Delivering Better Health, Better Care Through Continuous Improvement:
Lessons from the National Programmes
## Contents

**Foreword** 2

**Introduction** 3

### National Improvement and Support Programmes 4

01: Cancer Performance Support Programme 6

02: CHI Number Programme 9

03: Diagnostics Collaborative Programme 13

04: Eyecare Redesign and Cataract Programme 18

05: Planned Care Improvement Programme 24

06: Scottish Ambulance Service Performance Support Programme 28

07: Scottish Primary Care Collaborative Programme 30

08: Unscheduled Care Collaborative Programme 35

### Service Innovation 41

09: CitiStat Programme 42

10: ENT Tele-endoscopy 44

11: Rapid Improvement Events 46

**Summary** 48

**Next Steps** 52
Foreword

The Improvement & Support Team was formed on 1 September 2006 bringing together the people and resources of the former Centre for Change & Innovation. The Improvement and Support Team (IST) is an integral component of the Health Delivery Directorate with clarity of purpose – to apply improvement science to performance challenges.

This alignment of service improvement activities to NHS priorities (expressed through the HEAT performance framework) has moved service improvement nationally from the margins to centre stage. Through national improvement programmes, performance support programmes and our general contribution to building NHS capacity and capability, we want to promote and support that shift at the local level so that improvement science is woven into the fabric of NHSScotland.

With the completion of our first generation of improvement programmes now in sight, this is the right time to learn from what has worked best, what could have worked better, and how to build on this learning to support the NHS over the next 3 years.

Intuitively we know that the next steps in our service improvement journey will be more complex but also more rewarding with Better Health, Better Care setting a clear direction for quality improvement that takes account of patient experience, safety, effectiveness, efficiency, equity and timeliness.

- More complex because there needs to be real integration between national improvement programmes particularly on access, safety and experience
- More rewarding because there is now a critical mass of improvement activities taking place nationally and locally that will have a direct bearing on patient care

While this document focusses on the learning from programmes of work, it is appropriate to recognise the individual contributions that staff have made locally, regionally and nationally to service improvement over the last 3 years. For some, conventional clinical and managerial careers have been put on-hold and some risk has been taken to work in this fast changing and relatively new discipline. For others, especially those in positions of clinical leadership of programmes both nationally and locally, it has taken courage to introduce new concepts and advocate for the pragmatic science of improvement.

Better Health, Better Care sets NHSScotland on an improvement journey. It is the front line staff, empowered and armed with the tools and techniques for service improvement that are leading the way. The Improvement & Support Team has commissioned this publication as part of our commitment to constantly review the help and support we are providing to them.

Stephen Gallagher
Deputy Director of Health Delivery (Head of Improvement and Support Team)
Directorate of Health Delivery, Scottish Government
Introduction

Improvement and Support Team (IST) has three functions with the overall aim to develop the capacity and capability for continuous improvement throughout NHSScotland:

- Designing, developing and running national improvement programmes that engage every NHS Board. The programmes are developed in support of Government strategic priorities and delivery of HEAT targets
- Developing tactical support programmes in response to key risks to delivery for strategic priorities
- Supporting innovation through service design and delivery, the use of new technologies, or new improvement tools and techniques

Across all improvement activity there is a focus on rigour in the use of tools and techniques for clinical systems improvement and ‘information for improvement’, taking a systematic, incremental and sustainable approach. The emphasis on technical change is balanced with behavioural change management throughout all improvement work IST leads.

The tools and techniques for clinical systems improvement and behavioural change management are presented in the Continuous Improvement Toolkit, accessible from the IST website at: http://www.scotland.gov.uk/Topics/Health/NHS-Scotland/Delivery-Improvement

IST supports an integrated approach to quality improvement across the six dimensions of quality: to ensure that the drive for timeliness is balanced with safety, patient centredness, effectiveness, efficiency and equity. (Institute of Medicine, Dimensions of Quality Crossing the Quality Chasm, 2001)

Many of the current national improvement programmes complete in March 2008. There have been significant lessons learned over the last 3 years, moving from projects and programmes run in waves to running national improvement and support programmes. IST was developed from the Centre for Change and Innovation to be part of an integrated approach to delivery within the Health Delivery Directorate and works in an integrated way with the Access Support Team and Performance Management Teams.

This document aims to capture the lessons learned from running national improvement and support programmes. These will inform the design, development and delivery of the work programme to support NHSScotland on the continuous improvement journey over the next 3 years.
National improvement programmes are designed to support NHS Boards deliver sustainable improvements, through the development of capability and capacity in technical and behavioural change management.

This means that the programme design incorporates:

- an approach to engage all staff, acknowledging the roles of executive sponsorship, improvement leaders and champions, at national and local level
- dedicated time for clinical leadership, project management and information analysis
- front line staff actively engaged in redesign through rapid cycles of change
- use Lean techniques to reduce waste and duplication, improve patient flow and reliability of clinical processes
- a robust training and development strategy to develop skills and competency in the use of improvement tools and techniques and behavioural change management
- practical support to help staff develop confidence in using these tools and techniques through the establishment of technical experts at national level
- provision of formal and social networking opportunities to enable staff to share, adopt and spread good practice: this includes the development of ‘shared space’ facilities and national and regional events
- a national, regional and local programme management infrastructure including dedicated programme teams, who work to embed the changes through operational and clinical management.

Key to the development of the programmes has been to identify, co-ordinate and where appropriate integrate work already in progress at both a local and national level.
It has been important to ensure integration with performance management to provide functions that are well co-ordinated and have the same underpinning philosophy and approach to sustainable improvement. Both the Unscheduled Care Collaborative Programme and the Diagnostics Collaborative Programme have direct links to National Delivery Teams and both undertake external diagnostic reviews and provide external expert support to organisations that deviate from their agreed trajectory for delivery.

The same principles of delivering sustainable improvement are utilised in support programmes but there is a different focus on performance management and the use of diagnostic visits as part of the initial engagement.

This chapter presents a summary from each programme of the lessons learned, including outcomes and case studies:

- Cancer Performance Support Programme
- CHI Number Programme
- Diagnostics Collaborative Programme
- Eye Care and Cataract Redesign Programme
- Planned Care Improvement Programme
- Scottish Ambulance Performance Support Programme
- Unscheduled Care Collaborative Programme

The case studies included in this document provide a tiny snapshot of the rich improvement stories from the programmes. Comprehensive case study documents are currently in production for the Diagnostics Collaborative Programme, Planned Care Improvement Programme and Unscheduled Care Collaborative Programme.
BACKGROUND
The Cancer Performance Support Team (CPST) is a multidisciplinary team from across the Health Directorates, with input from experts from the service.

OBJECTIVES
- The CPST was established in 2006 to work with and support NHS Boards to deliver the 62 day target (from urgent referral to first cancer treatment) and establish weekly cancer reporting
- The fundamental principle of the CPST is that it adds value to NHS Boards by improving their ability to meet and sustain delivery of the target
- Support from the CPST has a performance management function which needs to be agreed and positioned within local and national performance management and service improvement structures and processes

IMPROVEMENT STRATEGIES
The CPST developed a national data set and reporting template to enable weekly reporting of performance, and to support NHS Boards in monitoring local performance of cancer services.

Each NHS Board submits anonymised data on patients weekly. This data identifies patients who potentially will not be treated within the agreed target time. CPST will then work with NHS Boards in a collaborative style, but with clearly defined and agreed expectations, responsibilities and time lines, to achieve improvements in cancer services and delivery of the 62 day target.

NHS Board reports and performance issues are discussed at weekly meetings, when reasons for delays are identified and addressed. The number of cancer patients treated weekly is also reported, allowing CPST to assess recent performance and the extent of local cancer patient tracking.
SUPPORT

CPST offers intensive support to NHS Boards reporting poor performance against the 62 day target, or in large Boards where the scale and complexity of meeting the target is considerable.

NHS Board engagement begins with a Diagnostic Visit, focussing on the following areas:

- Executive Leadership
- Clinical Engagement
- Operational Management Focus
- Weekly Reporting – prospective patient pathway management and active breach analysis
- Clear Pathways and Processes – design, adherence and variation
- Capacity and Bottlenecks
- Escalation Policies
- Management of Inter Hospital Transfers

ACTION

Following the diagnostic visit, CPST create a detailed action plan for performance improvement and draft an initial confidence assessment. This is followed up on a weekly or fortnightly basis by the CPST Programme Manager with the Board Lead Executive for cancer waiting times on site. The confidence assessment measures performance and compliance against factors known to be fundamental to meeting the target.

CPST disengage with NHS Boards following satisfactory completion of an action plan, together with visible and sustained performance improvement.

CPST have engaged with NHS Forth Valley, Greater Glasgow and Clyde, Highland, Lanarkshire and Lothian.

At a less intensive level, CPST also undertakes “Pathway Review” visits over half a day, to discuss individual problem pathways with Boards. External experts are involved to offer recommendations and advice to improve pathways, and progress against identified actions is then assessed a month later.

IMPROVEMENTS

Since CPST was formed, national performance against the 62 day target has risen from 84.5% in October-December 2006 to 87.3% in April-June 2007, from validated quarterly data.

There has been significant improvement against the target across Scotland over the last year and latest unvalidated weekly management information reports suggest performance is close to the 95% target.
Case Study 1

NHS Highland

NHS Highland has improved the patient journey by:

- Ensuring tracking is in place to facilitate more effective patient management
- Introducing a comprehensive and effective escalation policy
- Establishing weekly review meetings with multidisciplinary teams to discuss patients in the system
- Implementing the Cancer Services Improvement Programme’s “Top 20 Actions for Change” where appropriate
- Establishing robust clinical pathways with timelines for each stage
- Enhancing communication and co-operation with clinicians
- Actively involving all relevant staff, including clinicians, in breach reviews
- Implementing Inter-Hospital Transfers both within and outwith NHS Highland

Outcomes

Between quarter 3, 2006 and quarter 2, 2007 there was an increase in validated performance of 26.5%.

Case Study 2

NHS Forth Valley

NHS Forth Valley has improved the patient journey by:

- Restructuring their Cancer Support Team by appointing Patient Pathway Co-ordinators (PPC) and a Cancer Services Manager (CSM); PPCs work with clinical teams, liaise with patients, book appointments and coordinate Multidisciplinary Team meetings, facilitating the smooth running of the patient pathway at all stages
- Reviewing all urgent patients at weekly meetings, attended by the Lead Cancer Clinician, to ensure that patients follow timed pathways developed by local teams
- Reviewing progress and actions at weekly meetings with the Chief Executive, the Lead Executive for Cancer and the CSM
- Developing the first Inter-Hospital Transfer agreement in Scotland; this agreement with the Beatson Oncology Centre has now been rolled out across the West of Scotland Cancer Network
- Developing a comprehensive Multidisciplinary Team Meeting “constitution”

Outcomes

Between quarter 3, 2006 and quarter 2, 2007 there was an increase in validated performance of 10.3%.

“I am a convert to weekly reporting. I now know who is in the system and where they are.”

Chief Executive
Since the 1970s, every patient registered with a Scottish GP practice has been allocated a unique Community Health Index (CHI) number. Using the CHI number on all clinical communications helps reduce the risk of error and improve quality of care. In September 2005 a national programme was launched to improve the use of CHI on clinical communications.

The key objectives behind using CHI are:

- To reduce the risk of error
- To improve patients’ experience of health care
- To support the delivery of better quality health care
- To reduce wasted time and effort for patients and staff

CHI is also a vital building block for several strategic national initiatives, including:

- Picture Archiving and Communications System (PACS), which allows clinical staff to access digital X-rays and other diagnostic images for their patients using the patient’s CHI number, no matter where the investigations were originally carried out
- Scottish Care Information Store (SCI Store), which allows hospital staff to easily access laboratory results, radiology reports and other clinical information wherever they need to, by providing a ‘joined up’ view of patients’ information. It also allows test results to be transferred electronically into GP systems
• Electronic Health Record (EHR)

**Better Health, Better Care: Action Plan states:**

“Use of the Community Health Index (CHI) number on ... key clinical documents ... has increased from 70% in 2005 to 94% in December 2006 and is now used on 94% of community-held case records ... 

The Scottish Government is determined to build on these achievements and add fresh impetus to our national strategy in order to realise the opportunities that exist for improving the quality of patient care across Scotland. In Spring 2008, we therefore intend to publish a new eHealth strategy that will demonstrate how we intend to bring together existing information and systems throughout a patient’s journey of care and spread good practice between areas and clinical functions, whilst ensuring a continuing focus on protecting the confidentiality and security of patient information.”

**IMPROVEMENT STRATEGIES**

The main aim of the CHI Programme is to increase utilisation of the CHI number. CHI improvement teams in NHS Boards provide monthly performance monitoring, and have implemented a wide range of solutions which include three main strands:

- Education – ensure all staff are aware of CHI and its purpose, and understand the benefits that are realised through its use
- Capability – ensure all staff are able to find and use CHI numbers for all patients
- Policy – refresh local policies and procedures to encourage, and where possible mandate, use of CHI on clinical documents

In addition:

- The programme has produced and disseminated information leaflets via NHS Boards to explain the use of CHI to patients, carers and the public; CHI messages have also been placed in key public communications such as the Emergency Care Summary leaflet and local media
- Regular meetings of CHI Leads from across the service offer opportunities to discuss and debate local solutions, and also to identify good ideas and share lessons learned

**OUTCOMES**

A formal evaluation and report was produced for Phase 1 of the CHI Programme and similar work on Phase 2 is expected in March 2008. The main findings were:

- NHS Boards felt they received the support they needed from the CHI Programme
- Monthly monitoring was generally felt to be useful in supporting local improvements in the use of CHI
- Regular meetings of CHI Leads were found to be useful opportunities to share good ideas and lessons learned

Phase 3 of the CHI Programme will continue to support NHS Boards in making fundamental and permanent changes in the way patients are identified safely and consistently across NHSScotland.
Case Study 1

NHS Borders

Clinical staff were omitting the CHI number from laboratory and radiology requests in around 30% of cases.

Improvements

To address this, a social marketing approach was taken which included:

- Focussing on changing behaviour of clinical staff, and safety and quality of patient care
- Monthly monitoring of key performance indicators (CHI on requests)
- Establishing specific measurable goals, e.g. CHI on 95% of requests
- Analysis of costs and benefits to staff of using CHI, e.g. label-printing capability
- Recognition and incentives through monthly ‘performance league tables’ circulated to GP practices and hospital wards
- Interventions to specific audiences, e.g. Medical Director met with clinical staff to encourage and engage
- Development of a rolling poster campaign, integration into induction process, league tables, label printers

Outcome

Overall utilisation of CHI is now 95%.

The improvements will be continually monitored to ensure sustainability of improvements. Phase 2 of the CHI programme will spread learning and success into other NHS Borders areas, e.g. community-based staff.

Case Study 2

Former NHS Argyll and Clyde

Clinical staff were omitting the CHI number from clinical communications in around 40% of cases.

Improvements

- A communications strategy was put in place based on understanding the problems facing front line staff using CHI posters; the results informed eHealth solutions to meet these needs
- Regular communication with staff was provided on the use of CHI and benefits of the new eHealth solutions; feedback was provided to individuals on areas of poor performance
- Existing and new technology was used to make the CHI number available to all front line staff
- Capability for all departments to produce CHI labels ‘on demand’
- Ensure that patient identification labels incorporating CHI are available in every case note in sufficient quantities to meet requirements
- Use national eHealth solutions to provide an integrated approach across Boards, e.g. Emergency Digital Information Service (EDIS) A&E System, SCI Store, SCI Gateway, national CHI database
Outcome
Overall utilisation of CHI is now 95%.

The improvements will be continually monitored to ensure sustainability of improvements. Phase 2 of the CHI programme will spread learning and success into other NHS Greater Glasgow and Clyde areas, e.g. community-based staff.

“Using CHI makes things better for patients and for staff.”
Dr Harry Burns, Chief Medical Officer, NHSScotland

“Using CHI is not an administrative matter but something that is critical to patient safety.”
Dr Kenneth Robertson
Former clinical lead for eHealth in Scotland

“Moving over to CHI as our sole patient identifier required a lot of resources, but it is worth it because it reduces the possibility of mistakes and it is much more efficient.”
Susan Whitelock
Medical Records Manager, Golden Jubilee National Hospital

“CHI is now ingrained within every staff procedure and patient communication across all primary and secondary care locations. CHI is now second nature to all staff in NHS Tayside.”
Stewart Hunter
eHealth Programme Director, NHS Tayside

“The new system and the use of CHI significantly reduce the number of questions the patient has to answer. Working with a system which is much more efficient cuts down on wasted time and reduces stress levels all round.”
Pam McVeigh
Medical Records Manager, NHS Greater Glasgow and Clyde
BACKGROUND
Delivering improvements for Diagnostics services is recognised by the Scottish Government as critical to ensuring timely and high quality care for patients.

The Diagnostics Collaborative Programme (DCP) was launched in April 2006.

OBJECTIVES
- To improve patient and carer experience and satisfaction through improving access and reducing waits in diagnostics
- To share good practice and speed up the adoption of good ideas from one place to another
- To support NHS Boards in achieving the maximum 9 week waiting time standard for eight key diagnostic tests in Endoscopy, Urology and Radiology by December 2007
- To support the delivery of other targets, namely:
  - 18 week target for Outpatients
  - 18 week target for inpatient and day case
  - 4 hour Unscheduled Care target
  - 62 day Cancer target

IMPROVEMENT STRATEGIES
- Local teams have participated in a number of national learning events to network, share ideas and to learn about redesign tools and techniques
- Each of the 8 key tests has been mapped by local teams to identify bottlenecks and to apply Demand, Capacity, Activity and Queue (DCAQ) methodology; a master class DVD on this approach has been produced and is now available
- Using the DCAQ approach, local teams have produced stronger business cases as part of their Diagnostic Local Delivery Plans
• Learning has been further spread through the production of case studies and visits to each health board to highlight best practice and innovative ways of working

• Regular newsletters have been issued and there is continued engagement through national and local meetings

• Teams have visited other areas across the UK to see innovative models of working, and to learn from other sites

• The Diagnostics Collaborative introduced the Endoscopy Global Rating Scale (GRS), developed by the English National Endoscopy Team, as a tool for local services to assess and improve an endoscopy service in line with an NHS commitment to quality. GRS has now been widely adopted throughout Scotland by all NHS Boards

   For more information go to www.grs.scot.nhs.uk

• The Diagnostic Collaborative has commissioned patient focussed research. A study entitled “Does the Endoscopy Global Rating Scale (GRS) accurately reflect patient concerns around endoscopy services?: A report of findings from eight focus groups” sought to establish what patients really want from an endoscopy service in terms of quality. The exercise demonstrated that real commitment was required in involving patients and demonstrated the merits of conducting work such as focus groups, in conjunction with using tried and tested approaches such as patient questionnaires. The study highlighted the value of validating redesign against patient’s views in informing how services should be delivered

• The use of Lean thinking and delivery of Rapid Improvement Events (RIE), have helped to establish sustainability of service redesign. A number of successful events have taken place across Scotland in diagnostics, as these case study examples show:

   “Core information, particularly around DNAs (Did Not Attends), has been critical to improving services. What is absolutely key, though, is understanding and monitoring your service on a regular and routine basis, so that you can redesign and adjust the service to meet the patients’ needs.”

   Jonathan Proctor
   Director of Patient Access and Associate Finance Director, NHS Forth Valley

   “By actually auditing how your service works you can show some often quite glaring inefficiencies within the service which really should be addressed prior to demanding more resource. It may be that by dealing with these inefficiencies you don’t need any more resource.”

   Lindsay Potts
   Consultant Gastroenterologist, NHS Highland
Case Study 1
NHS Tayside
Colorectal Services
An RIE using Lean methodology was held in April 2007 which highlighted significant variation in patient management.

Improvements
- As a result, an appropriate and efficient single route referral management system has already demonstrated an improvement for patients and more timely diagnostic tests
- The process has improved efficiency, reduced unnecessary work and improved patient communication and interface between Primary and Secondary Care

Case Study 2
NHS Tayside
Urology Services
Although a one-stop service for frank haematuria (blood in urine) was available in Ninewells Hospital in Dundee, it was not provided in Perth Royal Infirmary or Stracathro Hospital in Angus. In Perth Royal Infirmary, patients waited up to 96 days to receive a clinical management decision.

Improvements
- One-stop services for patients in Perth and Stracathro were introduced in March and May respectively
- The average waiting time for patients to receive a clinical management decision in Perth now stands at 11 days

High Impact Changes
A number of High Impact Changes introduced by the DCP have also had a positive impact on improving access to services. The changes need to be adapted locally to ensure success, but the principles behind them are applicable across NHSScotland, and indeed can be seen as fundamental to other improvement programmes.

These changes include:
- Direct booking to reduce DNAs (Did Not Attends) including models that meet the needs of shorter waiting times, for example, booking units and telephone negotiation of appointment date
- Pooling of referrals between consultants and specialty to shorten access times and improve equity of access
- Moving from multiple points of referral to having a single point of referral to shorten access times
Introduction of straight-to-test protocols to reduce unnecessary delays in the process

Effective management of annual leave policies to reduce lost capacity

Use of scheduling templates and points systems for tests to increase capacity and improve efficiency

Use of referral protocols to ensure appropriate use of referrals for the right diagnostic tests

Regular clinical and clerical validation of existing waiting lists to ensure that the identified test is still the most appropriate course of action for the patient

Extending working hours to increase capacity and flexibility of services for patients

Introduction of new roles for staff to increase capacity under the Radiology 4 Tier Workforce Structure and Non-medical endoscopist roles

Continuous Improvement

The DCP wanted to ensure continuous improvement by analysing how successful the collaborative methodology was in supporting the delivery of waiting time targets and service redesign. A qualitative assessment was carried out one year into the programme to inform the second year of the programme’s work and to contribute to learning for the Improvement and Support Team (IST) for existing and future programmes.

A number of key issues emerged.

1. Senior management and senior clinician ‘buy-in’
2. Redesign as a legitimate use of clinician time
3. Coordinating the work of various collaboratives
4. Standardisation of definitions
5. Continuing review of progress

Much of the learning has already been assimilated into the design of the existing collaborative for example explicit focus on quality rather than waiting time targets.

“I think waiting time guarantees and the collaborative programme are catalysts – of that there is absolutely no doubt. Had they not been there and pressed the way we have been pressed, I believe we would not have had such a good a reaction from clinicians.”

Anonymised

“For radiology particularly, it’s been the first opportunity in many years that we’ve been able to sit and look at our work and say ‘this is what we need to be more efficient and effective’.”

Anonymised
Outcomes

The majority of NHS Boards achieved the 9 week target some four months ahead of the target deadline and are continuing to sustain this improvement. No patient in Scotland now waits longer than 9 weeks for any of the eight key tests.

The learning from the DCP in improving access to diagnostic tests will be key to driving forward further improvements for the delivery of shorter waits within the 18 week referral to treatment targets as described by Better Health, Better Care.

The DCP has worked in partnership with Information Services Division (ISD), other collaborative teams and representatives from healthcare science groups to determine the focus of diagnostics, to enable NHS Boards to deliver the 18 week treatment targets. The learning gained from Endoscopy, Radiology and Urology testing and from implementing the High Impact Changes will be invaluable in supporting improved access for other areas of diagnostic testing.

The DCP supported NHS Boards to deliver the improvements in performance demonstrated in the following graphs:
BACKGROUND
The Eyecare Redesign and Cataract Programme was launched in 2005 with participation from all territorial NHS Boards. Prior to its launch, the waiting time from referral to treatment for patients requiring cataract surgery could be as long as 52 weeks.

PROGRAMME OBJECTIVES
• To meet the patient access target for cataract surgery of 18 weeks from referral to treatment
• To support NHS Boards to deliver the required service redesign in ophthalmology by promoting evidence-based high impact changes

IMPROVEMENT STRATEGIES
• A senior executive level manager was identified in each NHS Board area to be accountable for delivery of the programme locally
• Funds were provided for the recruitment of local project managers dedicated to the redesign programme
• Training was provided to local project teams in evidence-based service redesign methodologies
• A national delivery team was established comprising clinicians and senior managers from NHSScotland. The delivery team met regularly to provide leadership and direction, to ensure a focus on delivery, and to offer support and guidance to NHS Boards experiencing particular challenges
• A system of robustly measuring demand, capacity, activity and queue was established with results collected and analysed monthly by the programme team; this supported local project managers and clinicians to redesign services, and where necessary develop business cases for additional capacity
“Nothing can be achieved without accurate data relating to capacity and demand.”

Paul S Baines
Consultant Ophthalmologist/Clinical Lead NHS Tayside

OUTCOMES
Preliminary performance data shows all NHS Boards achieved a maximum wait of 18 weeks from referral to treatment by December 2007.

Knowledge gained about the measurement and management of patient pathways will significantly contribute to the development of measurement systems, definitions and infrastructure required to support the delivery of referral to treatment times of 18 weeks for non-urgent referrals by December 2011.

Case Study 1
NHS Grampian

Formation of the Grampian Eye Health Network
The walk-in service at Aberdeen’s Eye Department was increasingly being used by the public for non-urgent eye problems. The level of walk-ins was at 6,000 annually and increasing, leading to long travel times and waits for patients, a chaotic environment, and specialist resources being used to treat non-urgent cases. An audit demonstrated that only 9% of patients coming to the eye department required referral to the hospital eye clinic; over 90% could have been treated by someone other than a hospital doctor.

Improvements
- Following input from all stakeholders (Local Board Advisory Groups, Community Health Partnerships, Community Forums), and to enable partnership and patient involvement, the Grampian Eye Health Network was formed which includes all optometry practices in Grampian and Shetland
- A 24 hour telephone Eye Health Network Clinical Decision/Support Line was established, staffed by specialist nurses and doctors
- Afternoon consultant-led eye-assessment clinics were established
- Optometrist-led support sessions were formed to ensure continuous learning and high quality care
- Patient Group Directives enabled more efficient prescribing of medications

Outcomes
- There has been a significant shift of care in to the community
- Only patients who require referral to the hospital eye clinic are booked into the eye assessment clinic
- Patients are now seen as locally as possible
- Lengthy travel times and waits are avoided
- Valuable NHS resources are now used more effectively
“The Eye Health Network is a great example of how multi-professional collaboration with patients can overcome historical inter- and intra-professional barriers to deliver high quality eye care in a more patient friendly and convenient manner.”

Dr John Olson
Consultant Ophthalmologist, NHS Grampian

“With the old system I waited over 7 hours for a simple check up – a real waste of my time. Now I can see my own optometrist at home – no contest.”

Patient

“From the nursing point of view it has lots of benefits for patients. They are seen more locally by qualified people, and they don’t have long waits as in eye casualty. Patients with urgent problems are being seen appropriately by experienced ophthalmologists. On a personal level I have learned new skills – it certainly hones your clinical decision-making skills.”

Gordon Porteous
Nurse, NHS Grampian
Case Study 2
NHS Fife
Hospital Eye Services (HES)
In May 2006 delays in the referral process were resulting in waiting times of between 3 and 33 weeks for patients with cataracts. An audit of the HES revealed that almost all optometrist referrals were sent via GPs. Delays in the referral process were one of the reasons for long waiting times. The delay from receipt of referral to vetting the referrals by consultants could be as long as 23 days.

Improvements
• A central referral unit, using electronic optometry referral with standardised form and digital images, was established for all referrals; clinical protocols governing referrals were also introduced
• Secure links through nhs.net were established between the Fife Electronic Clinical Communications Implementation (ECCI) group and optometrists, and a designated ophthalmology link within SCI Gateway for GPs
• Medical Records staff with experience of a central referral unit for cancer referrals offered advice on the process
• Trained clinical staff now screen referrals, view images and answer queries and designated clerical staff receive referrals and appoint patients accordingly

Outcomes
• Referrals are now screened on the day of receipt and prioritised according to protocol
• Routine appointments are allocated within one week
• Waiting times across sites are now within 18 weeks for general appointments
• Waiting time for cataract clinics has reduced to 9 weeks

“Effective electronic hospital administration systems can be designed to measure capacity and activity, forward plan resource and provide an efficient service to the patient.”
Roshini Sanders
Consultant Ophthalmologist, NHS Fife

“Clinicians with a patient-centred approach have been the key to success in Fife’s eye care redesign, the effect of which was rapidly evident in Primary Care. We believe we have developed a speedy, safe and workable eye care model for our future.”
Colin Ferrier
Optometrist, NHS Fife
“The power of direct electronic referral allows proper decisions to be made earlier, avoiding significant numbers of patient journeys to hospital, providing feedback to optometrists, reducing clinic slot demand and ensuring patients that do need to be seen are given earlier appointments. Truly everyone wins and nobody loses! It even saves on paper and mail costs.”

Peter Curry
Clinical Lead ECCI, NHS Fife

Case Study 3
NHS Highland

Ophthalmology Department, Inverness

NHS Highland serves a population of 299,000 and provides visiting services to 4 rural hospitals. It was anticipated that the already long waiting times for ophthalmology services would be further increased due to the ageing population and the increasing incidence of diabetes in the general population.

Improvements

- A ward was relocated to reduce delays and improve patient flows
- Ophthalmology staff duties were redesigned to improve clinical activities, i.e. a hospital optometrist was appointed; post-op cataract reviews were undertaken by community optometrists; a glaucoma service was established by developing optometrists and nurses; and nursing/clerical staff now carry out Visual Field assessments
- A cataract theatre was opened in Wick to provide local access to care
- Orthoptists now provide a fundus photography service
- Links with the voluntary sector have been improved and developed by the hospital optometrist and the outpatient manager
- Guidelines have been improved to help GPs and optometrists with accessing patient information and clinical decision-making
Case Study 4
NHS Tayside
Department of Ophthalmology, Ninewells Hospital, Dundee
The aim was to reduce the journey time of patients with cataract from 44 weeks to 18 weeks without compromising other ophthalmic patients, and to ensure equal access for patients across a large geographical area.

By consulting with all parties and gathering detailed data relating to waiting times, demand/capacity imbalances and inefficiencies, a business case was made for additional staff, equipment and a clinic rebuild.

Improvements
- The patient journey was redesigned resulting in one-stop nurse-led assessment clinics
- The first post-operative visit was replaced by telephone assessment and the introduction of optometry-led post-operative clinics
- Tight protocols were instigated to shorten the journey time for non-cataract patients

Outcomes
- The total journey for patients with cataract has reduced to 12 weeks
- The journey for all other patients has reduced from 26 to 8 weeks
- Audited outcomes of cataract surgery have led to quality improvements
- A more highly trained workforce is implementing extended roles
The Planned Care Improvement Programme was an 18 month initiative to support NHSScotland in implementing five high impact changes:

1. Treat day surgery (rather than inpatient surgery) as the norm for planned procedures
2. Improve referral and diagnostic pathways
3. Actively manage admissions to hospital
4. Actively manage discharge and length of stay
5. Actively manage follow-up

The programme gave NHS Boards the scope to choose their clinical specialties ensuring that areas of local concern were targeted for improvement work. NHS Boards were also given the scope to decide which of the changes they wished to implement.

The programme has worked to support the delivery of access and waiting times targets, increase day case rates, reduce length of stay, reduce patient journey time and increase whole system capacity working towards the following goals:

- Improving the patient experience by the delivery of care at the right time in the right place by the right person
- Promoting a culture of improvement based on rigorous data analysis and common principles that empower clinical teams to transform the way they deliver their services from existing resources
- Leading a whole system change in how planned care is provided by the identification, spread and adoption of good practice in planned care
• Promoting data management to support innovation and performance improvement
• Promotion of sound system and process design, making sure that variation from non-standardised processes are eliminated
• Developing robust and streamlined patient booking and referral management systems to improve access and confidence to patients and GPs by improving flow of information between clinicians and patients, primary, secondary and tertiary care, and within clinical teams

IMPROVEMENT STRATEGIES
The programme has supported local teams to deliver improvements in a number of ways, both locally and nationally.
• A series of national, regional and local events have facilitated networking and the sharing of ideas across local teams
• The forging of links with the British Association of Day Surgery (BADS) to provide NHSScotland with a framework to improve day surgery rates
• The publishing of guidance on improving all five simple changes
• Local teams were encouraged to undertake end to end process mapping, supported by the regional planned care teams
• Local teams supported in visiting innovative and best practice sites and to showcase improvement work at international conferences
• The collation of a case study document that includes contributions of the work undertaken in all NHS Boards
• Promoting learning and innovation through a planned care network

OUTCOMES
The programme has provided NHSScotland with the opportunity to pilot improvements in patient pathway management.

“Planned Care is not rocket science. It’s simply planning people’s care properly. It’s good old fashioned common sense being applied to a joined-up process for staff and patients.”

Dr Jane Burns
Divisional Clinical Director, Anaesthetics and Critical Care

Overleaf are 2 case studies that were written for the national ‘One year on event’ in September 2007. A full case study booklet will be published by March 2008.
Case Study 1
NHS Lanarkshire, Anaesthetics

Actively Managing Hospital Admission

Information deficits and inconsistencies across the 3 acute hospital sites in Lanarkshire had led to inconsistent performance information on pre-admission assessment, and lack of a unified approach to clinical protocols, admission criteria and pre-operative management.

The objective was to establish a single system of pre-admission assessment for all planned surgical procedures. Key aims were to improve peri-operative care, reduce cancellations and improve utilisation of resources including labs, theatres, in-patient beds and staff.

Improvements

A multi-disciplinary group was established including anaesthetists, surgeons and nursing staff to review current processes; work was taken forward to achieve:

- consistent pre-admission assessment pathways compliant with New Ways of Waiting guidance
- standardised pre-admission assessment documentation and clinical protocols
- a business case to address inequality of resources in staffing and physical environment
- formal competency-based training for existing pre-admission assessment staff
- the development of a competency framework and induction pack for new Pre-Admission Assessment staff

Outcomes

- Optimal pathways are developed for 100% pre-admission assessments for all specialities, for both patients with, and without medical problems
- The pre-admission assessment documentation has been revised in advance of approval by the programme board in November 2007
- The first tranche of standardised protocols has been circulated to surgeons and anaesthetists for comment
- A suite of standardised clinical procedures is planned to be in place by the end of December 2007
- A competency framework for pre-admission assessment Staff is being developed
Case Study 2
NHS Tayside

Actively Manage Discharge and Length of Stay within General Surgery and Urology

During the winter of 2006/07 there was constant concern about surgical bed capacity and the ability to meet the health needs of general surgery and urgent cancer patients. Key issues were:

- Surgery for cancer and scheduled cases cancelled on a regular basis
- Complaints from patients due to lengthy waits for a bed and last minute cancellations due to lack of beds
- Building work scheduled for April 2007 would reduce bed complement
- Increasing pressure on surgical beds from medical boarders

Improvements

A consultation process with all bed holding departments was undertaken with the following outcomes:

- A patient flow proforma was tested and rolled out within general surgery, urology, oncology and haematology in February 2007
- Regular meetings with a clinical team manager and the senior charge nurse of each ward were introduced to support the use of the proforma
- Agreement that if senior charge nurses created the capacity to admit the general surgery emergency and elective patients, they could do so without authorisation from the Bed Manager

Outcomes

- As a consequence of the changes in surgery, general medicine also reviewed their patient flows and processes, leading to a significant and sustained reduction in medical boarding from around 45 patients per week to five per week
- Since the change has been implemented there has been, on average, no more than one medical boarder in surgery
- Length of stay of the target patient population has been sustainably reduced

Ninewells General Surgery In-Patient Activity

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BACKGROUND
The Scottish Ambulance Service Performance Support Programme is a performance support programme, and is therefore tailored specifically to support the Scottish Ambulance Service.

OBJECTIVES
Established in July 2007, the programme aims to support service improvement initiatives to deliver the Scottish Government target for responses to Category A – life threatening calls.

Following a diagnostic visit, the programme team, established a framework for weekly performance reporting. Three priority areas for development were identified:

- Increase Emergency Medical Dispatch Centres’ capacity and performance
- Develop performance management
- Develop an operating model which will deliver a trajectory to responding to 75% of life threatening calls within 8 minutes

IMPROVEMENT STRATEGIES
- The team developed new performance metrics and a weekly reporting template. This data is analysed at weekly meetings with the Scottish Ambulance Service to identify priority areas for action. There is particular emphasis on more timely use and ownership of the data by operational managers to deliver performance improvements in real time
The Scottish Ambulance Service has commissioned a piece of work to assist in integrating the changes being made by the service, and to ensure that control room supervision is effective. The initial tranche of work was delivered in 2007, with a second tranche scheduled for 2008.

The new Chief Executive has introduced a high level performance management system which will start in January 2008. The team will work with the Scottish Ambulance Service to design and implement an effective performance management system throughout the organisation, starting with demand analysis through to live operational management and evaluation.

The team has researched other ambulance services and models with the Scottish Ambulance Service, and is exploring the potential to draw upon leading-edge American models to deliver on its Category A target.

A new service has been introduced at the beginning of 2008, and the service will be acquiring additional Fast Response Vehicles – cars and bikes – before the end of 2007/08.

There is a continuing requirement to develop service models for rural areas to minimise the difference in response times caused by lesser population density.

**SUPPORT**

The team has drawn upon the experience of the Cancer Performance Support Programme in using the same overall methodology in terms of a diagnostic visit, followed by a strong emphasis on regularly reviewing data to identify issues and areas of good practice to improve performance.

There is also a strong link between this programme and the Unscheduled Care Collaborative, i.e. ambulances conveying many patients to A&E departments, transferring them to other facilities and seeking to connect with other out-of-hospital treatments which would be more appropriate for many patients.

In addition, collaboration with the Unscheduled Care Collaborative aims to improve patient handover and ambulance turnaround processes between the Scottish Ambulance Service and A&E departments.

**SUMMARY AND WAY FORWARD**

Many of the recommendations agreed with the Scottish Ambulance Service have been implemented and benefits are being realised. The more fundamental changes have longer lead times and will be implemented through 2008. The Scottish Ambulance Service is committed to delivering the Category A target as a key milestone in its longer term plans to improve not only patients’ access to care, but also quality of care and patient pathways.
BACKGROUND
Established in September 2003, the Scottish Primary Care Collaborative (SPCC) is based on the Model for Improvement. Almost 50% of GP practices in Scotland across 12 NHS Boards have participated in the programme, covering over 2.5 million patients.

OBJECTIVES
- To develop skills and knowledge within General Practice to deliver rapid, sustainable and systematic quality improvements in patient care
- To deliver sustainable improvements in access and outcomes for patients with long term conditions, i.e., diabetes, coronary heart disease, chronic obstructive pulmonary disease (COPD) and chronic kidney disease (in 2008)

IMPROVEMENT STRATEGIES
- A panel of lead clinicians were invited to assist in developing key measures to track improvement on each of the long term conditions
- SPCC promotes the Model for Improvement which provides a robust method of implementing changes through the use of Plan, Do, Study, Act (PDSA) cycles
- Representatives from GP Practices and Community Health Partnerships (CHPs) are invited to attend a series of Learning Workshops where they have the opportunity to develop networks with other GP Practices and develop the skills and knowledge to improve patient access and outcomes for people with long term conditions
- In order to improve patient access, the SPCC assists GP Practices to work towards Advanced Access. Advanced Access is when a practice can offer a routine appointment to their patients whether their need arises on the same day or in the future, without holding back appointments or restricting forward booking
• The SPCC use the 3rd available appointment as a measure for improvement in patient access. The 1st and 2nd available appointments may become available at short notice due to cancellation and thus the 3rd available appointment is a more reliable and authentic measure of the patients’ experience of booking an appointment. The 3rd available appointment is increasingly becoming the internationally recognised proxy measure for assessing how effectively an appointment system is functioning.

• The SPCC has promoted a strong emphasis on Patient Focus and Public Involvement (PFPI) in making improvements in patient access and in outcomes for people with long term conditions.

“I feel we are offered an excellent service in the practice and knowing that the practice ask your opinion and are constantly changing surgeries to suit patient needs – this makes you feel important.”

Patient
Dr Ward and Partners, Inverclyde

OUTCOMES

• GP Practices have achieved and sustained Advanced Access through implementing systems that ensure there are sufficient appointments to meet demand.

• GP Practices from Phase 1 have successfully completed the programme and have made the following improvements in patient access:
  • GP access improved by 69%, on average the 3rd available appointment reduced from 4.6 days at baseline to 1.45 days at Month 24.
  • Practice Nurse access improved by 54%, on average the 3rd available appointment reduced from 3.1 days at baseline to 1.44 days at Month 24.

• Phase 1 practices also made the following improvements in outcomes for people with long term conditions:
  • On average, the percentage of people with diabetes who achieved the recommended blood glucose, cholesterol and blood pressure levels improved by 28%, 58% and 36% respectively.
  • If the above improvements in diabetic outcomes were sustained across a 10 year period for all people with diabetes in Scotland we would see the following reduction in complications from diabetes:
    • 5178 fewer patients with complications of diabetes*
    • 4735 fewer patients suffering strokes or heart attacks*
    • 1678 fewer deaths of patients with diabetes*

*calculated using the UKPDS (1998) and HPS – Patients with diabetes subset 2002.
“The collaborative has offered people with diabetes more access to quality care. The process, which supports improved systems of care and sharing good practice, offers a real opportunity for improved health outcomes.”

Audrey Birt, Director
Diabetes UK

Case Study 1
NHS Lothian
Penicuik Medical Practice

When Penicuik Medical Practice joined the SPCC in May 2004, the main challenge was providing enough appointments to meet the demand for patients to see their GP.

Improvements

- A signposting and patient education system was developed which was based on “Who To See”, i.e. the most appropriate healthcare professional
- The reception team guide patients to the most appropriate appointment based on their needs
- Telephone contacts are recorded and used for staff training to ensure signposting is carried out consistently and efficiently

Outcomes

- Two years on, the practice is currently undertaking a PDSA to identify how many patients now need signposted, as most patients now know who to ask for, and guidance from reception staff is rarely required

“Being involved in the programme enabled us to focus on making small changes which brought about rapid improvements. The introduction of telephone consultations improved our availability, and offers more choice to our patients. It has also been a great team-building exercise.”

Dr Jan Sinclair, GP
Perth and Scone Medical Group
Case Study 2
Dumfries and Galloway CHP
Sandhead Surgery, Sandhead, Wigtownshire
Sandhead Surgery is a rural practice with two full time GPs and one 0.33 WTE (Whole Time Equivalent) nurse. The aim was to enable patients to be more involved with self-management of their long term conditions, especially those with high blood pressure.

Improvements

• A fully automated blood pressure monitor machine was introduced to the waiting room, allowing patients to take their own blood pressure. The machine provides patients with a printout detailing their blood pressure measurement and gives them guidance if their reading was either too high or too low

Outcomes

• Recording of BP on the new clinical system has improved, and has also identified patients with high blood pressure who were previously unknown to the practice
• Patients now actively discuss their BP with the clinical staff in a much more informed manner, hence improving self-management within the practice

Case Study 3
Dumfries and Galloway CHP
Lockerbie Medical Practice
When this Lockerbie four-partner GP practice started in the SPCC the GP 3rd available appointment was 9.57 days. The aim was to manage patient demand for appointments more effectively.

Improvements

• ‘Patient sign-posting’ has been introduced (see Case Study 1)
• Members of the Patient Focus Group have been involved in explaining practice changes directly to patients in the reception area in, for example, the Minor Ailments Scheme, the new appointments system and changes in the role of the practice nurse

Outcomes

• GP 3rd available appointment has been reduced to less than 2 days
• Patients have better access to GPs, and a better understanding of how the practice operates
• Staff are less stressed, as demand is now more manageable
“Couldn’t wish for anything more. It’s an excellent service. I have used this service a number of times and it’s very helpful.”

Patient
George Street Surgery, Dumfries
(commenting on the telephone consultation service)

Case Study 4
NHS Greater Glasgow and Clyde
Dr Shapiro and Partners, Renfrewshire CHP
The aim of this practice was to improve patient access to GP services and improve outcomes for people with COPD.

Improvements
• Patients have the option of either a telephone consultation or a face-to-face appointment
• Reception staff have been empowered to manage the appointment system as required to fit demand on the day
• Practice Learning Events were organised where former participants of the SPCC discussed, with the team, the challenges that General Practice can face and the improvements that can be achieved
• All patients on the COPD register are reviewed and, where appropriate, a spirometry test carried out; with housebound patients receiving a visit from the practice nurse to ensure equity of care. The practice also provides a quarterly COPD information desk for patients

Outcomes
• 10 months into the 24 month programme, the GP 3rd available appointment waiting times have already improved, reducing the wait from 9.6 days to 2.9 days
• Patient satisfaction has improved in the same period from 20% to 94%

“More of our patients now see their GP or practice nurse within 48 hours or sooner, and receive improved management of their chronic disease such as diabetes within their local surgery. GPs and their staff have also experienced benefits in their working life through improved workload management.”

Rosslyn Crocket
Director of Nursing
NHS Greater Glasgow and Clyde
08: Unscheduled Care Collaborative Programme

BACKGROUND
The Unscheduled Care Collaborative Programme was a quality improvement programme established within every NHS Board in Scotland, which worked towards achieving and sustaining a target set by Scottish Government that: no patients should wait longer than 4 hours between arriving at A&E units and subsequent admission, transfer or discharge, unless there is a stated clinical reason for doing so. This target applies to all minor injury/illness units and assessment areas where trolleys are used.

OBJECTIVES
• To improve patient and carer experience and overall satisfaction through improved access, and reducing waits and delays across unscheduled care patient flows
• To support delivery of the 4 hour emergency access target by December 2007; specifically to:
  • identify bottlenecks within all unscheduled patient flows
  • identify opportunities for role development
  • provide alternatives to hospital attendance based on demand
  • provide a robust performance measurement framework
  • identify best practice principles from NHS systems across the UK
  • capture and share learning
• To work in partnership with the Delivery Team to develop an integrated approach to performance management and improvement

NATIONAL IMPROVEMENT AND SUPPORT PROGRAMMES
IMPROVEMENT STRATEGIES

• A ‘whole systems’ approach was adopted to include NHS 24, Scottish Ambulance Services (SAS), local councils, the voluntary sector and all clinical and non-clinical staff; service users, carers and the public were involved through the programme and project streams.

• Five high-volume patient flow groups were developed which reflected the length and complexity of the patient journey, based on the knowledge that patients within each flow required the same systematic steps to complete their cycle of care. These patient flow groups were applicable across all acute care including mental health and paediatrics.

These are:

• **Flow Group 1: Minor Injury and Illness** This flow focusses on trends in presentation and how patients at both minor illness and injury units, and A&E departments (including out of hours) can best be treated.

• **Flow Group 2: Acute Assessment** This flow focusses on patients presenting at A&E from all sources, i.e. self-referral, SAS or GP. A key improvement target within this flow was to reduce trolley waiting time to less than 4 hours from presentation to full assessment and discharge to an appropriate location.

• **Flow Group 3: Medical Admissions** This flow focusses on patients requiring access to emergency care services, including diagnostics, from a medical, or care of the elderly specialist. The flow looked at changes in patient presentation, including those with chronic diseases and recurrent admissions, patient demographics, the impact of technology and a new multi-dimensional approach.

• **Flow Group 4: Surgical Admissions** This flow focusses on patients requiring access to emergency care services, including diagnostics, from a surgeon. The flow looked at patient presentation, including those who are discharged without having surgery who may require a planned attendance for further diagnostics or review.

• **Flow Group 5: Out-of-Hospital Care** This flow focusses on accessing timely services to match clinical or social need. Key improvement targets included reducing the number of avoidable admissions; a reduction in hospital delays including timely access to diagnostics; and improved discharge planning. Delayed discharges and timely access to appropriate community resources were also considered.

• High impact changes were identified to sustainably improve the patient journey and develop a whole system approach to improving capability:

  • Streaming and locally agreed model of See and Treat (Zero breaches for Flow Group 1)
  • Management of the 4 hour journey
  • Improved access to initial clinical assessment
  • Prompt access to evidence-based diagnostic tests
  • Timely access to specialist opinion (surgery, mental health)
  • Reducing variation in admission
  • Proactive bed management
  • Management of the inpatient episode and timely discharge to reduce variation in length of stay.
OUTCOMES

Performance against the 4 hour emergency target has improved by 15% since March 2006 through whole system transformation, supported by the implementation of high impact changes.

- Whole systems redesign and improved capability
- Improving overall patient flow
- Improving the individual patient journey and experience

Whole System Redesign and improving capability

Example from NHS Borders of Local Progress Against the 4 Hour Emergency Access Target
Case Study – A&E Escalation Plan

NHS Forth Valley

The A&E Escalation Plan was developed to facilitate timely patient journeys through the A&E department, on the basis that preventing delays is not just about A&E – it is ‘everybody’s business’. This means an appropriate level of services in the community to prevent avoidable presentations to A&E and/or admissions to hospital. Efficient working within the A&E department depends on the management of the inpatient capacity within the hospital, with timely discharge of inpatients to enable early admission of patients from A&E.

Improvements

- Workshops were held to identify potential delays including capacity issues in A&E, patient journey times in A&E, restricted capacity within the hospital and equipment/systems failures
- A ‘traffic light system’ was introduced to describe the severity of the indicators and to guide staff (especially the A&E floor co-ordinator) to alert others as early as possible to potential delays, inform decisions to redistribute staff across emergency care, redirect patient flows and transfer patients to other areas where appropriate

The traffic light system is based on the following:

- Green Status: Normal working
- Amber Status: Potential delays for patients in A&E
- Red Status: Patients are experiencing delays within A&E

Outcomes

- Staff are now able to monitor the delay indicators and trigger times of potential delays which broadly matched that recorded through the capacity and demand prediction tool
- The floor co-ordinators communicate to others when potential delays are experienced and provides information of when delays are resolved, i.e. escalation/de-escalation
- There was evidence of early action taken to re-allocate staff and redistribute patients during periods of escalation, preceding a return to normal working
- The A&E floor co-ordinators reported that the escalation plan helped in identifying patient delays, communicating a description of delays to others and identifying actions to minimise delays
Case Study – ‘Waste Spotting Week’

NHS Greater Glasgow and Clyde
Royal Alexandra Hospital, Paisley

Medicine and A&E teams had previously introduced a process of working jointly within the Emergency Department in a ‘single pile’ approach to demand, making significant improvements to the flow of medical assessment and admissions. The aim was to make further advances to this flow.

Improvements

- Using Kaizen methodology, a team was assembled from each area to garner ideas and advice on process and waste in current systems; daily meetings and regular de-briefs with managerial staff took place over a week to ensure awareness.
- Findings were reported and action plans devised and presented for both immediate and longer-term actions which were incorporated in the programme action plan.
- Staff remain involved with their actions and other progressions within the flow through regular meetings or de-briefs.

Outcomes

- Measurable improvements have been seen in Flow 3 assessment process, bed availability and occupancy levels.
- Non-quantifiable outcomes include ideas, enthusiasm, ownership, clinical buy-in, credibility and awareness-raising leading to sustainable improvements.
- Short term actions included a senior nurse practitioner reviewing the flow of medical admissions at another acute site in Clyde using a similar approach of the ‘Waste Spotting Week’ adapted from Kaizen methodology.
- Long term action included the adoption of the acute physician role by the respiratory physician as trialled during the ‘Waste Spotting Week’ team, which resulted in a significant reduction in the length of stay within Medicine.
“The Unscheduled Care Collaborative has given me the opportunity to address and solve some of the system problems which have frustrated me on a day to day basis when caring for emergency patients. I have had the opportunity to step outside my own clinical area, work with other clinicians and managers as part of a team, and gain a wider perspective of the needs of emergency patients. The challenge now is to make that change sustainable, and to persuade clinical colleagues that the system by which we manage emergency patients is our responsibility. Emergency care is a system in evolution – we must be prepared to help shape the changes taking place.”

Veronica Devlin
Staff Grade Doctor, Emergency Department, Crosshouse Hospital, Kilmarnock

“The Unscheduled Care Collaborative Programme has given nurses a unique opportunity to get involved in making real improvements to local services for emergency patients.”

Dr Elizabeth Myers
Nurse Consultant, Acute Receiving, Medicine and Cardio-Vascular Acute Services Division, NHS Tayside

“As the Chairman of the Emergency Access Delivery Team and a Health Board CEO, I fully recognise the pivotal role that the Executive Leads for the programme have in supporting and empowering frontline staff to deliver real improvements in emergency care. Integrating the approach of the programme with operational management at local level is key to delivering sustainable improvement in performance. It is important to stress that performance against the target is a measure of the whole system in a hospital, and not just a measure of performance at the front door.”

Tim Davison
CEO, NHS Lanarkshire
SERVICE INNOVATION

Supporting innovation, in service design and delivery, and the use of new technologies or improvement tools and techniques will be an increasing feature of IST in the coming years.

Some initial work has been undertaken to test a model for identifying when innovations should be supported, with a clear focus on strategic priorities and innovations which will have the greatest impact and applicability across NHSScotland.

This section outlines the lessons from three programmes of work:

- CitiStat Programme
- ENT Tele-Endoscopy
- Rapid Improvement Events
09: CitiStat Programme

BACKGROUND

Originating in Baltimore, USA, CitiStat is a performance management system which uses recent operational data on key performance indicators as the basis for discussions on the delivery of key organisational targets.

The CitiStat model provides a useful mechanism for enabling NHS Boards and Chief Executives to track performance against their plans, and to hold executive teams to account using operational data that is as recent as possible.

The model is based on 4 key principles:

- Having the right data for managing performance and identifying improvement; enhanced data quality and analysis are key to the process and set it apart from existing performance management models
- Undertaking thorough analysis of the data in the context of strategic objectives and providing data which supports decisions to act
- Regular sessions, led from the top, to rigorously review the data and associated performance; the high level involvement of Chief Executives and senior non Executives focusses the agenda on improvement, scrutiny and accountability, and gives a clear sense of organisational and partnership priorities
- Immediate follow-up of forward actions by creating a link between actions agreed at one meeting being rigorously reviewed at the next; this ensures the link between data, performance and agreed actions at a corporate level
The CitiStat model was piloted in Scotland during 2005/6 in two NHS Boards (NHS Ayrshire and Arran and NHS Tayside) and two local authority areas, with the aim of ensuring that senior executive teams and Board members have a clear and timely view of their organisation’s performance against plans in respect of key priorities for the NHS.

The pilot was externally evaluated with positive results.

**OBJECTIVES**

- To support the roll out of CitiStat and an enhanced approach to existing performance management arrangements within NHS Boards
- To provide a focus on driving forward improvements in internal performance management and measurement

The team promoted the CitiStat roll-out by inviting NHS Boards to become early adopters, by offering financial support, technical expertise and project support. As a result, five NHS Boards worked with the programme as early adopters: NHS Forth Valley, NHS Grampian, NHS Highland, NHS Lothian and the Scottish Ambulance Service.

**IMPROVEMENT STRATEGIES**

Following a launch event in December 2006, the CitiStat national team supported Boards in implementing their plans through:

- identifying a project leader to bring appropriate colleagues together locally to agree the governance arrangements which would be put in place, and the data systems and analysis required to support them. The delivery of HEAT (Health Efficiency Access Treatment) targets was the main starting point to establishing the new system
- adopting an appropriate approach to suit local circumstances, but delivery of the key principles outlined above was the baseline for all
- supporting local developments, whilst also bringing together Chairs and project leads to offer opportunities to share learning at national events
- integrating the key principles and developing systems of meetings and review throughout the year; the end-of-project reports have highlighted the learning from the implementation phase

**OUTCOMES**

- As a result of the advice and support offered to the early adopters 4 NHS Boards now use the CitiStat model as part of their mainstream performance management framework

The Health Delivery Directorate will continue to apply the principles of CitiStat ensuring full alignment to HEAT, national outcome indicators and strategic objectives.
BACKGROUND

The Scottish Centre for Telehealth (SCT) is currently supporting NHS Boards across NHSScotland to pilot the use of Telehealth to help redesign and improve patient access to health care no matter where they live.

Telemedicine has been used successfully in a number of clinical areas such as dermatology, neurology and cardiology. Telecommunication technology is used to transfer images via videoconferencing to specialists. It can help to reduce the need for patients to travel to major cities and hospitals to receive their care and treatment.

In ENT, endoscopy is now a key diagnostic tool and ENT Consultants are reporting increasing patient referrals for assessment. The incidence of head and neck cancer is increasing and the importance of rapid diagnosis and treatment is reflected in the requirement to deliver the 62 day target from urgent referral to first treatment.

In May 2006, IST supported the project team at SCT by funding a pilot to test the ‘proof of concept’ in the use of tele-endoscopy. This used remote diagnostic technology to facilitate the examination of an airway for patients with symptoms of head and neck cancer.

The pilot was divided into 3 phases:

Phase 1 – to deliver a remote diagnostic service from Aberdeen to Shetland. This service went live in July 2007 and the clinics are now part of routine service delivery. Patients are reporting high levels of satisfaction with the service. Plans are also underway to train two local nurse endoscopists in Shetland.

Phase 2 – to deliver a remote diagnostic service from Raigmore to Stornoway. A local Speech and Language Therapist has been trained to perform the endoscopy and facilitate the clinics. Clinics are due to go live in February/March 2008.
Phase 3 – to deliver a Head and Neck review appointment service to a local Community Hospital in Aberdeenshire, which is currently under discussion.

It was agreed with IST at the outset, that if the pilots were successful, then the new service model of care should also be tested in other luminal study areas. An economic evaluation of the project is currently being undertaken by the Health Economic Research Unit (HERU) at the University of Aberdeen.

IMPROVEMENT STRATEGIES

The redesign project is comprised of several strands which will assist in meeting the increasing demand for specialist ENT outpatient services. The project will also gauge the potential impact that telehealth solutions may have in improving other patient pathways in support of delivery of the 18 weeks standard.

- Developing and piloting synchronous ENT tele-endoscopy services that will assist in the rapid diagnosis of the airway and reduce the need for patient, carer or Consultant travel
- Training non-specialist staff to perform ENT tele-endoscopy to improve patient access to a specialist ENT opinion
- Developing the use of remote luminal studies projects to test ‘proof of concept’
- Working with staff from HERU to conduct an economic evaluation of the project
- Disseminating the lessons learned and potential impact of the projects to the wider NHS

OUTCOMES

- Safe, effective and acceptable upper airway tele-endoscopy services for patients and carers are now being delivered
- Additional endoscopy clinics are now provided in between visiting specialist ENT services from Aberdeen. The additional clinics will also be provided from Inverness in March 2008. This demonstrates better use of equipment and improved clinical outcomes for patients
- The number of patients who have to travel to Aberdeen or Inverness for an urgent referral/appointment has been reduced
- Patient and carer travel time and costs to Aberdeen and Inverness have been reduced
- Consultant travel time and costs to Shetland and Stornoway will be reduced
- Access to specialist ENT education for local healthcare staff has been improved
11: Rapid Improvement Events

BACKGROUND

IST uses a range of tools and techniques to support improvement in healthcare. Increasingly, healthcare leaders in other countries are using Lean approaches to deliver significant improvements. In 2006 the Performance and Innovation Unit published a report which concluded that Lean was applicable within the public sector in Scotland.

There are a number of Lean tools and techniques that can be used to make improvements and, amongst others, IST has chosen to use Rapid Improvement Events (RIEs). These require a trained team of facilitators to deliver improvements, so IST selected three members of staff to be trained in this methodology.

Rapid Improvement Events are week-long events involving two facilitators and a team of 12 to 16 people. The RIE looks at a particular service, or part of the service, and the team is made up of representatives from all stakeholders within that service. The teams generally consist of hospital consultants, nurses, porters, estates, administration and management staff. Prior to the RIE there are many weeks of preparation to define the scope of the project, awareness raising, and data collection.

The RIE gives the staff an opportunity to properly review the service, discuss and, in most cases, discover what the other groups of staff do on a day to day basis. Over the week they discover how patients actually travel through the service, the duplication and delays in the system. They write an action plan which identifies improvements they will make within a week, a month and three months.
OBJECTIVES
The IST work on RIE had four main objectives:

- to deliver real improvements for patients and staff in Scotland
- to provide “proof of concept” for Rapid Improvement Events for NHSScotland through successful case studies in clinical settings
- to build capacity and capability within IST
- to encourage NHS Boards to build their own capability for Lean approaches to improvement

Case Study 1
NHS Tayside
The first event was undertaken in the urology service at Perth Royal Infirmary in February 2007. The event aimed to reduce the waiting times for patients with Frank Haematuria (blood in your urine) by removing the waste and inefficiency in a patients progress along the pathway. It also set out to make the working environment better for the staff and raise morale throughout the service. Before the RIE, an average patient waited for 48 days from referral through to diagnosis. After the RIE this has reduced to 10 days. The maximum wait reduced from around 80 to 100 days, to 20. The graph below demonstrates this improvement:

![Perth Frank Haematuria Patients Waiting times](image)

OUTCOMES
The IST team gathered feedback from the urology team.

“It’s going to be far better for staff. I think they feel they’ve been listened to this week.”
Urology Clinical Team Manager.

“It’s been an intense week. We were able to change things quickly that might have taken months, years, if we hadn’t taken the time out.”
Consultant Urologist

This event was the winner of the innovation award at the 2007 Daily Record Health Awards.

Rapid Improvement Events have been undertaken by very few organisations in the public sector. To date, the team have delivered 11 events. This represents one of the first such sustained programmes of work within NHSScotland, and complements the work of NHS Lothian with GE Healthcare. Lean approaches such as RIEs will offer NHSScotland opportunities to deliver the 18 week target in Better Health, Better Care.
These programmes have been successful in supporting sustainable delivery, through the efforts of local improvement teams, managers, clinicians and support staff.

This section draws together the main lessons from across the national programmes and implications in developing the new programmes of improvement work after March 2008. In doing this we are not seeking to diminish the achievements to date, indeed we need to build on these whilst recognising that the learning needs to be captured and exploited as we move forward into a new era of improvement.

Improvement programmes have been built on the following principles for Clinical Systems Improvement:

- Focus on high volume runner groups and improving patient flow, stream into simple and complex pathways
- Understand and measure end to end (or continuous) patient journeys. This should not be a one off activity, but an approach to management based on real time data
- Determine ‘Value’ added activities from the perspective of the service user
- Improving patient experience should be a key feature and future programme work should build in an integrated approach to support the patient experience programme – Better Together.
- Measure and manage demand, capacity, activity and queues, reducing numbers of queues and size of batch processes throughout the system
- Use Lean improvement principles to improve patient pathways, to realise efficiency and productivity gains, reduce waste, duplication, variation and standardise the pathway for reliability and safety
- Spread evidence based high impact changes
Whilst these have provided a focus for improvement activity they are numerous and some rationalisation is required.

- Rigour in the use of small scale rapid cycles of change for systematic and sustainable improvement (Plan, Do, Study, Act cycles – PDSAs)
- Create a receptive context for change where staff are empowered and enabled to deliver sustainable improvements, only through the engagement of all staff will service transformation be delivered on the scale required

**Measurement for Improvement** is a different approach to using information. The development, collection and reporting of meaningful data is vital to supporting improvement and is necessary to understand the impact of change across clinical systems. Investment in information management support has been significant, both nationally and locally as developing the use of information for improvement has proved to be challenging across all programmes.

There is a need for clarity in defining:

- Information for improvement
- Information for judgement
- Information for research

There is a mismatch between the approach to improvement, which looks at **patient flow**, and service management which takes a departmental or specialty approach. This is compounded by the way information is provided and used in service management. Further investment in clinical systems and operations management will be considered as an integral part of the new programme development.

Training in the use of **Improvement Tools and Techniques** alone has not been sufficient to give NHS staff the experience and confidence for practical local application. Additional focus and investment in service improvement support has been required and needs to be fully considered for the new programmes beginning in 2008.

There are still barriers to be overcome in using improvement methodology that has been imported from industry. Despite the emerging evidence base, many clinicians do not value some improvement tools and techniques. There is a need to interpret and translate some of the terminology used to better fit the healthcare context. Good case study material and the development of **clinical leads and champions** has been vital in overcoming some of these barriers and will continue to be a feature of improvement programmes.

**Leadership for improvement** requires the development of a particular skill set in technical and behavioural change management which needs further support and development.

The use of **small scale rapid cycles of change** is not yet thoroughly embedded. The size, scale and speed of use of PDSAs is not effectively understood and utilised. Therefore, there is still a tendency to use longer pilots or more traditional planning rather than the action focussed approach advocated.
“Most locations have not yet achieved a critical mass of individuals who can work on CSI independently. Staff were busy with crisis management tasks and had no time for sustainable improvement. Consequently, even where staff have been trained in CSI tools and techniques there is still pressure to ‘stick to the day job’.”

Barriers to the use of CSI

‘Implementing Clinical Systems Improvement – a review of opinions from delegates on the Unscheduled Care Collaborative Programme’

Paul Walley, Associate Professor in Operations Management
Warwick Business School
October 2007

Effective programme management and some dedicated programme support, including information management and clinical leadership is vital. The team should have seniority and skills to influence and lead across organisational boundaries and need to work to embed the changes through operational and clinical management. They need the support from Executive level leadership that is actively involved in driving the agenda at Board meetings and works to remove barriers that are beyond the influence of the programme team.

There has been variation across NHSScotland in the positioning and value that is placed on the improvement programmes to support delivery of NHS Boards core business objectives and strategic priorities. This has had an impact on the speed at which local improvement programmes get started and the recruitment and ability of the local improvement team to influence strategically and integrate their programmes of work for delivery through clinical and managerial teams. In some organisations the role of the executive sponsor has been a signatory to the project plan rather than someone who is actively working to enable and empower staff and to unblock organisational barriers. Attending workshops with their teams enables the Executive sponsor to recognise their achievements and the challenges they face in the context of the national improvement landscape.

“A number of clinical leads felt that although senior managers may have talked about their support of the collaborative process and would talk to them if the clinicians contacted managers directly, the talk was different from proactively supporting the collaborative team… and not to delegate participation on the collaborative work to a more junior manager.”

Senior management and senior clinician ‘buy-in’

‘Report on Qualitative Assessment of the Diagnostics Collaborative Programme’
Healthcare Quality Quest
June 2007
Because of their size or structure, some organisations have not appointed dedicated programme managers. The pull to “the day job” of clinical or operational management for these individuals with joint responsibilities means that progress can be delayed, and sometimes follow through is poor. Where organisations have chosen to appoint a programme manager across programmes to align improvement activities, the post holder often found it difficult to understand the detail of each programme and truly engage with the front line staff. Because of the diversity of geography across Scotland, some posts are better shared between individuals to reduce travel time and make sure that time is spent practically supporting the improvement teams and their work.

Where IST has been prescriptive on the required infrastructure to support improvement this has led to criticism and has not been seen as supporting an integrated approach to improvement. Therefore for the new programmes IST will adopt a more flexible approach and will work with NHS Boards to develop a locally relevant and integrated programme infrastructure that support not just IST led improvement programmes but includes support to the ‘Scottish Patient Safety Programme’ and ‘Better Together’.

National and regional learning events have received very positive evaluations and are seen as a powerful way of supporting and re-energising teams to continue their improvement journey. However, competition and repetition across the programmes has been apparent and has caused some difficulties for smaller organisations where competing events have required the attendance of the same individuals. Clinicians have been clear that national events should be offered sparingly and a specialty focus is preferred. Clearly there is a need for more work to get the right balance to ensure national spread and support local delivery.

There has been a move to core skills training and master classes in technical and behavioural change management that are open to all rather than provided by programmes. This has been supported through the development and launch of generic toolkit material – The Continuous Improvement Toolkit. This move has been well received, and has been a good way for programmes to share their expertise and experience in order to broaden the target audience. However, the reach of this training has not yet been sufficient to produce a groundswell of people with the capability to create a service that engenders continuous improvement. Having a consistent approach across all national programmes will be valuable in making that potential realisable.

IST experience shows that improvement capability is team, programme or clinical system specific. Improvement capability varies considerably across and between organisations.

We must now build on the achievements of the current programmes. We must use the knowledge from these programmes about patient pathway and patient flow management as we move forward to take on the ambitious improvement agenda over the next three years. We must maintain the skills for continuous improvement, using a consistent approach and set of tools and techniques. As we make the transition to the new improvement programmes, we must also maintain the momentum of improvement.
DELIVERING BETTER HEALTH

NEXT STEPS

IST have 3 new improvement programmes planned for 2008 – 2011:

- 18 Weeks Improvement Programme – integrated with delivery
- Long Term Conditions Collaborative Programme
- Mental Health Collaborative Programme

There will be a focus on ‘co-production’ and support for the strategic aims of a ‘mutual NHS’ as detailed in ‘Better Health, Better Care’, where patients and the public are more actively involved in service improvement and transformation.

All 3 national programmes are being developed in partnership with the NHS; the 18 Weeks Improvement Programme with NHS Lothian, the Long Term Conditions Collaborative Programme with NHS Tayside and the Mental Health Collaborative Programme with NHS Greater Glasgow and Clyde.

At local and national level there will be a focus on managing the transition between current and new improvement programmes to ensure that none of the knowledge, skills or momentum for improvement is lost.

Programme planning guidance for all 3 programmes will be available in March and support is available to NHS Boards to develop local integrated programmes of improvement that include the Scottish Patient Safety Programme and Better Together. The scale, scope and ambition of these programmes in transforming the experience and care delivery systems for patients is a significant step change for NHSScotland.

This guidance will determine the key actions required for the programmes. Local programme plans will be required to outline how NHS Boards will approach the improvement actions and detail expenditure required, up to a pre-determined ceiling. There will be a requirement to measure and account for the return on investment.
IST will also be introducing further Performance Support Programmes. In addition to the continuation of the Scottish Ambulance Performance Support Team, IST will build on the learning from the work of the Cancer Performance Support Team to inform the design of a new performance support programme for the delivery of 18 weeks by 2011 to complement the 18 Weeks Improvement Programme.

IST will also commission a programme of Productivity Performance Support. This programme will be in place to support NHS Boards in delivering the productivity and efficiency targets required through the latest government spending review.

Productivity and efficiency measures and gains will also be features of the national improvement programmes.

Further full programmes of performance support may be commissioned depending on specific performance issues against HEAT targets. IST will also continue to offer less intensive levels of performance support such as advice or access to training, to respond to other HEAT performance issues as they arise.

IST will further develop its role around innovation through the appointment of a programme manager to co-ordinate an iterative programme of innovation that influences the way NHSScotland resources and delivers patient focussed services to achieve key access targets.

There will be a focus on education and on supporting the development of NHS Board improvement capacity by providing core improvement skills training in addition to individual programme and master class events. It is anticipated that increasingly some NHS Boards will partner with IST in delivering the core skills training. Further development in Clinical Systems Improvement will also be offered. IST will also develop the NHS Board improvement leads forum and ensure it connects where appropriate with the Organisational Development Leads network. There will be increased use of Video Conferencing to better involve and support remote and island communities.

We will continue to develop strategic partnerships with other leaders in health care improvement. Continuing to work on developments with the NHS Institute for Innovation and Improvement and include their leaders in the master class programme and programme educational events. IST have also started to develop a strong relationship with the Institute for Healthcare Improvement through involvement in the strategic development of the Scottish Patient Safety Programme. This is a relationship we will continue to build upon.

Finally IST are looking to more fully support the delivery of HEAT targets where the expertise of the team in system and process improvement can add the most value to enable delivery.

“IST will continue to apply improvement science to performance challenges.”

Stephen Gallagher