Response to NHS Chief Executive’s Open Call for Evidence and Ideas

Respondent ID: 116

Organisation name: NHS Improvement

Type of response: Document and report
1) About NHS Improvement

NHS Improvement’s strength and expertise lies in practical service improvement. It has over a decade of experience in clinical patient pathway redesign, demonstrating some of the most leading edge improvement work in England.

NHS Improvement has proven track record in both generating innovative responses to service challenges, and providing a platform for them to be spread across the country. Over the past year NHS Improvement has tested, implemented, sustained and spread quantifiable improvements with over 250 sites across the country as well as providing an improvement tool to over 1,000 GP practices.

For more information about NHS Improvement, please see Annex A.

2) Our approach to innovation

NHS Improvement uses a framework across our work programmes for all improvement and change programmes, whether the work is in pilot (proof of principle), prototyping (testing wider applicability of pilots) or a spread phase (adaptation and adoption across England). It mirrors the “invention, adoption, diffusion” model of innovation identified, but whilst the focus should be on adoption and diffusion, the ‘invention’ stage of the innovation process is the foundation of all further work, as from our experience, all three are part of a learning continuum. Service change and improvements developed locally, then need adaptation and further testing, before wider adoption (see the AF and breast cancer examples below). Innovation and improvement should always be patient focused, our objective is always about making things better for patients and involving patients in that change.

See the NHS Improvement model for improvement (diagram below) and Annex B: NHS Improvement - Framework for Service Improvement for Clinical Pathway Redesign for more information.

The Approach: NHS Improvement - Framework for Service Improvement

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12 Months

12 Months

3 Months

NHS Improvement May 2011
3) Lessons learnt and recommendations for future spread work in the NHS

The NHS Improvement experience of national improvement work over a decade confirms that spreading sustainable change is complex, requires time, consistent effort and a systematic approach, at every level. Change that lasts, does not happen quickly, for example, reducing cancer waits was an eight year journey. Key generic features and critical success factors are set out in the diagram below:

Achieving spread: key dimensions

Engagement - clinical and managerial leadership for improvement, with strong leadership at the local level, supported and positioned by national support to make it happen, has been fundamental to the changes NHS Improvement has made, and is evident in all the clinical networks we work with. In addition, there needs to be recognition that there is a ‘human dimension’ to all change. We agree that innovation is ‘bound to require collaboration’, as clinical networks have demonstrated effectively.

Levers and incentives - at all levels engaged in improvement work, aligned to national policy, with incentives for engagement, including standards and targets.

Organisational and health economy readiness - means developing local capacity and capability in improvement work, with a national system that provides resources to translate and arbitrate experience and information, with locally based support for communities of practice, as seen in clinical networks. This ensures ‘bottom up, horizontal, and top down’ pressures are working towards the same aim.

Efficacy of solution - solutions should be evidence based, and recognise the complexities of the system and organisational context. Spreading improvement usually requires a degree of local adaptation and customisation. In addition, something that is to many a new innovation, to a few will be normal practice.

We also stress the importance of good, current data to measure and support improvement work. The focus on clear outcome measures is undisputed, but will require a combination of process, pathway and behaviour changes and measures if there is to be demonstrable and sustainable change.

For more detail on the lessons NHS Improvement has learnt in ten years of service improvement work in the NHS, please see Annex C: Spreading service improvement.
4) Practical examples to illustrate spreading improvement in action

Through the application of a consistent framework, NHS Improvement has developed, tested, spread and sustained improvements across a range of services and locations which include:

**National spread: ‘Accelerating Stroke Improvement' (ASI) programme** illustrates how NHS Improvement has developed and engaged clinical teams through the establishment of 28 clinical stroke networks to support the delivery of the National Stroke Strategy, and through ASI, focused on a consistent set of quality measures. The initiative focuses on improvements along the patient pathway which, if effectively addressed, would indicate a well-functioning care system. It covers the existing acute vital signs, areas of hospital practice (such as scanning) which need further work and the majority which address key issues in transfer of care and long term care. A data collection system has been designed to both provide a tool for monitoring progress and to highlight significantly under-developed areas of provision. If the ASI aim of 40% of stroke patients leaving hospital under an early supported discharge team is reached, potentially 123,000 bed days could be saved.

**National spread: seven day working**, at the request of medical director, Sir Bruce Keogh, this involves the rapid collection of case studies (29 developed in eight weeks), via our extensive clinical networks, communications bulletins and presence at key conferences, to collate key successes, challenges and emergent themes to inform the implementation strategy for seven day working. Because of our infrastructure and way of working, such “ask the service” questions and gathering examples of practice can be delivered in short timescales.

**SHA or regional spread: implementation of primary angioplasty (PPCI)** through the cardiac clinical networks, NHS Improvement’s clinical advisors and service improvement experts supported each SHA to increase adoption and access to PPCI from 27% to over 90%, with a goal of 97% by December 2011.

NHS Improvement increased awareness of the implementation within the networks, capturing learning from early sites and sharing with the wider community using a dedicated web page, reperfusion newsletter, bespoke meetings and presentations at conferences. Commissioning guidance was provided to health care professionals, SHAs, commissioners and any other interested parties. Bespoke support was provided to some organisations and in others, NHS Improvement acted as an independent expert (honest broker) to arbitrate when sites had disagreements about the best model for their area. This was driven by a clinical advisory group with clinical, managerial and commissioning representation from the networks.

**Acute provider spread: reducing the length of stay for breast surgery hospital**

via the adoption of redesigned pathways for breast surgery following cancer. 57% of acute providers have now introduced one night stay or day case procedures as the model of care, often a six day stay previously. There has been a reduction in bed days used nationally by 30% from the 2006/7 to 2009/10, in very rough terms, this could mean £7.89 million potentially saved. This programme has had four phases:

- **Phase 1 (2006-2007) baseline and scoping** year exploring current practice gathering information and evidence from a variety of sources relating to bed days, lengths of stay, patient experience and evidence of best clinical practice.
- **Phase 2 (2007-2008) testing the idea and providing proof of principle**, with two NHS trusts: Kings College NHS Foundation Trust and Sandwell and West
Birmingham Hospitals Trust, who designed and tested a pathway for patients undergoing mastectomies as a day case or a one night stay.

- **Phase 3 (2008-2009) prototyping** tested the transferability of the improvement, to show how different models could be adapted and identified the winning principles that underpin the breast pathway, but can be applied to any pathway of care, as tested by the Birmingham Cancer Network.

- **Phase 4 (2009-2011) spread and adoption** focused on spreading the model across England, involving 13 clinical networks, covering 88 hospitals, 57% of providers. More patients are now benefiting from the new pathway and they have overwhelmingly evaluated it as positive.

**GP practice and primary care spread: early detection of Atrial Fibrillation (AF)**

Leading the national programme to promote awareness and use of the 'GRASP AF' risk management tool to all GP practices in England. Free to download, the tool identifies patients with AF, calculates their stroke risk, and also details their current management. This information is summarised in a visual 'dashboard' to allow the practice to easily audit their current management of AF against best practice guidelines, and to upload the data for web based comparative analysis. This enables the anonymous benchmarking of practice data with other practices, PCTs, cardiac and stroke networks and SHAs.

In less than 12 months, 1017 GP practices have adopted GRASP-AF, representing over 100,000 patients. To date the data from a sample of 286 practices suggest that 31 strokes have already been avoided by changes in management, but if warfarin prescribing were further increased to 85% of those at high risk, a further 177 strokes could be avoided. This suggests that nationally, about 5,500 AF related strokes are potentially avoidable, which would save the NHS over £70 million.

**GP practice and primary care spread: serum Natriuretic Peptide (NP) testing**

Through the use of scenario generator simulation software, which helps GPs to rule out heart failure through a simple blood test. In all areas where NHS Improvement have undertaken projects to introduce serum NP, implementation has been achieved within 6-12 months, and cost savings have been realised within six months of implementation. A total of 34 PCTs have requested NHS Improvement assistance to date with a scenario simulation, to help put together business cases for introducing this test. 25 have had their modelling completed, showing total predicted annual savings of £3.1 million.

**GP practice and hospital spread: cervical screening results within two weeks**

NHS Improvement worked with 16 pilot sites to ensure 98% of women undergoing cervical screening receive their results in 14 days. All the sites have achieved this integrated performance measure and eight of the trusts now manage a turnaround time of just seven days, for over 85% of patients (down from as long as 20 weeks). At each site, NHS Improvement taught Lean philosophy to a core team across the screening pathway: the nurses taking the samples in primary care, cytology lab staff and those in the recall centre sending out the results. This improvement has impacted on one million women receiving cervical screening test results within two weeks, and resulting in a reduction of 10 million waiting days, a saving of £1.6 million.

**Integrated pathways spread: enhanced recovery** elective pathways of care in colorectal, gynaecology, urology and muscular skeletal care. By working with hospital and community teams, NHS Improvement is helping to streamline elective pathways to reduce length of stay. Enhanced recovery ensures patients are in the optimal
condition for treatment, have the best possible care during their operation, and experience optimal post-operative rehabilitation. Enhanced recovery reduces clinical complications post-operatively and benefits both the patients and primary care, as patients recover more quickly.

**NHS Improvement QIPP website** is designed to be a ‘one stop’ shop for case studies of achievements made across the patient pathway via the cancer, diagnostics (including radiology, pathology and audiology), heart, lung and stroke clinical pathways. Clinical teams looking to change their practice can find practical tools and solutions to improve quality and efficiency, in an interactive and easy to use format. Many of improvements on the site translate to other clinical areas and settings.

In addition, work can often be informally spread. In our case, this means through NHS Improvement’s extensive clinical, charity and professional links, and through our publications, the website with numerous case studies and resources for clinical teams, attendance at events, all of which provide clinical teams with the ideas, information, tools and shortcuts they need to implement changes in their own work.

NHS Improvement continues to push for new solutions. In support of the COPD strategy, we are working with clinical teams who are at the testing the idea and providing proof of principle stage, to study the practicalities and impact of undertaking quality assured clinical assessment and review of new and existing COPD and hypoxaemia patients’ need for long term home oxygen. NHS Improvement have been supporting teams to seek solutions, using problem definition through the use of ‘diagnostic’ tools such as process mapping and ‘demand and capacity’ analysis. Gross savings of up to 40%, equivalent nationally to £45 million a year, or £300,000 per PCT, can potentially be achieved (recent DH analysis).

For more examples of NHS Improvement’s work with clinical teams, please see *The best of clinical pathway redesign - practical examples delivering benefits to patients*, at Annex D or our website.

5) **Conclusion**

The experience of NHS Improvement shows that disseminating and accelerating learning needs the whole system to work together, with effective clinical and managerial leadership at national and local levels, a strong evidence base, clear strategic goals, good data collection and monitoring of both outcome and process measures, and sustained change will take time.

The successes seen in the implementation of the clinical strategies shows the effectiveness of national support in improvement which is focused on improving outcomes, but with the ability to unravel pathways, challenge practice and redesign services based on the latest evidence, clinical expertise and patient experience. This is being demonstrated through experienced teams such as NHS Improvement working with local teams and clinical networks.

6) **Attachments for further information**

- Annex A: NHS Improvement background
- Annex B: NHS Improvement framework for service improvement for clinical pathway redesign
- Annex C: Spreading service improvement – recommendations from NHS Improvement
- Annex D: The best of clinical pathway redesign - practical examples delivering benefits to patients
Annex A: NHS Improvement Background

NHS Improvement was formed in April 2008 (OSHA review recommendation 2007). It brought together two existing national improvement programmes Cancer Services Collaborative, which included Diagnostics (established 1999/2000) and the Heart Improvement programme (established 2000/2001) and extended work to create a three year stroke programme within existing resources.

The work programme for NHS Improvement is defined through the Department of Health on behalf of the NHS in key policy areas of cancer, heart, stroke, COPD and diagnostics. It forms part of the NHS Medical Directorate led by Sir Bruce Keogh.

What does NHS Improvement do?

NHS Improvement's strength and expertise lies in service improvement. It has a longevity of experience in clinical patient pathway redesign and is able to demonstrate some of the most leading edge improvement work in England.

The work falls into 5 key categories:
- Proof of principle: Piloting and testing new ways of delivering services – redesign and quality improvement (usually 12 month duration).
- Testing confidence & transferability: Prototyping new service models and improvements (usually 12 month duration).
- Spreading and disseminating learning and innovation more widely (2 year plus duration).
- Provision of bespoke clinical and managerial advice and support to assist in delivery of agreed clinical change.
- Introducing, developing and supporting clinical networks.

NHS Improvement’s uniqueness lies in:
- Demonstrable practical application of quality improvement and service redesign, a track record of delivering quantifiable improvement
- Able to lead improvement work with results in primary community, secondary and tertiary care.
- Clinical engagement and leadership (over 50 clinical leads work with us).
- Clear alignment with policy direction, providing a bridge between national strategy and local engagement and implementation. (The implementation support arm for the cancer, cardiac, stroke, respiratory and diagnostic strategies across England). Aligned to the National Cancer programme – Improving Cancer Outcomes Strategy Advisory and Programme Board, Diagnostic, COPD, Vascular, Stroke, Heart and Diagnostic Programme Boards.
- Skilled expertise in the full range of quality improvement tools and techniques including high level lean and six sigma – essential to the delivery of the QIPP agenda. NHS Improvement staff include experience and expertise gained from previous employment with Toyota, GE, Aviva and private healthcare
- Ability to show measurable results, from concept to delivery. During 2010/11, 6 examples of NHS Improvement work has been referenced as highly recommended in NHS Evidence: atrial fibrillation, stroke, day case or one night stay breast surgical model, cytology 14 day standard, enhanced recovery and Serum Natriuretic peptide testing for heart failure.
- NHS Improvement is experienced in working in partnership with leading charities, professional bodies, Royal Colleges and craft associations ensuring a strong alignment to research, patient facing organisations and third sector work. Examples include Stroke Association, British Heart Foundation, Arrhythmia Alliance, Macmillan, RNID, British Lung Foundation, and NICE.
NHS Improvement has established, developed and continues to support clinical networks. In 2004 NHS Improvement supported the set up of 28 cardiac networks across England and in response to the National Stroke Strategy in 2007, 28 new stroke networks were formed.

Provides free access for NHS staff to leading edge improvement, project management and on line collaboration / knowledge sharing tools via the NHS ‘Improvement System’. The QIPP impact of all specific projects, individual work streams and the programme as a whole of its improvement work is captured and monitored via the NHS Improvement ‘Performance System’.

NHS Improvement’s website is a major resource for the NHS and wider quality improvement community - 75,000 unique visitors from 140 countries last year.

NHS Improvement’s independence allows us to challenge the status quo in organisations, something internal improvement teams find difficult and also avoids NHS organisations’ need to pay expensive external consultancy fees.

NHS Improvement longevity experience and expertise in clinical process redesign is unprecedented in the NHS, combined with strong clinical leadership across work streams and knowledge, access to NHS teams, organisations adds a uniqueness not available from commercial organisations.

Work Priorities and Delivery
To focus on delivery of national strategies in cancer, heart, stroke, diagnostics and lung disease as well as QIPP work streams.

NHS Improvement works across all five domains of the NHS Outcomes framework: preventing mortality, long term conditions, recovery from ill health, patient experience & safety.

**Diagnostics:**
Cervical screening, delivery of two week standard from baseline of 12/14 weeks. Improving turnaround and results for treatment decisions in blood sciences, histopathology and microbiology across pathology laboratories in England.

**Cancer:**
Focus on saving 5,000 lives and reducing unnecessary bed days. Spread of breast surgical models reducing length of stay from five days to day case or one overnight stay, reducing length of stay through enhanced recovery approaches and admission avoidance in emergency care. Future survivorship pathways for adults, children and young people with cancer; with the aim of transferring care from a medical to self supported care model.

**Stroke:**
Focused support on delivery of vital signs across England with all 28 stroke networks, and engaging all provider organisations.

**Heart:**
Developing and supporting implementation of the Cardiac Rehabilitation Commissioning Pack across ten cardiac networks.
Implementation of primary angioplasty by December 2011.
Heart failure: earlier detection, reducing admissions and improving end of life care.
Reducing non-elective pathway length of stay, estimated at £106m saving to the NHS.

Audiology: Streamlining hearing services and refocusing services in a community setting, reducing visits to hospital, process time and cost.

Enhanced recovery: NHS Improvement, working in partnership with the National Cancer Action Team, and other key stakeholders will take the lead on the spread of enhanced recovery across England in 2011/12.

Lung: Redesigning the pathway of care from early diagnosis to treatment and long term care. Early stage pilot work.
Annex B: NHS Improvement Framework for Service Improvement for Clinical Pathway Redesign

1. Service improvement framework in context:

NHS Improvement applies a framework for service improvement and clinical patient pathway redesign to ensure a consistent and systematic approach to all its work.

The framework is drawn from over 10 years of collective experience from the largest and longest running clinical improvement programmes across England such as The Cancer Services Collaborative – Improvement Partnership, Diagnostic Programme in Radiology and Pathology, and the Heart Improvement Programme together with research on the critical factors for whole system change and receptive change (Williamson 2007, Driver 2007). This learning forms the basis on which the work of NHS Improvement is built.

2. The framework approach

The framework is used across the work programmes of NHS Improvement for all improvement and change programmes whether the work is in pilot (proof of principle), prototyping (testing wider applicability of pilots) or a spread phase (adaptation and adoption across England). See NHS Improvement model for improvement:

The Approach: NHS Improvement - Framework for Service Improvement

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<td>- Build interest &amp; capability</td>
<td>- Identify emergent leaders</td>
<td>- Recruit leaders for spread</td>
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3. The framework underpinned by 10 key principles

The framework is multi-faceted but will support the diversity of work and clinical requirements. It is simplified here, focussing on the themes: Diagnosing, Design and Engaging
1. Responds to the needs of the patient and the whole pathway (Diagnose/Design/Engage)
2. Aligns to national policy and strategy (Engage/Diagnose/Design)
3. Clear assessment and articulation of the issue being addressed together with clarity of outcome(s) and potential risks (Diagnose)
4. Early and sustained engagement with clinical and managerial leaders to drive, own and sustain successful redesign and continuous improvement via an appropriate governance structure (Engage).
5. Industry and NHS recognised improvement tools & techniques are deployed according to need (examples include Six Sigma, Lean, Microsystems, Process Mapping) following a clear process with defined stages over an agreed timescale (Design)
6. Data used as the foundation for evidence based improvement with solutions based on a thorough diagnostic and root cause assessment of the problem process or pathway (Diagnose & Design)
7. Outcomes/outputs are well defined and re-positioned nationally and locally to ensure alignment and prioritised for spread. (Engage)
8. Skilled and flexible application of the framework its tools and techniques is paramount to maximising the return on investment. (Design)
9. Mechanisms are developed to share and communicate the learning across the NHS (Engage)
10. Local leaders aligned to work at all times (Engage)

NHS Improvement aims to leave a positive legacy of improvement with its partners and wherever possible will help build local capability in improvement skills.

4. Key features of the improvement framework

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<td><strong>1 The appropriate use of data is the foundation for evidence based improvement</strong></td>
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<td>• Define the problem, agree measures and establish base line prior to any work commencing</td>
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<td>• Understand and validate root causes</td>
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<td>• Develop solution metrics that demonstrate and evidence improvement and to enable sustainability to be managed. (input, process and output \ outcome measures)</td>
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<td>• Develop outcome metrics that align with the strategic need and the outline business case (quality, productivity, financial, clinical, patient experience)</td>
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<td>• Ensure that outcome measures describe and recognise causality in improvement activities</td>
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<td>• define and measure quality improvements from the patient perspective across the clinical pathway</td>
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<td><strong>2 Use of proven standard techniques to define current and future process design as necessary</strong></td>
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<td>• Use process mapping / capacity and demand, Lean / Sigma value stream mapping techniques to understand the current “state” process and to help determine future “state” process design</td>
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<td>• Root cause analysis to complement process mapping and data analysis to isolate and then to validate problem root causes.</td>
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<td>• Agree and apply varied approaches to obtaining patient and public contributions e.g. ‘Discovery interviews’ and Appreciative Inquiry techniques</td>
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### Engagement

- Establish executive support prior to clinical team engagement so that the problem is defined, the scope established and risks mitigated prior to work commencing
- Early and sustained patient/carer engagement is an essential prerequisite to all improvement work
- Engage and involve clinical teams in defining and implementing changes
- Ensure collective ownership and understanding of the problem being addressed from clinical leaders and teams together with sustainability of agreed solutions

### Staged evidence based delivery framework

- Proof of principle: **Pilot** and test new ways of delivering services – redesign and quality improvement (usually 12 month duration).
- Test confidence & transferability: **Prototype** new service models and improvements (usually 12 month duration).
- **Spread** and disseminate learning and innovation more widely (2 year plus duration).
- Ensure consistent and meaningful patient/carer involvement across all stages of improvement work

### The application

The framework supports:

- Service improvement across all sectors of healthcare; primary through secondary, tertiary and social care
- Whole health economy initiatives with drivers that include commissioning quality and productivity improvements
- All process and clinical pathway redesign initiatives
- Improvement initiatives generally spanning 6-12 months with sustainability tracking for 2-3 years, to rapid redesign projects (of circa 3-5 days) and broader initiatives including the development and implementation of national clinical strategies

### The benefits

The approach to change is applicable across the spectrum of improvement work and draws learning focusing on what to change and how to change but also develops capability to lead the change.

Clinical teams are engaged throughout the process and will have a clear story to tell as a result of the work. The collective narrative, benefits and emerging principles and learning will shape the improvement outcome for adoption across the country.

By applying a systematic service improvement approach NHS Improvement demonstrates consistency of work and clear outcomes including:

- Measurable differences in the delivery and quality of services for patients and their experience of care
• Evidence based outputs and outcomes both in process and data terms; clearly aligned to strategy and articulated up front and through out the change process
• Reduced waste, increased productivity, elimination of things we do that just don’t make sense
• Engaged workforce, increased ownership and recognition, better quality outcomes
• Transferable (replicable) learning
• A clear understanding of return on investment and other key metrics
• Catalyst to continuous and sustainable improvement with change embedded and sustained

Footnotes
¹ ‘Transforming Inpatients Programme – Spreading the Winning Principles’ NHS Improvement (June 2008)
² ‘Service Improvement for Radiologists’ NHS Improvement (Nov 2007)
³ Cardiac Priority Projects. NHS Improvement (2008)
⁴ Williamson - Model for Improvement (2007)
⁵ Doctorate of Professional Studies in Health (Middlesex University)
Factors affecting the achievements of cancer waiting times targets in NHS Trusts; an exploratory study. Ann Driver April 2008
Annex C: Spreading service improvement – recommendations from NHS Improvement

The purpose of this paper is to outline:
1. Six practical examples to demonstrate the spread of service improvement across England, illustrating spread from a national programme and regional perspective to an acute trust and primary care setting
2. Lessons learnt and recommendations for future spread of improvement work across the NHS
3. Offer the model for spread used by NHS Improvement for adoption by the new Improvement Body

1. NHS Improvement – spreading service improvement

Through the application of a consistent framework of principles (see Annex C), NHS Improvement has developed, tested, spread and sustained improvements across a range of services and locations which include:
- National spread programmes
- Regionally based spread
- Acute provider and GP practice spread
- Integrated pathway spread

The following six case studies illustrate spread in practice:
1. **National spread**: Accelerating Stroke Improvement. This illustrates how NHS Improvement has developed and engaged clinical teams through the establishment of 28 clinical networks to support the delivery of the National Stroke Strategy.
2. **SHA/regional spread**: Implementing primary angioplasty. Through the cardiac clinical networks, NHS Improvement’s national clinical and improvement lead and network clinical advisors and service improvement experts has supported each SHA to increase adoption and access to primary angioplasty from 27% population coverage in April 2008 to over 90%, with a goal of 97% by December 2011.
3. **Acute provider**: Hospital adoption of redesigned pathways for breast surgery following cancer. 57% of acute providers have now introduced a 23 hour pathway or day case procedure as the model of care when previously patients stayed up to six days
4. **GP practice spread**: Atrial Fibrillation risk awareness tool. In less than 12 months over 1000 GP practices have adopted this tool to assess for AF representing 100,000 patients. NHS Improvement team are working directly with GPs to reduce the risk of strokes.
5. **GP Practice and primary care spread**: introducing Serum Natriuretic testing. NHS Improvement has used Scenario Generator software to model the pathway changes to show the cost savings and demand impact of introducing this simple blood test to rule out heart failure. To date the savings predicted across 23 PCTs alone is more than £3 million
6. **Hospital and community spread**: Enhanced Recovery elective pathways of care. By working with clinical pathways and community teams NHS Improvement is helping to streamline elective pathways to reduce length of stay. The National clinical leads are working closely with our GP advisors to ensure this work is aligned to the Royal Colleges and Professional Societies
2. Lesson learnt and recommendations for future spread work in the NHS

The NHS Improvement experience of national improvement work over a decade confirms that spreading sustainable change is complex, requires time, consistent effort and a systematic, all inclusive approach at every level. Nevertheless the key features and critical success factors are generic across different services and situations, as set out in the diagrams below;

Achieving Spread; key dimensions

Achieving Spread; impact assessment

Note the model is dynamic; solutions must be imbedded in practice, systems & structures & capable of responding positively to the changing environment.
These key dimensions are explained:

**Levers and incentives**
- alignment of improvement work to national strategies and policies
- development and adoption of clinically credible, patient-centred and coherent strategies for improvement that embrace clear stages and integrated processes across the patient pathway
- ‘positioning’ of improvement work at all levels to ensure support and sustainability – including national professional organisations
- provision of incentives for engagement in improvement work and good practice - including ‘levers’ such as standards and targets

**Organisational and health economy readiness**
- development of local capacity and capability in improvement work – training/support/networks
- provision of a national system and resource to support, translate and, where necessary, arbitrate the process of implementation, providing an interest-free ‘honest broker’ for the transfer of knowledge, expertise and experience and maintaining the community of interest amongst all relevant bodies and organisations;
- the existence of locally-based support for communities of practice - clinical networks –to mobilise the professionals, services and patients across all sectors of the relevant patient pathway, and provide peer support and practical assistance
- build support for the sustainability of improvement work from the outset

**Engagement**
- clinical and managerial leadership for improvement at all levels – local and national
- locally-based support for communities of practice - clinical networks –to mobilise the professionals, services and patients across the relevant patient pathway, and provide peer support and practical assistance
- acknowledge the ‘human dimensions’ of change and ensure appropriate support and encouragement
- recognise and accept that sustainable change does not occur quickly
- acknowledge that all improvement effort has value – including the learning from less successful approaches
- include service improvement awareness/training/education in all professional curricula and in the annual e-learning modules for all staff

**Efficacy of solution**
- development of a range of tools, techniques and resources designed to make implementation of desired changes as easy as possible for busy clinical teams
- ensure that improvement work and the return on investment can be measured and monitored, and causality can be attributed
- Recognise that spreading improvement usually requires a degree of local adaptation and customisation which may or may not result in a loss of continuity with the original innovative approach and features.
- That any solutions proposed are evidence based, recognise system complexities (and organisational context) and are robustly supported by clinical and managerial champions.

3. Six Practical examples to illustrate spreading improvement in action

3.1 National spread: ‘Accelerating Stroke Improvement’ programme
The Accelerating Stroke Improvement (ASI) initiative, run by the stroke team within NHS Improvement, was created to enhance the implementation of the National Stroke Strategy. A National Audit Office investigation had concluded that significant progress had been made in putting required development in place, but also that significant work remained to be done. A key policy concern - voiced also by patient organisations and representatives - was that the centre of gravity of work on the strategy had been tipped too far towards the acute care aspects of stroke. Consequently, NHS Improvement created a programme of work to redress this balance through reinforcing a whole-pathway focus to improvement, which became known as Accelerating Stroke Improvement. This programme is now in its second year.

Central to ASI was developing a clear focus on certain aspects of care along the patient pathway which, if effectively addressed, would indicate a well-functioning care system. This included some aspects of work that had been included in the vital sign performance management system, aligning the work with existing ‘system levers’ and development priorities. Other aspects of the work - such as the in-patient management of atrial fibrillation in stroke survivors - where areas where little work had been done other than to acknowledge a significant problem. The majority of ASI areas address key issues in transfer of care between organisations and especially in post-hospital/long term care. Alongside these areas of work was created a data collection system designed to both provide a tool for monitoring progress and to highlight significantly under-developed areas of provision. Attempting to measure a poorly provided and ill-defined service shows clearly where major action is needed; a subtle provocation.

NHS Improvement established 28 stroke clinical networks in 2007/08 that have been instrumental in helping to support delivery and change the way stroke services are delivered locally. NHS Improvement has galvanised their collective input and energy to focus on a consistent set of quality measures underpinned by key changes aligned to the vital signs.

3.2 SHA and regional spread: implementation of primary angioplasty
The introduction and dissemination of primary angioplasty (PPCI) in England, provides a good example of how a nationalised healthcare system can work at its very best. After randomised clinical trials had established the potential superiority of PPCI over thrombolysis for ST segment elevation myocardial infarction (STEMI), the Department of Health with the national societies British Cardiac Society and British Cardiovascular Interventional Society (BCIS) conducted a feasibility study (the National Infarct Angioplasty Project, NIAP). The final report in October 2008 concluded that the national implementation of PPCI was desirable, feasible and cost effective.

Taking account of geographical considerations it was estimated that PPCI could be offered as the treatment of choice to 95% of the STEMI population. Concerted implementation work began and was spearheaded by the Cardiac Networks, with the support for implementation assigned to NHS Improvement, via a National Improvement Lead and Clinical Lead for reperfusion supported by a Director.

The work of NHS Improvement brought together interested parties including the DH vascular programme, BCIS, Cardiac Networks and Strategic Health Authorities to share and implement learning from the growth of PPCI and early thrombolysis when timely PCI is not a feasible option.
Through its role NHS Improvement has:

- Increased awareness of the implementation within the networks, capturing learning from early sites and sharing with the wider community using a dedicated web page, reperfusion newsletter, bespoke meetings and presentations at conferences
- Provided guidance to SHA, commissioners and any other interested parties on commissioning of PPCI services including ambulance services and cardiac rehabilitation. It has also published a commissioning guide for PPCI
- Given Bespoke support to organisations
- Co-produced the publication “Health information provision post primary PCI – an overview for health care professionals
- Acted as an independent expert (honest broker) to arbitrate when sites have disagreement about the best model for their area.
- Developed a clinical advisory group with clinical and managerial/ commissioning representation from the 28 Cardiac Networks.

The publication of an interim report in October 2010 showed that 18 months into the project more than 70% of STEMI’s are now being treated by PPCI (an increase from 10% when NIAP started) with all networks having robust plans to achieve 100% coverage for eligible patients by Dec 2011. At the start of the project 27% of the population had access to primary angioplasty services in April 2008, increasing to over 90% by April 2011, working to a goal of 97% by October 2011.

3.3 Acute provider spread: reducing the length of stay for breast surgery

This programme was approached in four phases and governance provided via the Cancer Transforming Inpatient Care Programme Steering group which reported to Professor Mike Richards, National Clinical Director and the Cancer Programme Board.

Phase 1: 2006-2007
Baseline and scoping year exploring current practice gathering information and evidence from a variety of sources relating to bed days, lengths of stay, patient experience and evidence of best clinical practice.

Phase 2. 2007-2008
Testing the idea and providing Proof of Principle.
Two NHS Trusts: Kings College NHS Foundation Trust and Sandwell and West Birmingham Hospitals Trust- City Hospital designed and tested a pathway for patients undergoing mastectomies as a day case and a one night stay. This involved reviewing clinical procedures, listening to patients’ views and integrating the pathway between acute hospitals and the community. It challenged preconceptions surrounding clinical practice in breast cancer surgery and successfully tested mastectomies (without reconstruction) using a day case or one night model.

Phase 3 2008-2009
2. Prototyping. Tested the transferability of the improvement, looking at the competence or capability of the pathway can it be adopted? Confidence factor. Can it be delivered in other settings? Quality assurance ensuring patients were not being put at risk and the pathway met their needs. What are the frequency of the benefits and building the clinical evidence base? The learning showed how different models could be adapted and identified the winning principles that underpin the breast pathway, but can be applied to any pathway of care. Pan Birmingham Cancer Network service improvement team tested the new approach the prototyping indicated the potential benefits of the improvement and confirmed the working
hypothesis. The learning has been widely disseminated across the country to accelerate the pace of change to benefit more patients.

**Phase 4; 2009-2011**

**Spread and Adoption** - focused on spreading the model across England, involving 13 clinical networks covering, 88 acute NHS hospitals; 57% coverage of providers. More patients are now benefiting from the new pathway and they have overwhelming evaluated it as positive. King’s College conducted a postal questionnaire and feedback through focus groups, supported by Breast Cancer Care. Patient support for day surgery was unanimous - all same-day discharge patients said they would choose the approach again and that same-day discharge provided an early psychological boost.

Pan Birmingham Cancer Network covered a population of 1.8million and identified a potential network saving of £1million. The pathway has spread across the West Midlands where 15 PCTs out of 17 are in the best quartile (short length of stay – length of stay, Cancer Reform Strategy second annual report 2009). Sandwell and West Birmingham now provide 94% of all breast surgery (excluding reconstruction) within one day (NHS Consolidation report July 2010).6

The programme has achieved the following outcomes;

- The reduction in national mean length of stay for all elective inpatient breast surgery from Baseline 3.89 (2006/7) to 2.7 (2010/11 prov). The pathway has been applied to the majority of breast surgical procedures (excluding reconstruction).

- Specific focus was given to major surgery cancer procedures traditionally treated as inpatients: mastectomies and wide local excisions (without reconstruction), National mean length of stay reduced from baseline 2.4 (2006/7) to 1.4 (2010/11 prov).

- For the above cohort of patients bed days there have been a reduction in bed days used nationally by 30% from the 2006/7 baseline to 2009/10. 39,483 bed day capacity potentially released. Taking a crude measure of £200 per bed day = £7.89m potentially saved if realised locally

- There has been no significant increase in re admissions related to reducing length of stay. National readmissions (3%)

- Audit undertaken by NHS Improvement of 2000 mastectomy/WLE patients treated on the new pathway (November 10 - March 11) showed 2% readmission rate within 28 days of surgery,

- The 2006/7 baseline for Breast Surgery Day Case was 112,789 episodes. 2009/10 increased to 135,293 episodes treated as day cases including mastectomies and wide local excisions 20% increase or shift to day case surgery becoming the default for breast surgery. The projection for 2010/11 is 142,427 episodes.

**3.4 GP practice spread: early detection of Atrial Fibrillation**

NHS Improvement is leading the national programme to promote awareness and use of an Atrial Fibrillation (AF) risk management tool to all GP practices in England.
12,500 large, disabling and often fatal strokes each year are caused directly by AF – many of which could be avoided by improved management of stroke risk.

The ‘GRASP AF’ tool helps GPs to manage their AF patients by assessing risk and identifying appropriate treatment. GRASP is being "spread" widely across GPs in England – as of August 2011, 1017 practices were using the tool; representing in excess of 100,000 patients with AF from a total practice population of about 6 million people. The NHS Improvement works closely with the NHS Information Centre and PRIMIS (software supplier) to ensure the GRASP tool remains fit for purpose, technically robust and clinically up to date. NHS Improvement employs a full time former GP and public health consultant and information analyst to support the GRASP tool. PRIMIS offers support to practices in the use of the GRASP tool and NHS Improvement also provides technical advice and data analysis.

NHS Improvement staff are engaged in a concerted effort to raise awareness of AF and promote the tool – working closely with cardiac networks, PCTs and charities, and promoting use of the tool at conferences and workshops. A major push is planned for the summer and autumn 2011 in which NHS Improvement is working with and supporting the funding of the Stroke Association “Ask First” campaign to raise awareness of AF. There are also plans to send a flyer about AF to all GP practices in England in partnership with the Atrial Fibrillation Association.

Work to improve the quality of anti-coagulation services for patients with AF has also started. A guide to anti-coagulation services for commissioners was published in May 2011 and NHS Improvement is currently recruiting a consultant haematologist to help with further improvement work in anti-coagulation.

In addition to the AF programme – NHS Improvement is also working with the DH to develop a guide to managing high risk cardiovascular disease patients in primary care – this is work associated with the delivery of NHS Health Check.

3.5 GP Practice and primary care spread: Serum Natriuretic Peptide testing

Early, accurate diagnosis of heart failure in the community allows for earlier treatment, symptom relief, and offers patients a more convenient solution closer to home, but diagnosis is not simple and heart failure referrals to outpatients currently cost the NHS £51million per year.

A simple blood test (serum Natriurectic peptide or NP), costing £15-25, can rule out heart failure and reduce the need for further investigations by 30-40%. A survey of cardiac networks by NHS Improvement in Aug 2009 showed that only 46% of primary care trusts (PCTs) provided this test in primary care.

Computer simulations of the different scenarios and pathways (using Scenario Generator from Simul8) before and after the introduction of the blood test shows potential cost savings of 25-40%, and if used as an average potential saving per PCT yet to implement the test, the total national savings would be £13.7 million.

In all areas where NHS Improvement have undertaken projects to introduce serum NP, implementation has been achieved within 6-12 months, and cost savings have been realised within six months of implementation. A total of 34 PCTs (to date) have requested NHS Improvement assistance with scenario simulation to help put together business cases for introducing this test, 25 have had their modelling completed showing total predicted annual savings of £3.1m.
In addition to the cost savings the serum NP test also improves clinical effectiveness and speeds up diagnosis of heart failure, by highlighting the patients who need urgent referral and so reducing the likelihood of an acute admission, whilst also ruling out heart failure in those without the disease, reducing the number of patients who have to go through unnecessary tests and anxiety.

3.6 Hospital and community integrated pathways spread: enhanced recovery

- Enhanced Recovery is an approach to elective surgery, ensuring that patients are in the optimal condition for treatment, have the best possible care during their operation, and experience optimal post-operative rehabilitation. Enhanced recovery reduces clinical complications post-operatively and benefits both the patients and primary care. “Patients are fitter sooner”
- Patients on enhanced recovery pathways recover more quickly following surgery returning to normal life.
- The enhanced recovery pathway involves the whole health community.
- Primary Care has a key role in optimising health; ensuring patients are well informed benefits primary care and sets patients expectations. Primary care across the country has been involved in the changes and delivery of enhanced recovery pathways.

NHS Improvement is continuing to support the spread of enhanced recovery approaches across colorectal, gynaecology, urology, breast and MSK across all 10 SHAs. The goal is to see widespread adoption across the country this year and then see the work extending beyond the original specialties. The spread of this work requires changes to clinical pathways, working patterns and the behaviour of clinicians and their teams.

NHS Improvement has developed a national network of clinical leaders and experts who are working with us to promote Enhanced Recovery with acute and community organisations and local teams and ensuring that the spread is aligned to the Professional Bodies and Organisations.

Dr Janet Williamson
National Director
NHS Improvement
June 2011
Annex D: The best of clinical pathway redesign - practical examples delivering benefits to patients
[see attached pdf]
NHS Improvement

The best of clinical pathway redesign
Practical examples delivering benefits to patients
CANCER DIAGNOSTICS HEART LUNG STROKE
The best of clinical pathway redesign - Practical examples delivering benefits to patients

CONTENTS

04  Foreword
05  About us
06  The approach: NHS Improvement Framework for Service Improvement
08  2010-11 achievements
10  Helping to deliver quality and productivity improvements and sharing the learning
18  The external assessor perspective
21  The staff perspective
24  The stakeholder perspective
26  Best practice case studies
   • Cancer
   • Diagnostics
   • Audiology
26  • Heart
28  • Lung
34  • Stroke
39  • Stroke
44  • Stroke
52  • Stroke
58  • Stroke

www.improvement.nhs.uk
FOREWORD

Innovation has always been important in the NHS – new ideas, listening and learning from each other and implementing what works best are at the heart of many of the major steps forward we have made for our patients over the years.

The examples here showcase just some of the innovations that have enabled thousands of patients to enjoy better health and well-being thanks to practical service improvements implemented on various clinical pathways.

I urge each of you to read this report. Some of its practical examples of service improvement have also been endorsed by NICE as best practice examples on the NHS Evidence website and I would like you to ask yourselves whether you could take the learning here and replicate some of these achievements within your own organisations.

Whether you are based in a local hospital, GP practice, consortia or PCT cluster, strategic health authority, clinical network or within a community based setting working with social care partners, there are initiatives here that could help you deliver your own quality and productivity challenges. In addition, there are 200 more QIPP case studies on NHS Improvement’s website that provide additional practical examples of implementation for health organisations throughout England.

It is critical that we continue to innovate for our patients as we design the health and care system of the future, ensuring we improve the quality of care for our patients, while making historic levels of financial savings to reinvest in frontline services. NHS Improvement working with and through clinical networks has been proven as an effective and productive model and it ensures that positive learning is spread more widely across the system.

As we move forward, we will strengthen and widen clinical involvement in commissioning decisions. To help facilitate this I have asked Sir Bruce Keogh, who leads the NHS Medical Directorate, to work with the national clinical directors to begin longer term work to strengthen our multi-disciplinary networks and engage with the networks to understand how best to improve outcomes for patients. There is a central role for networks in the new system as the place where clinicians from different sectors come together to improve the quality of care across integrated pathways.

While these examples demonstrate innovative solutions to major health challenges such as cancer, heart disease, stroke and chronic respiratory conditions, there is no reason why these improvements could not be applied to other areas. That is why it is essential to continue the good work delivered by NHS Improvement, the NHS and its partners – we must take this opportunity to achieve the best outcomes for our patients.

Sir David Nicholson KCB CBE, Chief Executive of the NHS in England
NHS Improvement’s strength and expertise lies in practical service improvement. It has over a decade of experience in clinical patient pathway redesign in cancer, diagnostics, heart, lung and stroke services. The organisation demonstrates some of the most leading edge improvement work in England which supports improved patient experience and outcomes.

Working closely with the Department of Health, trusts, clinical networks, other health sector partners, professional bodies and charities, over the past year it has tested, implemented, sustained and spread quantifiable improvements with over 250 sites across the country as well as providing an improvement tool to over 800 GP practices.

NHS Improvement is:

- **Demonstrating the practical application of quality improvement and service redesign with a track record of delivering quantifiable improvement**
- **Leading improvement work in primary, community, secondary and tertiary care**
- **Providing clinical engagement and leadership by working with over 50 clinical leads**
- **Aligning with policy direction, providing a bridge between national strategy and local engagement and implementation, often through clinical networks**
- **Having skilled expertise in full range of quality improvement tools and techniques including high level Lean and Six Sigma plus experience from across the healthcare sector as well as commercial knowledge gained at Toyota, GE, Aviva, Boots and private healthcare**
- **Showing measurable results from concept to delivery**
- **Working in partnership with leading charities, professional bodies, Royal Colleges and other associations ensuring a strong alignment to research, patient-facing organisations and third sector work**

NHS Improvement’s priorities across cancer, diagnostics, heart, lung and stroke have been aligned to domains one, two and three in the NHS Outcomes Framework 2011-12. However, they could equally align to domains four and five.

The case studies contained in this report are taken from across the clinical pathway and are helping to deliver the objectives contained within each of the domains. It was only possible to feature a selection of good examples from around the country, however, there are numerous sites out there that could have been featured for the work they are doing. NHS Improvement would like to thank its partners for their ongoing work in improving services and bringing benefits to patients.

**Dr Janet Williamson**, National Director, NHS Improvement
THE APPROACH: NHS IMPROVEMENT FRAMEWORK FOR SERVICE IMPROVEMENT

NHS Improvement applies a framework for service improvement and clinical pathway redesign to ensure a consistent and systematic approach to its work.

**The work falls into five key categories:**
- Long term programmes of work to support delivery of a key national priority (Stroke Improvement Programme)
- Bespoke improvement work which is time limited (review of seven day services across England)
- Tailored support to assist delivery (working with SHAs to implement primary angioplasty)
- Establishment, development and support of clinical networks (cardiac and stroke networks)
- Advisory and development work (service improvement training for clinical and managerial staff)

**It utilises the following approach as part of any service improvement work:**
- **Proof of principle**: Piloting and testing new ways of delivering services – redesign and quality improvement (usually 12 month duration),
- **Testing wider applicability of pilots**: Prototyping new service models, innovations and improvements (usually 12 month duration)
- **Spreading and disseminating learning and innovation** more widely (two year plus duration).
Working with health sector partners over the past year NHS Improvement has helped to deliver a number of patient-centred improvements and identified many future benefits. These are just some:

1 million women received cervical cancer screening test results within two weeks at 16 pilot sites

this has removed 10m waiting days and saved £1.6m

Up to £10.5m could be saved by halving the length of stay for those patients having day case/one night stay breast surgery

Over 123,000 bed days could be saved each year if the Accelerating Stroke Improvement aim for 40% of stroke patients leaving hospital to have access to early supported discharge is achieved.

290,000 patients now waiting less time for test results, saving 655,940 waiting days, with up to £300,000 saved at some sites.

£45m could be saved nationally on home oxygen services based on a minimum reduced spend of £600k across nine project sites.

If every trust applied the Winning Principles we promote, which includes: reducing length of stay; enhanced recovery; and averting admissions, this one initiative has the potential to reduce bed utilisation by 20%, saving the NHS 1m bed days.
£1.8m per year could be saved by increasing access to psychological support for stroke patients by 30%. Approximately £64k per stroke clinical network.

£5.9m could be saved by giving nearly 66,000 patients direct access to a tinnitus audiologist or hearing therapist.

1.2m outpatient appointments for cancer survivors could be released over the next five years thanks to testing on four tumour pathways.

£3.25m could be saved over the next five years by using safe risk stratified pathways for Children and Young People cancer survivors.

£106m of savings could be released by working with local hospitals to free up avoidable bed days for non-elective cardiac patients.

8,000 strokes every year could be prevented by using the GRASP-AF detection tool. This could save the NHS £96m.

Over 650 health staff have been trained to use the Discovery Interview™ technique to engage with patients and carers.
NHS Improvement’s tools and techniques, combined with its expertise and experience, could be applied to other service areas to support delivery of the five key domains within the NHS Outcomes Framework 2011-2012 and priorities within the Operating Framework 2011-2012.

It is committed to continue delivering quality improvements that are clinician-led and patient-focused to enhance patients’ outcomes and experiences.

**Practical support for the delivery of QIPP**

Delivering the Quality, Innovation, Productivity and Prevention (QIPP) challenge successfully will be key to delivering £20bn of savings across the NHS by 2015. NHS Improvement’s approach to system improvement aligns closely with the QIPP agenda QIPP and over the past year more than 200 good practice examples have been identified across the country. These are now showcased on the QIPP section of its website [www.improvement.nhs.uk/qipp](http://www.improvement.nhs.uk/qipp).

Examples can be viewed by specialty (heart, lung, cancer, etc) or across the patient pathway – primary care, referral, diagnosis, treatment, aftercare and end of life care. In addition to the case studies there is useful information and tools and since summer 2010 the site’s pages have been viewed over 25,000 times.

**Demonstrating the evidence**

NHS Improvement’s leading edge improvement work with partners across the country has been recognised on a number of occasions during the past year by NICE and it now has six case studies which have been commended on the NHS Evidence website[^1]. Most recently its works on developing the one day/one night stay breast surgery model and computer modelling on the potential impact of serum natriuretic peptide blood tests to GPs practices have joined commissioning for stroke in primary care, and the optimal detection of Atrial Fibrillation; Cytology 14-day standard for test results and its work as part of the enhanced recovery programme.

In addition to its contributions to the nationally-renowned NHS Evidence site, NHS Improvement continues to encourage the identification and scoping, development, piloting, prototyping and spread of best practice through the Improvement System[^2] - a comprehensive online resource to support shared learning. It provides service improvement tools and resources, practical guidance, case studies, useful contacts and signposting for further information.


[www.improvement.nhs.uk](http://www.improvement.nhs.uk)
Sharing the learning

NHS Improvement has captured the latest learning and innovative thinking on a range of healthcare topics and disseminated this knowledge during the past year through a number of channels. These have included:

- Review workshops with clinicians, cancer survivors and representatives from a range of NHS organisations and third sector
- Social marketing training session for those working in cardiac rehabilitation
- Sponsorship and facilitation of FiLM (Frontiers in Laboratory Medicine) 2011 - a forum where global influential leaders address the key challenges facing laboratory medicine
- A collaborative event jointly-led and designed by GPs looking at the challenges facing those working in the new commissioning landscape
- Website which was accessed by 75,000 unique visitors last year from 140 countries
- An e-seminar on heart failure end of life care which attracted 100 participants and is being explored further to help support stakeholders facing resource and financial challenges in the current climate
- Working with local, national and specialist media

Involving public and patients

Engaging the public and patients in its activities is one of NHS Improvement’s core principles in the way it works. It is committed to designing and delivering health and care services around the needs of patients and carers and now has a new section on its website showcasing this partnership approach. The patient experience website supports people working with patients and carers, offering easy to access engagement resources, examples of good practice and links to useful information including personal accounts from patients of their conditions and explanations of how work involving NHS Improvement has helped improve their lives.

Working with clinical networks, NHS organisations across England and in partnership with charities we support clinical teams and managers, providing practical tools and techniques that transform, deliver and build lasting improvements across care pathways making a difference to patients, services and staff in meeting the quality goals as part of the QIPP agenda. Most recently we have worked in partnership with the Stroke Association to co produce Community Voice events around the country designed to hear the experiences of stroke survivors and carers.

Following successful testing the trademarked ‘Discovery Interview™’ innovative approach is now used by a number of specialties in the UK health system to improve care by understanding patient and carer experiences and by gaining insight into their needs. They are based upon a philosophy that puts patients and carers at the centre, and values listening to their experiences as a way of gaining insight which is unavailable elsewhere to stimulate quality improvement.

*The Discovery Interview™ technique was originally developed by the Coronary Heart Disease Collaborative in 2000*
IMPROVING CANCER CARE

NHS improvement - Cancer’s work has gained national recognition and continues to work closely with its key stakeholders including the Department of Health and other members of the Cancer programme team, cancer networks, charities, local organisations and clinical teams. It is also liaising more closely with social care organisations and professional colleges to further enhance outcomes for patients.

Integral to the Improving Cancer Outcomes Strategy (2011), NHS Improvement’s work includes Transforming Inpatient Care, across elective and emergency care, Living with and Beyond Cancer (Survivorship) for Adults and Children and Young People.

Transforming Inpatient Care promotes the spread and adoption of the four winning principles (one: unscheduled (emergency) patients should be assessed prior to the decision to admit. Emergency admission should be the exception not the norm; two: all patients should be on a defined inpatient pathways based on their tumour type and reasons for admission; three: clinical decisions should be made on a daily basis to promote proactive case management and four: patient and carers need to know about their condition and symptoms to encourage self-management and to know who to contact when needed. Tried and tested models of care include:

- Day case/one night stay for major breast surgery
- Approaches to reduce avoidable emergency admissions and reducing lengths of stay for those who do need to be admitted as emergencies
- Supporting the spread and adoption of enhanced recovery approaches across colorectal, gynaecology urology and musculoskeletal. The DH Enhanced Recovery Partnership Programme ended March 2011 but this partnership work continues to support implementation within Transforming Inpatient Care

Specific emergency pathways work is focused on aligning with other emergency initiatives such as NHS 111 pathways, emergency care practitioners, spread of tried and tested innovations such as communication alerts, promoting acute oncology models and preventing unnecessary readmissions

Adopt Survivorship aims to improve the outcomes for adults living with and beyond cancer. Over the past year it has completed the pilot phase of testing elements of the care pathway, which are summarised in the case study section. Over the next year it will work with 13 tumour projects in breast, prostate, lung and colorectal cancer across seven communities in England to test risk stratified pathways of care based on the individual needs to:

- Improve the patient experience and reported outcomes of care
- Reduce outpatient attendances by 50%
- Reduce avoidable admissions by 10%

All patients will be offered an assessment and care plan at key stages of their pathways.

The enabling projects which are testing remote monitoring and care coordination will support the effective delivery of supported self managed care.

In the Children and Young People (CYP) Survivorship workstream there has been tangible progress since September 2010. The initial 10 CYP tests sites have continued evaluating and testing models of care, identifying proposed models of follow up care, and other non clinical initiatives to support CYP cancer survivors. Achievements have included four existing sites moving into prototyping phase; defining measurable outcomes; developing after care pathways with clinicians, commissioners, patients and local teams and a patient experience workshop held with test sites and Teenage Cancer Trust.

Priorities for 2011-2012 now include: continuing to support the 10 initial sites with ongoing testing and a package of evidence by October 2011; supporting the four prototype sites to present evidence of four proposed models of care being tested and defining the quality key indicators that need to be in place within services to provide effective care of patients within all levels of after care. NHS Improvement is also working towards providing evidence of a 20% reduction in CYP cancer survivorship hospital-based outpatient appointments (those patients already routinely followed up) and achieving the goal that 100% CYP survivors have a treatment summary and care plan.

“

Our aspiration is that England should achieve cancer outcomes which are comparable with the best in the world. However, the changes required to deliver on this aspiration are complex and will take time. However, I am confident that we are moving in the right direction and will see more of the positive results that have already been achieved by NHS Improvement. Working with a range of NHS partners, national charities and patients, they have delivered improved outcomes in some key areas. But we can and we must go much further if we are to achieve the levels of ambition for cancer patients.

”

Professor Sir Mike Richards (CBE), National Clinical Director for Cancer and End of Life Care
IMPROVING DIAGNOSTICS

In areas such as cytology, pathology and radiology, NHS Improvement has been working with teams nationwide to re-design services, focusing on efficiency and quality.

In cytology, it has used Lean methodology to support the new Vital Sign that all women have their screening test results within two weeks. At 16 pilot sites, this has benefitted one million women, removed 10 million waiting days and saved £1.6 million (around £100,000 per site).

In histopathology, NHS Improvement has been working with nine pilot sites, aiming for 95% turnaround results in seven days, with half of those sites processing tests within three days. 290,000 patients are now waiting less time for test results saving 655,940 waiting days with up to £300,000 saved at some sites (extrapolating this across England could deliver £3.375 million savings).

In radiology, NHS Improvement has been working to reduce waiting times and working towards creating a ‘no wait’ imaging service. The radiology team is continuing to support the National Stroke Strategy and contributing to the Accelerated Stroke Improvement initiative.

A programme of clinically-led SHA imaging events and local site visits is helping to take this work forward. The new radiology work focusses on interventional radiology and early diagnosis to support the Improving Outcomes: A Strategy for Cancer (2011).

NHS Improvement provides a wealth of information and support to imaging services across England. Service improvement changes promoted and delivered by NHS Improvement working with imaging departments have played a large part in the reduction in waiting times for imaging services seen in recent years. The implementation of Lean methodology to radiology services has delivered massive improvements for patients and also for the staff working in these departments. NHS Improvement is seen as a beacon of excellence in service delivery both nationally and internationally.

Dr Erika Denton, National Clinical Director for Imaging

I have been extremely impressed with the work of NHS Improvement and the contribution they have made to the diagnostics agenda, particularly their work on pathology. Improving turnaround times for histopathology and cytology is a vital step in the wider cancer agenda and the evidence shows that this will have enormously positive effects on patients and trusts alike. Phlebotomy is one of the main ways in which patients experience pathology testing first hand and so dramatically improving that experience - through reduced waiting times and a more streamlined service - will have a profound effect upon a huge number of people.

Dr Ian Barnes, National Clinical Director for Pathology

www.improvement.nhs.uk/diagnostics
IMPROVING DIAGNOSTICS - AUDIOLOGY

NHS Improvement has worked in partnership with the Department of Health National Audiology Programme since July 2008 supporting service improvements across England. Assisting 12 challenged sites to reduce waiting times for patients and later 18 sites to improve the quality of patient experience, four key winning principles were identified and tested:

- Direct access
- One-stop clinics
- Care closer to home – community services
- Developing protocols for patients with complex hearing problems

Amidst economic adversity and the challenges posed by times of change in the NHS, these teams rose to the challenge of developing their services and delivering successful projects that will influence the future practice of audiology services across England.

Central to their philosophy was a multidisciplinary approach where consultants, clinicians, scientists, managerial and administrative staff worked together to deliver truly patient focussed services – across primary and secondary care.

Fostering the right project approach was key to planning, implementation and developing the new services. The audiology pilot and prototype sites have proved they are the epitome of today’s forward thinking NHS staff.

Crucially, these teams are keen to share their learning. Their onward aim is to embed the approach that has been achieved locally and the national goal is adoption and replication across the country.

Emerging learning from the pilot and prototype sites was shared via strategic health authority clinical lead networks, as well as through presentations and workshops such as the British Academy of Audiologists (BAA) and via an audiology e-bulletin subscribed to by nearly 300 interested stakeholders. Strong partnerships were forged with third sector partners including the National Deaf Children’s Society (NDCS), the Royal National Institute for the Deaf (now Action on Hearing Loss) and the British Tinnitus Society Association (BTA) to gain support and input for the improvement work.

Essentially these are proactive teams. Clearly, these are leading departments. More importantly, patients are benefiting.

“These pilot sites, working with NHS Improvement have applied Lean principles to demonstrate how improvements can be made across the pathway that will change the way audiology services should be delivered in the future.”

Professor Sue Hill,
Chief Scientific Officer, Department of Health
Heart disease is still the second biggest cause of death in England despite huge progress and reductions in mortality and morbidity since the publication of the National Service Framework for Coronary Heart Disease in 2000.

NHS Improvement – Heart, continues to build on its excellent record of improvement work across the cardiac agenda over the past 10 years.

The current work programme is tackling a variety of contemporary issues which span the cardiac patient pathway including: preventing strokes caused by atrial fibrillation; improving efficiency in using hospital beds in acute cardiology and cardiac surgery; pioneering a new way of commissioning cardiac rehabilitation and improving efficiency and quality across the heart failure pathway from early diagnosis to end of life.

NHS Improvement has worked alongside Department of Health colleagues to support delivery of national priorities such as the implementation of primary angioplasty for treatment of heart attack and jointly on the development of a Commissioning Pack for Cardiac Rehabilitation.

The programme provides ongoing support to cardiac networks across England, as they continue to be a key resource in the delivery of local improvements to services through work with commissioners and providers of cardiac care.

Collaborating with charities and professional bodies has always been an important part of NHS Improvement’s work and recent examples include an awareness campaign with the Stroke Association and the Arrhythmia Alliance and also developed a cardiac rehabilitation resource and partnership working on end of life care in heart failure with the British Heart Foundation.

The work is promoted through a range of publications, presentations on national and international platforms, e-seminars and more recently as a publishing partner for the NICE Quality Standards on chronic heart failure.

Service improvement does not happen spontaneously. It requires organisation, leadership and a great deal of hard work. This is what NHS Improvement has provided in spades over the years. Their industry and commitment have been consistent levers for change over the years working with the local delivery mechanisms and the 28 cardiac networks.

I would like to thank every one of them for their outstanding efforts and their determination to extend healthy life and reduce suffering in our population.

Professor Sir Roger Boyle,
National Director for Heart Disease and Stroke, Department of Health
As one of NHS Improvement’s newer programmes, 2010 saw completion of NHS Improvement – Lung’s first full 12 months. During this time the team worked with stakeholders across the country in contributing to the Department of Health’s consultation on the national Chronic Obstructive Pulmonary Disease (COPD) strategy.

In addition, the team linked up with the British Thoracic Society, Primary Care Respiratory Society (PCRS) UK, Asthma UK and the British Lung Foundation, established a web presence and launched the Lung Improvement News e-bulletin, which now has over 1,200 subscribers.

The programme has continued to support the SHA Respiratory Clinical Leads and help guide clinical network and community of practice development across the country. In addition, the website contains over 70 examples of good practice alongside other resources, case studies, tools and practical suggestions to guide improvement activities in clinical teams and organisations.

It has also provided direct support to over 40 COPD and asthma national improvement projects and trained a number of staff in project management and improvement methodologies and approaches. As the COPD projects come to the end of the testing phase of work, the results have seen demonstrable improvements as well as the publication of emerging learning, examples and key measurable improvement principles and approaches.

Through developing new and sustainable models of care, using capacity differently, reducing variations, and focussing on the implementation of good practice, the team is aiming to:

- Reduce overall spend on home oxygen services and prescriptions
- Reduce avoidable unscheduled admissions by 20%
- Reduce the length of stay by 25%
- Reduce readmissions within 30 days by 20%
- Increase patient satisfaction, experience and outcomes

Priorities for 2011-2012 include further development of respiratory networks as vehicles to spread good practice and improve the access of data, and establish high quality and cost effective commissioning pathways with the new GP consortia.

Its work going forward will continue to concentrate on six core areas of care, which are aligned to the NHS Outcomes Framework 2011-2012, domains and QIPP workstreams. The six areas are: early accurate diagnosis, improving oxygen services, transforming acute care, chronic care and self-management-models, end of life care and asthma.

People who are training Olympic teams at the moment will be focusing on even very small components of their team and how they can improve to ensure that they will win a medal rather than going out in the heats. That’s what every single clinical team needs to be doing, making the outcomes for patients amongst the best in the world. On the NHS Improvement - Lung web pages there is a whole host of resources, the result of 10 years experience - which can be used to help clinicians at a local level understand and improve.

Professor Sue Hill, Joint National Clinical Director for the Respiratory Programme

NHS Improvement is a collection of clinicians and experts in improvement science that help to translate a clinical vision into a sustainable service improvement. They have been invaluable in lung work in actually helping clinicians realise their ambitions and vision in terms of quality improvement and improving clinical effectiveness, patient experience and patient safety.

Dr Robert Winter, Joint National Clinical Director for the Respiratory Programme

[www.improvement.nhs.uk/lung](http://www.improvement.nhs.uk/lung)
The role of NHS Improvement - Stroke was set out very clearly in the National Stroke Strategy (2007) as supporting its implementation and establishing clinical networks in stroke care.

A system of Stroke Care Networks, covering all services in England, was completed in 2009 when they were audited against strategy specifications. Since then, NHS Improvement has continued to guide and develop networks, providing coordination and support for local improvement activities and links to national initiatives.

Four years on from the strategy its role remains as crucial, leading on the Accelerating Stroke Improvement initiative - launched by the Department of Health in response to the National Audit Office’s (NAO) report on stroke services. The NAO noted the importance of NHS Improvement and Stroke Care Networks in improving services for people affected by stroke and called for further work to build on the progress in service development.

NHS Improvement is also working closely with the Care Quality Commission to drive service improvements identified in its 2011 report ‘Supporting life after stroke’. This includes leading the drive to ensure that focus on improving outcomes extends to the whole stroke care pathway, including community services, nursing homes and social care.

On the ground, it has also provided direct support to over 40 stroke projects, resulting in demonstrable improvements in clinical outcomes and patient experience as well as the publication of learning, examples and key development principles which have been subsequently used nationally to guide service improvement.

In addition, the NHS Improvement website contains over 200 examples of stroke good practice alongside other resources, case studies, tools and practical suggestions to guide improvement activities in clinical teams and organisations. The most recent addition - the Community Stroke Resource page - is a comprehensive collection of material including evidence from literature and research, business cases, presentations and documentation to show how to develop community stroke services.

New developments include joint ventures with two major stroke charities - The Stroke Association and Connect - to improve stroke survivors’ experience in post-hospital care and develop practical tools to ensure patients with aphasia can fully participate in the planning, delivery and evaluation of their care.

Priorities for 2011-2012 include guiding stroke care networks through the transition to new commissioning arrangements and supporting their role in developing pathway commissioning for stroke patients within the new GP consortia. NHS Improvement - Stroke will continue to lead the Accelerating Stroke Improvement initiative, aiming to ensure effective service development along the whole stroke pathway throughout England.

There has been a revolution in the improvement of quality stroke care in recent years, and the work of the stroke networks and NHS Improvement has been at its centre. In particular, great progress has been made in raising public and professional awareness and in delivering comprehensive specialist acute stroke care. NHS Improvement will continue to guide and inform the work priorities in the stroke networks to address these areas in a timely, effective and productive fashion.

Damian Jenkinson, National Clinical Lead, NHS Improvement - Stroke and Consultant Stroke Physician, Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust
NHS Improvement was formed as a result of the Hosted Services Review (November 2007). The review endorsed the continuation of work delivered by the Cancer Services Collaborative ‘Improvement Partnership’ and the Heart Improvement Programme and requested that they be integrated and extended to include other clinical specialties such as stroke. The objectives were to: share learning across clinical specialties, increase impact and show value for money.

NHS Improvement was asked to deliver this agenda by having:

- A clear programme of work aligned to national priorities with measurable outcomes
- A focus on the delivery of high quality improvements based on latest evidence based practices
- Clinically led and patient focussed workstreams
- A close working relationship with other national organisations, stakeholders and professional organisations
- Robust monitoring and performance

To determine just how effective NHS Improvement has been since its creation, an external evaluation was commissioned. Tribal Consulting carried out a robust, independent assessment and produced its findings in September 2010.

Tribal based its work on a series of questions: “Has the work of NHS Improvement led to an improved quality of services? Does it continue to do so? Does it represent good value for money?”

Reviewing both ‘what we do’ and ‘how we do it’, the consultants looked at NHS Improvement’s identity, value creation and operational factors. They evaluated case studies from the Heart, Stroke, Cancer and Diagnostics work programmes. It also reviewed existing literature and empirical evidence, conducting interviews with 26 people and facilitating discussion workshops between April and July 2010.

In summarising their findings, Tribal said NHS Improvement had a “catalytic” role in bringing about improvements to outcomes. It recognised the organisation’s importance in disseminating best practice through clinical networks and other stakeholders - using a range of channels such as its publications, events and online support. Tribal further argued that NHS Improvement was “well positioned” to provide a coordinated whole NHS system approach to healthcare improvement.

According to Tribal: “Good value for money can be demonstrated by the relationship between costs and benefits. Our evaluation uncovered substantial benefits from the work of NHS Improvement, even if not all of these can be measured. There are some projects which do have very measurable results, for example, the faster access to diagnostics (cytology), saving bed days (23 hour breast cancer model), and primary angioplasty unit admission (PPCI roll out programme).”

The report concludes by saying: “...It is our considered view that NHS Improvement does represent value for money, playing a critical role in the development, testing and roll-out of clinical improvements. Due to the ‘behind the scenes’ role that it often takes, especially when clinical improvements may have many stakeholders and participants, it is easy to underestimate the relative impact and importance of NHS Improvement.”

Tribal did identify some areas where NHS Improvement could strengthen its offer to the NHS. These included: ensuring systems and processes demonstrate return on investment; supporting and developing staff so they can maximise their contributions and promoting its profile and identity with stakeholders.

Work to address some of these areas had already begun before Tribal’s final report however, the external assessment has acted as a catalyst to accelerate this.

In terms of ensuring our systems and processes can demonstrate return on investment, NHS Improvement has developed three key systems that make best use of its knowledge and information and demonstrate the impact its making across the full range of specialties – they are the website, NHS Improvement System (available through the website), and new Performance System.

The Performance System is central in evidencing the outcomes of its work, gathering information in a number of vital areas such as patient experience, productivity and efficiency gains and the resources allocated. Using real-time data dashboards, it allows information to be qualified, quantified and aggregated in order to demonstrate value for money, impact and return on investment against QIPP. These data dashboards mean that NHS Improvement staff can even drill down to individual project sites - who are contracted to provide baseline information, monthly monitoring data and case studies - and evaluate performance against the project milestones and identify any risks.
The great advantage of the Performance System is that it is integrated with the NHS Improvement System and website, providing a seamless flow of information. Stakeholders working with NHS Improvement will be able to access the Improvement System. This provides a comprehensive online resource developed to support every stage of an improvement initiative, including initial scoping; project management; reporting; case study development and ultimately sharing the outputs and outcomes with the wider NHS.

IDENTITY
Visible leadership and a mentoring approach were demonstrated by NHS Improvement in various implementation programmes.

NHS Improvement, to our knowledge, is unique in employing (on a part-time basis) a variety of clinicians (consultants, GPs, nurses, physiotherapists, ambulance staff etc) who are chosen because of their expertise and standing in the areas which the programmes are concentrating... as a consequence of this background, all of them have major national ‘street credibility’.

NHS Improvement staff appeared to have a common set of beliefs and values and work towards a common objective of sharing learning, increasing impact and bringing tangible improvements in the delivery of NHS services.

VALUE CREATION
Its ability to engage with key stakeholders, the strength and value of NHS Improvement’s connections, an ability to bring people together around a common agenda of improvement, and working in partnership with charities and voluntary organisations, as well as the NHS.

BUSINESS APPROACH
NHS Improvement has a strong focus on aligning its planning to the strategic priorities of the Department of Health... at the organisational level, measures to evaluate the performance of the organisation and individual projects have been introduced and aligned to QIPP.

NHS Improvement’s knowledge and understanding of the NHS context was seen as a major asset. Respondents noted that this included both practical and theoretical knowledge – of key clinical areas, of the health service system and of the challenges faced by NHS staff.

NHS Improvement is a learning and teaching organisation with strong commitment to improvement. It is successful in terms of helping the NHS to focus on meeting the national priorities, sharing knowledge and developing networks and relationships.
As a result of Tribal’s review, NHS Improvement intends to re-affirm its commitment to supporting staff in a number of areas including:

- Sharing and learning between workstreams
- Increasing use of IT solutions to support virtual working
- Ensuring a healthy work/life balance
- Introducing an anonymous questions and answers facility to pose questions to the national director as well as an online forum
- Maintaining the programme of monthly National Team meetings to allow contributions to future planning, knowledge sharing and networking

A member of NHS Improvement’s executive team is leading this work. Planning includes a funded training and development programme which will encompass specific skills, training opportunities and a broader focus on career development in the changing health landscape. A two day workshop will be held in September 2011 with a focus on preparing for the future.

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In response, it has revamped its communications strategy in order to better manage its brand and raise its positive profile so key stakeholders are better placed to know who NHS Improvement is, what it stands for and how it can help them. It will encourage feedback from its wide range of stakeholders to ensure what it offers and how it is communicated is well-timed and well-targeted.

In the last year around 75,000 unique visitors from 140 countries visited NHS Improvement’s website and there were more than 350,000 page visits. Our website was refreshed to include a new QIPP section featuring more than 200 case studies from across both our specialty programmes and all parts of the patient pathway. The site also links to our highly commended case study examples on the NHS Evidence website.

Nearly 9,000 people have subscribed to NHS Improvement’s range of e-bulletins to receive news about best practice in their particular field of interest as well as national guidance, latest news and information about learning events and workshops. The organisation also showcased its services and achievements over the past year, reaching thousands of people from across the health sector and beyond through appearing at over 100 events and producing over 25 publications which help to further share and embed best practice.
In 2008, an initial staff survey was carried out to assess their views on life in the workplace, what support they required to perform more effectively, where progress was being made and to identify potential future improvements. This was repeated in 2010, with some identical questions for comparison but also additional questions, reflecting the new world and its challenges, to establish what it was like.

The 2010 survey was completed by 51 staff (a response rate of 74%). In summary, the feedback was very encouraging, despite the climate of uncertainty within the NHS and wider public sector.

More than 80% of staff agreed or strongly agreed that they understood the scope and direction of work covered by their workstream and NHS Improvement as a whole. A total of 84% of staff said they felt supported in forging strong working relationships with their team and line manager – a 22% increase on the previous survey findings. More staff were receiving inductions than in 2008 and these were helping to provide reassurance of expected performance.

Staff indicated they have freedom to act with 80% saying ‘I have an opportunity to do what I do best as part of my job’ – a similar result to 2008. While staff generally acknowledged that the pace and volume of work has increased, 84% also recognised that support was provided to maintain an appropriate work/life balance.

More than 72% of staff wished to take advantage of additional training and development in order to fulfil their roles while 86% of staff said their line manager was genuinely concerned about their well-being – a similar result to 2008.

A total of 72% of staff also felt there were opportunities to discuss work issues with colleagues in other workstreams. Staff said in general they felt empowered to contribute to discussions regarding the future of their workstream (90% agreed or strongly agreed) and NHS Improvement as a whole (64%).

The survey revealed positive themes around opportunities, relationships, communication, organisation and leadership, induction, training and development, and work/life balance. This will be used to further develop the role of line managers, explore training opportunities and build staff views into future corporate plans.

Direct comparisons between NHS Improvement’s survey and the annual national NHS survey are slightly difficult due to different methodologies, however the general comparison is favourable.
According to a review of staff survey results across the NHS for 2009 produced by the Care Quality Commission (CQC), 58% of staff felt that they had adequate materials, supplies and equipment to do their work, whereas the figure was 90% for NHS Improvement.

In the national NHS survey (which covered all 388 NHS trusts in England), just over two-thirds of respondents said they had clear objectives, but in answer to a similar themed question, 84% of NHS Improvement staff said ‘I know exactly what is expected of me in my work in NHS Improvement’.

The national picture is that more than half of all staff (57%) said they knew how their role contributes to what their trust was trying to achieve. The NHS Improvement position is that 64% agreed or strongly agreed that ‘I feel empowered to contribute to discussions regarding the future direction of NHS Improvement’.

The national NHS survey found 63% of staff felt they had frequent opportunities to show initiative in their role, whereas 92% of colleagues in NHS Improvement said ‘I have some say over the way that I work’.

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The passion, energy and motivation of NHS Improvement’s staff were commented on. Employees are drawn from a range of backgrounds and professions; however they appear united in their passion for improving the health service. This was seen as an important asset, both to inspire and energise the NHS organisations they work with and to sustain NHS Improvement staff in what can often be challenging work.

Tribal Report, September 2010

www.improvement.nhs.uk
NHS Improvement’s work can only be successfully progressed in partnership with varied interest groups (clinicians, front line staff, managers, policy-makers, charities, professional associations, carers and patients).

In order to better understand how NHS Improvement is viewed by its stakeholders, to improve its working relationships and enhance its communication channels, research was conducted at a number of events between November 2010 and June 2011 which involved nearly 500 participants.

The overwhelming majority of survey respondents viewed NHS Improvement’s contribution as positive – with 56% saying its work was ‘good’ and a further 29% saying it was ‘very good’. A similar response was received in judging how effective people saw NHS Improvement as an organisation with 51% saying good and 26% saying very good.

The stakeholder research did indicate that its reputation was seen as overwhelmingly positive – 24% said it was ‘very good’, 48% said was ‘good’, 26% were ‘not sure’ and 2% said ‘poor’.

These results were broadly in line with other pieces of research carried out on a national scale which involved consideration of NHS Improvement. A primary care trust census carried out by the National Audit Office in 2010 showed 69% of respondents were ‘aware of’ and ‘had used’ NHS Improvement as an information source. Nearly a quarter of those polled were aware of but had ‘not used’ the organisation while 8% were ‘not aware’ of NHS Improvement. Their census found 52% of respondents had found NHS Improvement ‘very useful’ as an information source (only topped by Hospital Episode Statistics and Improving Outcomes guidance results) and 42% said it was a ‘useful’ source.

In a census of cancer networks carried out by the National Audit Office in 2010, 89% of respondents were ‘aware of’ and ‘had used’ NHS Improvement as an information source whereas 11% were ‘aware’ but had ‘not used’ it. These figures compare favourably with other national programmes and centres within the NHS. The census revealed that 15% had found NHS Improvement ‘very useful’ as an information source, in this case we were behind the top three of NICE guidance, Improving Outcomes guidance and the National Cancer Intelligence Network. A further 69% in their census stated they had found us ‘fairly useful’.
Elsewhere, there has been support for NHS Improvement’s work in an Ipsos MORI review of the Coronary Heart Disease National Service Framework. Their report said national improvement teams /improvement agencies “played a fundamental role in supporting service design and developing networks but were much less at the forefront of most people’s minds.”

NHS Improvement - Stroke worked with the National Audit Office during production of the 2010 report ‘Progress in Improving Stroke Care’ and also cooperated with the NAO to create an addendum to ‘Progress In Improving Stroke Care: A Good Practice Guide’. Similarly, the Care Quality Commission 2010 report ‘Stroke services: National report’ highlights the work of NHS Improvement and directs those seeking advice and information on improving services to our resources.

The National Audit Office also in its recent report ‘Managing high value capital equipment in the NHS in England’ drew on good practice identified by NHS Improvement including case study evidence and recommended that Trusts make use of its work to improve their management of high value equipment (MRIs, CT scanners and linac machines for cancer treatment).
Helping youngsters cope with cancer

**Strategic overview**

Today more than 1.6 million people living in England have had a diagnosis of cancer and with an ageing population this is likely to increase significantly in future years. The Improving Outcomes - A Strategy for Cancer publication (January 2011) sets out plans to drive up England’s cancer survival rates so that they match the best in Europe, saving an extra 5,000 lives every year by 2014-15. But as Professor Sir Mike Richards, England’s clinical director for cancer, says: “... improving outcomes for people with cancer isn’t just about improving survival rates. It is also about improving patients’ experience of care and the quality of life for cancer survivors and our strategy also sets out how that will be tackled.”

An important population within these figures are children and young people affected with cancer.

There are approximately 40,000 survivors of child or young person cancer in England who will need some level of care and long term follow up as they live into adulthood, perhaps 50+ years after their cancer diagnosis.

Providing long term follow-up for all childhood cancer survivors in a hospital setting is not viable or appropriate in the future given the exponential increase in the number of cancer survivors.

The Children and Young People (CYP) workstream, working with clinicians, commissioners, patients and local teams, has developed national safe risk stratified pathways that identify how follow up for children and young people can be delivered in line with current pressures and aspirations.

The pathways form the basis of the models of care now being tested by the four prototype sites. The principles emerging from the testing emphasise the importance of:

- Patient choice and being responsive to individual, clinical, psychosocial and practical needs
- Providing patients with treatment summary and care plan
- Stratify risk and signposting patients to these appropriate and tailored pathways
- Providing differing levels of care and support based on risk assessment
- Effective coordinated supported care
- Effective automated surveillance / remote monitoring systems to remind patients / healthcare professionals when specific screening/investigations are required
- Fully supporting primary care within any shared care arrangements
- Managing transition between paediatric, young adult and adult services
- All after care services need to be cost effective and delivered by the appropriate health care professional to ensure the best use of skill mix and resources

Patients have been involved in shaping and developing these pathways of care with an emphasis on actual / practical improvements for all cancer patients.

The following case study is one aspect of the important issues identified for CYP cancer survivors.

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All children and young people who are cancer survivors should expect to receive the same, high quality standard of individualised care irrespective of where and when they are treated.

Alex Brownsdon, Patient Representative NCSI CYP Steering Group

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[www.improvement.nhs.uk/cancer](http://www.improvement.nhs.uk/cancer)
The Survivorship Programme aims to provide relevant, sufficient and timely information that informs, supports and empowers survivors in relation to many aspects of their lives that have been affected by treatment for cancer.

Through three education courses completed in 2010, the programme seeks to improve the quality of patient care and self-management. Sessions focused on a range of topics including relationships and body image, anxiety, coping strategies and risky behaviours, late effects of treatment, fertility, finances, education, employment and life skills. The programme is part of the National Cancer Survivorship Initiative (NCSI) and The Christie is one of the test sites for the children and young people workstream.

The pilot courses were held in Manchester with patients from the Trust’s Young Oncology Unit. A total of 56 patients enrolled on the courses with attendances varying between sessions. Attendees were aged between 16 and 32, with the average age being 22. The majority of people on the courses were from the Greater Manchester area.

Questionnaire feedback was completed as part of the programme with further follow-up evaluation to come. This work helped measure the value of the intervention, ensuring continuous assessment and on-going refinement. Participants were asked whether the course met expectations and 12 sessions out of 24 received 100% feedback of either ‘agree’ or ‘strongly agree’. They also gave 100% backing to eight out of 24 sessions that had motivated them to learn more.

The survivorship programme helped me in many ways. Primarily it gave me a better understanding of what help was available after having cancer, as well as being able to use the folder as a handbook to refer to in the short and long term. It also gave me vital contacts to get in touch with which really helped a lot and on the whole I think it’s a brilliant idea!

Patient who took part on the programme

A cancer diagnosis in children and young people is rare. However, when this occurs as a child or young person this is at a time in their lives when they need to meet many challenges. Physical and social development, education, and the learning to take responsibility to move on into the adult arena for example. The diagnosis, treatment and later consequences of treatment puts this normal development into jeopardy. Longer term support is vital to assist survivors to achieve maximal quality of life.

Dr Gill Levitt, Great Ormond Street Hospital for Children NHS Trust, National Clinical Lead for Children and Young People Survivorship
Transforming Inpatient Care: Driving improvements in quality that values patients’ time and increases efficiency

Strategic overview
The Cancer Reform Strategy (2007) highlighted the need to focus attention on inpatient care for cancer patients. The Transforming Inpatient Care Programme was established to take this forward led by NHS Improvement.

The National Audit Office (2010) reported good progress has been made in reducing the number of inpatient days per year for cancer patient’s, however, there is scope to go much further and to make a significant contribution to the efficiency savings that the NHS needs to make.

The Transforming Inpatient Care Programme continues to be a cancer priority and this is reflected within the Improving Cancer Outcomes Strategy (2011) supporting the QIPP agenda and Outcomes Framework.

The improvement programme promotes innovation and new models of care delivery:
- Day case/one night stay for breast surgery and other procedures
- Enhanced recovery approaches for elective care (colorectal, gynaecological, urological and musculoskeletal)
- Approaches to reduce avoidable emergency admissions and readmissions
- Reducing unnecessary lengths of stay for those who need to be admitted as emergencies and elective

The lessons learned from testing prototypes and new models is disseminated across the NHS in order to improve the quality of care and experience for patients and to maximise the potential scope of savings.

The Transforming Inpatient Programme is underpinned by four ‘Quality Winning Principles’.

The Quality Winning Principles

Winning Principle 1
Unscheduled (emergency) patients should be assessed prior to the decision to admit. Emergency admission should be the exception not the norm.

Winning Principle 2
All patients should be on defined inpatient pathways based on their tumour type and reasons for admission.

Winning Principle 3
Clinical decisions should be made on a daily basis to promote proactive case management.

Winning Principle 4
Patient and carers need to know about their condition and symptoms to encourage self-management and to know who to contact when needed.
Patient feedback tells us that being diagnosed with cancer can be a difficult transition to make. Patients undergoing surgery for both cancer and non-cancer expressed they wanted to be in hospitals for as short a time as possible. Through patient forums, diaries and interviews, people have talked about how unnecessary waits and procedures increased anxiety. Patients have stressed the importance of getting back to normal as soon as possible and valuing their time.

**Getting breast surgery patients better sooner**

The ‘Quality Winning Principles’ were applied to the redesign and streamlining of the breast surgery pathway for all patients undergoing major breast surgery (without reconstruction).

The working hypothesis was that the streamlining of the breast surgical pathway could reduce length of stay by 50% and potentially release 25% of bed days and managing patient expectations the patients experience could be improved.

**Why breast surgery?**

Baseline data drawn from local and national sources indicated:

- Variation in clinical practice and conflicting clinical evidence surrounding the use and effectiveness of wound drains, drainage of seromas, anaesthetics and pain control
- Breast cancer is one of the most commonly diagnosed cancers in the UK. In England, female breast cancer equates to approximately 34,000 new cancer cases registered per annum and approximately an additional 20,000 patients undergo breast surgery for benign conditions. (Cancer Registration in England 2000)
- Breast cancer is one of the areas which appears to perform worst – survival rates
- Significant geographical variation in length of stay

- All admissions for mastectomy are elective but only a quarter of patients (27%) were treated as day cases
- In 2007-2008, there was 54,115 elective admissions form breast surgery that occupied 305,061 bed days (HES)
- The mean range of length of stay between acute providers ranged from 0-7 days for mastectomy procedures. Prompting the question. Why should mastectomy be an inpatient procedure? It is a:
  - Relatively short operation
  - Low post operative pain
  - Patient can mobilisation early
  - No high risks as with other major surgery such as retention/ileus
  - Rare significant post op events

**Enhanced Recovery Partnership**

The principles of enhanced recovery in elective surgery are currently being implemented across the NHS nationwide and, as a result, transforming the approach to care before, during and after surgery. This innovative, evidenced-based practice has already resulted in dramatically improving the recovery times for patients across colorectal, gynaecology, urology and musculo skeletal care pathways.

It has so far been recognised that implementing enhanced recovery pathways instead of using traditional models actual improves efficiency as it is helps patients to get better sooner after surgery - it also has improved their experienced due to shorter stays in hospital and a more rapid return to normal living as they are encouraged to contribute to their own recovery. The hospital itself benefits in stable or reduced readmissions rates, with lower complications and better bed utilisation as reductions have also been witnessed in the amount of high dependency and intensive beds which are normally required.

Enhanced recovery entails a multidisciplinary team and healthcare community approach as they are actively involved in the patients care before, during and after surgery. This means the patient is well informed and prepared pre-operatively, which helps to reduce anxiety or stress levels prior to surgery and results in the patient making the correct decisions about their treatment and recovery pathway.

The Enhanced Recovery Partnership led by NHS Improvement working in partnership with National Cancer Action Team, SHA Enhanced Recovery Leads, Cancer Networks and National Clinical Leads supports the NHS to implement and realise the benefits of enhanced recovery.

www.improvement.nhs.uk/cancer
The breast surgery improvement work was undertaken in four phases. The governance of the programme of work was through the Cancer Transforming Inpatient Care Programme steering group which reported to Mike Richards Cancer Programme Board.

Phase 1: 2006-2007
Baseline and scoping year exploring current practice gathering information and evidence from a variety of sources relating to bed days, lengths of stay, patient experience and evidence of best clinical practice.

Phase 2. 2007-2008
1. Testing the idea and providing Proof of Principle. Two NHS Trusts: Kings College NHS Foundation Trust and Sandwell and West Birmingham Hospitals NHS Trust - City Hospital designed and tested a pathway for patients undergoing mastectomies as a day case/one night stay. This involved reviewing clinical procedures, listening to patients’ views and integrating the pathway between acute hospitals and the community. It challenged preconceptions surrounding clinical practice in breast cancer surgery and successfully tested mastectomies (without reconstruction) using a day case/one night stay model.

Phase 3 2008-2009
2. Prototyping. Tested the transferability of the improvement, and how different models could be adopted in different settings. The Pan Birmingham Cancer Network service improvement team tested the model in day case units, treatment centres and inpatient wards.

The Pan Birmingham Cancer Network covers a population of 1.8 million. The team identified a potential saving of £1 million across the network. The pathway has spread across the West Midlands where 15 PCTs out of 17 are in the best quartile (short length of stay, Cancer Reform Strategy second annual report 2009). Sandwell and West Birmingham now provide 94% of all breast surgery (excluding reconstruction) within one day (NHS Consolidation report July 2010). The prototyping indicated the potential benefits of the improvement and confirmed the working hypothesis. The learning has been widely disseminated across the country to accelerate the pace of change to benefit more patients.

Phase 4; 2009-2011
Spread and Adoption - focused on spreading the model across England, involving 13 clinical networks covering, 77 hospitals sites (55 NHS Trusts); 36% coverage of providers.

I went down to surgery at about 8.45am and by 11.30am I was sitting up in bed and by 3.30pm I was having tea and biscuits. My recovery has been remarkable, within a couple of days, I had forgotten about the surgery and I would highly recommend day surgery to others.

Patient, Kings College Hospital NHS Foundation Trust

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More patients are now benefiting from the new pathway and over 2,000 patients have evaluated it as a positive experience. Patients’ experience has also been captured on video and through focus groups. King’s College conducted a postal questionnaire and feedback through focus groups, supported by Breast Cancer Care. Patient support for day surgery was unanimous - all same-day discharge patients said they would choose the approach again and that same-day discharge provided an early psychological boost.

**Progress to date**

Good progress has been made proving the working hypothesis of streamlining the breast surgical pathway could reduce length of stay by 50% and potentially release 25% of bed days.

Clinical engagement has been strong and the pathway has received endorsement by the British Association of Day Surgery (BADS).

Mastectomies and wide local excisions (without reconstruction) National mean Length of stay reduced from baseline 2.4 (2006/7) to 1.4 (10/11 provisional)

There has been a reduction in 30% of bed days from the 2006/7 baseline potentially saving £7.89 million if released locally.

There has been no significant increase in re admissions related to reducing length of stay.

The biggest shift in practice has been seen around drains patients are now having no drains, drains removed prior to discharge, or being discharged with drains in situ rather than remaining in hospital.

Patient’s expectations are managed at the beginning of the pathway with the emphasis on a good pre-operative assessment.

The breast surgical day case/one night stay pathway has been acknowledged as best practice by NHS Evidence, CQuins and the best practice tariff. The pathway has been presented nationally and internationally. It has also been published in professional journals.
NHS Improvement has been working, through the adult cancer survivorship team, to support the NCSI, helping clinical teams and patients to better understand the current service and potential for the future.

An evaluation of the NCSI test community projects through a patient experience survey\[10\] was carried out in November 2009 by the Picker Institute.

A total of 1,284 questionnaires were completed by patients receiving care at 17 test community projects.

Among the many findings, the survey reported that:

- 85\% of patients said their follow up care was ‘excellent’ or ‘very good’ and just 5\% said it was ‘poor’ or ‘fair’
- 74\% of all respondents had a named individual they could contact if concerned but 21\% did not
- 69\% of patients said they currently needed no extra help with physical, clinical or medical concerns; just over a quarter (26\%) of those who required additional help needed help with four or more different physical aspects of living after cancer
- Almost all patients reported positive experiences of the care provided by different health professionals involved and few reported any problems. Patients were able to ask the questions they wanted, receive answers they could understand and felt health professionals listened to them; 86\% felt they had been given consistent advice all or most of the time and 96\% said they had been treated with dignity and respect by health professionals all (or most of) the time
- 62\% of patients had most of their follow up care at their local hospital, 16\% at another hospital, 10\% at their GP surgery and 6\% elsewhere; 14\% said they had not had any follow up care

\[10\]www.improvement.nhs.uk/cancer/LinkClick.aspx?fileticket=T7F7QDka6xY%3d&tabid=214
Improving quality for patients with lung cancer in Sussex

At the start of the programme, lung cancer care in Sussex faced a number of issues, many of which related to the number of sites offering care and treatment and coordination between these sites. There was inadequate time for patient assessments and a lack of access to other support services.

A process mapping exercise highlighted areas for improvement in the care of patients with lung cancer and led to a newly-designed pathway. A weekly multidisciplinary Combined Cancer Clinic (CCC) within the Sussex Cancer Centre at Brighton and Sussex University Hospitals NHS Trust has been established where patients at any stage in their treatment pathway post-diagnosis have an holistic assessment carried out. The clinic has been designed to be more flexible to suit patients’ needs, allowing them to trigger an appointment or cancel if not required and rebook for a later date.

During the consultation a treatment record summary (TRS) is produced which is given to the patient either at the clinic or sent to them and their GP within 24 hours. The patient also has a detailed assessment and care plan (ACP) completed by the specialist nurses. All documents are given to the patient to be kept in their own patient-held record. Initial feedback from both patients and staff has been very positive.

Non elective emergencies appear to be reducing compared to data in previous years. Of those patients admitted between February and May 2010 none were patients who had received care through the new service.

Due to the setting of the clinic and the increased time allotted to each patient, the local team has been able to carry out certain procedures in the cancer centre, avoiding the need for emergency admission or re-attendance at a later date for an outpatient procedure.

Huge advances have been made in cancer treatment over past years, and survivorship rates are increasing all the time. However, a by-product of this success is that cancer patients typically need supporting for many years beyond the end of their primary treatment. The care planning needs include not only monitoring for possible recurrence of the original illness but also a whole range of unrelated conditions that can arise because of the long term effects of the original cancer treatment. As a patient who has lived with the effects of cancer over many years, I am hugely encouraged to see the progress being made.

The cancer landscape has changed but the public and professional view is lagging behind. Cancer is seen in simple terms - completely cured and ‘back to normal’ or incurable disease and ‘terminal’. Reality is different. Some still die within a year of diagnosis. Others with incurable cancers live years with their illness or experience treatment consequences directly after cancer treatment or years later, with similar illness patterns to a long term condition.

"""Professor Jane Maher, National Clinical Lead for NHS Improvement

Michael Prior, Cancer survivor
Achieving a seven day turnaround in histopathology

Strategic overview
Approximately 800 million pathology tests are performed annually in England. The Review of Pathology Services in England in 2006 by Lord Carter estimated that 70-80% of all health care decisions affecting diagnosis or treatment involve a pathology investigation. Pathology employs 25,000 staff nationally and costs the NHS in the order of £2.5 billion a year, representing nearly 4% of total NHS expenditure.

In 2006, Lord Carter endorsed the work of NHS Improvement’s Diagnostics team and Lean as the methodology to deliver a seven-day service (from the time the patient has the specimen taken to the result being available to their clinician) and make improvements in quality, safety and productivity.

The recently-published Improving Outcomes: a Strategy for Cancer confirms current cancer waiting time standards continue to be justified and should be retained. Histopathology services are an important element in delivering the 31-day and 62-day cancer wait standards for patients. Improvements within the service deliver tangible results in measuring the patient experience.

When the situation became very difficult in terms of resistance to change, NHS Improvement were unfailingly supportive. There is no doubt in my mind that external, impartial training and support is critical to the success of any profoundly transformational project, particularly when it involves doctors.

Dr Patricia Harnden,
Clinical Director, The Leeds Teaching Hospital NHS Trust
Historically there were lengthy delays in histopathology reporting at Whipps Cross University Hospital NHS Trust resulting in a risk of breach of cancer diagnosis targets. With the support of NHS Improvement, the service has been transformed and their success is now being celebrated with awards. By eliminating a number of bottlenecks, the overall turnaround time has reduced from 11 to four days, with 95% of results available in seven days, giving patients and clinical teams a guaranteed and predictable service.

As well as allowing earlier management and treatment of patients, time and efficiency savings have been made both within and outside histopathology as evidenced by the feedback from the service users.

In January 2011, the histopathology team presented their ‘extra requests database’ to the Trust’s Dragons’ Den-style competition, attended by NHS Innovations. From 28 applications, they won first prize and a £2,000 educational bursary.

How has this change happened?
Prior to this initiative, there were a number of problems affecting the service. Histopathology results were delayed and issued in batches, particularly for ‘routine’ cases. The department was regularly receiving telephone and fax requests for results from clinical teams and multidisciplinary team coordinators - 10% of which were made whilst the patient was in clinic being seen by a clinician.

Six hours of resource within pathology was wasted on a weekly basis dealing with requests and prioritising cases. In other departments, resource was required to keep track of outstanding cases and chase results. The overall mean turnaround time was 11 days with some cases taking up to 40 days.

Analysis of specimen pathway data using statistical process charts (SPC) highlighted the points of greatest delay and inefficiency. These were targeted using a series of ‘plan, do, study, act’ problem solving cycles, which led to improvements across the pathway and consistent reductions in turnaround time. The average turnaround time is now four days and the degree of variation markedly reduced so that 95% of results are available with seven calendar days.

The impact has been felt by clinical users of the service:
• Dermatology patients are now given their histopathology results and discharged when they return to have their sutures removed a week post-biopsy. This has eliminated the need for a further follow-up appointment, saving on average 25 appointment slots every month with annual cost savings of £30,000
• Faster histopathology results have enabled colposcopy to increase the number of results letters dispatched within two weeks
• Nurse-led telephone clinics operate more smoothly as 100% of results (previously just 75%) are available at the outset
• In urology, patients are discussed at the multidisciplinary meeting and given management plans within four working days of the biopsy being taken
• The referral of patients with gynaecological malignancy to the regional cancer centre has been streamlined with the elimination of batching
• Unexpected malignancies are reported promptly as prioritisation of cases according to clinical need has been abolished and all samples are dealt with on a first-in-first-out basis
• Throughout the units, unnecessary telephone calls and waste of administrative resource have been eliminated

As a result of these changes, clinicians receive histopathology results faster, in a predictable and guaranteed fashion. This improves the overall patient experience.

Changes made in histopathology have changed the service beyond recognition. My patients are getting reassurance earlier. Firm management plans are being made much earlier. Time and money are being saved by potentially reducing the need for follow up clinic slots.

Consultant Gastroenterologist
Using Lean processes to support delivery of the new Cervical Screening Vital Sign

Strategic overview
Improving Outcomes: A Strategy for Cancer\(^1\) (January 2011) confirmed that “commissioners should ensure that cervical screening results continue to be received within 14 days. As at November 2010, 81% of women were receiving their results within 14 days. As recommended by the Advisory Committee on Cervical Screening, the threshold for achieving this has been set at 98%... By taking a complete screening pathway approach, achieving a 14-day turnaround time has also been shown to be cost saving, with an average £100,000 saved per unit per year. Some cancer networks are using this in their local Quality, Innovation, Productivity Prevention (QIPP) programmes.”

Following the initial success of phase one Cytology, the 10 pilot sites have continued to embed their improvements across the whole end to end pathway, developing a culture of continuous improvement in their daily work. Sustainability is the greatest challenge following any improvement effort and the teams continued to monitor their data very closely for a further 12 months.

In phase two, six sites were challenged to take the learning from phase one and use this to accelerate the pace of implementation.

NHS Improvement has gained international recognition and been asked to present its Lean work at conferences in Denver, Seattle and Copenhagen.

"Your work is on target with its focus on quality, prevention, and safety along with an improvement in productivity. Specifically, your work in the histopathology services value stream is creating a predictable process as seen in your 36% reduction in turnaround times while reducing errors in sample labelling and requisitions. You should be proud of your success to date, while taking your approach to other processes within the organisations you are working with."

Charles Hagood, President – Healthcare Performance Partners, Inc. USA

\(^1\)www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_123371

www.improvement.nhs.uk/diagnostics
The Somerset and West Dorset multi-agency programme spans more than 50 general practices, two call-recall agencies, three acute trusts and two commissioners - providing a cervical screening service for up to 45,000 women a year. It was a phase one national pilot site, working with NHS Improvement in 2008-09. At the start of the programme, the average time for a woman to get her result was 22 days. Despite a massive surge in demand half-way through the project, by the end of the programme all results were being returned within 14 calendar days. This level of service has been maintained, month on month, for over a year following sign-off, with parallel improvements in patient safety and productivity.

The project has been successful in achieving the 14-day turnaround time despite a 30% increase in demand during this time, following coverage of the illness of Big Brother celebrity Jade Goody.

It has been made possible due to a number of changes in the process. Samples are stockpiled at the point of receipt and handled on a ‘first in, first out’ basis while cases identified as urgent are prioritised and processed the same day. The project has benefitted from good and regular communication across all aspects of the pathway. Strong sponsorship from the chief executive helped to accelerate improvements in IT services and elsewhere that might have been difficult to negotiate without her active support.

In addition to meeting the 14-day turnaround time, 95% of results are returned to women within seven days of their smear being taken, there has been a 90% fall in major and minor errors in request details and a 90% fall in clinical incident reports across the whole process. Analysis has shown a return of between £85,000 and £100,000 a year based on an initial investment of £30,000.

I got my result back so quickly that I nearly phoned the lab to check that they had actually done the test.

Patient

I was absolutely amazed by the results you have all achieved - you must be very proud. I know you are experiencing great increases in demand...with my thanks and much appreciation: well done all of you.

Jo Cubbon
Chief Executive, Musgrove Park NHS Hospital
Improving access and quality of care

Strategic overview
NHS Improvement has worked in partnership with the Department of Health National Audiology Programme since July 2008, to support 18 NHS providers in piloting innovative ways to redesign hearing, balance and tinnitus, complex needs and children’s pathways of care. During the first year, 12 ‘challenged’ audiology services needing urgent help were assisted to reduce their waiting times and streamline their ‘testing and fitting’ services to attain maximum efficiency within their systems.

Following publication of four good practice guides: incorporating care pathways for adult hearing impairment; paediatrics; tinnitus; and complex hearing and balance, the programme set out to improve the quality of the patient experience, increase productivity and sustain the improvements made. Learning from this initial pilot phase is shared in the national publication, Pushing the Boundaries: evidence to support the delivery of good practice in audiology (NHS Improvement, July 2010).

Six out of the 18 sites have been involved in the subsequent prototype phase to further test the following four key principles established in the pilot phase, which underpin an effective service:

- Direct access to audiology services
- Implementing one-stop clinics – encouraging adoption of the ‘assess and fit’ procedure
- Access to care in the community
- Developing standardised specifications and pathways for those identified with complex hearing problems and developing communities of practice to support delivery of these services

The focus of this concluding work was on quality and innovation. However, additional productivity and prevention benefits were realised as a direct result of the improvement work:

- Early indications show that by implementing the model of direct access to a tinnitus audiologist for the 65,761 tinnitus patients seen nationally each year, a potential saving of £5.9m per annum could be made
- For the 205,000 re-assessments undertaken annually, work with one prototype site demonstrates that providing access in the community by an associate practitioner, a potential saving of £5.3m per annum could be saved nationally

The learning from this work has been captured, evidenced and disseminated across the NHS in: Shaping the Future: Strengthening the Evidence to Transform Audiology Services (NHS Improvement, March 2011).
The audiology teams at University Hospitals Birmingham NHS Foundation Trust and Sherwood Forest Hospitals NHS Foundation Trust identified that up to 73% of GP referrals to ENT (ear, nose and throat) outpatient clinics met the direct access audiology service criteria for tinnitus management. Patients reported that delays in access to services added to the emotional impact of tinnitus and that professionals were providing inconsistent information.

New guidelines were therefore drawn up to allow GPs to refer directly to audiology clinics or via an agreed pathway to ENT. These services are provided by audiologists and hearing therapists who have access to ENT consultants with the ability to request MRI scans if required.

Core measures were identified at Sherwood Forest as key to establishing whether any implemented changes were a true improvement – or just added more variation into the patient pathway.

These were agreed with patient focus groups. To demonstrate quality and productivity benefits, the measures included:

**Clinical outcome measures** – number of patients red flagged to ENT, treatment modalities, severity scores of tinnitus at presentation and six weeks.

**Process measures** – number of referrals, referral source, referral to access times, number of DNAs, number of follow ups per patient, quality of clinical records/individual management plans.

**Defect measures** – proportion of referrals that met red flag criteria on referral letter, proportion of referrals that on clinical assessment patients met red flag criteria.

**Patient satisfaction measures** – a satisfaction survey was given to all patients attending clinic. A patient focus group was used to evaluate the patient experience.

**Staff satisfaction surveys** – staff were given a questionnaire to determine the level of involvement and awareness of pathway redesign to help identify training needs of staff.

The graph above shows reduced variation and turnaround times for patients following the direct access pathway.

**Measurable changes, outcomes and impact**

Variation in the referral to assessment times were identified by use of statistical process control (SPC) charts – see diagram above. Root cause analysis on the outliers from mean identified: delays in redirection of referral from ENT, DNAs; variation in capacity due to staffing leave.

Activities that delayed the consultation process (i.e. clinic room stock levels low necessitating the audiologist to leave the room) were identified and overcome. Some tasks were simplified and combined – e.g. patients able to agree a follow up appointment on the day of clinic. Telephone follow up and partial booking were implemented to reduce DNAs.

Waiting times have been reduced from up to 28 weeks to less than four weeks, with less follow-up appointments required.
Like many people I put off seeing my GP for a long time, therefore I found the very short wait to see someone in the tinnitus clinic very beneficial. My visit to this clinic was very reassuring; the audiologist was friendly, clear and concise and discussed my options with me as regards both my hearing and my tinnitus as well as confirming that I was not imagining what I am going through... This clinic gave me the reassurance of further help and encouragement to deal with my tinnitus in the future.

Audiology tinnitus management clinic patient

I was relieved when I went for my appointment at the tinnitus clinic. After weeks of unhelpful appointments with doctors, particularly the ENT consultant, I was feeling very frightened. I didn’t think that anyone could help me. I feel it would have been better to be referred straight to the tinnitus clinic.

ENT referred patient

This new pathway enables more effective access for other patients that require an ENT opinion. Only a small volume of patients with tinnitus need a medical opinion, for example, objective tinnitus – these are pulsatile tinnitus or complex patients for which tinnitus is a symptom with multiple medical issues.

Andrew Reid, ENT Consultant Surgeon, University Hospitals Birmingham NHS Foundation Trust
CASE STUDY

Patients need to be able to access the reassessment service when they feel their hearing has changed. Nottingham University Hospitals NHS Trust wished to re-design the support provided for patients who routinely require hearing aid assessments and simple repairs. The new pathway had to be more efficient than the existing reassessment service, more cost effective and also offer care closer to home for their patients, therefore improving accessibility, whilst maintaining or improving quality.

With the acceptance that an ageing population will inevitably lead to a significant increase in demand, the future provision of services by a well trained workforce was also tested in this model. The aim was to provide evidence that the service can be delivered safely and effectively using associate practitioners was tested and measured by comparing clinical and patient outcomes between the existing and new pathways.

**Measurable changes, outcomes and impact**

With direct input, patients, commissioners, managers and clinicians (all grades) agreed to pilot and prototype care closer to home so that patients would have more accessible services, with fewer and shorter journeys, thus valuing their time.

By introducing a ‘screening’ appointment, they reduced the time in clinic for most patients and improved the department’s ability to manage capacity. The work has improved accessibility with services increasingly provided in a community location of their choice, reducing patient travel while maintaining clinical quality. Evaluation has shown a 46% reduction in patient visits was required and a 43% reduction of time spent in clinics meaning that a greater number of patients can be seen within existing resources. (see old and new pathway diagram above).

This site demonstrated that:
- Clinical quality is maintained in this model
- 97% of patients preferred a local service with a survey showing increased patient satisfaction
- There is no detrimental impact on patient care
- Patients do not return more often for reassessment at a local service
- A greater number of patients can be managed within existing resources

This audiology team were short listed for their Trust’s annual awards for innovation.
The pilot has developed individual staff members into team players with the skills to drive and implement change and innovation in the future.

**Project Lead**, Nottingham University Hospitals NHS Trust

We have shown that great things can be achieved if change is embraced not feared.

**Clinical Lead**, Nottingham University Hospitals NHS Trust

Huge thanks to NHS improvement for their support with our project, putting on some really useful away days, their continued motivation and leaving us with transferable skills. We were all apprehensive in the early stages. Don’t be put off.

**Richard Nicholson**, Clinical and Professional; Lead, Audiology, Nottingham University Hospital NHS Trust

This project has been the best thing I’ve done in 10 years.

**Long-serving junior audiologist**, Nottingham University Hospital NHS Trust

It gives me more variety and responsibility.

**Associate Audiologist**, Nottingham University Hospital NHS Trust

At the very start of the project we were asked our thoughts on what we wanted on how the service could be improved…I now have the reassurance that my hearing has not deteriorated which is great as you get a lot of stick at home!

**Brian Thacker**, Audiology patient
IMPROVEMENT

Focusing on prevention and best practice to save lives and save money

**Strategic overview**

Atrial fibrillation (AF), an abnormal heart rhythm, is a major cause of stroke, accounting for 14% of all strokes. Stroke management and prevention, as set out in the National Stroke Strategy (December 2007), are major priority areas for the NHS. AF increases the risk and overall severity of stroke and therefore improved recognition and management of AF is important – a key area within the NHS where prevention should be encouraged as both a cost-saving measure and an approach which will improve people’s lives. The cost to the NHS and social services of the first year of care for the 12,500 patients whose strokes are attributed to AF is estimated at £148 million.

NHS Improvement has been involved in a national programme to reduce the number of strokes caused by AF. The work aligns to the national QIPP agenda through improving the quality of care, preventing the risk of stroke, and increasing productivity via reducing the costs associated with stroke.

The programme has a number of aims including achieving greater use of a risk management tool called Guidance on Risk Assessment for Stroke Prevention in Atrial Fibrillation (GRASP-AF) in primary care to help reduce the number of preventable strokes (the tool was originally developed in the West Yorkshire Cardiac Network). GRASP-AF identifies all patients on the existing GP AF register and performs a risk assessment using CHADS₂ to identify whether they are on the correct treatment and support the use of anticoagulant drugs such as warfarin. Ultimately the programme was initiated to reduce overall stroke mortality.

www.improvement.nhs.uk/heart
Fifteen cardiac and stroke networks participated in the first round of national priority projects to address the detection and promote optimal management of atrial fibrillation (AF) in primary care and a further round of 10 projects were supported by NHS Improvement in 2009-2010.

A number of the second round projects have used the GRASP-AF tool (available from NHS Improvement) to facilitate the detection of AF and improve its management.

In NHS County Durham and Darlington, 31 practices have used the GRASP-AF tool. Their data indicated that AF prevalence was 1.75% (compared with a nationally reported figure of around 1.2%) and that use of warfarin was lower than expected.

Avon, Gloucestershire, Wiltshire and Somerset Cardiac and Stroke Network has been working with seven primary care trusts on use of the GRASP-AF tool and optimising the use of appropriate anticoagulation for high risk patients. Funding linked in with the programme helped PCTs to run local events and share the learning, review baseline data and develop action plans. Interim data in December 2010 showed 107 GP practices involved, more than 17,500 patients with AF identified in six weeks of which 189 were found to have AF. This represented an estimated cost saving of £220,000 return on investment in addition to the improved quality outcomes for these patients.

Throughout our involvement in this work we often see clear variations in AF prevalence rates across England and that opportunistic screening increases the recorded prevalence. We have seen that many individuals who have already been identified with AF and with known risk factors putting them at high risk of stroke, are not being treated with anticoagulants. We believe that the management of AF in primary care is practical, feasible and can be improved by the use of the GRASP-AF tool.

The identification of those at risk and appropriate treatment offers a real opportunity for cost effective, high quality care, with the goal of preventing avoidable mortality and morbidity.

Dr Matt Fay, GP with a special interest in stroke and NHS Improvement Clinical Lead
The introduction and dissemination of primary angioplasty (PPCI) in England, provides a good example of how a nationalised healthcare system can work at its very best. After randomised clinical trials had established the potential superiority of PPCI over thrombolysis for ST segment elevation myocardial infarction (STEMI), the Department of Health with the national societies British Cardiac Society and British Cardiovascular Interventional Society (BCIS) conducted a feasibility study (the National Infarct Angioplasty Project, NIAP). The final report in October 2008 concluded that the national implementation of PPCI was desirable, feasible and cost effective. Taking account of geographical considerations it was estimated that PPCI could be offered as the treatment of choice to 95% of the STEMI population. Concerted implementation work began and was spearheaded by the Cardiac Networks, with the support for implementation assigned to NHS Improvement, via a National Improvement Lead and Clinical Lead for reperfusion supported by a Director. The work of NHS Improvement brought together interested parties including the DH vascular programme, BCIS, Cardiac Networks and Strategic Health Authorities to share and implement learning from the growth of PPCI and early thrombolysis when timely PCI is not a feasible option. Through its role NHS Improvement has:

- Increased awareness of the implementation within the networks, capturing learning from early sites and sharing with the wider community using a dedicated web page, reperfusion newsletter, bespoke meetings and presentations at conferences
- Provided guidance to SHA, commissioners and any other interested parties on commissioning of PPCI services including ambulance services and cardiac rehabilitation. It has also published a commissioning guide for PPCI
- Given bespoke support to organisations
- Co-produced the publication “Health information provision post primary PCI – an overview for health care professionals
- Acted as an independent expert (honest broker) to arbitrate when sites have disagreement about the best model for their area
- Developed a clinical advisory group with clinical and managerial/commissioning representation from the 28 Cardiac Networks

The publication of an interim report in October 2010 showed that 18 months into the project more than 70% of STEMI’s are now being treated by PPCI (an increase from 10% when NIAP started) with all networks having robust plans to achieve 100% coverage for eligible patients by Dec 2011. At the start of the project 27% of the population had access to primary angioplasty in 2008, increasing to 88% by February 2011 working to a goal of 97% by October 2011.

The East Midlands Cardiac Network

In 2009, within East Midlands, only one hospital Trust offered a 24 hour PPCI service, seven days a week. Following a regional reconfiguration project led by the SHA working with the cardiac network, which included service assessment site visits to inform the accreditation process, five hospital trusts were accredited to perform PPCI within the East Midlands. This would ensure equity of access of the service within 60 minutes for the population it serves.

In January 2011, four out of the five hospital trusts were providing a 24/7 PPCI service across the region with full coverage expected in November 2011. Throughout the whole process the East Midlands region has been supported by colleagues at NHS Improvement through developing a clinical summit early in the process and securing a national clinical lead to help gain project buy-in; facilitating at clinical advisory groups; attended site visits and led on peer reviews; identified independent patient representatives and provided advice and support throughout.
Early in 2010, I was fortunate to be asked to sit on the accreditation team for PPCI to provide a patient/carer focus. I had the benefit of seeing both a localised view and a national insight into how learning from existing good practice can overcome the many challenges faced. My contribution was both valued and inclusive, providing me with confidence and reassurance that this was a truly patient-centred approach, most definitely providing a benefit for all in the long term.

Pauline Mountain, patient/carer representative on the accreditation team for PPCI

NHS Improvement has been instrumental in enabling progress with PPCI across the East Midlands. Both Professor Roger Boyle and Dr Jim McLenachan provided clinical advice and steer throughout the project which helped our recommendations being acceptable to all.

Dr Doug Skehan, Consultant Cardiologist, University Hospitals Leicester NHS Trust, Cardiac Network Clinical Lead

NHS Improvement helped with a range of people and in a variety of ways – from attending regional PPCI meetings and providing a national perspective, sharing best practice with expert support and facilitation and even providing cardiac nurse expertise and representation during the individual trust site service assessments visits.

Rebecca Larder, East Midlands Cardiac Network Director
Driving up quality and productivity in cardiac surgery

Strategic overview
Substantial progress in cardiac surgery has been made over the last 10 years. Surgeons are operating in a more timely fashion on more people with higher levels of risk and co-morbidity, yet they are delivering better outcomes with mortality following a fall in coronary artery bypass graft surgery from 1.9% in 2004 to 1.5% in 2008.

In 2008, one in four patients undergoing coronary artery bypass surgery were over 75 years of age, an increase from one in 10 in 1999. The changes in cardiac care set out in the National Service Framework have also had a marked effect on the way patients are treated - operating on many more patients on an urgent basis as appropriate treatments are now available much earlier in the time course of the patients’ disease. Despite such progress there have been long delays in both the elective (planned) and non-elective pathways that lead to heart surgery.

Eight NHS Trusts, supported by their local cardiac networks, participated in a national project as demonstration sites from 2008 to 2010 testing out new approaches to care and improvement to frontline patient services. The work with the project sites addressed key efficiency measures seen as constraining the management of smooth patient flows, including pre-admission provision, referral management services, scheduling and discharge and post-operative care management.

Lessons drawn from this work suggest that quality improvement to cardiac surgery services requires smarter working, a data driven approach to understanding processes, the enhancement of staff roles and a shared overview of the patients’ experience across referring providers and the tertiary centre.

NHS Improvement’s A Guide to Commissioning Cardiac Surgical Services published in February 2010 aims to share the successes of the participating demonstration sites, showcasing examples of innovation and improved efficiency.

Following completion of the national project, work in 2011 has focused on the development of a resource (based on hospital episode statistics) linking the non-elective cardiac patient journey by procedure across the shared pathway of care. This will help us define the QIPP, benchmarking and service improvement opportunities for improving the patient experience through shorter length of stays.

In one area of the country, patients stayed in hospital for an average of 33 days from the time of their coronary event to being discharged following urgent surgery. An ideal path length would be more like 12-14 days. Not only does this represent an unsatisfactory experience from the patient’s point of view, it is a huge waste of resource.

The projects the eight centres worked on with the help of NHS Improvement focussed on the issues at the heart of these excessively long waits which lead to real improvements for patients and helped deliver more cost-effective care.

Steven Livesey, National Clinical Lead and Consultant Cardiac Surgeon

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www.improvement.nhs.uk/heart
St George’s cardiac surgery team took the opportunity to become involved in the national project to address some of their longstanding problems. Both the elective and non-elective adult cardiac surgical pathways had room for improvement. In pre-assessment in 2007-08, fewer than 60% of elective cardiac surgery patients attended the pre-assessment clinic. Theatre scheduling was an issue with theatre overruns and lack of beds. Electronic referral was not being utilised and paper referrals were frequently being mislaid. In the third quarter of 2008-09, only 10% of elective cases were admitted on the day and there was a need to reduce length of stay.

A project team was established, chaired by the unit’s general manager and baseline data was collected to identify areas for improvement across five key workstreams. A set of key values reflecting the Trust’s own strategic vision were agreed and integrated within the team’s vision established to deliver the improvement work across the patient pathway. Highlight reports helped monitor each workstream against key goals, actions, risks and progress. Data was analysed to evidence improvements and the work was informed by the use of patient and carer diaries.

Team members attended the national cardiac surgery priority project peer support meetings which inspired members to share good practice within the unit and to develop solutions to challenges across the peer group.

A new pathway for cardiac surgery was developed that featured:
• Pre-assessment of all elective cardiac surgery patients by September 2009
• A theatre scheduling policy introduced in October 2009 which included improving notice to patients of their date for surgery
• Regular monitoring of theatre cancellations to reduce non-clinical cancellations
• Implementation of the use of electronic referrals for non-elective cases by January 2010
• Implementation of admission on the day as normal practice
• Recruiting two additional staff - a pre-assessment nurse and a cardiothoracic nurse practitioner. While these new posts required funding, the project overall was cost neutral due to the savings gained by each workstream
• Implementation of new discharge planning for patients from Jersey who previously had a long length of stay due to flight restrictions imposed by the airline

The improvements have seen an overall boost to productivity – theatre scheduling, increased pre-assessment and admission on the day, and reduced cancellations and length of stay have all contributed towards an increase in activity by £103,000 to date.

“The national work will support the North East London Cardiovascular and Stroke Network with ongoing local analysis of performance, particularly in relation to QIPP.”

Margaret Ancobiah, Network Project Lead for Cardiac Surgery, North East London Cardiovascular and Stroke Network
Early diagnosis of heart failure

Strategic overview
The increasingly successful management of heart disease, particularly intervention for heart attacks, has greatly improved survival rates but has left a burgeoning population living with left ventricular dysfunction. Heart failure is now the only cardiovascular disease increasing in prevalence. In the UK, heart failure affects about 900,000 people with 60,000 new cases annually, and is predominantly a disease of older people.

NHS Improvement has worked across the whole heart failure pathway, working to improve diagnosis, treatment and end of life care. More recently this involves working in collaboration with NICE as a publication partner for the Quality Standards for Chronic Heart Failure and publication of a web based resource to support the implementation of these standards.

Early, accurate diagnosis of heart failure in the community allows for earlier treatment, symptom relief, and offers patients a more convenient solution closer to home, but diagnosis is not simple and heart failure referrals to outpatients currently cost the NHS £51 million per year.

A simple blood test (serum natriuretic peptide or NP), costing £15-25, can rule out heart failure and reduce the need for further investigations by 30-40%. A survey of cardiac networks by NHS Improvement in Aug 2009 showed that only 46% of primary care trusts (PCTs) provided this test in primary care.

Computer simulations of the different scenarios and pathways (using Scenario Generator from Simul8) before and after the introduction of the blood test shows potential cost savings of 25-40%, and if used as an average potential saving per PCT yet to implement the test, the total national savings would be £13.7 million.

In all areas where NHS Improvement have undertaken projects to introduce serum NP, implementation has been achieved within 6-12 months, and cost savings have been realised within six months of implementation. A total of 34 PCTs (to date) have requested NHS Improvement assistance with scenario simulation to help put together business cases for introducing this test, 23 have had their modelling completed showing total predicted annual savings of £2.8 million.

In addition to the cost savings the serum NP test also improves clinical effectiveness and speeds up diagnosis of heart failure, by highlighting the patients who need urgent referral and so reducing the likelihood of an acute admission, whilst also ruling out heart failure in those without the disease, reducing the number of patients who have to go through unnecessary tests and anxiety.

“Measured in terms of both processes and outcomes, the care of patients with heart disease has improved beyond recognition in the past 10 years, NHS Improvement - Heart and associated Cardiac Networks have been major drivers in this transformation. As heart disease is the most expensive sector of health spending, the new emphasis on prevention and productivity is clearly appropriate and NHS Improvement has a major contribution to make in the future.”

Mark Dancy, Consultant Cardiologist and National Clinical Lead for NHS Improvement - Heart

www.improvement.nhs.uk/heart
Patients with heart failure require complex therapy but a lack of prospective case management often leads to disorganised care with inappropriate intervention or avoidable admission as the disease progresses to the end of life. Patients and their families are consequently more distressed than they need to be. Better treatments for cardiac disease and developments in heart failure care have resulted in improved survivorship but have not changed the nature of this chronic progressive condition which is ultimately fatal.

NHS Improvement is dedicated to enhancing the implementation of national strategies for cardiac care across England. For several years we have been in the vanguard of the promotion of end of life care for advanced heart failure, and for the last two years have supported a number of projects on the best ways of implementing an end of life service for heart failure patients. In 2009 we were approached by the National End of Life Care team to help develop a framework for implementing end of life services in heart failure.

Clinicians responsible for both heart failure care and end of life care as well as commissioners, providers, social care organisations, charities and patient and carer groups were invited to submit their views on the optimal structure of care pathways and service delivery for these patients. Formal meetings and other forums took place during autumn 2009.

Treatment protocols, patient needs and the challenges to co-ordinated care were collated and then themed in the context of the recently implemented National End of Life Care Strategy.

We published our framework document in June 2010 and distributed it nationally to key stakeholders. The publication - *End of life care in heart failure - a framework for implementation* - sets out to raise awareness of the supportive and palliative care needs of people living or dying with progressive heart failure, and to facilitate the commissioning of services specifically tailored to meet those needs. It does so in the context of the national End of Life Strategy.

Integrating end of life care in a strategy for advanced disease management relevant to all care settings is challenging but care coordination is pivotal to the success of services. We also believe the template developed for heart failure in this initiative will provide a useful model transferable to other disease states.

An e-seminar on the document to provide healthcare staff with the opportunity to question the author has proved an overwhelming success, and due to the great demand, more are planned.

**Praise for NHS Improvement's heart failure framework publication:**

"I have found the document useful as it covers many of the issues we highlighted during our project... in particular repeating some of the key components that are necessary for the process to come together and be sustained, for example, multidisciplinary teams, linking across care boundaries and end of life tools."

Service Improvement Manager

"I am always on the lookout for this type of publication as I find it is such a powerful tool in helping GPs identify end of life in conditions other than cancer. It would be a boost if we had similar publications for other long term condition such as COPD and stroke."

End of Life Care Facilitator
Improving respiratory care

Strategic overview

Why chronic obstructive pulmonary disease (COPD)?

- **Awareness and diagnosis is low**: only 44% of smokers have heard of chronic obstructive pulmonary disease (COPD) when prompted and approximately 33% diagnosed (plus 20-30% misdiagnosis). It is estimated that there is approximately two million undiagnosed people with this life limiting disease.

- **The death toll is high**: Respiratory disease (including COPD) is the second biggest killer in the UK. One person dies in England and Wales from COPD every 20 minutes – a loss of about 25,000 lives every year.

- **It's expensive**: Annual patient costs for COPD are around £801-930 million; and the disease leads to 24 million working days lost each year (9% of certified sickness absence).

- **It is a burden on the NHS**: One in eight emergency admissions to hospital are for COPD (second biggest cause of emergency admissions).

- **The burden is avoidable**: Following hospital admission for an exacerbation, 30% of people with COPD are likely to be readmitted within a three-month period.

NHS Improvement - Lung provides national support for the local improvement of respiratory services. This covers COPD, asthma and home oxygen services. It is an initiative to support the implementation of recommendations in the consultation on the National Strategy for COPD Services in England.

The team supports clinical teams, commissioners, service managers and other key stakeholders to deliver effective clinical practice through process improvement and re-design. It provides a wide range of expertise on how to begin, manage and sustain improvements that benefit patients and staff. Working closely with the Department of Health and other organisations involved in this area, it also works in partnership with strategic health authorities and the clinical leads for respiratory care to co-ordinate the development of national improvement projects using robust evidence, information management and service improvement and re-design methodologies.

A fresh approach to oxygen services

NHS Improvement - Lung is working with a number of project teams around the country via the Improving Home Oxygen Services workstream, part of the National COPD Projects.

While NHS Improvement - Lung is still within the initial project cycle, early findings have already become known and it is learning a great deal about how to improve the delivery of services and how best to engage a range of stakeholders in making these improvements.
A fresh approach to oxygen services

The rationale for the work of the project teams is provided by recommendation 14 of the COPD Strategy Consultation \(^{14}\), which states: “All people with COPD and hypoxaemia should be clinically assessed for long-term oxygen therapy and reviewed at regular intervals, and existing home oxygen registers should be reviewed.”

The consultation document also highlighted the need for respiratory services to meet the challenge of achieving both quality and productivity and makes the case for cost efficiencies within home oxygen services. The Impact Assessment \(^{15}\) which accompanied the consultation stated that an estimated 30% of people prescribed oxygen either derive no clinical benefit from it or do not use their oxygen. Quality and productivity in the home oxygen service can be improved significantly. Gross savings of up to 40% - equivalent nationally to £45 million a year, or £300,000 per PCT can potentially be achieved according to recent analysis carried out by the Department of Health through the established of home oxygen services and oxygen register review and formal clinical assessment \(^{16}\).

The project teams have made extensive use of British Thoracic Society Home Oxygen Services Standards, early drafts of the 2010 Department of Health Good Practice Guide, and NICE and IMPRESS guidance to inform their thinking.

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Historically, NHS Hull did not have an oxygen service, with patients being predominantly prescribed long-term oxygen on discharge from hospital without review. In addition, GPs issued oxygen therapy to patients on a want rather than needs basis without formal assessment. From April 2010, NHS Hull commissioned a new home oxygen assessment and follow up service, provided by City Health Care Partnership.

In June 2010, the project was accepted onto NHS Improvement - Lung’s programme and a multidisciplinary project team was established including respiratory nurses, a smoking cessation specialist, commissioners, oxygen provider, a patient and the fire service. The project team work was integrated within the wider COPD pathway service development work being undertaken by the PCT.

The project aim is to contribute to a 30% reduction in unscheduled hospital admissions and the optimisation of COPD patient care. This is being approached through the delivery of appropriate and cost-effective oxygen therapy to adult COPD patients identified as being in clinical need determined through assessment by a trained healthcare professional.

Data metrics have been agreed by the project team and data collection processes established and information provision responsibilities assigned. Since July 2010, 428 patients have been assessed or reviewed - prior to assessment these patients had a combination of 601 oxygen therapies in place. After the assessments the combination of therapies was reduced to 433 and there were 145 removals and 44 decreases in oxygen flow rate. This has reduced monthly invoices by £11,378.

A local risk assessment pro-forma is completed by the clinical team at every review and which has strong links with both the local oxygen provider and the fire service, enabling issues and concerns to be highlighted and addressed.

In addition, 24 patients on oxygen have stopped smoking, due to COPD smoking cessation specialists and the home oxygen service now has 404 patients on their caseload and in the cycle of review.

Collaboration with NHS Improvement has provided greater clarity, structure and focus via project planning as well as motivational interaction with peers. We have also benefitted from the expansion of the future work plan to include demand and capacity analysis and the development of a prescribing costs ‘dashboard’.

Toni Yell
Commissioning development manager with NHS Hull
NHS Improvement has been working with a team in West Sussex to improve the patient pathway for people with acute exacerbation of COPD by reducing the number of avoidable hospital admissions and streamlining the in-patient pathway where admission is required.

The project is a joint venture between Worthing Hospital and NHS West Sussex PCT. The team wanted to improve COPD care across primary, secondary and community care and provide a more integrated approach to patient care. They also wanted to ensure high quality, respiratory specialist care was provided where this was necessary. For patients admitted to Worthing Hospital with acute exacerbation of COPD there was a mean length of stay of 6.1 days and 38% of people's care was managed by a respiratory consultant. Readmission rates at 30 days were 15% and at 90 days were 20%. It was felt that improving care across the patient pathway would decrease admissions and readmissions and reduce unnecessary hospital utilisation.

The team convened a large group of professionals from across primary, secondary and community care and patients to evaluate the COPD patient pathway and identify the key areas for improvement work. This process was also carried out within Worthing Hospital to identify areas for improvement specific to the inpatient stay.

The team identified a need to improve communication and the quality of information about the patient's admission that is passed between secondary and primary care at the point of discharge. They have developed a discharge summary that is being tested to allow timely, concise and accurate information to be shared.

There was a lack of a clear pathway for patient follow up after admission for acute exacerbation of COPD. The team identified several options for follow up depending on the patient's clinical need and mechanisms to ensure it happens. The discharge summary has been instrumental in this, and a COPD checklist has also been developed for use by the community matrons to ensure follow up is high quality and comprehensive, wherever it takes place.

A monthly COPD multidisciplinary meeting has been instigated which allows the systematic discussion of patients who have had more than one admission with the aim of avoiding future unnecessary hospital admissions. It also allows the community teams to access specialist support to effectively manage patients in the community and reduce the need for formal out-patient consultations.

The team identified that there was limited COPD Respiratory Specialist Nurse availability for patients admitted with an acute exacerbation, and that patients who were admitted at weekends or when the COPD RNS was on leave were less likely to receive specialist input. The team is working to develop a network of ‘respiratory lead nurses’ with one on each ward to ensure specialist advice is always available, and this will be supported by the wider team of respiratory specialist nurses.

The team is now identifying ways to further streamline and improve the care received during the in-patient stay and are considering the use of a care bundle. In primary care the team are exploring ways to improve the longer-term follow up of these patients and also to improve medicines management in this group.

Through the work the project team have learnt a number of lessons including the importance of good communication at all stages of the patient pathway, particularly where care passes between departments and particularly across organisations.

The project has been closely aligned to QIPP and the new approach to working has the potential to demonstrate quality improvements as well as productivity gains in admissions, readmissions and number of hospital bed days used.

We feel that our project support team really benefitted from the added value that NHS Improvement was able to bring. Not only did it coordinate additional master classes, which have enhanced our skills in how to run a project and on the tools and techniques required such as process mapping and data analysis, it also provided key learning from other sites.

Jo Congleton, Respiratory Consultant, Worthing Hospital
Imperial College Healthcare NHS Trust (ICHT) and Fulham Primary Care Trust (H&F) recognised that there was a need to improve the services and outcomes for patients with chronic obstructive pulmonary disease (COPD) and other chronic respiratory diseases. In a joint venture with NHS Improvement they set out on the improvement journey to improve the outcomes for patients and the patient’s experience.

After an initial gap analysis revealed there was over 5,000 undiagnosed COPD patients within the geographical region of care and the cost of COPD admissions resulted in an estimated cost of over £1 million per year there was a genuine need and commitment to improve the patient services within this area.

The initial analysis also highlighted that improvements could be made across the entire patient pathway from improving the quality of diagnosis, introducing a system to enable patients to self-manage, facilities within general practices (GP) to record exacerbation numbers and prioritise patients for review. Within the geographical area it was also observed that there was a significantly higher death rates due to COPD in H&F (standardised mortality rate 31.5) than in neighbouring PCTs (K&C 18.7; W 21.4; Ealing 21.4); in London (27.2); and in England overall (26.8) which required addressing.

After the analysis was complete there was an increasing amount of evidence that application and implementation of the chronic care model to the care of patients with COPD can deliver improved measurable outcomes. Previously, there was limited joint working between the hospital, community and primary care but a multi-disciplinary team (MDT) approach was established which emphasised engagement and enhanced coordination between all organisations. An integrated COPD patient pathway was agreed and a respiratory redesign group was convened which was chaired by a local GP which also had representation from primary and secondary care, public health, commissioning, finance, community providers, community pharmacy, local smoking cessation, the British Lung Foundation and patients.

An innovative integrated service supported by improvement methodology has improved and will continue to improve the quality of patient care which will result in delivery better patient outcomes and value for money. Shared aims and joint working across primary, secondary and community care, with the engagement and support of the commissioners within the region have been critical to this process.
Since the establishment of the new integrated pathway, community based respiratory consultant clinics in primary care were introduced along with consultant led open access respiratory MDT. Other improvement success includes the introduction of pulmonary rehabilitation, early supported discharge and a rapid response telephone service for patients was introduced along with an electronic patient record for community and hospital teams.

Other initiatives include specialist respiratory nurse-led support to review disease registers, provide workplace based training and education, support self management and case finding in primary care.

These improvements to the service have shown a reduction in acute admissions by 19% and readmissions by 66% (2010/11 compared with 2009/10), along with a reduction in first and follow up outpatient appointments which equates to approximately £170k. There has also been a dramatic reduction in number of patients surfacing without a previous COPD or asthma diagnosis and on GP disease register.
Implementing best practice in stroke care

**Strategic overview**
A stroke is a sudden interruption in blood supply to the brain caused by a blood clot or bleed in the brain. This can cause permanent damage, with a potential impact on the person’s ability to function including effects on movement, feeling, balance, vision, cognition, continence and communication. It is this country’s third-biggest killer, killing more women than breast cancer (National Stroke Strategy 2007). It is the main cause of adult disability, with a devastating impact on hundreds of thousands of people of all ages. The National Stroke Strategy highlights the preventable and treatable nature of stroke and the need for rapid response to the early warning signs.

NHS Improvement - Stroke was set up to provide national support for local improvement of stroke and transient ischaemic attacks (or ‘mini-stroke’) services, through the stroke care networks. It takes both a strategic and local approach working closely with national organisations including the Department of Health, the major stroke charities, Royal Colleges and statutory bodies. Local improvement is mediated through the stroke networks and national improvement projects with providers of health and social care. It provides regular educational national learning events and conferences to share good practice and learning. The team has also published a range of web-based and paper resources to provide a wide range of expertise on how to begin, manage and sustain stroke service improvements that benefit patients and staff.

**Case studies – improving stroke care across England**
NHS Improvement has worked with a number of national projects looking at how to improve patient care in acute settings, the transfer of care and rehabilitation, and patient and public involvement. Three case studies are shown here illustrating those themes and providing insights into how our varied activities support local teams across England. Additional case studies are available on the NHS Improvement website.

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18 www.improvement.nhs.uk/stroke/CaseStudies/tabid/60/Default.aspx

www.improvement.nhs.uk/lung
STROKE CASE STUDY

Speeding up Nottingham referrals via the ‘bat phone’

The ‘direct access into the stroke hyper acute unit’ (DASH) project at Nottingham University Hospitals NHS Trust aimed to provide rapid and equitable access to the service. This included admission directly into the unit when arriving at the hospital, as opposed to admission through A&E. The aim was for patients to be admitted, assessed and, where appropriate, treated with thrombolysis within three hours of the onset of symptoms.

At the start of the project there were patients being admitted directly onto the stroke unit, but lower in number compared with those being transferred from A&E situated on a campus five miles across the city, and from the emergency admissions unit which was on the same site as the stroke unit. Patients began to arrive on the stroke unit from A&E without a call being made to advise staff in advance. Telephone calls and triage of the calls were not reliably recorded.

The project saw close working with East Midlands Ambulance Service, encouraging greater awareness and adherence to the agreed stroke pathway. Communications focused upon publicising the direct phone on the stroke unit, which became known as the ‘bat phone’ (with a new ring tone and flashing light fitted). The phone alerts staff on the ward immediately when a patient is to be transferred, giving them the opportunity to triage and provide advice to the crew on where to take the patient.

Information was sent to all GPs asking them to contact the stroke unit if they assessed a patient with stroke symptoms. ‘Walking the patient pathway’ was carried out by both clinical and non-clinical members of the team to highlight any problems.

The project has successfully produced a direct access route into the hyper acute stroke unit. All suspected stroke patients are now referred directly to the stroke unit. There has been a reduction in delays in transfer and a decrease in the number of patients being admitted via A&E.

“The NHS Improvement - Stroke team were key to the success of the acute stroke project, they provided ongoing support and ensured that the project team remained focussed on delivery on improving outcomes for patients. Peer support days enabled the team to meet with other teams undertaking different projects and share experiences away from the clinical environment. The profile of being involved in a national project raised awareness of the direct access project within the acute trust and the community – ensuring engagement of executive teams and commissioners.”

Dawn Good, Head of Stroke Services, Nottingham University Hospitals NHS Trust
In this project, colleagues across health and social care in South East London worked together to improve the service for stroke patients on transition from hospital to home and after they had left hospital. At the project outset, a typical Lewisham stroke patient would need to pass through up to seven different teams, with variations in the quality of service throughout. The average length of hospital stay was 22.5 days, which impacted on the number of acute stroke patients who could be admitted to the ward. Only 41% of stroke patients spent more than 90% of their stay on the stroke ward and the wait for generic community rehabilitation after hospital discharge was often greater than 12 weeks.

Through engagement with senior management and clinical staff and consultation with service users, bottlenecks in the transfer of care and rehabilitation process were identified and a collaborative approach across health, social care and voluntary organisations used to aspire to best practice. The pathway was re-designed, there was a focus on joint working and systems of communication and a reconfiguration of the workforce to include some new therapy posts and new ways of working and to integrate provision of stroke rehabilitation from several teams into a single integrated team.

A number of key improvements were made at ward level, including simplifying the discharge process, addressing inaccuracies of coding and implementing a key worker system. A pilot neuro-rehabilitation team was formed as part of the new integrated care team to address the lack of stroke specific community rehabilitation.

Service level agreements were re-negotiated with the third sector for family support at home and there was improved integration with social care staff and processes.

As a result, there is now a re-designed, more efficient, simplified stroke pathway in place and enhanced joint working with social care. Coordination of care has been improved with a more personalised holistic service. The length of stay has decreased to 19 days (March 2010) which has had an impact on the stroke Vital Sign with more than 80% of stroke patients spending 90% of their time on the stroke unit. The improvements made a significant impact on access to community waiting times for therapy falling by 10 days or more for some therapies, even before the planned early supported discharge team was in place.

Better patient outcomes and value for money will be realised through the integrated team through shared resources such as administration, shared assessments and reduction in hand-offs and duplication.
STROKE
CASE STUDY

Involving stroke patients in Dorset

The Dorset Cardiac and Stroke Network believes that patients, their families and carers should be at the very heart of their NHS. This philosophy is in line with national involvement requirements, the QIPP approach to service transition and the 2011 Health Bill – all of which support the need for true and ongoing involvement.

The network’s approach is reflected in their patient and public involvement strategies and plans – which highlight the importance of ensuring effective and supported patient/carer representation and also of actively seeking people’s views so that they can be used to inform service development.

It is aware that different people want to be involved in different ways at different times. They therefore developed a number of different opportunities for involvement. These are called ‘involvement levels’ and in the literature have been colour coded (to help people distinguish between them) and numbered from one to five. The levels are:

- Level one: home based involvement
- Level two: discussion groups
- Level three: involvement forums
- Level four: local representation
- Level five: network, regional and/or national representation

The network currently has 155 local people signed up to 308 types of involvement and works closely with local providers and purchasers, third sector organisations such as the Stroke Association and Connect, the ambulance service, adult social care and their Local Involvement Networks.

They employ a variety of approaches to actively seek people’s views to influence care – including focus groups, Discovery Interviews™, view seeking forums and easy-read feedback forms.

There are a number of ingredients that have underpinned our model of involvement – recognition of the importance of effective involvement from the network board and all of its sub-groups, commitment to provide time and financial support to enable our model to be developed and implemented, true collaborative working from the outset from everyone involved - including our patients and carers and enthusiasm which has been almost palpable!

Frances Aviss,
Patient and Public Involvement Lead,
Dorset Cardiac and Stroke Network

“...the involvement meetings can be considered a therapy in their own right... they are well organised, focused and productive.”

Derek Hurrell, Dorset Cardiac and Stroke Network patient representative
PUBLICATIONS
LIST 2010-11

Heart
• Anticoagulation for Atrial Fibrillation
• End of life care in heart failure: a framework for implementation
• Atrial Fibrillation in Primary Care - Making an impact on stroke prevention
• Heart Failure - Quick guide to quality commissioning
• A guide to commissioning cardiac surgical services
• Guide to implementing primary angioplasty
• Continuous improvement to cardiac services 2009/10
• Improving patient experience - developing solutions to deliver sustainable pathways in cardiac surgery
• Pathways for heart failure care: making improvements in heart failure services
• Transforming Cardiac Rehabilitation - celebrating achievements and sharing the learning from the national projects

Cancer
• Effective follow up: Testing risk stratified pathways
• Risk Stratified Breast Cancer Pathway
• Risk Stratified Lung Cancer Pathway
• Risk Stratified Breast Cancer Pathway
• Risk Stratified Prostate Cancer Pathway
• Models of care to achieve better outcomes for children and young people living with and beyond cancer
• Teenage and young adult aftercare pathways
• Building the evidence - Developing Winning Principles for children and young people
• Providing evidence to achieve improvements for patients: children and young people living with and beyond cancer
• The improvement story so far: living with and beyond cancer
• An integrated approach: the transferability of the Winning Principles - sharing the learning
• Consolidation report: From testing to spread
• From testing to spread: sharing the knowledge and learning from organisations spreading the Winning Principles - case studies

Diagnostics
• First steps in improving phlebotomy: The challenge to improve quality, productivity and patient experience
• Continuous improvement in cytology: sustaining and accelerating improvement
• Cytology improvement guide: achieving a seven day turnaround time in cytology
• Learning how to achieve a seven day turnaround in histopathology
• What a difference a day makes

Audiology
• Shaping the Future: Strengthening the evidence to transform audiology services
• Pushing the Boundaries: Evidence to support the delivery of good practice in audiology

Stroke
• Commissioning for stroke prevention in primary care: the role of atrial fibrillation
• Why treat stroke & TIA’s as emergencies?
• Going up a gear: practical steps to improve stroke care
• Going up a gear: joining up prevention
• Going up a gear: implementing best practice in acute care
• Going up a gear: improving post hospital and long term care

Lung
• Improving home oxygen services: emerging learning from the national project sites
• Chronic and self management services: emerging learning from the national project sites (Summer 2011)
• Transforming acute care in COPD: emerging learning from the national project sites (Summer 2011)
• Driving up quality diagnosis: emerging learning from the national project sites (Summer 2011)
• Improving end of life care services: emerging learning from the national project sites (Summer 2011)

General
• Bringing Lean to life: making processes flow in healthcare
• Demonstrating how to deliver the QIPP challenge - pocket guide

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NHS Improvement

NHS Improvement’s strength and expertise lies in practical service improvement. It has over a decade of experience in clinical patient pathway redesign in cancer, diagnostics, heart, lung and stroke and demonstrates some of the most leading edge improvement work in England which supports improved patient experience and outcomes.

Working closely with the Department of Health, trusts, clinical networks, other health sector partners, professional bodies and charities, over the past year it has tested, implemented, sustained and spread quantifiable improvements with over 250 sites across the country as well as providing an improvement tool to over 800 GP practices.’

Delivering tomorrow’s improvement agenda for the NHS