Orthopaedic Services have been at the forefront of many people’s minds recently. In March, Audit Scotland’s report focused on the need for greater efficiencies through reduced lengths of stay and shifting more patients from inpatient to daycase. Our event ‘Delivering Timely and Efficient Orthopaedic Services’ on 24 June run in partnership with the Scottish Committee for Orthopaedics and Trauma provided an opportunity to hear at first hand the successes achieved using the ‘Enhanced Recovery’ technique. In the same month, colleagues at our ‘Improving the Safety, Reliability and Efficiency of Theatres’ event described how they are working to redesign and improve Orthopaedic theatre services.

At the end of September 2010, Professor Jimmy Hutchison from NHS Grampian gave an update to the ‘Sustainable Delivery of 18 Weeks’ event on the forthcoming outputs from the Orthopaedics Task and Finish Group. The Group have just reported on their work and we look forward to featuring this in a future edition of the newsletter.

Laura Jones
National Programme Manager
18 Weeks Service Redesign and Transformation Programme—Improvement and Support Team

**Review of Orthopaedic Services—Audit Scotland Report**

In recent years the NHS in Scotland has significantly reduced the length of time people are waiting to receive orthopaedic procedures such as hip replacements and knee operations but the Audit Scotland report ‘Review of Orthopaedic Services’ found that there is more scope to make savings by working more efficiently.

As Scotland’s population ages, demand for Orthopaedic services will keep rising. Reduced funding and shorter waiting times targets will add further pressure. In order to sustain the improvements made, the NHS has to become more efficient. The report looks at areas worth exploring for potential efficiencies.

Moving more inpatient care to day surgery, reducing the length of time patients stay in hospital and making changes to how surgical implants are bought would all result in savings. Based on available information it is not possible to draw clear conclusions about productivity, but the report suggests that if NHS boards with lower levels of activity were to reach the average then an additional 3,700 procedures could be carried out each year.

Deputy Auditor General for Scotland, Caroline Gardner, said: “Back pain, hip problems and other orthopaedic conditions can seriously affect people’s mobility and quality of life. Waiting times for hospital treatment have reduced considerably in recent years, and this is a very welcome achievement.”

“However there remains much that the Scottish Government and NHS boards can do to help improve the efficiency and effectiveness of orthopaedic services and money could be saved by better use of resources. But for this to happen there needs to be much better information on activity, costs and what works best for patients.”

The report is available through the Audit Scotland website at: [www.audit-scotland.gov.uk/docs/health/2010/nr_100325_orthopaedic_services.pdf](http://www.audit-scotland.gov.uk/docs/health/2010/nr_100325_orthopaedic_services.pdf)
DELIVERING TIMELY AND EFFICIENT ORTHOPAEDIC SERVICES

This one day event was run by the Improvement and Support Team in partnership with the Scottish Committee for Orthopaedics and Trauma to consider future strategies for the development of Orthopaedic Services for the patients of NHSScotland.

The main areas of discussion during the day were:

- What data do we need and how do we use it?
- Reducing variation in purchasing, activity, pathways and lengths of stay.
- Recognising that time as an important aspect in the quality of care.
- Make the patient an active participant in their own care.
- Harnessing the talent of the whole Orthopaedic team.

A two-hour plenary session was devoted to Enhanced Recovery, a new approach to the pre-operative, intra-operative and post-operative care of patients undergoing surgery. Originally pioneered in Denmark it is now being championed by a growing number of health professionals in the UK.

Fast Track = Right Track

Dr Henrik Husted, Head of Arthroplasty at Hvidovre University Hospital in Denmark spoke to delegates about his experience with Enhanced Recovery technique and his findings which included:

- Reduced length of stay.
- Reduced waiting time.
- Reduction in overall cost of the service.
- Increased productivity with no increase in staffing
- Improved patient satisfaction.

Dr Husted’s key messages include the need for standardised procedures in both the operating theatre and the office, the importance of patient motivation in its success and of the whole team having a positive attitude to its introduction. His take home message was “fast track = right track”.

Enhanced Recovery in NHSScotland

Enhanced Recovery was first introduced in Orthopaedics in Scotland by the Golden Jubilee National Hospital (GJNH). David McDonald is the co-ordinator for their Enhanced Recovery programme—titled the ‘CALEDonian Technique’. David reiterated the importance of the engagement with the team. He also highlighted the need for whole systems thinking to help ensure success. David has a lead role in promoting Enhanced Recovery for NHSScotland and has been working with a number of Boards including NHS Borders, which you can read more about in the next article.

An ‘Eventscast’ of the Orthopaedics event, along with all the presentations are available online. Details of how to access this are available on the Improving NHSScotland website at: [www.improvingnhsscotland.scot.nhs.uk/programmes/18weeks/Pages/24June2010-DeliveringTimelyandEfficientOrthopaedicServices.aspx](http://www.improvingnhsscotland.scot.nhs.uk/programmes/18weeks/Pages/24June2010-DeliveringTimelyandEfficientOrthopaedicServices.aspx)

Professor Jimmy Hutchison, Chair of the Orthopaedics Task and Finish Group gave an update on the forthcoming outputs of the group to the ‘Sustainable Delivery of 18 Weeks’ event on the 30 September 2010 which can also be viewed as an Eventscasts at: [www.improvingnhsscotland.scot.nhs.uk/programmes/18weeks/Pages/30September2010-Sustainabledeliveryof18Weeks.aspx](http://www.improvingnhsscotland.scot.nhs.uk/programmes/18weeks/Pages/30September2010-Sustainabledeliveryof18Weeks.aspx)

STOP PRESS

The interim output report from the Orthopaedic Services Task and Finish Group is now available online at: [www.18weeks.scot.nhs.uk/how-to-achieve-and-maintain-18-weeks/task-and-finish-groups/orthopaedics/](http://www.18weeks.scot.nhs.uk/how-to-achieve-and-maintain-18-weeks/task-and-finish-groups/orthopaedics/)

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Implementing Orthopaedic Enhanced Recovery Programme for Hip and Knee Arthroplasty in NHS Borders

Following a Lean redesign of Orthopaedic Theatres in NHS Borders, it was identified that although we could improve Theatre utilisation; this presented us with an issue of inpatient bed availability in the Orthopaedic ward. To address this we accepted an offer of support from the Golden Jubilee National Hospital (GJNH) to adopt the Enhanced Recovery Programme (ERP) as a means to improve patient experience and aid delivery of the 18 Weeks RTT target by reducing length of stay for these patients therefore increasing inpatient bed capacity.

Where we started from

- Average length of stay for primary arthroplasty was higher than the national average at eight days.
- Variation in clinical practice particularly relating to mobilisation and DVT prophylaxis.
- 100% of patients admitted the day before surgery.
- 100% of patients admitted to HDU post op.
- 100% of patients catheterised.
- 40% of hip arthroplasty patients received a blood transfusion post op.

What we did

- Between June–September 2010 we undertook data collection, staff awareness sessions and stakeholder interviews.
- Arranged training at GJNH of ERP techniques for Orthopaedic Consultants and Anaesthetists.
- Agreement of standard clinical practices i.e. DVT protocol, no wound drains, no urinary catheters.
- From September–end November 2010 six Kaizen events will be held to implement changes for our six Orthopaedic surgeons.
- Planned changes at pre op assessment enable the patient to be a more active participant in their recovery.
- No ERP patients in HDU post op.
- Introduced a dining area in ward for ERP patients.
- Separation of trauma and elective patients on ward.

What we achieved in our first Kaizen week

In the week 20th–24th September 2010:

- 75% patients admitted on day of surgery, with an average length of stay four days.
- Increased the number of arthroplasties on theatre list from three to four.
- All consultant Orthopaedic surgeons will be participating in the ERP by end November 2010.

Still to do

- Audit of clinical outcomes including patient follow up.
- Role development e.g. Arthroplasty Nurse Specialist, Advanced Practitioner–Theatre to support sustainability.
- Involve GPs in management of anaemia pre op.
- Revise post op blood transfusion triggers.
- Plan for sustaining of ring fenced elective beds during peak winter activity.

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IMPROVING ORTHOPAEDIC PRE-ASSESSMENT

NHS Grampian’s Continuous Service Improvement Team recently supported the Orthopaedic Service to undertake a Value Stream Analysis of the surgical pathway. Aileen MacVinish, Better Care Without Delay Programme Manager describes how NHS Grampian identified a range of opportunities which will improve patient experience of the pre-assessment process for Orthopaedics, increase staff job satisfaction as well as delivering organisational benefits through the release of time to care.

What was the issue?

Analysis of the surgical pathway showed that the Orthopaedic pre-assessment clinic was chaotic for patients and staff alike. In addition not all patients were pre-assessed and the ultimate cost of this was late theatre cancellation.

What did the team do?

A Rapid Improvement Event (RIE) was set up with consultants, Allied Health Professionals (AHPs), GPs, nurses and administrative staff as equal stakeholders. The current state of pre-assessment was mapped and staff took the opportunity to highlight issues that impacted on their role within the service. Patient flow, administrative flow, staff flow and scheduling all came under the spotlight.

What improvements were achieved?

The output of the event included the following improvements:

- Patients are now in clinic a maximum of 1 ½ hours as opposed to 3.
- AHP time in clinic reduced to two days, previously it was four.
- Patients are seen within two weeks following outpatient appointment.
- Clinic capacity increased from 48 slots to 68.
- All patients now pre assessed (whether full pre assessment or quick screen).
- Nursing staff time almost 100% touch time with patient, due to new administrative role.

The pre-assessment team continue to meet on regular basis to ensure the continued smooth running of the clinic and to problem solve if required.

MUSCULOSKELETAL AUDIT

The Orthopaedics Task and Finish Group has recently published two Musculoskeletal (MSk) audits on the 18 Weeks website. To produce these reports local MSk Audit Coordinators collected data from patient case notes, patient information systems, results reporting and referral management systems.

Carpal Tunnel

The first report is on Carpal Tunnel Syndrome (CTS) patients. Carpal Tunnel is a common condition with up to 10% of the population having symptoms. The report finds that there are large variations in the waiting times and pathways for the management of CTS. It also observes significant variations in the frequency and waiting times for preoperative nerve conduction studies between centres, with some major delays in accessing neurophysiology services. The CTS audit period ran for 14 weeks from 5 January to 9 April 2010 in all reported hospitals, and for up to twelve weeks before this in selected hospitals to increase sample sizes. The report includes all patients listed for an elective carpal tunnel release. Reports are being used to target local improvement work.

Knee Arthroscopies

The second report focuses on referral to treatment for Knee Arthroscopies. Knee Arthroscopy is the commonest procedure carried out in orthopaedics. Here the MSk Audit co-ordinators report on a 13-week arthroscopy audit period from 14 September to 11 December 2009. The report includes all patients listed for an elective Knee Arthroscopy. The report emphasises the need to understand the pressures and pinches in the system and highlights opportunities for improvement.

If you would like to know more about these findings, both reports are available on the 18 Weeks website at: www.18weeks.scot.nhs.uk/how-to-achieve-and-maintain-18-weeks/task-and-finish-groups/orthopaedics/
Visit to Crosshouse Hospital Health Records Department—25Th June 2010

Representatives from NHS Highland and NHS Greater Glasgow and Clyde visited Crosshouse Hospital in Kilmarnock to view their approach to delivering the Medical Records service in NHS Ayrshire & Arran. The purpose of the visit was to show staff the department in operation and the agenda for the visit was based around the referral journey. The visit had been arranged to give participants the chance to look at another area, network with colleagues and discuss and generate ideas for improvement in a safe environment. From 18 Weeks RTT perspective this would support improvements in core practices and processes to facilitate smooth flow within the patient journey. The following article is based on feedback gathered from the attendees.

"We met with the front-line staff responsible for referral management, scheduling and booking appointments to the staff who pull and prepare the clinics. From the visit, it was clear that the Medical Records workplace in NHS Ayrshire and Arran is highly organised, well structured with clearly defined staff roles and responsibilities. New starts undergo a comprehensive two week induction programme which focuses on quality assurance as well as the systems and processes from the outset. As well as being very industrious, staff feedback was positive with pride taken in their trouble-shooting abilities. From a leadership perspective, Team Leaders pro-actively manage staff in promoting attendance with a 3.2% sickness rate which is suggestive of a happy workforce.

Crosshouse Hospital utilises a broad range of visual management tools which along with the clearly defined written roles and responsibilities meets the needs of various learning styles. One example is the booking system used which identifies each patient with either a green circle (breach date > 1 week) or a red circle (breach date) depending on which date was entered for that patient’s appointment.

In summary, this was a worthwhile and positive experience and we are grateful for all the time and effort taken by staff to meet with us and share in their best practice and learning.”

Astrid Lefevre
Service Improvement Manager
Fiona McGeachan
Locality Business Manager
Belford Hospital, Mid-Highland Community Health Partnership

"Visiting Crosshouse Hospital Health Records Department gave us the opportunity to observe how NHS Ayrshire and Arran approach Health Records management, and all of the associated tasks. We found this to be a very useful exercise which allowed us to compare current processes within NHS Greater Glasgow and Clyde with those in use not only in NHS Ayrshire and Arran, but also in NHS Highland. We are currently getting ready to launch a new Referral Management Centre in NHS GG&C and were curious to find out where we could share and learn from best practice with our colleagues in both Boards.

We found it particularly useful to visit the Referral Management Centre which has been established in NHS Ayrshire and Arran. It was encouraging to learn from staff that working in the Referral Management Centre has led to job enrichment for them and this was evident in the positive attitudes of the staff in the centre. It was also reassuring to see that some of our processes (or planned processes) are similar and these appear to be working well in NHS Ayrshire and Arran. The day also gave us some food for thought around our approach to implied acceptance policies and staff training.

Overall it was a very helpful visit and we are very grateful for the hospitality and welcoming attitudes of all of the staff we met at NHS Ayrshire and Arran.”

Isabella Burr
Health Records Service Improvement Manager
Lisa Clark
Health Records Service Improvement Manager
NHS Greater Glasgow and Clyde

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Anne Allison, Mary Beattie, Janet Campbell and Debbie Baird
NHS Ayrshire and Arran
“The site visit to Crosshouse gave a complete overview of how a well managed, efficiently run department can achieve results. Crosshouse provides an excellent template for any Medical Records department to work to. On speaking with filing, preparation and admissions staff it was apparent that they worked as one team, providing the same outstanding service in each area. Staff were very clear as to what their duties involved and what deadlines they should be working to, this I am sure was due to the comprehensive direction and excellent management both written and verbal. Questions were easily answered by all staff members and additional written information was always to hand. I left the Highlands looking for ideas of how improvements could be made within the Central Records Department—Crosshouse has provided me with a clear picture of what can be achieved and the answers as to how I go about it.”

Lynne Mackay
Central Records Manager
Raigmore Hospital

It is clear to see from the feedback that site visits are a great way of giving a fresh perspective on how things could be done differently in your own Boards. The Improvement and Support Team are keen to promote networking and are happy to help facilitate visits to areas of interest. Many thanks to Debbie Baird and her team at Crosshouse Hospital for the support and time given in making this visit such a great success.

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NHS Ayrshire and Arran aim to reduce ‘did not attend’ (DNA) episodes wherever possible. The X-ray department at Ayr Hospital reported DNA rates at end August 2010 of 3% for CT and 2% for MRI. In particular, significant levels of unused capacity have been noted in these modalities during evening sessions due to patient DNAs.

Reducing DNAs in MRI/CT evening clinics at Ayr Hospital: What were the implemented improvements?

The clerk on duty for the evening sessions would attempt to make telephone contact with patients who were scheduled for the next evening session. This would firstly serve to remind patients of their appointment and if a patient indicated that they were unable to attend for whatever reason, then the slot would be free for another patient. Patients at the top of the waiting list could then be contacted to determine if they are available to take up a spare slot at short notice. Details of patients who had previously contacted the department on an ad-hoc basis indicating their willingness to fill a ‘last-minute’ or cancelled appointment are kept on an informal basis by desk staff. These patients can also be contacted in an attempt to fill any vacant slots. Any slots which become vacant can also be filled quickly by in-patients requiring CT or MRI.

Measurable outcomes

Since implementing this process DNA rates have been significantly reduced for evening MRI/CT sessions at Ayr Hospital.

What are the benefits for patients, staff and the organisation?

- Patients are given timely reminder of appointments.
- Patients who are available for cancelled appointments are able to take up late availability slots.

NHS Ayrshire and Arran
IM&T Developments

Awaiting Test Reporting
Following the introduction of the new clinic outcome sheet, it is now possible to collate information to track patients who are awaiting test results. In the clinic, ‘Awaiting Test Results’ (ATR) is recorded on the clinic outcome sheet for the patient. Staff then update the PAS system with the information from these sheets. A report, developed by our IM&T department, can then be run to pull ATR information. An e-mail is sent to medical secretaries on a weekly basis highlighting to staff that they need to check the ATR report for patients who have been waiting for test results longer than four weeks (for a routine referral) and two weeks (for an urgent referral).

What we did
With the support of our secretarial teams a more effective and reliable process has been introduced to manage seamless patient journeys and to escalate delays.

What plans are there to spread the improvement?
This process could be extended to include daytime schedules and perhaps also be rolled out to other modalities in the department.

The department does however recognise there are barriers which might limit the success of this:

- Limited current administrative support capacity in the department to contact patients.
- Lack of up to date patient details e.g. contact telephone numbers.
- Logistics of contacting patients during normal office hours.

What is happening now?
The department continues to monitor DNA rates for these evening sessions and we are hoping to capture patient and staff feedback about this process.

When secretaries receive the outcome from the test results from the appropriate clinician the RTT status is updated.

Unique Care Patient Number
The Unique Care Patient Number (UCPN) has now been introduced to NHS Dumfries and Galloway and is being piloted in two specialties—ENT and Rheumatology. Following successful pilots, further staff training will take place and the use of the UCPN will be rolled out to all other specialties in the very near future.

Audiology Improvement Work
It was highlighted following a review of Audiology waiting times and demand and capacity analysis significant support and improvement was required in order to reduce the waiting times. In the last year considerable improvement work has taken place with the Audiology team.

What we did
A project group was set up consisting of members of the Audiology team, ENT, senior management and members of the 18 Weeks RTT local and national project team. Following an initial scoping exercise the group agreed some key priority areas to reduce the waiting times.

NHS Board Updates

Joan McGhee
18 Weeks RTT Programme Manager
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18 Weeks work in NHS Dumfries and Galloway is progressing well in terms of service improvement and developments within the information infrastructure to support the achievement of the 18 Weeks RTT. This article provides a brief overview of some of the recent IT developments to date and an insight into the improvement work being undertaken within Audiology.

MRI Evening DNAs
**NHS Board Updates**

**Staffing**
The first priority was to address staffing vacancies within the team. The department had been using locum staff for a considerable length of time. In August 2010 we appointed two full time permanent Audiologists giving us our full complement. Our waiting time for first appointment as at June 2010 was 60+ weeks so even with the improved staffing levels, this would not be have been sufficient to reduce the waiting list.

A successful business case which included a waiting times trajectory was put together to appoint temporary locum Audiology staff in order to support clearing of backlog. We have set a three month trajectory from July to September of this year to achieve 31 weeks for first appointment, 10 weeks for fittings and other treatment 30 weeks. Early indications are that we are on track to achieve this target.

**Clinic Profiles**
Work continues between Information Services Division (ISD) and Audiology to work out the clinic profiles required to reduce the waiting times for the various pathways. ISD are also working closely with Audiology to ensure clinical outcomes are being recorded correctly and we are planning to roll out TOPAS alongside Practice Navigator in the next few weeks.

**Hear Check Screener**
In the past, the traditional way to manage patients who need a hearing aid is to assess at one appointment and fit at another. In order to manage demand on the service, we have now provided all GP practices throughout the region with a hear check screener. The screener means that for some patients, two appointments can be combined into one. A revised referral protocol for primary care has been developed to include the screener results which will help us to enhance the patients’ pathway and we are planning to develop this model of ‘assess and fit’ over the next few months.

**Ongoing Work**
The team are currently:

- Working on a new trajectory for September 2010 onwards which will help us to further reduce our Audiology waiting times to meet the 18 Weeks RTT Standard.
- Reviewing the staff skill mix, looking at opportunities to develop the Administrative and Audiology Technical Officer roles in helping to manage the patients journey.
- Working very closely with the Hard of Hearing Group and RNID to improve the information being provided to patients.
- Setting up rural drop-in clinics which will help to support the care and maintenance programme across the region and to reduce the demand on the Audiology department.

Progress continues to be challenging however the team are very focused on introducing further improvement measures to meet these challenges.

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**Referral Management**

An electronic Referral Management System (RMS) is enabling electronic vetting and triage of referrals resulting in quicker turnaround of referrals with a target for triage and vetting set at three days. This electronic system is also enabling the majority of referrals to be triaged and vetted without case notes. We are currently in the process of rolling this out to all specialities and monitoring the turn round time. In addition RMS is supporting the achievement of the HEAT target for e-referral.

**Outpatients**

Scoping is underway to understand how the outpatient capacity and rooms for acute specialities are being utilised, and a newly formed Outpatient Group Chaired by one of our Clinical Directors will review all
information and develop an action plan for improvements. Loss of capacity through DNA is a concern for outpatient services. Following on from a text reminder pilot conducted across several specialties in 2009, procurement is underway to purchase a cost effective DNA reminder system. This will be completed by November 2010. Once the preferred solution has been identified it is planned that this will be introduced alongside a review of our current booking processes and patient communications. This work is being pursued in partnership with the Scottish Ambulance Service to establish a system which will also help reduce the number of aborted ambulance journeys.

Theatres
Redesign work has been underway across all theatres in NHS Fife since January 2010. The focus of the redesign is to improve utilisation which is being achieved by:

- improving scheduling,
- more efficient booking of lists,
- improving the current pre-assessment model,
- improving the flow of patients into and out of theatre by the development of a surgical elective admissions unit.

Other key areas of work to improve monitoring and measurement
Clinical outcome recording
Clinical outcome recording is now in progress across all specialties. To date efforts have been concentrated within outpatient settings and in Endoscopy to support staff to record their outcomes electronically. The next phase is to work with Allied Health Professions to understand their role in key patient pathways and support them to record outcomes. This will improve the quality of outcome information and will allow us to explore the option for speciality specific outcomes. Currently 68% of all new and review appointments have outcomes recorded electronically at the point of care. This work is closely linked to our wider e-health programme for the development of an electronic patient record and clinical portal.

Unique Care Pathway Number
Unique Care Pathway Number (UCPN) is now in use for all GP generated electronic referrals. Work continues to understand and implement a process for generating non-SCI gateway referrals and Consultant to Consultant referrals.

Unified Patient Tracking System
This system, which is being developed with NHS Tayside and NHS Western Isles, will provide us with the ability to monitor and report on and display our 18 Weeks RTT activity. The work on development and validation of our prospective monitoring of the 18 Weeks RTT pathway and inter-hospital transfers is due to be completed by December 2010 and the project is currently on track to deliver in this timeframe.

Within NHS Forth Valley, we have recognised the need to ensure that the elective pathway for patients is both lean and standardised regardless of speciality if we are to further drive down the waiting time and meet 18 Weeks Referral to Treatment standard by December 2011.

Current Processes for Elective Booking
Our Centralised Booking Office was established some years ago to provide a dedicated unit to assist in the delivery of waiting times. This Unit does not cover all specialties and we currently run a hybrid service with waiting lists for some specialties serviced by the unit and others serviced by medical secretaries. Both from a strategic and operational view the hybrid booking process makes the management of waiting times more difficult.

This has resulted in a number of issues including:

- **Two systems in place**: Waiting Times Unit and medical secretaries booking results in non standardised practices and variability throughout processes. Pathways that lack flow and that include unnecessary delays, rework and multiple hand offs.
- **Inefficiencies**: Under utilised theatre lists (due to cancellations and planned under-utilisation), theatre lists lost due to leave, day of surgery cancellations, patients not being dated for surgery in order of additions to the waiting list.
- **Lost opportunities**: Time lost because suspensions are not being applied in a timely way; unfit patients added to the waiting list, delays due to paper systems and lack of due procedure, in terms of agreed processes.
- **Inequity**: There is inequity of consultant waiting list size and number of theatre sessions available, and inability to direct resource where greatest need exists e.g. provide sessions to surgeons/specialties with waiting time pressure.
**New Model for Elective Booking**

A phased move from two acute hospital sites in Stirling Royal Infirmary and Falkirk and District Royal Infirmary) to one site Forth Valley Royal Hospital (FVRH) by June 2011 has provided further incentive to review our elective booking model.

The new model supports a one stop experience for patients at the outpatient clinic. This pathway frontloads the necessary information to ensure a robust elective surgery booking process on the day of the decision to treat. This pathway would be supported by drop in pre-op assessment (for about 47% of patients) or booked assessment within seven days, and clinical input that would ensure optimal utilisation of all theatre lists. It is estimated that this pathway would provide an additional ten days to book the patient for surgery, and ensure that all patients placed on the waiting list were fit and available to attend for surgery from that moment on. It is also argued that this would result in a reduction in the number of cancellations due to patient unavailability.

The greatest benefit of this system however would be that an increased window of opportunity for booking elective surgery would be created, with many of the existing delays removed.

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Fig. 1: Proposed Elective Booking Process for FVRH (by June 2011)
NHS Grampian’s Better Care Without Delay Team is relaunching its Clinical Guidance Intranet (CGI) as a support tool for referral practice and pathway development. The original tool contained lots of helpful information but was difficult to keep up to date and required changes to be implemented by E-health staff. The new CGI will be simpler to navigate and can be updated more easily.

Clinical Guidance Intranet’s Role in Demand Management

The establishment of a functional CGI is a key component of NHS Grampian’s demand management strategy and achievement of the 18 Weeks Referral to Treatment Standard. The vision for the CGI is that it becomes an informative web based tool which supports referral practice by providing easy access to clear succinct guidance. It will also have a comprehensive directory of all services available in the region whether they are based in primary or secondary care. Access to this type of information will ensure the patient is referred to the right person in the right place every time.

Improved Functionality

The guidance available on the CGI will be clearly laid out under simple drop down menus. For example select Orthopaedics, select knee, select anterior knee and guidance on how a referral should be managed or directed will appear. Coupled to this will be a service directory so following on with the Orthopaedic example, a range of locations where ‘knees’ can be referred will be displayed. The GP and patient can then select the most appropriate service based on the patient’s condition and physical location. This may include a locally based GP with Special Interest (GPwSI) in Orthopaedics as an appropriate alternative to a consultant referral.

Pathway Development Forum

One of the biggest challenges faced by the Better Care Without Delay team in supporting the development of pathways has been finding convenient times to bring together clinical stakeholders to work on redesign. The Pathway Development Forum component of the CGI will allow clinicians to contribute remotely to the development and agreement of patient pathways. The forum will have three sections:

- the existing pathway,
- the proposed pathway for comment,
- a discussion forum that is accessible to all stakeholders.

This forum will be moderated by the Clinical Lead for the pathway. The stakeholders will be invited to comment on the new proposals, the moderator will pull together the consensus and the pathway will be agreed at a sign-off meeting. The new pathway will be posted on the CGI as guidance and the service directory amended to reflect any changes. Finally a review date will be set to ensure a cycle of continuous improvement.

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A great deal of work has been undertaken within NHS Greater Glasgow & Clyde to ensure the 18 Weeks Referral to Treatment Standard is in place by December 2011. In this newsletter we would like to share news of two recent pieces of work. The first is the implementation of electronic vetting and the second is how we used Lean methodology to facilitate change in Renal Services.

A Team Approach to Implementing Electronic Vetting in NHS Greater Glasgow and Clyde

The Scottish Government set a HEAT target to all NHS Boards to electronically manage 90% of referrals by December 2010. We receive on average 28,000 referrals per month from 273 GP Practices across nine hospital sites so this is no small challenge.

Steps Involved

There were a number of important steps on our journey to achieving our goal.

1. The e-Triage Project Team developed a partnership agreement with the 18 Weeks RTT team detailing roles and responsibilities. This helped form the basis of a strong working relationship.
2. The e-Triage project manager provided detailed presentations and demonstration of the e-Triage system to Managers by directorate. Management support has been essential to the successful rollout.
3. Health Records Staff have been the champions of the e-Triage System. They have also provided important feedback for future developments.
4. Functionality for all staff was carefully considered. It was agreed to host this within the ‘Clinical Portal’ to allow access to as much electronic clinical
information as possible. This reduces case note requests.

5. The 18 Weeks RTT Service Improvement Manager met with clinicians to build an understanding of the whole pathway. Understanding existing vetting processes was crucial to a smooth transition to e-Triage which was achieved by the Lean technique ‘Who, What, When, Where, Why’.

Streamlining
Streamlining entry to the service was performed by establishing the options that were available for referrers on SCI Gateway. In some instances sub specialties were created to channel the referral to the most appropriate person. This could be a nurse or member of diagnostic staff. Diagnostics performed during the guaranteed wait time can mean the results are available at outpatient appointment. As referrals are received to a service, not an individual clinician, patients are vetted to the first available appointment. This enables the staff appointing patients to maximise utilisation.

Go Live
Once agreement had been reached, a demonstration of the test system was given to clinical and administrative staff ensuring that all those involved were aware of the ‘Go Live’ date. The ‘Go Live’ provided clinicians with support when vetting actual patients. The e-Triage Project Team also devised an electronic user manual to support veters in navigating the system. They also provided a single point to contact for comments, concerns and compliments. User feedback has been really positive.

E-Triage reports provide data on the following:

1. **Vetting Outcomes**
   - Outpatient Appointment (including clinic)
   - Straight To Test
   - Straight To Procedure
   - Referred Onwards
   - Back To Referrer

   These reports inform and aid demand management and support the development of referral guidance.

2. **Time To Vet**
3. **Vetter**

By August 2010, over 56% of NHS Greater Glasgow and Clyde Referrals were electronically vetted.

**Renal Services Rapid Improvement Event**

A number of our Service Improvement Managers (SIMs) are Lean trained to bronze certification. This training equips our SIMs with the skills and techniques to lead and facilitate improvement and transformation through Rapid Improvement Events (RIEs).

**Steps Involved**

One of our first RIEs looked at Renal Services within Glasgow Royal Infirmary (GRI) and the Western Infirmary Glasgow (WIG). This event focused on:

- new ways of delivering Renal Service modernisation to support the new South Hospitals build,
- reducing the variance and improving the service delivery,
- recording and management of day case patients across sites.

The initial process mapping took place several weeks before the RIE. The process mapping brings together the key people from the service at both sites to detail, step by step, what currently happens for day case patients, both within Renal Surgery- Vascular Access and Nephrology- Ward Attenders. The mapping confirmed the variation in process. For example whether Ward Attenders have an Inpatient stay was dependent on where they attend was one variation. Another was variation in waiting times for Vascular access and the differences in recording systems.

**Transformation of processes into pathways**

The RIE brought staff from both GRI and WIG together over four days to look at the mapped processes. Our aim was to transform the current processes into streamlined pathways which would benefit patients and staff. Through a number of exercises the team looked at the value add and non value add of each step within the process, concentrating on bottlenecks. The team then looked at these in depth to understand the root cause behind these. From this, Renal staff were able to create a future state map which would eliminate as many of these bottlenecks and delays as possible.

**Action Planning and Change**

After completing the future state map, the team put together an action plan that would deliver the future state, helping us to move away from old working practices. As many of the actions as possible were actually completed during the RIE, with staff working together to produce new templates, guidance, order new equipment and liaise with other departments to get things in place. The results were vast and include:

- Reduction in referral to treatment time from 30 weeks (GRI) and 18 weeks (WIG) to 12 weeks by December 2010.
- Increase of Day Cases at GRI from 10% to 60% for ward attenders and Inpatient reduced from 90% to 40%.
A harmonised single pathway for both the GRI and WIG.

14 out of 21 ‘Do-its’ completed during the 4 day RIE, e.g. templates updated, identifying and ordering equipment, agreeing arrangements with other departments.

The Renal RIE was a very positive event and the hard work and input of the Renal staff, as well as the facilitators, has been driving forward a pathway that promotes quality, timeliness and patient/staff morale.

Our Orthotic service historically has had long waits from the time of referral to supply of an Orthosis (medical device). In some cases it could take up to 45 weeks to provide a patient with their orthosis. There were concerns that this was potentially contributing to bed blocking. The Orthotic service took on average one week for each patient episode of care. This resulted in the delayed discharge of approximately 60 patients each month. It was clear to all that improvement was needed.

Improving Orthotic Services

Our requirement was to ensure that the service became more responsive to needs and met the 18 Weeks RTT Standard. This needed to be achieved within the context of cost improvement measures as the service was seen as delivering poor value for money.

The Challenge
Initially, one of the major challenges was the availability of useful data within the service to examine the current state. As a result the first step in the improvement was to introduce a data collection structure to collect the following information:

- Episode of care times
- Referral rates (by site and specialty)
- Case mix analysis
- Activity analysis per clinician (ratios of new vs fitting vs review appointments)
- Average cost per type of orthosis
- Performance management of Orthotic manufacturers (delivery performance scores)

Lean Methodology
Lean methodology was used to examine aspects of the current pathways and processes that didn’t add value to the front end delivery of care. The service members and other stakeholders were involved in a process mapping exercise to examine the current service. From this stakeholders became very aware of the aspects of the service that didn’t add value. The process mapping approach was also an opportunity to ask stakeholders what the service should look like, to give a vision of the future state. This gave stakeholders the opportunity to input into the re-design of the service.

The Results
Currently the service has no patients waiting over 9 weeks from date of referral to delivery of Orthosis. This allows for nine weeks for consultant outpatient referrals. The service now accepts GP referrals which means not all patients need to attend a consultant outpatient appointment before attending, thus reducing demand on the Consultant outpatient clinic slots.

- 35% of all patients attending the Orthotic service are supplied with their orthosis on the day of their 1st appointment. Previously none were supplied on the day
- The Orthotic service in July 2010 averaged less than 24 hours for an IP episode of care, reduced from the previous one week average.
- Every patient leaves the department with their return appointment already booked which has resulted in a reduction in DNA rates from 20% to 7% (July 2010).
- The service had a cost improvement of approximately 10% in 2009/10 as opposed to 2008/09

What We Learned
- Relevant data collection is imperative to understanding any Orthotic service.
- Working in partnership with Orthotic manufacturers is necessary to ensure they also understand the need for service change.
- Forward booking does not increase workload.
In this month’s newsletter, an update from NHS Orkney on Lean and news of developments in their Audiology Services.

Lean in NHS Orkney
Application of the Lean ‘tools’, has clarified and focused efforts on addressing challenges across a number of services and re-design work-streams including Intermediate Care, Acute Service Redesign and Specialty treatment pathways. It has highlighted the requirement for robust real time service activity data to inform objective and evidence based decision making, as well as for measuring the impact of service changes and monitoring service improvements. In line with best practice, public perceptions and the patient experience is essential to ensure that services are shaped appropriately. There have been a number of different areas of improvement and development. Here is a summary.

Scottish Patient Safety Programme: Facilitators based within the Clinical Governance Team support application of the continuous improvement methodologies and adoption by nursing staff in the hospital to support improvement focused towards the Scottish Patient Safety Programme.

Information: Appointment of an Information Analyst and Information Officers to increase local capacity recognises the importance of information for measuring and supporting service improvement as well as for audit and reporting purposes.

Releasing Time to Care: Six members of NHS Orkney staff, five nurses and a service redesign facilitator are undertaking training to engage Balfour wards with Releasing Time to Care: The Productive Ward employing continuous improvement methodology.

Discharge Planning: A Rapid Improvement Event (RIE) helped to improved flow of patients from the acute area of the hospital to home, improved communication between partner organisations, reduced emergency readmissions, and reduced complaints and incidents reported.

Audiology Services
Christine West, NHS Orkney’s Chief Audiologist, offers a singled-handed service to the Board. Understanding how patient’s Audiology pathways are mapped in Topas, our local Patient Administration System (PAS), has helped NHS Orkney to improve the way it records Audiology services and as a result make reporting performance easier.

Current system
Audiology patient appointments are made in Topas. The clinical information about the appointment is added to a separate system called Auditbase. Christine updates both systems—manages and administers patient appointments in Topas. In the event that she is unavailable, Medical Records staff have access to her clinics and help with the administration of patient appointments (e.g. moving patient appointments). Topas also has a module where e-Referrals are automatically picked up from SCI-Gateway, so Christine can use Topas to vet and triage referrals. For our Information Services team, using TOPAS ensures that they can interrogate it to generate activity report information on request to the service.

Mapping Audiology Pathways
Back in February 2009, work began to use Topas to map Audiology pathways. We needed a flexible method of recording and reporting the following Audiology Waiting Times (WT) information:

1. Number of patients waiting for a first contact appointment.
2. Waiting time for a first contact appointment.
3. Patient waiting from assessment to fitting of hearing aid.
4. Waiting time experienced from assessment to fitting of hearing aid (waited).
5. Waiting time from assessment to treatment—other than hearing aid.
6. Waiting time from assessment to treatment—other than hearing aid.
7. Patients waiting from fitting of hearing aid(s) to review.
8. Waiting time from fitting of hearing aid(s) to review.
9. Pathway calculation of patient waiting from assessment to fitting of hearing aid
10. Experience waiting time from assessment to fitting of hearing aid (waited)—pathway calculation

We recognised that there were a number of issues that needed to be addressed to help us improve Audiology waiting times. These were:

- the quality of the GP referrals. Poor quality referrals meant we could not determine the type of referral at the time of booking the appointment,
- being able to report on patient’s Audiology waiting times both in real-time and retrospectively.

To address the reporting issue we gave each appointment subtype; a sub-classification. By doing this we now have the ability to measure and identify patients on an Audiology pathway. The Information Services team make the linkage from previous appointments subtype to subsequent
appointments. Using this method, a wait calculation can then be done from past appointment to future appointment. Using subtypes helps with classification, distinction and mapping of each Audiology appointment.

The types of subtypes used in Topas for Audiology clinics are:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR</td>
<td>NEW REFERRAL, 1ST ASSESSMENT</td>
</tr>
<tr>
<td>REV</td>
<td>HEARING AID REVIEW</td>
</tr>
<tr>
<td>FREV</td>
<td>FURTHER HEARING AID REVIEW</td>
</tr>
<tr>
<td>HAR</td>
<td>ROUTINE REASSESSMENT—3 YEARS</td>
</tr>
<tr>
<td>REP</td>
<td>REPAIR APPT</td>
</tr>
<tr>
<td>UNHS</td>
<td>TARGETED FOLLOW UP</td>
</tr>
<tr>
<td>TINN</td>
<td>NEW TINNITUS 1ST APPT</td>
</tr>
<tr>
<td>TINR</td>
<td>TINNITUS REVIEW APPT</td>
</tr>
<tr>
<td>FIT</td>
<td>HEARING AID FITTING APPT</td>
</tr>
<tr>
<td>NFIT</td>
<td>HEARING AID FIT 1ST APPT</td>
</tr>
<tr>
<td>NDEC</td>
<td>DECLINED TREATMENT</td>
</tr>
<tr>
<td>NNFA</td>
<td>NO FURTHER ACTION REQUIRED</td>
</tr>
</tbody>
</table>

Measuring the Audiology 18 Weeks RTT Pathway
Pathways can be mapped by identifying a patient’s appointment that starts with DR (new referral, first appointment). The subsequent appointment would map from DR to using FIT (hearing aid fitting appointment) subtype. Using this mapping, measure the length of wait from the first appointment (and referral) to the second review appointment for when the hearing aid is fitted.

For Hearing Aids, there are two distinct pathways which need to be identified. They are:

DR → FIT → REV        NFIT → REV

Once the subtype is added to the appointment, pathway linkages can then be made.

Below is an example from the Topas patient appointment screen. This patient’s Audiology referral came in on the 16/09/09. Patient attended the first appointment on 13/10/09 for investigation and measurement of hearing aid. Then on 10/11/09, patient was fitted with hearing aid and attended their review appointment 23/12/09.

With this system a patient’s waiting time can be monitored at each stage.

Visual Studio Reports
The Information Services team have developed reports deployed via Visual Studio—Reporting Services by linking directly to the TOPAS database. This now answers the Audiology waiting times queries. These dynamic reports are now available as a web based service that Christine can run at anytime.

For more information on Audiology please contact

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As a result of a successful e-Health Demonstrator Project, NHS Tayside, Fife and Western Isles began working with Aridhia in 2010 with the ongoing development of a system which will enable the measurement and reporting required from the 18 Weeks Referral to Treatment Programme, using near real-time data. The NHS Tayside implementation and training programme commences on 24 September, 2010. The application will go-live across the consortium Boards by 31 December 2010.

Aridhia
Aridhia is a health informatics company. Formed in 2007, it is a joint venture between Sumerian Europe Ltd, NHS Tayside and the University of Dundee. Its purpose is to improve patient care and patient safety through health analytics.

Unified Patient Tracking
The objective of the project is to develop an IT solution that would provide:

- Data integration from multiple data sources and multiple NHS Boards.
- Automatic production of 18 Weeks Referral to Treatment performance returns – national and local requirements.
- Prospective patient tracking tools to manage waiting times and operational management of referrals.
- Support pathway level analysis.
- Support onward patient referral tracking and measurement.

**Data Sources**

The Aridhia system integrates information from a NHS Board’s Referral Management System, Patient Management System and any Diagnostic information sources. This enables end-to-end views of the referral from the GP referral details until the clock stops. Clinic outcomes captured in the Patient Management Systems are mapped into Aridhia which influences the clock status.

**Unified Views**

The system can be viewed either at a NHS Board level i.e. aggregate data views or at patient level i.e. a timeline view of events along the patient pathway. Work is ongoing to develop a view which identifies potential ‘hot spots’ across patient pathways indicating areas that require action to ensure the 18 Weeks target can be met adequately.

**Onward Referral Management**

The Unique Care Pathway Number will be generated by Aridhia on receipt of referral; this will assist with onward referrals, and pathway linking. The system will be developed to support the process of onward referrals to and from other NHS Boards. Proof of concept work has successfully been undertaken integrating at the patient level, where there was patient activity from referral to treatment recorded across the OASIS Patient Management System and TOPAS Patient Management System. Work is ongoing to further define requirements to support this development.

**System Benefits**

- Reduction in time spent producing weekly or monthly reports.
- Ability to pinpoint potential hotspots by using filters.
- Near real-time updates from data sources to allow for a quicker response.
- Reduction in time spent gathering information from various systems to identify waiting time’s breachers, or potential breachers.
- Meaningful information to staff across the organisation responsible for waiting lists, reducing the number of steps in the process.
- Reduces the paper flow in waiting list information.
- Improves the ability to fast track diagnostics tests to fit the pathway.
- Online validation to CHI level is possible, as consequence providing a credible information tool.

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**UPDATE ON 18 WEEKS PRINCIPLES AND DEFINITIONS**

The 18 Weeks Referral to Treatment Time (RTT) Standard requires NHSScotland to measure the total period waited by each patient from referral to treatment and to manage every patient’s journey in a timely and efficient manner. Setting clear principles and definitions of what this journey includes is an important step in this process. The Information Delivery Team (IDT) for the 18 Weeks RTT Standard has responsibility for developing the principles, definitions and scope of the Standard. The ‘Principles and Definitions’ for 18 Weeks RTT was issued in January 2009 and here is a summary of developments with that document.

In July 2010, a decision was taken to combine the Principles and Definitions document with the New Ways publication ‘Applying the Scottish Executive Health Department Guidance’ (a.k.a The Green Book) along with a variety of guidance material published by the Information Services Division (ISD) around waiting times definitions and recording. Having a single document was felt to be a more effective way of presenting this information. An early draft of this new amalgamated guidance has been circulated to members of the IDT for comment and their feedback is currently being reviewed by ISD for incorporation into a further draft. Following this exercise, the draft will be circulated to a wider group for review. Any comments and recommendations from this review will inform the final draft. The guidance can then be signed off by the IDT and the 18 Weeks RTT Programme Board and circulated across NHSScotland. We are hopeful of this being complete by end of January 2011 at the latest.

**NATIONAL ACCESS POLICY**

The National Access Policy (NAP) is one of the workstream groups within the Demand and Capacity Management Task and Finish Group. The NAP group, chaired by Jane Grant of NHS Greater Glasgow and Clyde, is developing a policy which will help ensure that there is equitable and sustainable delivery of waiting times and that there are systems in place to optimise the use of facilities and available capacity to deliver high quality, safe patient care within waiting times standards.

The development of the NAP has involved a review of access policies currently in use across NHS Scotland. Core principles from these local access policies have been identified and brought together to create an access policy for Scotland. The NAP will contain a number of key principles that underpin access. It will also outline a number of high level responsibilities around communication, referral and waiting list management and the use of information to support service improvement.

This is a high level policy document which sets out the principles and objectives rather than the detailed guidance regarding the recording of waiting times which will be contained in the waiting times guidance document described earlier. Work is taking place to ensure that these two separate documents—NAP and the waiting times guidance, complement one another. There will be a review of the draft NAP at the next workstream group meeting in mid-November. At this session further comments will be taken and the draft updated. Once the document signed off it will be circulated to 18 Weeks contacts across NHS Scotland.
ONLINE RESOURCES

18 Weeks
www.18weeks.scot.nhs.uk

No Delays Scotland
www.nodelaysscotland.scot.nhs.uk

Improving NHS Scotland
www.improvingnhsscotland.scot.nhs.uk

Improvement and Support Team Continuous Improvement Toolkit
http://member.goodpractice.net/ContinuousImprovementToolkit/Welcome.gp

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