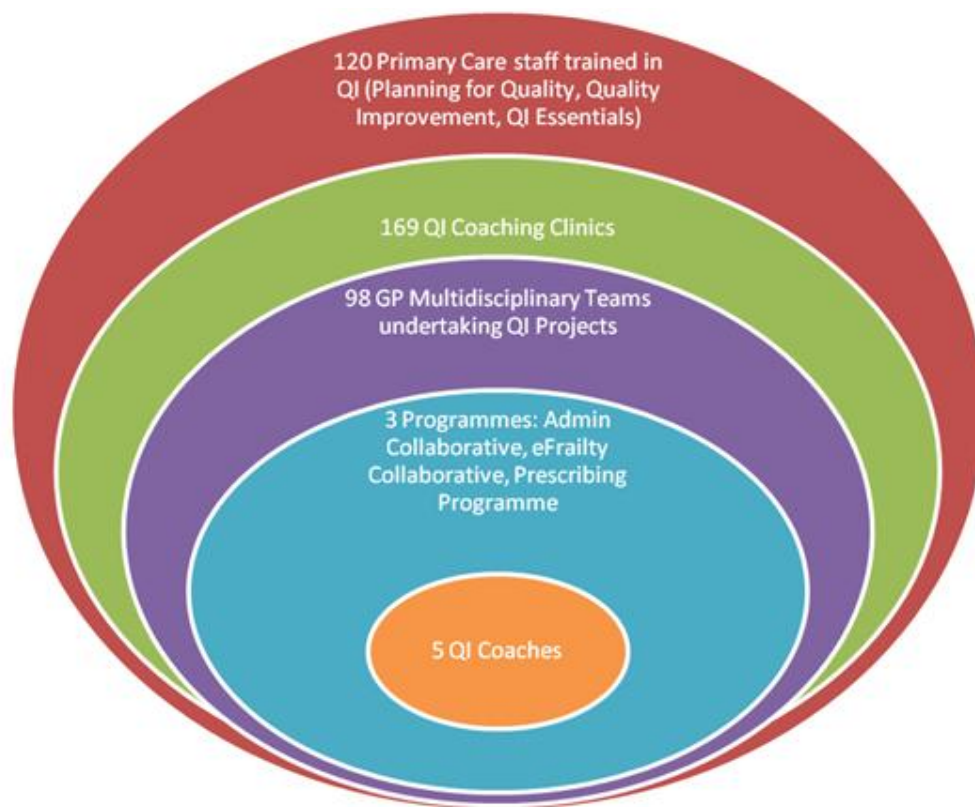
The network aims to enable a culture of continuous improvement in support of: -

- Integration Joint Boards Strategic Plans

- NHS Lothian Better Health Better Future
- NHS Lothian Quality Strategy 2018
- Health & Social Care Improvement Priorities.

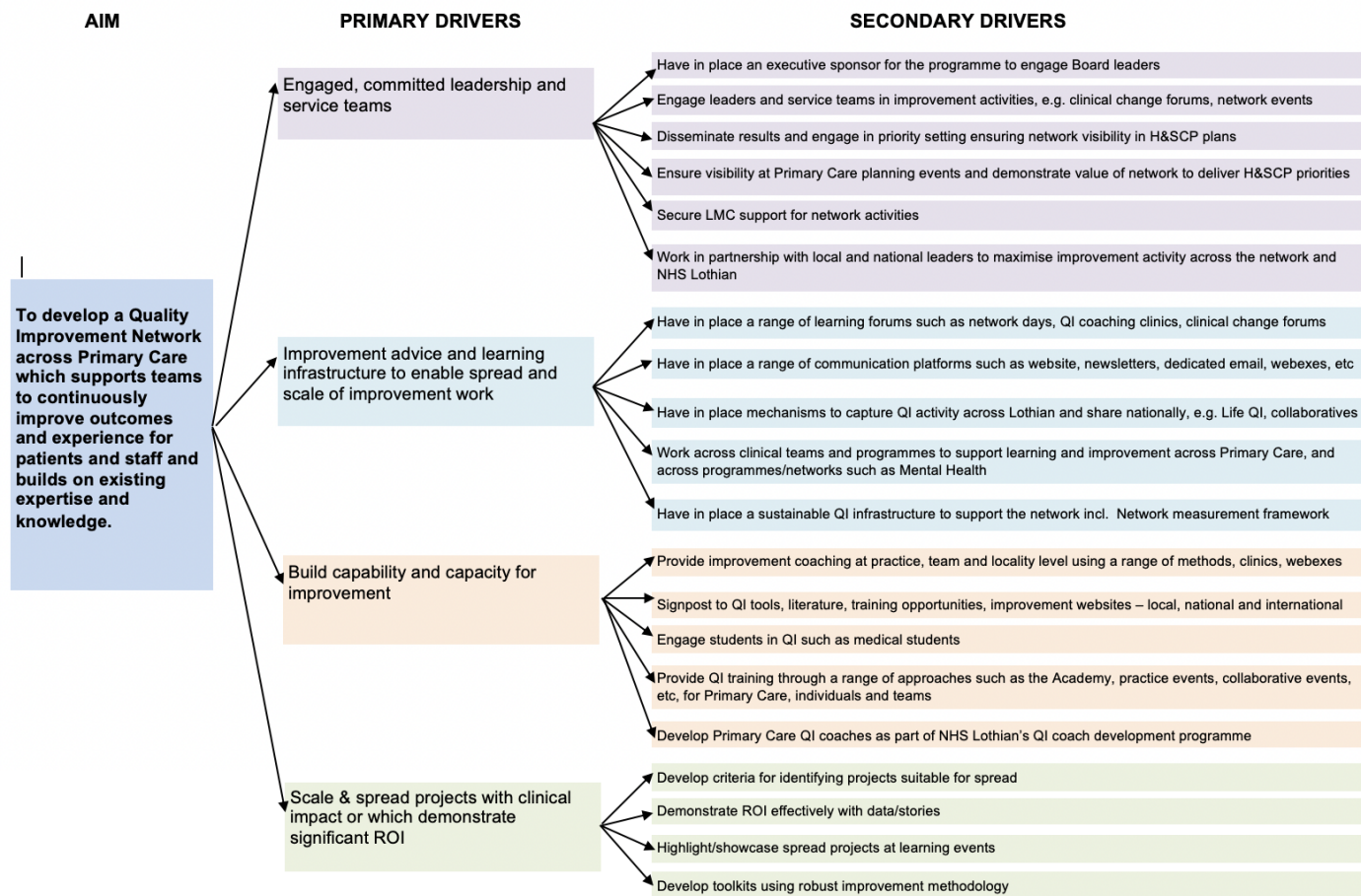
The network's initial focus was on General Practice. It, however, has been expanded to support Health & Social Care at a programme and project level. Exemplars of this include the Midlothian Frailty programme, a medicines management programme and spread of microsystems projects across NHS Lothian. Prominent projects that have spread from micro- to macro-system include the admin collaborative and realistic physiotherapy as well as new models of care, such as care chronic pain management services funded through the Value Fund. All these of which have clear measurement frameworks and demonstrate the value of Quality Management as a means of local prototyping as one route to whole system change.

Currently, over 80% of Lothian's GP practices are actively engaged in the Quality Network, with small teams within practices now typically contributing to improvement work. To support this programme, 169 Coaching Clinics have been held as well as five pan-Lothian events. 98 practices have formally registered projects using the Quality Workbook structure. Three programmes are being supported by the Quality Network – Practice Admin Staff Collaborative (14 teams), eFrailty Programme (12 teams) & the Pharmacy programme (16 teams). Over 120 staff have undertaken formal training to develop either advanced practitioners in Quality Improvement or Quality Management skills for Leaders. Local coaches and other experts are also supported in delivering Essential QI (eQI) training for teams in Primary care.



The 3-Year Primary Care Quality Improvement Network Plan set out the aims of the network in this driver diagram.

PRIMARY CARE NETWORK DRIVER DIAGRAM



One of the key benefits of the network is the identification and scale-up and spread of successful improvement programmes and projects across NHS Lothian in an efficient, effective and sustainable manner.

The Primary Care Network reports regularly to the GMS Implementation Board, the NHS Lothian Sustainability and Value Group and components of this large and varied programme are reported to a variety of oversight groups within Lothian.

Progress of every project is tracked using an established measurement framework based on the IHI Maturity Scale (<https://blog.lifeqisystem.com/ihi-progress-scores>)

Completed projects are written up for sharing in an ePoster format – production supported by the Lothian QI Coaching Network and Quality Directorate staff. These are shared at cluster meetings and through the Lothian Quality Webspaces.

Photos from a recent Cluster Quality sharing event





Improvement projects typically align to a number of agreed high-value areas including care navigating, frail & vulnerable patients, prescribing, chronic disease management, workflow improvement and health screening and protection.

The quantity of improvement work across Primary Care is too extensive in totality and whole-system aggregate metrics are not yet developed to encompass the sum of all improvement work. Up to date information about the programme can be found via the website at <https://qilothian.scot.nhs.uk/pagep>.

The 3 year plan for Primary Care Quality is available online [here](#).

Expanding the Mental Health Quality Network

The Mental Health Quality Network was established in 2017, embracing specialist services across Lothian. A three year quality plan was approved in 2018 with high level aims to: -

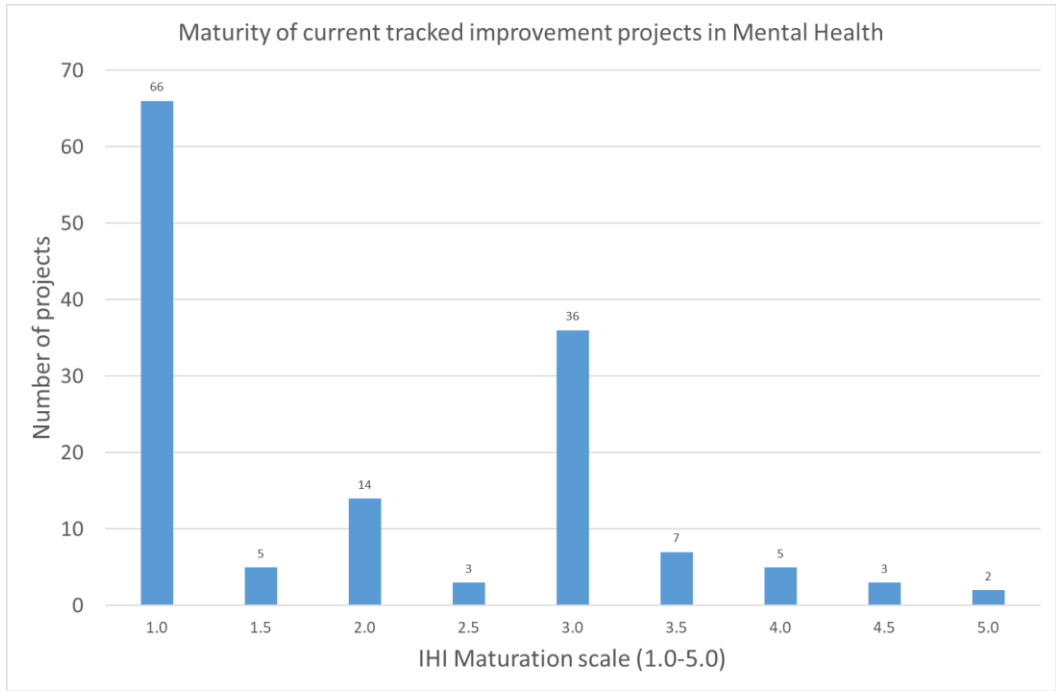
- Improve the mental and physical health outcomes for people using mental health services in Lothian.
- Ensure the equitable access to evidenced-based mental health care to reduce health inequalities.
- Improve the use of resources, skills and technology effectively and efficiently to provide the best value healthcare.
- Ensure that staff feel empowered and engaged to enable them to deliver the best care possible to patients and their carers.

Immediate improvement priorities are: -

- Improving access to assessment and evidence-based treatment with the most appropriate service in the most appropriate setting.
- Improving the quality of mental and physical healthcare.
- Ensuring that transitions of care between services are safe, efficient and effective.

In common with the model deployed in Primary Care, the programme is supported by a Clinical Lead, a small specialist improvement support team and specialist Analytical support. A steering group for the Programme is chaired by a Senior Manager, frequently the Director of Operations for REAS. Reports have been presented to the Lothian Sustainability and Value Group and elements of the programme shared at a variety of management and governance meetings in Lothian.

7 Quality Improvement Specialist Coaches have delivered 102 Clinics and 176 Coaching Sessions to staff working on project. There are 136 registered projects currently known to be in progress with a distribution of maturity shown below



Maturation scale explained here <https://blog.lifeqisystem.com/ihi-progress-scores>

97 of these are being tracked through the LifeQI web platform that has been tested in the Mental Health programme. A detailed breakdown of these projects is found here: -

<https://static1.squarespace.com/static/56d4490107eaa0756af084ea/t/5b18f2a8758d4629003ecaf8/1528361641598/Database+of+projects.pdf>

More detailed information on specific wider projects is shared in ePoster format here: -

<https://qilothian.scot.nhs.uk/our-projects>

170 staff have been through Quality Academy Lead Level and the directorate has supported local training of a further 109 people locally. Members of staff have presented their work to a variety of overseas visitors to Lothian and also at several external conferences. Quality and Innovation forums are held quarterly, and presentations captured and shared digitally via eNewsletters. The most recent newsletter is shown here: -

<https://static1.squarespace.com/static/56d4490107eaa0756af084ea/t/5d3eb79eb1602d00014dfebb/1564391328218/20190729+MHQIP+Newslettersv1.0.pdf>

Current exemplar work from the Mental Health Quality Programme

NHS Lothian Rapid Response Team

NHS Lothian's pioneering Rapid Response Team is celebrating after they picked up a title in the prestigious Scotland's Dementia Awards.

The Rapid Response Team collected the Best Community Support Initiative Award. The service is the first of its type in Scotland and has picked up its fourth award since starting in December 2016.

The team take pride in providing a flexible person-centred approach to care and assess each person's needs individually to create a unique care plan in line with the person's own view of what recovery looks like for them.

The service is based on the Scottish Government's 2020 vision of health care (2011) and will help meet a corresponding demand for fewer hospital beds by the provision of a safe alternative to hospital admission.

Since introduction of the RRT Fairmile ward at the Royal Edinburgh Building has seen a reduction in the median length of stay of 74%. The remaining old age psychiatry wards have all seen median reductions of over 60%.

Reducing seclusion on Blackford ward.

A visit from the Mental Welfare Commission (MWC) prompted the staff on Blackford ward to consider their use of the high dependency unit. The team was keen to reduce restrictive practice on the ward by improving communication with patients and developed a driver diagram to help identify areas to improve.

With this focus on appropriate use of HDU, the Blackford team has reduced episodes of seclusion for patients by **25%** and overall time spent in seclusion by a massive **71%**. Huge congratulations are due to all of the team, but special mention goes to Laureen Gray and Jess Grant who took on major parts of the improvement as QI Skills and Newly Qualified Practitioner (NQP) projects.

Edinburgh CHP Community Mental Health Services

A willingness to develop and test ideas from across all healthcare professionals has embedded a culture of constantly looking for areas to improve within the Cambridge Street Community Mental Health Service.

A project to increase percentage of Clozapine patients in SWCMHT by linking physical health screening to the "forced function" of mandatory Clozapine blood monitoring increased physical health screening in this patient group from 22.6% to 79.5% over the course of 5 months.

A second project to reduce time for Adult ADHD patients to reach maintenance medication dose, was inspired by a presentation at the Mental Health Clinical Change Forum in November 2018. Introducing a drop-in clinic for these patients, the team has reduced the time to maintenance dose from 26 to 5 weeks, and the clinic has been so successful that it has now been made permanent. The savings in staff time (productivity gain) have been calculated to £7863 per annum.

Missing persons

Over the last 2 years the Royal Edinburgh Hospital has been working in collaboration with Police Scotland to reduce the number of missing person reports from the Royal Edinburgh Hospital (REH). When the project started the REH had the highest number of missing person reports in Scotland. The team provided training for staff to increase awareness, and improve completion of pass plans for patients.

Costs associated with nursing time spent dealing with police and patients has reduced to less than £10k from an initial baseline of £18K per annum since 2014. Police costs from 2016 have reduced from £1,431,500 to £948,500 per annum.

Safewards and adult acute inpatient services

Safewards interventions continue to be introduced and tested across general adult acute mental health wards. Working with the national Scottish Patient Safety Programme – Improving Observational Practice has allowed wards to reduce their use of 1:1 nursing care.

Comparing spend in adult acute wards for the 12 months before against 12 months after there's a total drop in banking and agency nursing spend for 1:1 nursing of £11k.

72 Hour Crisis Care Plan

Seventy-two-hour crisis care plans have been implemented for six general adult psychiatry patients with a diagnosis of EUPD after discussion and agreement with them. Certain responsibilities were placed on the patient, such as not self-harming or using alcohol or illicit drugs, with the consequence being discharge from hospital.

Reviewing data for the period of one year before and one year after initiation of crisis care plan demonstrated a reduction in median psychiatry inpatient bed days of 85.5%, total psychiatry admissions reduced by 19% and total days spent detained under Mental Health Act during Psychiatry inpatient stay reduced by 82.5%.

Further up to date information can be found in the Mental Health Quality Programme's latest newsletter

<https://qilothian.scot.nhs.uk/s/20191031-MHQIP-Newsletternv11.pdf>

Establishing a Western General Hospital Quality Network

The most recently established Quality Network is based on the Western General Hospital Campus. A whole site quality plan was developed by the WGH Leadership team and approved by NHS Lothian in 2019. An inventory of current Quality Improvement work was undertaken on the site, a Clinical Lead appointed, and key priorities identified. Recruitment to a small support team of improvement advisors and analysts is almost complete.

Regular progress meetings chaired by the Site Director or deputy have monitored the establishment of the programme. A regular schedule of quarterly Clinical Change Forum meetings has been established, typically led by the Site Director.

In addition to creating greater site-based capacity and capability in Quality Management, key objectives for the Western General Hospital Quality Network are: -

- Improved management of frailer, older people
- Improving management of patients receiving specialist cancer therapies
- Improving access to schedule care including Urology

There are 208 known Quality Improvement projects on WGH site. Their level of activity and maturation are being measured using the standard IHI scale. 160 Projects have been mapped against potential Return on Investment using model described in NHS Lothian Quality Strategy.

10 active QITs operate within services; all QIT Leads now formally trained in Quality Improvement methods. 128 staff have received some formal training in Quality Management. Most of these have been trained through the Quality Academy.

Key staff from priority areas are undergoing Lead Level training through the Quality Academy to help develop to lead teams to manage quality and implement local Quality Plans.

Purposeful linkages between relevant national QI programmes and the local Quality Programme have been made, including the Access QI programme and the national frailty collaborative. It is hoped these will bring net benefit in terms of learning and material support.

Coaching clinics have been established with 4 slots per month and plans to expand as more improvement support staff come into post.

Urology

Urology Services at the Western General Hospital is one of three specialities taking part in the accelerator site Access QI, launched on 30 October 2019. Accelerator

sites are being supported to develop and deploy QI expertise to sustainably improve waiting times while maintaining or improving the quality of care. QIST are supporting the project team with a number of nationally agreed measures.

The project team consists of QIST, clinicians from Urology Services, management, sustainability and analytical services, all with a range of QI expertise. The project team have already begun pathway diagnostics undertaking a range of improvement activities including process mapping, data collection and conducting short interviews using feedback tools and open-ended questions, with patients and staff to gather information on their experience of the pathway.

Priority areas for improvement have been established and tests of change include:

- One stop clinic for patients requiring flexible cystoscopy
- Patient initiated follow-up
- Improving referral process

This work is in the early stages and ongoing.

Frailty

As part of the work to improve management of frailer older people, the Western General Hospital is one of four hospitals across Scotland involved in Phase 2 of the iHub's Frailty at the Front Door Collaborative. This 18-month national programme launched in September 2019, with the Frailty QI Project Team at WGH identifying an aim to increase the % of patients aged 75 and over who are discharged directly home from the front door.

QIST, alongside colleagues from Medicine of the Elderly, Team 65 and Front Door staff, have conducted a number of improvement activities to date, including; Process Mapping, Value Stream Mapping and the gathering of staff feedback on what's currently working well and what could be better. QIST is also supporting the collection of data against a number of nationally identified measures, using a variety of data collection methods.

Changes tested to date include:

- Increased frequency of a Frailty ward round at the front door from 1 day to 5
- Revision of the Frailty Screening database used by CGA Team (Team 65) to better support appropriate data collection

Additional tests of change being considered include:

- The use of electronic markers for Frailty

- *Introduction of joint screening by the Multi-Disciplinary Team (MDT) to eliminate duplication*
- *Collaborative working with the newly developed Home First Team*

Tests of change and data collection are in their infancy and as such, it is too early to say if there are any signs of improvement.

Summary of current state – Western General Hospital Quality Programme

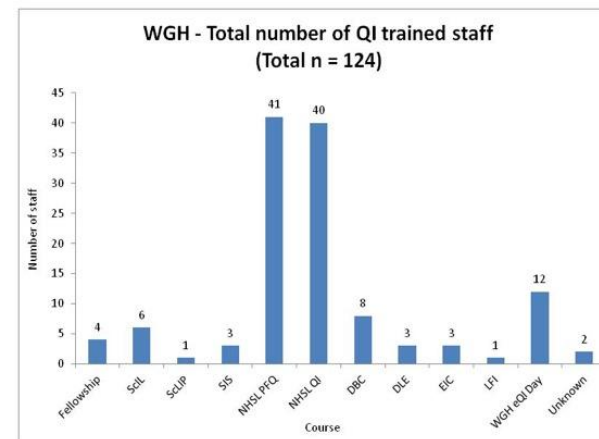
Quality Improvement



WGH QI Projects by Speciality

Service	Number of QI Projects	Number of QI projects confirmed at each level on the IHI progress scale									
		0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
MOE	18	1			1	4	5		2		
Respiratory	9	5			2		1	1			
Medicines	27				11	12	2				
RIDU	3	1			1						
Urology	12	5		4	2		1				
Colorectal	11	6		1	2	1	1				
GI/Endoscopy	9										
Rheumatology	8	1		1	1						
Oncology	16	3		1		2		1			
Haematology	3										
Palliative Care	2							1	1		
Diabetes	7	2			1			1	1		
OPD	5	1		2		2					
Radiology	2	1		1							
Critical Care	9	1		1	2	1		2		1	
Theatres & Anaesthetics	9										
DCN	6			1	1	1	2				
Safety	14	2		2	2	5		3			
Estates	1					1					
TOTAL:	171	29	0	14	26	29	12	8	3	1	0

WGH QI Trained Staff



- At the WGH our priority work streams include patient safety which incorporates deteriorating patient, anticipatory care planning, falls, pressure area care and peripheral vascular cannula. Work streams also of priority are urology, frailty and oncology services.
- Sustained improvement noted in Cardiac Arrest Rate per 1000 discharges since December 2017
- WGH part of HIS collaborative; Frailty at the Front Door and Access QI (Urology)
- QI Hub developed to support Coaching Clinics, Project Database, Webinars and QI meetings
- Focus on building a culture of Quality Improvement

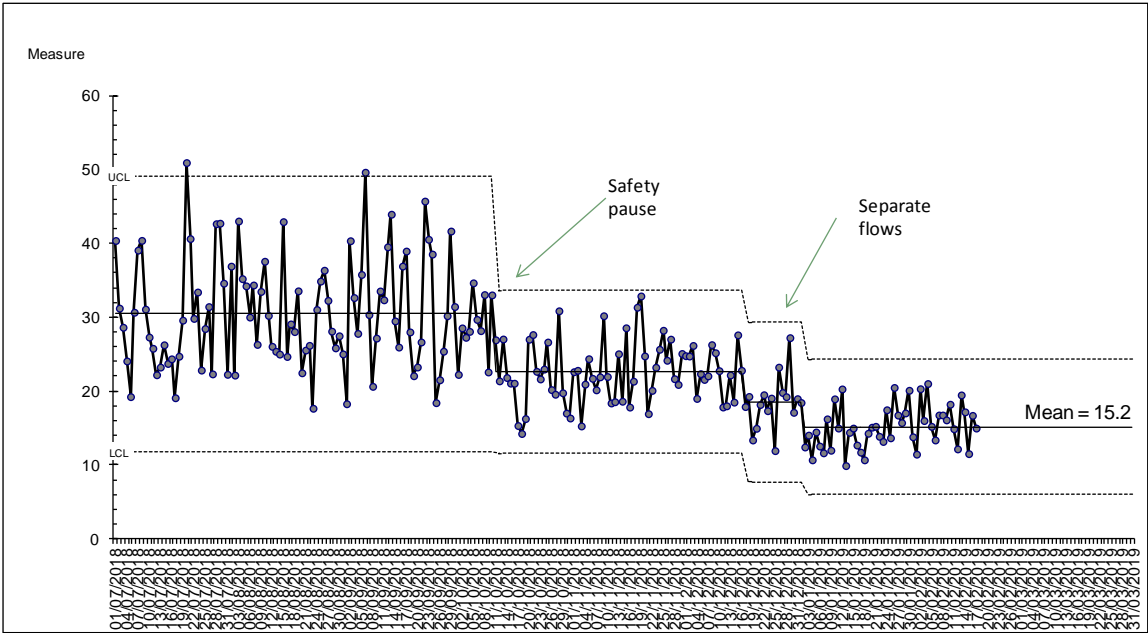


Establish a Quality Programme in our Accident and Emergency Departments

The A&E Quality Programme was initiated in the Royal Infirmary of Edinburgh with a clear focus on a patient safety concern relating to time to triage patients in the 'majors' category.

Highly detailed process mapping and data analysis were presented to staff in November 2018. This enabled a discussion on the significance of the challenge and allowed improvement ideas to emerge. The team undertook a series of tests of change leading to a reduction in mean time to triage from 30 mins to 15 mins

**Time to End of Triage (minutes) for Self Presenters and Ambulance Patients
July 2018 Feb 2019**



Less intense improvement work on majors time to triage continues. Ongoing areas of specific focus include improved use of analgesia, improved use of neurological observations and improved time to ECG for patients with chest pain. Support has also been provided to develop a patient audit tool and to collect patient experience data. The team is supporting work relating to deteriorating patients and the Patient Safety Programme.

A key enabler for clinical, operations and improvement work has been the availability of high-quality, real-time data, displayed through co-developed dashboards.



In June 2019 St John's Hospital A&E dept initiated a Quality Programme also focused on triage. Learning from the RIE site informed both planning and ongoing work. Detailed process mapping and data analysis were shared with the team in July in an engagement and training event.

A 'readiness for change' assessment was performed using the MUSIQ tool and the results have been used to inform capacity building, with a bespoke training event delivered for the team in November 2019. Tests of change are at early stages but are promising. The multi-disciplinary engagement from the team is highly impressive.

Collecting patient experience has been a key part of the early planning and a patient event is planned for December 2019.



St Johns Hospital Emergency Department · 4d
Who loves QI? We do! @Jax_Pringle @NHS_Lothian @emz_philp @aristyro @kimsimp76974657 lots of great input from all of parts of the team.



13 staff from both RIE and SJH A&E depts have completed Lead Level courses through our Quality Academy and others have signed up for new courses. eQI courses will be offered on both sites in 2020. There is significant evidence of learning being shared between the two A&E sites.

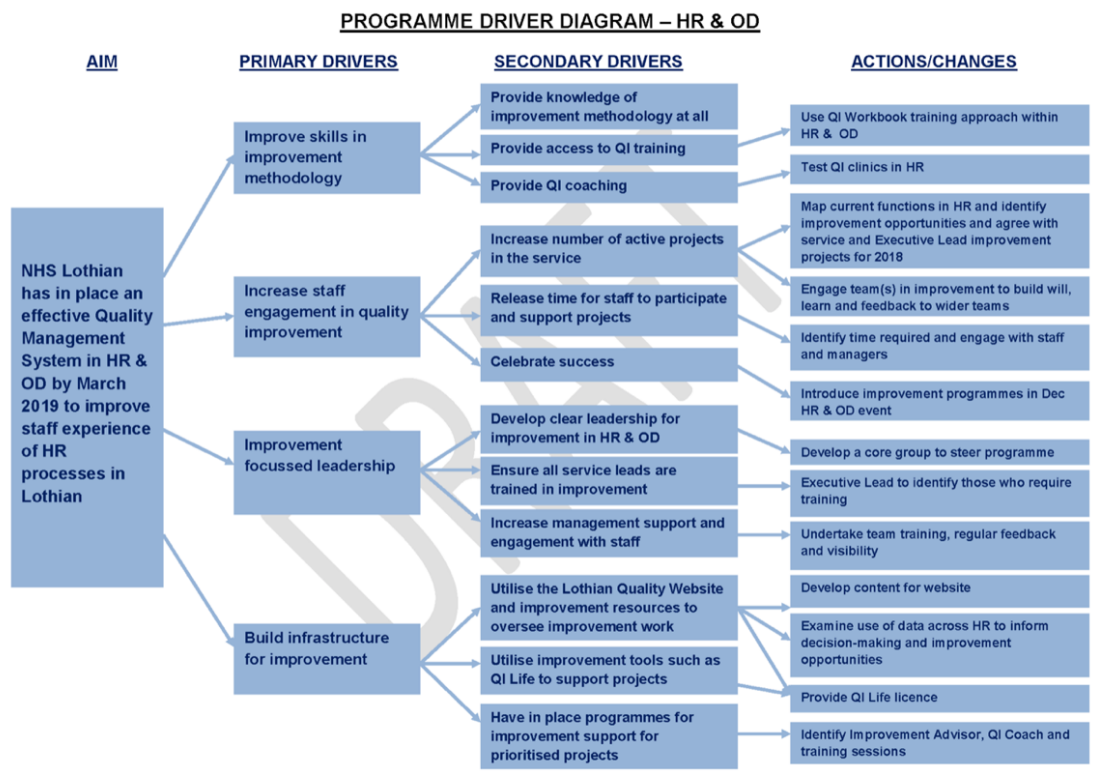
Expanding quality management in corporate services

The Quality Strategy highlighted the need for Quality Management to go beyond traditionally 'clinical' teams. NHS Lothian has a number of vital corporate services used by many or all staff.

Pharmacy, Corporate Nursing and Human Resources (HR) have sponsored significant numbers of staff through Quality Academy training. This together with coaching and specialist improvement support has enabled diagnostic work to prioritise areas for improvement. An important side benefit of members of these teams attending Academy courses has been support they can give other team, given the breadth of work they do across many services

Human Resources Programme

HR are developing a Quality Plan, with current iteration illustrated in this driver diagram.



19 HR & OD Staff have undertaken Quality Academy training, with further participant's being identified on an ongoing basis for each cohort.

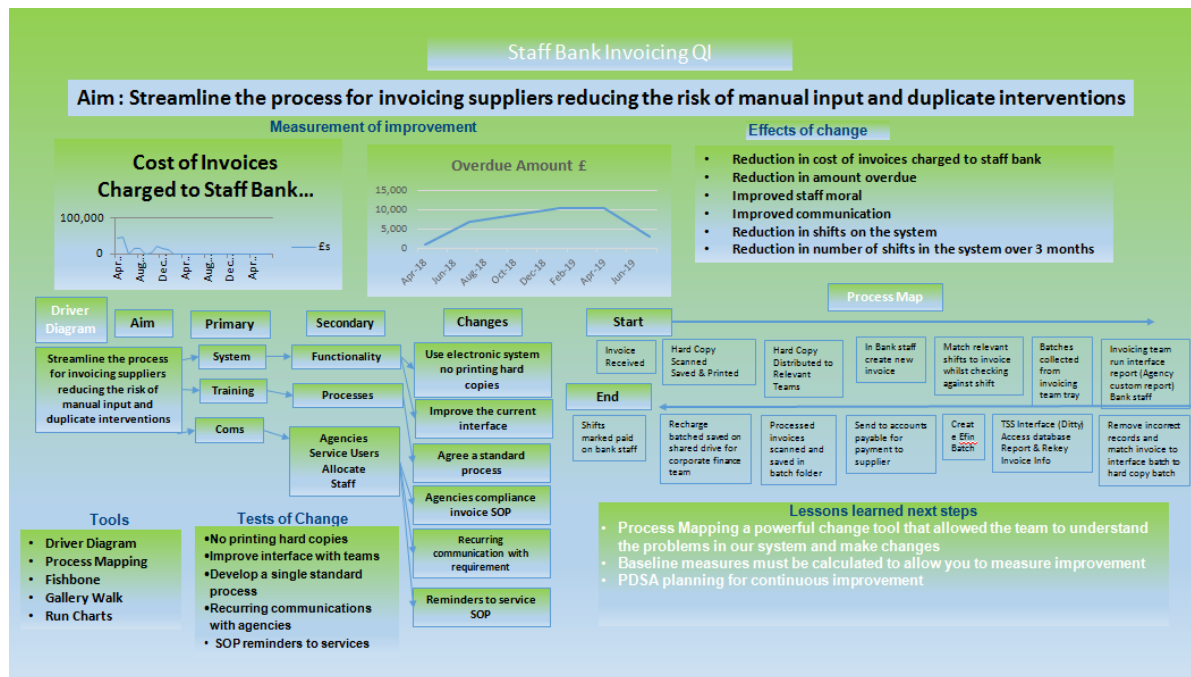
An early priority has been the processes relating to employee relations – including redeployment and supporting those on long-term sickness absence. These workstreams are being developed collaboratively with stakeholders from other areas. An in-depth diagnostic process to understand the key systems and plan changes has been completed. Tests of change are underway.

HR & OD are at the early stages of establishing a HR & OD Directorate Quality Improvement Team and have started work on improving Staff experience of recruitment and induction. Further opportunities have been identified for improvement focused on Smart Working.

More detailed information on the HR programme can be found here <https://qilothian.scot.nhs.uk/hr-od>

Corporate Nursing – Staff Bank

Colleagues from the Staff Bank service have undergone training through the quality academy, undertaken a service diagnostic to identify priorities for improvement and run tests of change using Quality Management methodology. An example of some of their work is shown in the ePoster reproduced below. In addition to focussed improvement projects, service-level Quality Planning work is underway.



Pharmacy quality programme

Clinical Pharmacists have a strong tradition of involvement in clinical Quality Management. They have used Lothian's Quality Management approach to extend that to elements of the pharmacy supply chain.

Following a diagnostic process, based upon Lothian's Quality Management approach, a number of key improvement priorities have been identified: -

- Reduction in the number of sites undertaking over labelling and associated staff time released to clinical areas for direct patient pharmaceutical care
- Rationalisation and agreement of the number of product lines and variations produced
- Increase in batch production size and reduction in the frequency of batch productions for same line

- *Optimal stock holding and turn over*
- *Reduction in the number of labelling errors*
- *Understand the financial benefits of the above*

A number of engagement events with teams have been held and staff are attending Quality Academy training events.

Further information is available via the Programme's Website

<https://qilothian.scot.nhs.uk/pharmacy>

Expanding our Quality Academy training programme

Capacity building to enable our teams and staff to lead and deliver Quality Management is a major component of the Quality Strategy. The Quality Directorate's training team delivers and supports locally accredited courses bearing the 'Quality Academy' designation.

The Academy provides and supports four main courses. Two lead level courses are planned and delivered directly by the Quality Directorate. These are called 'Planning for Quality' and 'QI Skills'; the names indicating a strong link to specific Quality Management elements.

Both courses provide at least first level training on all aspects of Quality Management but explore certain areas more deeply. The 'Planning for Quality' course for those already in leadership positions explores 'Quality Planning' and the leadership beliefs, attitudes, skills and behaviours more deeply. The output of this course is a first diagnostic and early Quality Plan developed with staff, patients and other key stakeholders within the participants' service.

The second lead level programme focuses more on the technical skills of Quality Improvement. This course aims to develop experienced staff as local QI expert coaches for others to draw upon. It is also envisaged that a proportion of those graduating this course will continue with training to become an accredited Lothian Quality Coach. This additional bespoke training gives participants the skills, knowledge and confidence to support those out with their normal service.

Designing and delivering these lead level programmes has been the top priority for the past year. This recognises the need to develop both the capabilities of our leaders and the need for a larger pool of specialist QI teaching and coaching

expertise across our services. Both courses have been subject to evaluation and review and, in the spirit of continuous improvements, experience regular tests of change.

Additional training aimed at our wider workforce is being developed. It is envisaged that the Quality Academy will support the development of these courses but not deliver all the training. Quality Coaches, local Improvement Advisors and other component staff from services or specialist educational roles will own the delivery of much of this training. In the last year we have successfully tested an abbreviated QI skills training programme lasting less than one day for delivery in situ for a team or teams. Over the coming year we will refine the programme and supporting materials in collaboration with front line services and other specialist training and education teams within Lothian. This "QI Essentials" (eQI) programme will become a key engine to drive capability within teams establishing their own Quality Management Programmes.

We also have had regular contact with colleagues in HIS and NES over recent years concerning the development of web-based training tools covering the essentials of Quality Management. These are now formally hosted on TURAS. These packages are of a high standard and suitable for either group learning – potentially as part of an eQI course – as well as personal study. A key decision for the organisation with whether and how to align this training to other recommended or mandatory training within the Board.

<https://learn.nes.nhs.scot/741/quality-improvement-zone>

We have run over 30 of our lead level courses, each providing 30 places. The courses are significantly over-subscribed, and steps are being taken to address this. Over 100 Coaches have been trained and deployed within the Lothian Coaching Network; they regularly deliver coaching through scheduled clinics and other events.

Almost all of the individual pieces of work done by Academy graduates are shared within the Lothian Quality Website. Further information can be found here

<https://qilothian.scot.nhs.uk/training>

Additional Quality Programmes aligned to the Quality Strategy

Hip fracture improvement programme

Hip fracture is the most common, serious orthopaedic injury to affect the elderly, with more than 6,000 patients admitted to hospital in Scotland each year at a cost of around £200million / year.

The Royal Infirmary of Edinburgh deals with over 1000 patients with hip fracture each year making it the largest unit of its kind in the UK and throughout Europe. Hip fractures have a major impact on health-related quality of life and, for many patients, bring loss of mobility and independence. Hip fracture carries a national 1 year mortality rate of around 30%, often as a result of the associated frailty of this patient group

The burden of hip fracture in Scotland is likely to increase significantly over the coming decade as a consequence of population demographic changes. It is therefore essential that we manage this injury as effectively and efficiently as possible, primarily for the benefit of patients, but also for the optimum use of NHS resources.

The Scottish hip fracture audit from 2016 showed that patients with hip fractures in NHS Lothian had the longest wait time for surgery with only 35% of patients reaching theatre within 36 hours of admission, the longest median total length of stay of any of the large Scottish health boards and amongst the lowest proportion of patients returning to home or nursing home within 30 days (26%). Reliability of most process measures including delivery of reliable care and assessment bundles in ED, fasting times, AHP assessment and reliability of rehabilitation input was also poor. The potential opportunities for improvement were significant.

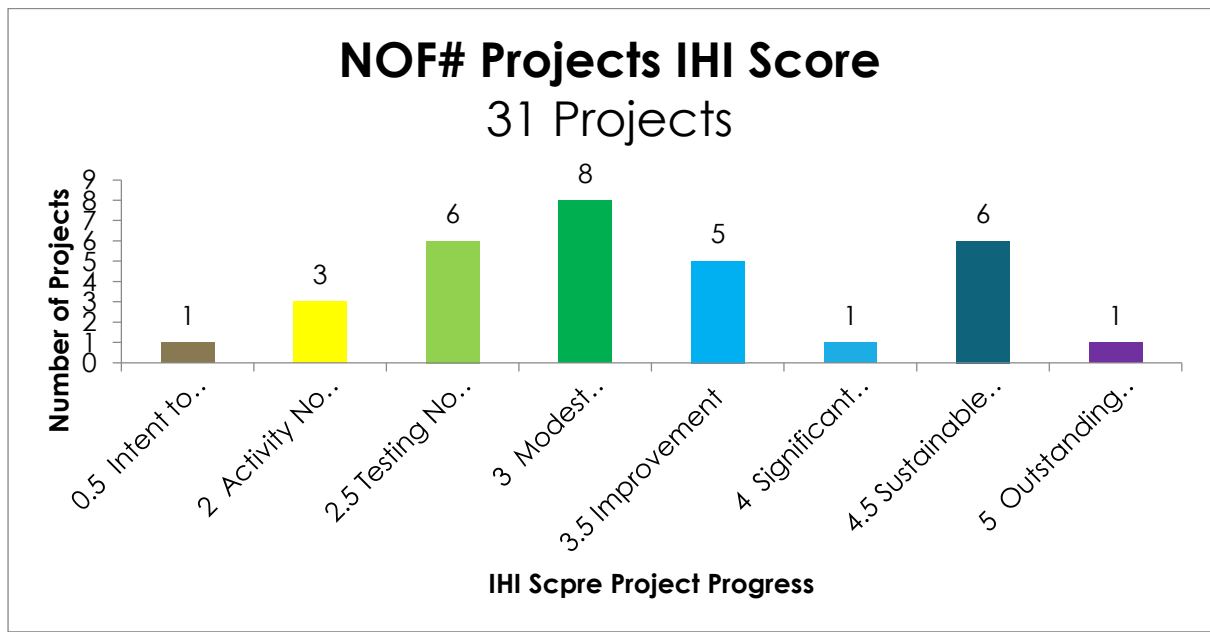
The aims of the Hip Fracture quality improvement program are to deliver optimal management of all patients with fracture neck of femur to ensure they receive best quality care with maximal return to homely setting in shortest necessary time with minimum possible harms.

Outcome measures

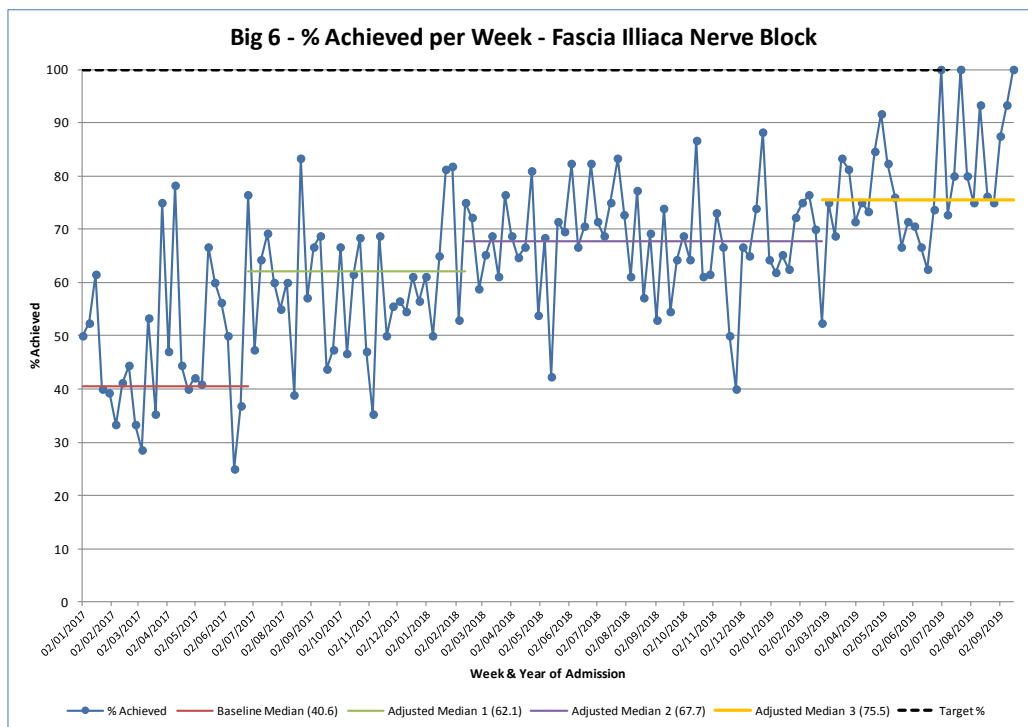
- i. Reduce Total Length of Stay – Acute and rehab
- ii. Increase Proportion of patients going back to home setting
- iii. Reduce Proportion of Harms – AKI, pressure ulcer, VTE, SSI
- iv. Improve Patient Experience

v. Reduce or maintain Mortality rate

In addition, the program aims include building capacity and capability for quality improvement & quality management within the service. Staff engagement has been enthusiastic and to date, 30 staff across a range of professional groups have been trained through the quality academy. Quality improvement projects have been undertaken across the whole pathway of care from admission to the emergency department ED through to discharge.



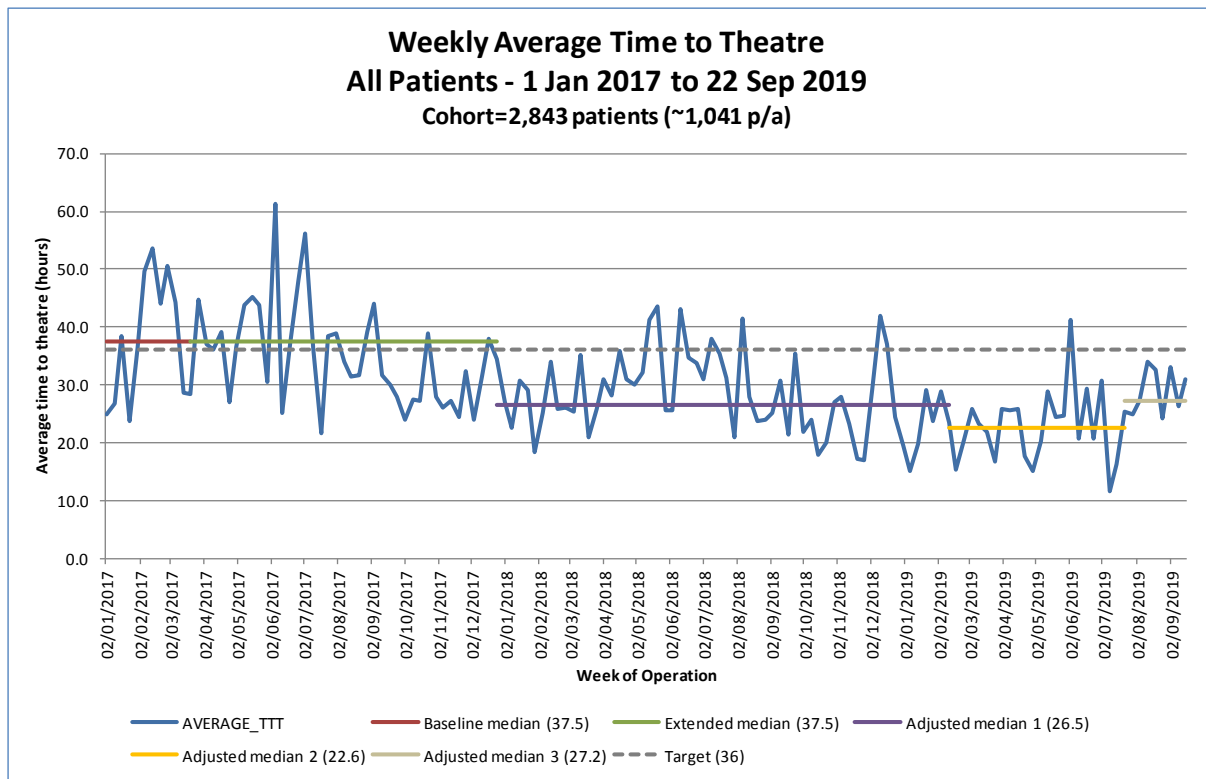
The range of projects undertaken have led to significant improvement in both processes of care and outcomes for patients. The following examples give a flavour of the work that is being undertaken.



Improvement – 40.6% to 75.5% - March 2019

Hip fracture is a very painful condition and administration of nerve blocks can offer good pain control and also help to reduce the side effects caused by use of other strong painkilling medications. Work in the ED has significantly improved reliability of administration of these nerve blocks offering patients the best form of pain relief.

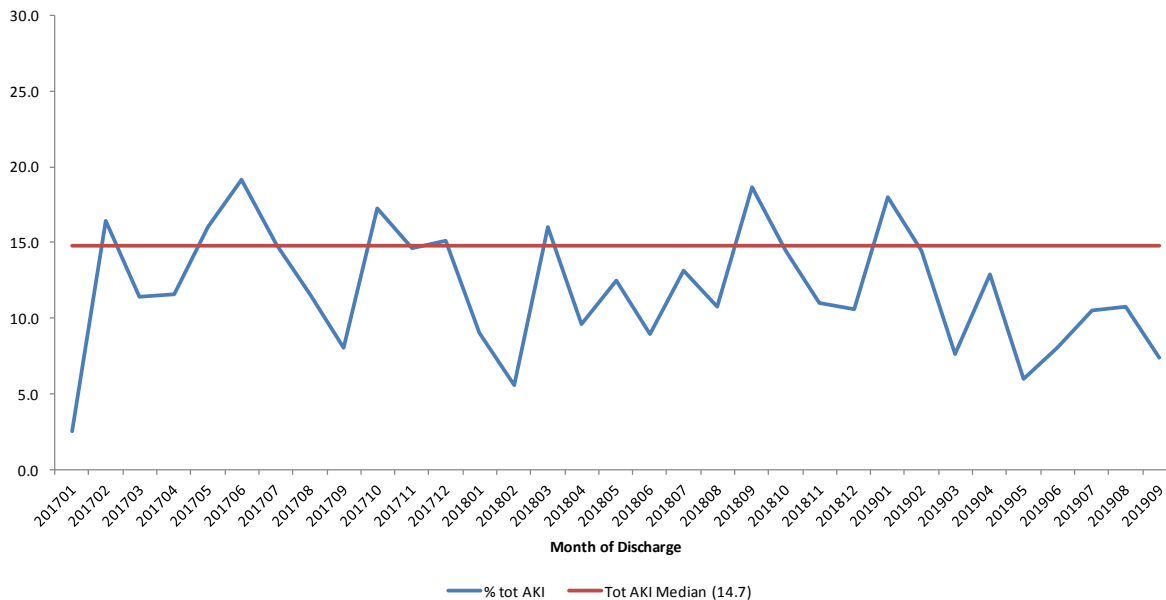
Definitive treatment of hip fracture involves operation and the national standard recommends that surgical fixation is carried out within 36 hours of admission. Through a series of changes, we have reduced the median time to operation from 37.5 to 22 hours from admission despite a 10% increase in the number of patients treated within this period. This work has also had a massive positive impact on patient experience



A number of quality improvement projects have focused on improving reliability of elements of care in the perioperative period and these have contributed to a reduction in measured harms including acute kidney injury. During this period, we have also seen a reduction in 1-year mortality of patients who have been treated for hip fracture in NHS Lothian. This rate is amongst the lowest for this patient group in the UK.

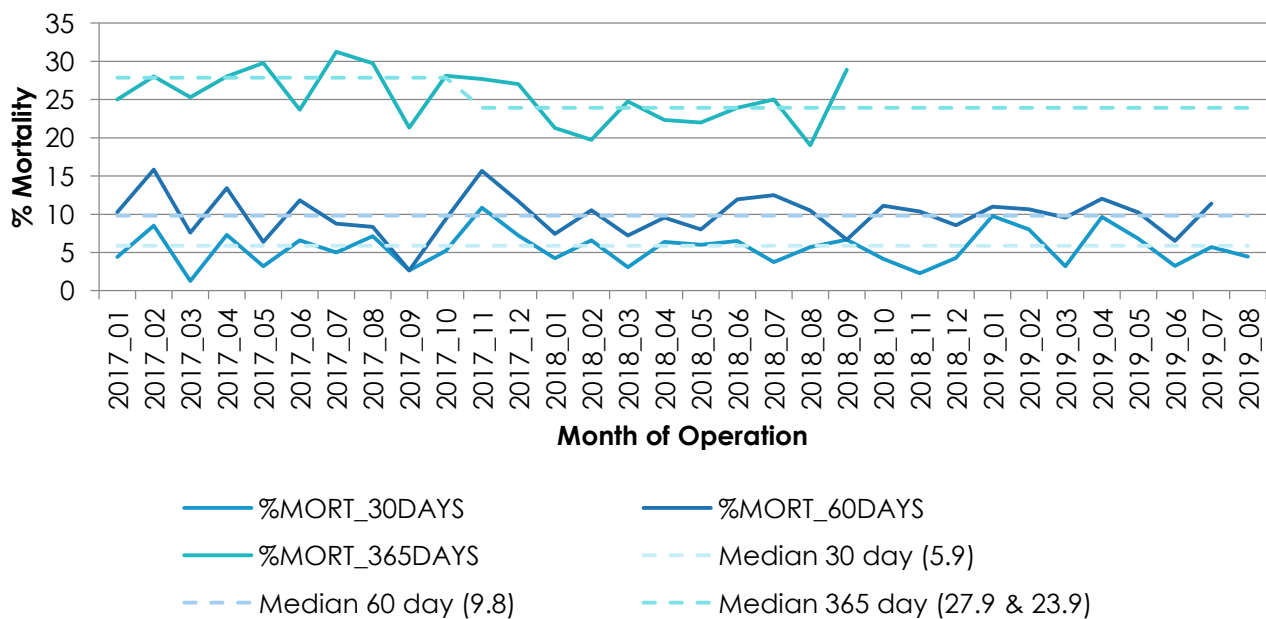
Reduction in Acute Kidney Injury

% of #NOF patients with AKI by month
Jan 2017 - Sep 2019



Shift in one month if maintained

Mortality rate at 30, 60 & 365 days after #NOF surgery Jan 2017 to Aug 2019



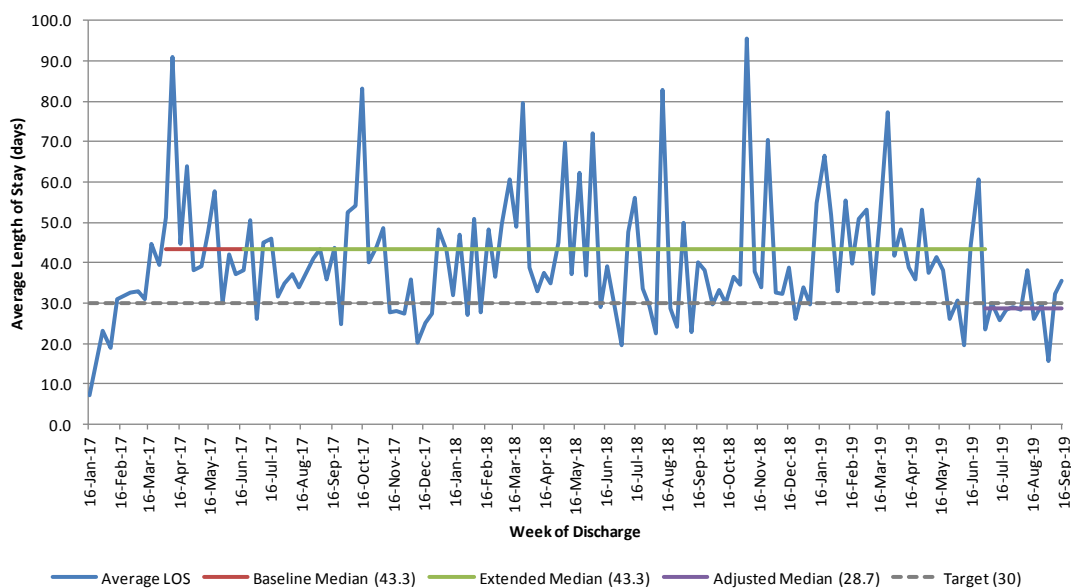
Improvement in all processes in care have contributed to a reduction in the total length of stay for patients admitted from and returning to home.

Weekly Average Total Length of Stay - Discharged from Rehab

Patients Admitted from: HOME & Discharged to: HOME

1 Jan 2017 to 22 Sep 2019

Cohort=783 patients (~288 p/a)



Improvement – 43.3 days reduced to 28.7 days/ July 2019

The hip fracture improvement programme not only supports work within an acute hospital setting. Significant improvement work occurs within community pre- and post-hospital settings. Exemplars of community-focussed work include the Midlothian Discharge to Assess programme and the Edinburgh Falls Reduction programme focussed on Care Homes.

The significant improvements arising from the hip fracture improvement programme led the managerial and clinical staff in orthopaedic surgery to request support to extend the Lothian Quality Management System approach to improving management of hip and knee arthroplasty ('joint replacement') work. This programme is still at a relatively early stage of development but some improvements in numbers of patients being able to mobilise on the day of their operation and discharged home within 2 days of surgery have already been achieved. This is likely to impact on overall length of stay and contribute to creating a more sustainable model for delivering best care for patients who need joint replacement surgery.

External collaborations

NHS Lothian has recently been selected as an Accelerator Site for two national programmes led by Healthcare Improvement Scotland. These are the Access QI Programme – applying Improvement Methodologies to waiting times challenges and Value Management – applying improvement methodologies to ward-based quality with an additional focus on understanding the financial benefits of improvement. Both bring additional resource to establish and test these approaches. HIS were explicit in identifying the maturity and extent of Lothian's Quality Management capability and infrastructure as key reasons for our selection. Both programmes have Executive Sponsorship from the Chief Officer (Acute) and work programmes are led by staff in the Acute Division with support from the Quality Directorate and other corporate services.

The Director of Nursing for the Acute Division is providing leadership for the Value Management programme with the Division and St John's Hospital will be the first site to test the approach.

The work on both programmes began in October 2019 and the Board and its subcommittees will receive progress reports as the work develops.

Next steps

Though much has been achieved over the previous year, expansion of the programme and initiatives to create the best conditions possible for improvement are ongoing. A workplan for the coming year will be developed in early 2020, taking account of available resources and assets balancing the needs of new programmes as well as those currently being supported. A driver diagram shown below describes at high level the actions required to fully realise the ambitions of the Quality Strategy.

Ongoing actions to create enabling conditions and expand the use of Quality Management in Lothian

