

SUBJECT: Quality Improvement Hub

1. Purpose of the report

The purpose of this paper is to set the strategic context for the Quality Improvement Hub (QI Hub), provide information on progress to date and consider the next stage of its development.

2. Recommendation

The Healthcare Improvement Scotland Board is asked to:

- note this report for information.

3. Background and key issues

NHS Quality Improvement Scotland – the predecessor to Healthcare Improvement Scotland took responsibility for hosting and coordinating a QI Hub. The QI Hub, which is essentially a national resource centre for quality improvement, forms part of the national infrastructure for healthcare quality and is highlighted as such in the *Healthcare Quality Strategy*.

Healthcare Improvement Scotland is the lead organisation and hosts and coordinates the QI Hub on behalf of a partnership which includes NHS Education for Scotland (NES), Information Services Division (ISD) of NHS National Services Scotland (NSS), NHS Health Scotland and the Quality and Efficiency Support Team (QuEST) of Scottish Government Health and Social Care Directorates

4. Strategic objectives/work programme

The QI Hub supports 'improvement' which is a key component of the Integrated Cycle of Improvement. It also supports the delivery of the first corporate objective which is to:

- support innovation and improvement in the delivery of high quality healthcare, adopting a highly patient-centred approach in the planning and designing of services.

5. Measures for improvement

A benefits realisation plan has been developed for the QI Hub and is attached at Appendix 3. A review of the partnership arrangement will take place in the autumn when we will consider progress against this plan

6. Resource implications

The partner organisations align budgets in line with their particular service contribution which has been agreed through a Memorandum of Understanding (MoU). The costs for Healthcare Improvement Scotland are included in the paper at Section 6.

7. Legal implications

Each of the partners has signed up to a MoU. Although this is not a legally binding arrangement it sets the tone in relation to collaboration and partnership working. Healthcare Improvement Scotland's Evidence, Improvement and Scrutiny Committee endorsed this MoU at its May 2011 meeting.

8. Governance and risk implications

The QI Hub partnership is overseen by a strategic partnership group, who in turn are supported by an operational steering group. Both these groups have representation from each of the partner organisations.

A Risk Register is maintained for the QI Hub and governance and oversight within Healthcare Improvement Scotland is provided by the Evidence, Improvement and Scrutiny Committee. An annual report will be provided to the committee.

9. Consultation

An extensive consultation exercise was carried out with NHS board executive teams and those involved in leading improvement to inform the design and delivery of the QI Hub service.

10. Equality and Diversity

An Equality Impact Assessment is carried out for each programme that the QI Hub is involved with.

11. Implementation plan, timeline and Lead Officers

A review of the partnership approach is planned for the October/November of this year. Feedback from key stakeholders will also be sought at this time.

All staff in the QI Hub are employed on temporary contracts (either secondments or fixed term) and these will start to come up for renewal from March 2012 onwards.

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Quality Improvement Hub

1. Introduction

NHS Quality Improvement Scotland took responsibility for hosting and designing a Quality Improvement Hub (QI Hub). The QI Hub, which is essentially a national resource centre for quality improvement methods forms part of the national infrastructure for the *Healthcare Quality Strategy*. All national health boards have a role to play in supporting quality improvement and rather than working independently of each other, the QI Hub concept emerged out of the need for a coordinated, national approach.

Healthcare Improvement Scotland coordinates the QI Hub on behalf of a partnership which includes NHS Education for Scotland (NES), Information Services Division (ISD) of NHS National Services Scotland (NSS), NHS Health Scotland and the Scottish Government's Quality and Efficiency Support Team (QuEST).

The QI Hub currently sits within the Directorate of Implementation and Improvement which supports the delivery of the improvement element of the Integrated Cycle of Improvement. The purpose of this paper is to set the strategic context for the QI Hub, provide information on progress to date and make proposals for future development.

2. Healthcare Improvement Scotland vision

Our vision is to deliver excellence in improving the quality of the care and experience of every person in Scotland every time they access healthcare. Healthcare Improvement Scotland has identified four strategic objectives and the QI Hub supports the achievement of these with a particular focus on the first. Healthcare Improvement Scotland will:

- support innovation and improvement in the delivery of high quality healthcare, adopting a highly patient-centred approach in the planning and designing of services
- provide assurance of the safety and quality of healthcare services for the population of Scotland
- provide authoritative, evidence-based advice and guidance on high quality treatment and care, and best practice in public engagement, and
- influence national policies to improve the quality of healthcare.

3. Vision and objectives for the QI Hub

The vision for the QI Hub is to support NHSScotland to excel in quality improvement, for the benefit of patients and to support Scotland's place as a world leader in healthcare quality.

High level objectives

- To identify and coordinate responses to unmet need across NHSScotland for improvement support in pursuit of the three quality ambitions where this unmet need requires a partnership approach and cannot be met by an individual organisation.
- To align the quality improvement agendas of the collaborating organisations through a national partnership to deliver coordinated support to NHS boards, maximise resources and reduce duplication.
- To embed improvement methods and the use of data and measurement for improvement into the fabric of NHSScotland.

4. Testing the concept

Although the concept of a quality improvement resource centre is not new, the national partnership approach is innovative and 'proof of concept testing' has been undertaken over the past six months.

A total of nine programmes (two in NHS boards with the others Scotland-wide) were included in the proof of concept testing and included:

- advising on the design of an improvement approach to reliably improve patient safety in primary care in three pilot NHS boards saving the NHS up to £30,000 in consultancy fees.
- facilitating nationally coordinated support to an NHS board to develop a plan for mortality reduction (death in hospital) using improvement methodology. This work is now informing the development of an improvement toolkit to support other NHS boards in addressing mortality reduction.
- advising on the improvement approach for the second phase of the National Improving Nutritional Care Programme which received very positive evaluation.
- facilitating a national event to build skill in measurement for improvement to support the National Falls (reduction) Programme.

A full list of the work taken forward by the QI Hub during the proof of concept testing can be found in **Appendix 2**. Feedback through an evaluation form was sought from each 'customer' and overall the input has been well received. For example:

*"Gave us a better understanding of harm and that we can reduce it"
NHS board representative*

*"The QI Hub has provided the board project teams with a clearer understanding of improvement science. The QI Hub has supported teams to identify success and helped to keep their projects focused."
Healthcare Improvement Scotland programme manager*

*"The QI Hub added value: as a facilitator; by bringing a degree of service improvement methodology to the discussions; by providing experience and knowledge of methodologies and tools for continuous improvement; and by bringing a degree of rigour to the discussions."
Scottish Government Health Directorates representative*

The proof of concept testing phase has also informed the development of a capacity planning tool, which will allow us to align workforce requirement to anticipated demand. A model for projecting project costs has also been developed and both of these will be tested over the next six months.

5. Service delivery

The coordinating centre for the QI Hub is located in Elliott House and includes an 'innovation room' to offer a creative space to support innovative ways of addressing service improvement issues. Web-based resources are available to support access to quality improvement tools and resources across Scotland's dispersed communities (see Section 4 for more detail).

Healthcare Improvement Scotland employs a core team to coordinate and deliver the service in association with partners. See **Appendix 1** for staffing.

The QI Hub delivers four elements of service:

- implementation support that is flexible and responsive
- education and learning opportunities that are accessible and relevant
- measurement for quality improvement that is meaningful, and
- facilitation of quality improvement networks for NHS staff.

Further information on each element of service is provided below.

5.1 Implementation support

Improvement science, mainly adapted from industry, provides a range of goal-orientated, measurable methods and approaches that can reliably improve care and help build a culture of continuous quality improvement. See **Appendix 2** for some examples.

The application of improvement methods is context specific (ie to each NHS board setting); therefore the QI Hub's business model necessarily requires an 'adaptive', flexible approach in delivering packages of implementation support to NHS organisations.

In addition, the QI Hub 'brokers' the use of staff trained to an advanced level in quality improvement in territorial and special boards to work with us to support the national quality programmes. The Scottish Patient Safety Programme also uses this approach and has had much success. A national 'directory' of staff trained to an advanced level in Improvement methods is being developed and the brokerage model is currently being tested internally and externally with NHS Tayside. This element of service is provided by Healthcare Improvement Scotland in association with QuEST.

5.2 Education and learning

This workstream is led by NES and includes the development a Quality Improvement Education Programme incorporating:

- Development Strategy for Lead Group (300) – NHSScotland needs a critical mass of around 300 people trained to an advanced level in improvement methods. This strategy sets out how this will be achieved.
- Quality Improvement Education Curriculum Framework – the Curriculum Framework supports the development of four primary groups of staff who have different roles in delivering quality improvement: the lead group, the practitioner group, the foundation group and NHS boards.

Healthcare Improvement Scotland supports this work by providing expert quality improvement advice and input, by embedding measurement for improvement skills into the Curriculum Framework and in facilitating training sessions.

5.3 Measurement for quality improvement

Measurement is an essential element of quality improvement and ISD leads on this work (in collaboration with a Data and Measurement Advisor seconded from ISD to the QI Hub core team at Healthcare Improvement Scotland).

The workstream includes development of a database to support data reporting for national improvement programmes and discovering and cataloguing measurement tools which will be available through the QI Hub website. The Data and Measurement Advisor also arranges measurement consultancy support to advise on measures of improvement, gathering data, analysis and supporting action (integrated with improvement support activities described in Section 5.1 above).

5.4 Quality improvement networks

The QI Hub will facilitate quality improvement networks which help spread and sustain quality improvement at a clinical team level through 'skill sharing' and 'community building'. These are open and accessible to all staff. The QI Hub also facilitates smaller programme-specific networks which help clinical staff to use improvement methods and building skill through experiential learning.

This element of service is led by Healthcare Improvement Scotland and NES.

5.5 How the service is tailored for use by NHSScotland

The QI Hub provides support and interventions at various levels of input from level 1 (assessment and advice) through to level 5 (programme infrastructure support).

6. Virtual access and engagement

An integrated Information Communication Technology (ICT) infrastructure is being developed to make the resources of the QI Hub available across our dispersed communities. The plan for ICT infrastructure is being developed in consultation with our stakeholders and the first priority is to create a website for the QI Hub. It is expected that a beta version (second stage testing) of the website will be available from August 2011.

7. Managing demand

The QI Hub is already facing a high level of demand for its services and it is anticipated that there will be a significant stretch on current resources. Requests for support are assessed against key criteria using a weighted measurement process which includes benefit, impact and capacity to deliver. Through the testing phase core processes and costing profiles have been developed to guide future planning and programme development.

To help manage demand, it is proposed that the QI Hub focuses on the following three priority areas over the coming year:

- provision of advice/ design support to improvement programmes which have been identified as a priority through the Healthcare Improvement Scotland work programme, including issues identified as a result of scrutiny activity
- building quality improvement capacity and capability, internally and externally, through coaching and mentoring, and
- responding to requests for bespoke packages of advice and support from organisations in the design and delivery of local improvement programmes.

8. Resources

The partner organisations align budgets in line with their particular service contribution which has been agreed through a Memorandum of Understanding. The contribution from each organisation reflects their scale of involvement. While it has been helpful to identify the

resources that each organisation will commit to developing the QI Hub, the proof of concept testing phase has told us that the budget discussions may be more meaningful at individual programme level. This will be explored further as part of the next stage of development. The budget for the financial years 2010-11 and 2011-12 is set out in Table 1 below.

Table 1 Healthcare Improvement Scotland QI Hub Budget (2010-2012)

Element	2010-2011	Actual	2011-2012	Projected
Physical Infrastructure*	£35,870		£20,526	
Staffing	£177,281		£293,389	
Service Delivery **	£26,802		£49,329	
Total	£239,953		£363,244	

Notes

* Physical Infrastructure - In 2010-11 £21,344 was incurred on QI Hub development costs and £14,526 was incurred on infrastructure costs (development of the Hub Room and ICT). Please note NES has contributed £9,000 in relation to website development which is in addition to the existing web based resources.

In 2011-12 it is anticipated that £7,951 will be spent on QI Hub development costs and £12,575 will be incurred in relation to infrastructure (including ICT).

**Service Delivery includes associated travel costs

8. Conclusion

The QI Hub is a core component of the improvement element of the Integrated Cycle of Improvement and the national quality infrastructure for the *Healthcare Quality Strategy*. The demand for support and advice in the use of improvement methods is likely to continue both within Healthcare Improvement Scotland and across NHSScotland.

All staff within the QI Hub core team are employed on a fixed term basis with contracts coming up for review from March 2012 onwards.

As the phase two of the Healthcare Improvement Scotland's organisational restructure plans are rolled out we are considering how the QI Hub staffing resource can be increased through realignment of existing resources to enable it to respond to projected demand.

Appendix 1 – QI Hub core team

Title	Whole time Equivalent
Associate Director of Improvement (Operational Lead)	1.0
Improvement Advisor*	1.0
Data and Measurement Advisor	1.0
Business Manager	1.0
Programme Coordinator	1.0
Administrator	1.0
	6.00

*Service Level Agreement with Information Services Division, National Services Scotland

Appendix 2 – Proof of concept testing programme

<p>Safety Improvement in Primary Care (SIPC) 1 and 2</p>	<p>SIPC 1 The QI Hub has supported the design of an improvement approach and journey to enable the SIPC 2 work achieve its aim and goal of reliably improving patient safety in primary care. This included designing and facilitating several workshops on improvement approaches, process mapping and value stream mapping.</p> <p>SIPC 2 The QI Hub's involvement in this programme saved up to £30,000 of consultancy fees. The QI Hub designed and delivered a series of workshops to enable three pilot boards to:</p> <ul style="list-style-type: none"> • clarify aims and approaches to their pilot work • develop board improvement approaches, including development of driver diagrams and tests of change, and • develop a measurement strategy to support delivery of SIPC 2 objectives: <ul style="list-style-type: none"> • developing reliable medication reconciliation after discharge from hospital/attendance at an outpatient clinic • improving clinical communication between specialist outpatient clinics and primary care to optimise share management, and • developing safe and reliable systems for managing results. <p>QI Hub staff are providing mentoring and coaching for improvement for both the project lead and the clinical lead, to enable them to effectively lead the work programme and achieve programme aims, and in turn build capacity and capability in quality improvement . QI Hub staff are also providing improvement coaching to NHS board project managers and clinical leads.</p>
<p>NHS Orkney</p>	<p>The QI Hub facilitated the first national coordinated partnership approach to supporting an NHS board with the development of a mortality reduction improvement plan (including aim setting, knowledge and evidence review, driver diagram development and improvement expertise).</p> <p>The QI Hub designed and delivered two workshops for 30 consultants, GPs, executives, senior managers and frontline clinical staff, providing a supportive environment to constructively challenge and share learning with NHS Orkney to enable the board to gain a greater understanding of the Hospital Standardised Mortality Rate (HSMR) and how this data can be used to drive improvement.</p> <p>As part of the session, the QI Hub provided access to other boards which have undertaken work in this area. This allowed approaches to developing improvement plans, and learning about overcoming challenges, to be shared.</p> <p>The partnership approach enabled a wider discussion and partnership agreement to develop an HSMR improvement toolkit to support boards with the creation of mortality reduction improvement plans.</p>

NHS Forth Valley	The QI Hub designed and delivered a capacity and capability for quality improvement skills development day for 40 charge nurses, senior nurses and middle managers to support the spread of patient safety and quality improvement work across the board, as well as supporting them in their new senior charge nurse role as leaders of quality improvement across the new hospital at Larbert.
ThinkGlucose	The QI Hub advised the chair of the Scottish Diabetes Group and the chair of the diabetes inpatients short life working group on the design and delivery of the prototype for ThinkGlucose pilot sites, including the measurement strategy, enabling the appointment of a project manager to coordinate the delivery of the aims of the pilot. The QI Hub brokered improvement advisor resource from NHS Tayside to augment available quality improvement capacity and capability.
Tissue Viability	Advising on the improvement and implementation approach for prototyping testing and implementation of the tissue viability bundle. supporting and coaching the clinical lead and programme manager on the improvement work and integration with other improvement programmes.
Maternity Services Framework	Advised on the improvement and implementation approach for the implementation of the refreshed Maternity Services Framework launched by Cabinet Secretary. Facilitated a day workshop session for the national implementation steering group on the improvement and implementation approach to be used to enable them to achieve their aims. Advising SGHD lead on the improvement approach to enable implementation of the Framework to be realised.
Improving Nutritional Care	Advising on the improvement approach and model to be used for the second phase of Nutritional Care improvement work. This has involved: <ul style="list-style-type: none"> • coaching and mentoring the clinical development lead and programme manager for nutritional care • facilitating the learning sessions, and teaching and building capacity and capability in quality improvement for clinical and managerial staff involved in the programme • advising on spread and sustainability, and teaching and coaching on approaches and models, and • facilitating a spread and sustainability session with the Chief Nurse for Scotland at the National Spread Event for Nutritional Care. <p>The feedback and evaluation of the improvement advice and support throughout has been extremely positive and has demonstrated early results in nutritional care improvement.</p>
Releasing Time to Care	Facilitated a national capacity and capability day for board leads and other programme staff on measurement for improvement to support the improvement and implementation work of Releasing Time to Care
National Falls Programme	Facilitated a national event to build capacity and capability in measurement for improvement to support the National Falls Programme.

Appendix 3 – Project benefit profile log

Title	Quality Improvement Hub
Project Ref (Assigned by Performance and Planning)	N/a
Programme Ref (As Above)	
Board Level Ref (As above)	K1
Description of Benefit	<p>The Quality Improvement Hub (the QI Hub) is an NHSScotland collaboration in quality improvement resources and expertise and draws on key organisations, teams and individuals who can contribute in a combined effort to enable NHSScotland to realise the vision of the <i>Healthcare Quality Strategy</i>.</p> <p>The development of the QI Hub will bring the collective expertise of NHSScotland to support NHS boards with implementation of the <i>Healthcare Quality Strategy</i> as well as build capacity and capability in quality improvement in support of the <i>Healthcare Quality Strategy</i>.</p> <p>The QI Hub aims to enable frontline practitioners, managers and leaders to bring improvement science into their everyday work and language and support demonstrable improvement in patient care through quality improvement activity.</p>
Current or Baseline Performance Stats /Issues	<p>Currently there is not a national coordinated and cohesive approach to quality improvement across NHSScotland and the QI Hub therefore offers an excellent opportunity to provide the necessary infrastructure to support NHS boards.</p> <p>There is variability and little visibility around the existing capability and capacity in quality improvement expertise and there is little quantifiable data available.</p> <p>Current issues in relation to quality improvement include:</p> <ul style="list-style-type: none"> • little coordination of improvement efforts across Scotland resulting in a wide variety of capacity and skills to improve; • an over-dependency on private sector improvement support • lack of an established ‘community’ or ‘learning system’ in support of shared experience and effort • duplication of effort on similar improvement approaches across the country • a substantial lack in sustainable improvement capability for Scotland • substantial gaps in an improvement ‘infrastructure’ including multiple, uncoordinated demands on data providers

	<ul style="list-style-type: none"> • uncoordinated education and learning approaches, and • little or no reliable information communication technologies and approaches to support collaboration on local or national quality improvement efforts.
Interdependencies with other Benefits	<p>The QI Hub will be an integral part of the quality improvement infrastructure of Healthcare Improvement Scotland and as such will potentially have interdependency with supporting all future improvement work and work activities.</p> <p>A pipeline process which approves and prioritises requests and programmes of work that the QI Hub will support is in existence.</p>
Benefits realisation time period	<p>The first year will see the QI Hub approach being tested with a view to building a body of knowledge of what works best in the Scottish context</p> <p>Low level support is already being offered in the form of providing advice / responding to queries as well as offering the facilitation of meetings in relation to future improvement work.</p> <p>As the QI Hub develops it will be possible to offer more complex forms of support such as running facilitated sessions to scope out possible improvement approaches to future work, diagnostic work, plans for infrastructure support or active infrastructure support.</p> <p>It is anticipated that by the end of 2011 the QI Hub will be actively supporting boards through a variety of mechanisms aligned to the deliverables of the <i>Healthcare Quality Strategy</i>.</p>
Benefit Type	Quality (Q)
Benefits Measures and Method	<p>The benefit measures for the QI Hub are currently being developed. It is anticipated that measures of success will include the following for the implementation support service element:</p> <ul style="list-style-type: none"> • the number of requests for support from the QI Hub at each level • response times (to demonstrate that our support is flexible and responsive) • customer satisfaction and perception of the added value of the QI Hub, and • support delivery team satisfaction. <p>Measures for the QI Hub's three remaining elements of service (education and learning, measurement and networks) are in development.</p>
Changes required for benefits realisation	<p>A key change required for benefits realisation will be achieving effective participative partnership working by the partner organisations involved in the QI Hub's development to ensure there is a coordinated approach to supporting and realising the benefits of the QI Hub and quality improvement.</p>

	In addition, engagement with territorial boards to ensure awareness, use and responsiveness of the QI Hub will be critical.
Dependencies on external programmes or projects	The development of the QI Hub is dependent upon the unique contribution of each of the partner organisations and specifically allocated budgets from each partner, dedicated resources from partners and active, co-ordinated work planning and effort.
Responsibility for realising the benefit	<p>Responsibility for realising the benefits primarily lies with the QI Hub partners, being:</p> <ul style="list-style-type: none"> • Healthcare Improvement Scotland; • NHS Education for Scotland; • Information Services Division, NHS National Services Scotland; • NHS Health Scotland; and • Quality and Efficiency Support Team, Scottish Government <p>However, Healthcare Improvement Scotland has a lead role in coordinating the partnership to facilitate benefits realisation.</p> <p>The partner organisations will build national and local capacity and capability in quality improvement.</p> <p>However, NHS territorial boards will also play a pivotal role in achieving full benefits realisation by contributing to the work of the QI Hub and supporting QI Hub activities.</p>