MINISTRY OF HEALTH
MANATŪ HAUORA

A Summary of the Improving Patient Pathways – Diagnostic Pilots

Elective Services

Ministry of Health

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Introduction

Following the survey of General Practitioner (GP) Access to Imaging and Endoscopic Diagnostic Procedures (November 2007), the Elective Services team at the Ministry of Health canvassed District Health Board (DHB) interest in undertaking direct access initiatives. A panel with representation from DHB Planning and Funding, RANZCR (College of Radiology NZ branch), and the Elective Services team was formed to select pilots against an agreed set of criteria. The focus was on improving elective access, so medical and surgical diagnostics were included whilst ACC and maternity diagnostics were excluded. Twenty-two applications for pilot funding were received. Fourteen pilots were selected. This document contains a summary of the 14 pilots that were supported between May 2008 and January 2009.

The purpose of the pilots was to improve access for patients to diagnostic services on referral from primary care.

The selected pilots fell into two broad categories:

1. expanding diagnostic capacity through the provision of additional procedures, alongside development and implementation of GP referral protocols and pathways; or
2. improving diagnostic service quality, through reviews and improvements in administration, GP referral processes, and data management, that is, demand, capacity, activity and queue data.

The Elective Services team congratulates the participants in the pilots. We can all learn from what worked well and what did not go as planned.

The pilots confirm that GP direct access can significantly improve utilisation of specialist outpatient time and improve patient care by reducing patient distress with more rapid diagnosis. Redesign of processes through better understanding of demand and capacity, triage and prioritisation results in long-term sustainable benefits. The same principles can be applied to other diagnostic modalities such as DEXA scans, urodynamics, and cardiac ultrasound.

The summaries are in a standardised format that includes contact information for more detail.

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Northland District Health Board

Single point access for patients with large bowel symptoms

Introduction

There is unanimous agreement among clinicians at Northland District Heath Board (NDHB) that patients with symptoms, but low risk of cancer, should be offered further investigation but this may not necessarily be a colonoscopy. Some GPs were referring patients for procedures that were not always the most appropriate without knowledge of waiting times for either barium enema or colonoscopy.

The situation overburdens the colonoscopy service and delays those with high risk clinical features from accessing the most appropriate investigation. Patients with low risk clinical features are waiting longer than needed for the reassurance that they do not have cancer and guidance on their future management.

Pilot aims

- Develop an effective method for consultation with primary care for service development purposes.
- Develop a pathway that improves access for primary care patients to the most appropriate investigation for their large bowel symptoms.
- Establish an electronic referral tool that could be accessed through the GP Patient Management System (PMS).
- Develop the role of the clinical nurse specialist (CNS) to undertake referral triage under supervision.
- Conduct training by the general surgeon to upskill the CNS to perform sigmoidoscopy procedures under supervision for patients referred for large bowel investigation.

Improvement processes

- GPs across Northland were consulted to build understanding of the proposed project and develop a mutually acceptable solution.
- A GP reference group was established to assist in the development of an electronic referral tool that could be integrated into the GP PMS.
- An electronic referral template for colorectal referrals was developed.
- Training for the colorectal CNS to undertake triaging of referrals was provided.

Outcomes

- A successful model for engaging with GPs through the use of a GP Reference Group has been established.
- An electronic referral template including referral guidelines, and prioritisation information that supports single point access for patients with large bowel symptoms has been developed.
- Waiting times from GP referral to prioritisation have been reduced.

- GPs found the new pathway a substantial improvement on the previous referral process.
- GPs were unanimous in their support of being involved in designing services they were going to use.
- The role of the colorectal CNS is being developed to enable better co-ordination of referrals.
- The pilot did not proceed with the colorectal CNS undertaking sigmoidoscopy procedures.
- The electronic referral template has been extended to include generic and breast referral templates for use by primary care.
- Collaboration has been improved between primary and secondary care in relation to IT services and information transfer across NDHB.
- Virtual First Specialist Assessment (VFSA) was established for this group of patients.
- The electronic referral template enables:
  - GPs' referrals to be made more efficiently
  - referrals to be prioritised more efficiently and accurately
  - colorectal referral management to be streamlined.

Sustainability

The electronic referral template will continue to be developed and its use evaluated. Implementation beyond the pilot practices to the wider GP community is planned. The role of the CNS will continue to develop with support from the surgeons.

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Northland District Health Board

Improved primary care access to ultrasound scans

Introduction

Access to community referred diagnostics had been constrained. Waiting times for non-urgent ultrasound (US) scans in the Bay of Islands and Whangarei had deteriorated and exceeded 15 months. The causes of the prolonged waiting lists had been identified as inappropriate GP referrals (not clinically indicated) and workforce shortages.

Anecdotal evidence suggested potentially avoidable hospital admissions had occurred because of delays in accessing scans. GPs had started directly referring patients to specialist clinics to bypass the block in US access. The development of referral guidelines had failed to reduce waiting times or enable provider capacity to meet demand.

Pilot aims

- Improve primary care access to US scans.
- Develop a process that ensured reasonable waiting time for non-urgent US scans on a long-term basis.
- Improve the appropriateness of US scan requests by primary care physicians and specialists.

Improvement processes

- A survey was undertaken to identify GP views on current diagnostic service delivery and the impact of constrained radiology services on primary care.
- For US scans older than three months, requests were returned to the referring GP for review and consideration as to whether the procedure was still required. GPs were funded for reviewing returned referrals.
- A range of US referral and management guidelines were developed and disseminated.
- Education on referral guidelines was provided to GPs.
- Referrals were audited for clinical appropriateness and feedback was provided to GPs.
- A limited number of US scans were purchased via a private provider.

Outcomes

- Following an audit of US referrals, 329 referrals (referrals older than three months) were returned to GPs for review. Only 31 (9.4%) referrals required further action.
- The most common reasons for scans no longer being needed were: patient problem had resolved (n.70), scan no longer indicated (n.49), the patient had been seen in clinic (n.43), and the patient had moved away (n.28).
- Improved primary care access to US in both Whangarei and the Bay of Islands was achieved by purchasing additional US procedures and relocation of a hospital ultrasonographer to the Mid North.

- Reduction in average waiting time from 15 months to six weeks was achieved through improved management of existing and incoming referrals.
- Improvements in appropriateness and quality of US referrals was achieved through GP education sessions on the newly developed referral guidelines and referral pathways.
- Improved GP satisfaction with US access reported via survey. Post pilot, 61% of GPs reported being either 'very satisfied' or 'somewhat satisfied' compared with 3% pre pilot.
- Radiology staff reported improved communication with primary care as a more responsive service is offered.

Sustainability

- Waiting times for access to US at NDHB is now approximately six weeks.
- Provision of additional diagnostic volumes is no longer required.
- GP liaisons (GPLs) will continue to monitor US referrals and feedback to GPs.

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Waitemata District Health Board

Speedier access to diagnostics for breast patients through streamlining referrals

Introduction

Primary and secondary care proposed a streamlined referral system for breast cancer patients. Three issues were identified:

- **Quality of referrals:** Anecdotal evidence suggested a high number of referrals have inadequate clinical information to determine appropriateness or grading. This results in delays while additional information is being sought.
- **Clinically inappropriate referrals:** Some referrals received are not clinically appropriate. This may be due to a lack of understanding about what is appropriate and a lack of any referral guidelines.
- **Monitoring progress of referrals:** The progress of referrals through the system, can be difficult to track and is often reliant on paper based or manual systems.

Improvement processes

The project aimed to reduce the waiting times for diagnosis for breast patients through the development of three key tools:

- **Referral standardiser:** Taking recently agreed and distributed referral guidelines and creating an electronic template referral form to standardise the ways in which referrals are made and the information contained.
- **Referral validator:** Developing and piloting an electronic validation system that:
  - receives all breast cancer referrals
  - validates that required information has been provided
  - validates that information on the referral form meets the referral criteria
  - acknowledges referral and generates referral summary.
- **Referral tracker:** Developing and piloting an electronic referral tracker, which will track each referral through the system from receipt of referral through to first specialist assessment (FSA).

Outcomes – pilot incomplete at June 2009

- An electronic referral form that enables standardisation and validation of referral data has been created and deployed to Waitemata District Health Board (WDHB) general practices.
- Internal aspects of the pilot have been delayed to ensure consistency with the wider Auckland Regional electronic referral project.
- Aspects of automated validation and tracking are planned to be implemented through the Regional electronic referral project later in 2009.

Sustainability

The breast referral pathway will be fully implemented and sustained through the Regional electronic referral project.

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Auckland District Health Board

Community radiology pilot project

Introduction

In central Auckland, all publicly funded radiology and diagnostic procedures are provided at Greenlane Clinical Centre. Some patients are required to travel considerable distances. The DHB accepts most GP referrals. GPs experience long waiting times for some ultrasound (US) requests and have no direct access to computed tomography (CT) or magnetic resonance imaging (MRI). Many referrals for first specialist assessment (FSA) are a means to gain access to CT or MRI. This has a detrimental impact on FSA waiting times.

Pilot aims

- Improve GP access to community-based diagnostics.
- Trial a community-based radiology service to allow GPs to refer patients for abdominal, pelvic or renal US.
- Develop algorithms to assist GPs with their referrals.
- Reduce the number of FSAs that are needed simply to access diagnostics.
- Ensure GPs receive diagnostic reports in a timely manner.

Improvement processes

- Referral guidelines for abdominal, pelvic and renal US were developed in collaboration with GPs and secondary care specialists.
- Referrals were triaged by GP liaisons (GPLs).
- Private radiology providers were contracted to provide abdominal and pelvic US across five sites in Auckland.

Outcomes

- 168 referrals for US were received via the pilot.
- During the pilot timeframe, 128 US were delivered across five diagnostic sites in Auckland at a location convenient to the patient.
- Referrals were triaged by the GPLs and accepted or rejected. If rejected, the referring GP was contacted to explain the reason for not accepting the referral. (Only two referrals were rejected because they were inappropriate.)
- The average waiting time from referral to US was 15 days for the community-based service compared to 74.2 days for Auckland District Health Board (ADHB).
- On completion of the diagnostic, a report was sent via Healthlink to the GP within 24–48 hours, compared to seven days plus for ADHB.
- There were no ‘did not attends’ (DNAs) during the pilot.
- Feedback from GPs included satisfaction with:
  - direct access to diagnostics
  - the availability of referral guidelines

- decreased waiting times from referral to procedure
  - improved access for patients
  - improved reporting timeframe.
- Most GPs thought access to diagnostics should be on a triaged basis.
- The pilot reinforced the view that very long times are needed to change and then embed GP referral behaviours.

Sustainability

ADHB has signalled its intent to improve GP access to all diagnostics not just ultrasound.

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Western Bay of Plenty Primary Health Organisation

Direct access to computed tomography (CT) head scan for headaches

Introduction

The Bay of Plenty region experiences variable access to neurology clinics for those patients with headaches without ‘hard’ neurological signs or symptoms. This situation has arisen due to both a nationwide and local shortage of neurologists. Headaches are a distressing symptom, and despite the availability of good patient management referral guidelines, patient anxiety about the possibility of a brain tumour is often only allayed by a normal CT scan result.

Some patients self present acutely to emergency departments (EDs). GPs often refer patients to private diagnostic and neurology providers, or to ED. GP referrals are also made to medical Outpatient clinics as ‘urgent’ referrals. These referrals reduce first specialist assessment (FSA) capacity for other referrals.

Pilot aims

- Improve access to CT head scans for patients in the Bay of Plenty.
- Improve management of headaches for patients in primary care.
- Reduce the number of patients with headaches referred for a FSA.
- Improve communication between the primary and secondary sectors.

Improvement processes

- The pilot was administered via the primary health organisation (PHO) co-ordinated primary options system following agreement between Bay of Plenty District Health Board (BOPDHB) and the Western Bay of Plenty Primary Health Organisation (WBoPPHO).
- Headache referral guidelines, referral processes and access criteria for CT head scans were developed.
- Continuing Medical Education (CME) for GPs on the pilot in general, and the investigation and treatment of patients with headaches was provided.

Outcomes

- 76 referrals for CT head scans were received via the pilot pathway. Of those, 70 scans were completed; six scans were delivered via the non-pilot pathway.
- Monitoring of referrals confirmed that GPs were accessing the service in a responsible and appropriate manner.
- primary care management of patients with headaches was improved.
- Care commenced earlier, and patients felt reassured regarding the absence of intracranial pathologies.
- GPs were able to provide more comprehensive care for their patients, which led to greater GP and patient satisfaction.

- Access to DHB CT brain scan resources was improved for GPs in the Western Bay of Plenty district.
- Early access to CT head scans meant a reduction in the number of unnecessary referrals to secondary care.
- By having definitive diagnostic results available at the FSA, there was better use of specialist appointments.

Sustainability

BOPDHB are reviewing the impact of the pilot on their radiology services and have not yet made a decision as to whether GP direct access to CT will continue.

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Whanganui District Health Board

Improved access for primary care clinicians to general ultrasound

Introduction

1640 patients were waiting in excess of three months for a general ultrasound (US). Prolonged waiting times were the most significant barrier to accessing US procedures. The key impact of constrained access for the patient and GPs was a delay in diagnosis and/or treatment. GPs identified that constrained access led to increased demand for first specialist assessments (FSAs), increased emergency department attendances and avoidable hospital admissions.

Pilot aims

- Reduce waiting times by increasing capacity of diagnostic ultrasound.
- Implement sustainable strategies to reduce the number of patients waiting.

Improvement processes

- US referral guidelines for GPs where there was most pressure on FSAs were developed.
- Education sessions for GPs on diagnostic ultrasound were provided.
- Newsletters on pilot progress were circulated to GPs.
- Additional capacity was established through both the DHB and private radiology providers.

Outcomes

- 242 US procedures were funded via the pilot pathway.
- Fewer US were delivered than planned as a result of sonography resource constraints.
- Implementation of this pilot and the use of the Australasian College of Radiologists referral guidelines did not result in a reduction in the number of patients waiting for US.
- Use of the Australasian College of Radiologists guidelines were not effective for managing appropriate flows for US.
- 40% of referrals for abdominal US showed normal pathology; radiologists and GPs suggest a percentage of normal pathology would be expected in 10–15% of referrals.

Sustainability

- The DHB has identified the need for further work to define the referral pathway for abdominal US.
- Plans are underway to establish new referral guidelines.

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Whanganui District Health Board

Improved access for primary care clinicians to computed tomography colonoscopy

Introduction

Whanganui District Health Board (WDHB) has experienced an increase in the number of referrals for first specialist assessment (FSA). For some patients, a colonoscopy is required in order for a diagnosis to be made. There was concern with the waiting times for routine and surveillance colonoscopies. Limited capacity and a reduced number of colonoscopists were preventing WDHB matching inflows with outflows.

Pilot aims

- Improve capacity of the colonoscopy service through the expansion of both traditional and computed tomography colonoscopies (CTCs).
- Remove the waiting list backlog for the colonoscopy service, to catch up and keep up.

Improvement processes

- New Zealand National Guidelines for surveillance and management of groups at increased risk of colorectal cancer were adapted for local use.
- Referral guidelines and management processes for GP referrals for CTC were developed.
- Additional CTCs were purchased from a private radiology provider in Palmerston North.
- Information was developed for patients referred for CTC.
- Additional traditional colonoscopies were delivered.

Outcomes

- Ninety patients received colonoscopies through either CTC or traditional colonoscopies.
- Of those, 52 patients received CTC via the private radiology provider.
- Patient information for CTC has been revised and updated.
- A sustainable increase in CTC and traditional colonoscopies has been implemented.

Sustainability

- WDHB is now able to balance inflows with outflows.
- As an interim measure, WDHB will continue to purchase groups of 20 CTCs from a private provider.
- From March 2009, WDHB has new CT technology that will enable the DHB to continue to use CTC.

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Wairarapa District Health Board

Diagnostic protocols – getting results quicker!

Introduction

Timely access to some diagnostic procedures such as endoscopies, computed tomography (CT), and magnetic resonance imaging (MRI) was being hampered by the inability of GPs to refer patients directly. Prior to the pilot, specialist approval via a first specialist assessment (FSA) was required. A key impact of this process was the delay in diagnosis and/or treatment, and there was also a greater resource burden in terms of administration, specialist time and use of FSA and follow-up appointments that could otherwise be avoided.

Patients were also attending some FSAs without the results of all the necessary diagnostic tests being available and needed to be referred for more diagnostic tests. Patients would often then require a further specialist appointment prior to diagnosis.

Pilot aims

- Streamline access to diagnostic tests including endoscopies, CT and MRI by enabling GPs to refer directly when patients present with specified conditions and/or standard indications.
- Shorten the time between GP visit and diagnosis by ensuring that all necessary diagnostic tests are ordered and reported by the time the patient attends the FSA, thus allowing the specialist to make an earlier diagnosis.
- Develop and implement, in collaboration with stakeholders from primary and secondary care, six protocols for services and a series of common medical conditions. The protocols stipulate all the tests required prior to a patient attending an FSA.

Improvement processes

- Protocols were developed and implemented for a series of common medical conditions, enabling GPs direct access to diagnostics, subject to specialist approval, without referring patients for a FSA.
- Some education for GPs on use of the protocols was provided.
- Diagnostic assessments were delivered to patients using the protocols and the new pathway.
- A satisfaction analysis of GPs, specialists, and diagnostic providers on the new diagnostic protocols was undertaken.
- Options were explored for a funding model for the provision of imaging services that is both fair and sustainable.

Outcomes

- Communication, understanding and links between primary and secondary care was improved through the development of a new primary secondary innovation forum.
- Six protocols were developed in collaboration with primary and secondary care staff:
  - Radiology
  - Rheumatology

- Colonoscopy (not yet issued)
- Transient ischaemic attack (TIA)
- Breathlessness
- Atrial fibrillation.

Radiology protocol results

- A reduction in waiting times from referral to an investigation (from 87 to 27 days).
- More appropriate use of FSAs.
- Improved access to secondary care consultants.
- Enhanced patient management.

TIA, breathlessness and atrial fibrillation protocols show the most encouragement for potential gains, but post-implementation data is too limited to be able to make inferences. Rheumatology guidelines are complex and require continuing refinement and medical education for their value to be realised.

Sustainability

A report has been prepared that describes and compares potential funding models for the provision of community-referred imaging services in the Wairarapa. The report includes analysis of the following funding elements; budget holding options, funding methods and pricing methods. Recommendations within the report have been adopted by Wairarapa District Health Board (WDHB).

The report is available on request.

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Nelson Marlborough District Health Board

Allowing GPs to directly refer patients for diagnostic tests

Introduction

Referral processes resulted in delayed access to diagnosis and treatment across Nelson Marlborough District Health Board (NMDHB). All outpatient services are keen to improve demand management. NMDHB has two base hospital campuses, Nelson and Wairau.

Diagnostic breast imaging

Patients requiring diagnostic breast imaging (DBI) (not screening) are required to be referred to surgical outpatients to access free DBI or go privately for their diagnostic procedure. Patients wait for FSA, then for imaging and again for follow-up to receive results. This is stressful.

Computed tomography scans for headaches

GPs refer patients to medical outpatient services in order to access a computed tomography (CT) scan. The demand creates strains on effective management of the service and requires the neurologist to manage referrals.

Computed tomography urogram for renal colic

Computed tomography urograms (CTUs) are only available on specialist referral or via the emergency department (ED).

Computed tomography colonography scans: Wairau Hospital only

Demand/capacity issues were prohibiting patients needing computed tomography colonoscopy (CTC) being seen within the preferred timeframe. NMDHB had invested additional resources but were still finding it difficult to meet the demand.

Pilot aims

- **DBI:** Enable direct access so patients can be investigated without incurring costs, get results more quickly and avoid unnecessary FSAs/delays.
- **CT head – headache:** Enable direct referral so limited physician time could be better utilised.
- **CTU – renal colic:** Enable GPs direct access to free up time in the ED and to remove renal colic patients from FSA clinics if they are able to be managed in primary care.
- **CTC:** Reduce pressure on the colonoscopy services by providing an alternative pathway for investigation of patients whose symptoms warranted investigation but were less clear cut than guidelines for colonoscopy.

Improvement processes

- Referral guidelines were developed by the GP liaisons (GPLs) in collaboration with secondary specialists and imaging services.
- GP education, dissemination of pathways and agreement to triage and audit of referrals occurred.

Outcomes

DBI

- Streamlined and more efficient access to DBI reduced waiting time for DBI and the number of secondary appointments necessary.
- Patients received quicker diagnosis.
- Positive feedback was received from surgeons about better use of FSAs.
- In some instances, the number of appointments needed to be reduced from four to one.
- In other cases, no FSA was needed at all as the patient could be managed in primary care once the diagnosis was confirmed.
- Of 439 referrals for DBI, 344 were able to be managed in primary care.
- Of all the modalities, DBI was used most with unused volumes from the other modalities being re-directed to this service.
- GPs received further education to address the concern raised by one radiologist that GPs may be relying on DBI results alone without physical examination. Awareness of false negatives and the need to maintain the standard of the triple test was highlighted.

CTU

- Appropriate utilisation of the pathway was reported.

CT head

- Part way into the pilot, it was recognised that the clear red flag indicators initially used as the pathway trigger would require specialist urgent attention anyway.
- The access criteria were then expanded to include patients with worrying symptoms including headache, and the radiologists triaged these for acceptance onto the pilot scheme.

CT colonography

It became clear that the target group were not patients who had red flags requiring urgent specialist assessment as per guidelines. Rather, it was a group of patients displaying symptoms requiring investigation, who in the past would have been referred for barium enema. Of 24 CTCs delivered, 20 did not require a colonoscopy.

Sustainability

- Planning and Funding have agreed to continue with these diagnostic referral pathways for as long possible.
- Questions remain about the sustainability of this funding in the long term.

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West Coast District Health Board

Nurse Co-ordinated Sleep Study

Introduction

Pulse oximetry has been shown to be a useful screening tool for obstructive sleep apnoea (OSA). When used in conjunction with clinical assessment, it can help to determine the severity of OSA. Overnight home oximetry used to exclude OSA is known as a Level 4 Sleep Study.

On the West Coast, specialist respiratory and sleep services are provided on a visiting basis by a respiratory physician and sleep nurse specialist from Christchurch Hospital Sleep Disorders Unit (CHSDU). Prior to the nurse co-ordinated sleep study pilot, visiting one-day clinics were held three to four times a year. There had been periods when clinics were provided only once or twice in 12 months. Patients referred to the service for assessment of OSA often followed an inconsistent and convoluted pathway before receiving a sleep study. The process was protracted, and the demand exceeded capacity for respiratory first specialist assessment (FSA).

Pilot aims

- Provide access for GPs to the Level 4 Sleep Study in order to exclude OSA and to identify other causes of sleep disordered breathing without referring for an FSA in the first instance.
- Establish evidence-based clinical pathways to allow GPs to refer directly to Grey Hospital for sleep studies.
- Establish formal consistent prioritisation criteria for referrals for sleep assessment.
- All patients requiring a respiratory FSA receive this within six months of being added to the list.
- All patients are recorded appropriately in both the West Coast District Health Board (WCDHB) patient management system and the National Booking and Reporting System.

Improvement processes

- Collaborate with CHSDU to develop and support the (WCDHB) nurse co-ordinated sleep service.
- Provide education for respiratory nurse specialists (RNS) encompassing all aspects of sleep medicine.
- Provide weekly video or teleconferences with the CHSDU respiratory physician, sleep nurse specialists and RNS to discuss results of studies and assessments.
- Regularly communicate to all stakeholders via newsletters and the WCDHB website.
- Review and streamline IT processes and documentation of service provision.
- Engage with primary care and other key stakeholders.
- Develop referral/management guidelines and prioritisation criteria.
- Provide education for GPs and other primary health care providers on sleep disordered breathing.

Outcomes

- An increase in the proportion of patients accepted for an FSA received it within six months.

- The number of days from referral to sleep study to implementation of case management and from referral to FSA was reduced.
- The service model for sleep patients was enhanced with discussion of all cases following nurse specialist assessment and sleep study with the respiratory physician, sleep nurse specialist and sleep technician from CHSDU.
- The service provides GPs with a pathway for ordering investigations related to sleep medicine, including a mechanism to allow follow-up on results with advice for ongoing management.
- Sustainable systems for recording and monitoring referrals to the sleep service were established.
- The quality of referral data submitted from primary care was improved.
- Prioritisation criteria is used consistently, appropriately and effectively by the RNS.
- More appropriate education and advice is provided to patients and GPs for patients returned to primary care.
- Staff satisfaction with delivery of service is improved.
- A video presentation conference was held for DHBs to learn about the pilot.

Sustainability

Collaboration between Canterbury District Healt Board (CDHB) and WCDHB staff ensured a robust and dynamic service has developed to meet the specific health needs of the West Coast community. This new service caters for a group of patients who previously were without a clear pathway for diagnosis or management of their condition. The service has provided an opportunity to strengthen the skills and knowledge of nurses to provide a high-quality service. The service is being continued with an audit planned every three months over the next year to monitor performance and implications on funding and staffing levels.

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Canterbury District Health Board

General surgery pilot

Introduction

Lack of access to some radiology diagnostics in the community often resulted in consultants seeing patients at a first specialist assessment (FSA) without appropriate imaging available to inform diagnosis. Referrals for diagnostic procedures would then be made by the consultant at the FSA. Additional appointments were then required for the diagnostic results to be reviewed with the patient.

Pilot aims

- Trial and evaluate the GP liaison (GPL) budget holding at the referral gateway for computed tomography (CT) abdomen, CT liver and pancreas, and soft tissue ultrasound (US).

Improvement process

- Referrals for CT abdomen, CT liver and pancreas, and soft tissue US will be triaged by GPLs.
- Triage guidelines were developed.
- Education sessions were held and guidelines to assist GP referral processes were implemented.

Outcomes

- 40 referrals were received for CT and US diagnostics via the pilot pathway.
- Patients referred via the pilot pathway experienced:
  - reduced waiting times for radiology procedures
  - reduced waiting times from GP referral to FSA.
- Diagnostics delivered prior to the FSA enabled a wider range of management options to be accessed by the triaging GPL, including FSA, follow-up or returning the patient to primary care.
- There is more appropriate use of FSAs and follow-ups as a consequence of diagnostic results being available when the GPL triaged referrals.
- The pilot identified a proportion of cases able to be managed in primary care with some input from the General Surgery Department, but without the need for an FSA.
- The General Surgery Department was able to provide useful clinical information in a more timely manner to GPs when the patient was referred back to GP care.
- GPs reported positive feedback on the speed of access to radiology procedures.

Sustainability

- Canterbury District Health Board (CDHB) plans to undertake a review of the pathway for access to diagnostics and FSAs to ensure improved efficiencies and more timely care for patients.

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Canterbury District Health Board

Rapid access to shoulder ultrasound pilot

Introduction

Limited access to shoulder ultrasound (US) created inefficiencies and disincentives in the orthopaedic journey. Constrained access to US inhibited objective triage. The increased demand for first specialist assessment (FSA) prolonged waiting time for diagnosis and treatment. Additional patient visits were required for specialist follow-up. Clinic capacity to see new patients was eroded by diagnostic follow-ups and unnecessary FSAs. All stakeholders were frustrated by delays in access to diagnostics, and consequently diagnosis and treatment.

Pilot aims

- Trial the usefulness of GP liaison (GPL) budget holding for shoulder US at the referral gateway.
- Improve delineation from referral to FSA of need and ability to benefit.
- Improve the utilisation of US referrals within a standing order framework for GPs at the referral gateway.
- Improve patient outcomes through earlier diagnosis and individual care plans at the beginning of the patient journey.
- Improve FSA to treatment conversion ratio and the utilisation of surgeon and other hospital-based resources.
- Reduce follow-up visits and increase supported return of patients to GP care, thereby freeing up capacity for better use of FSAs.
- Inform the design, volume and patient journey requirements for the proposed community based musculoskeletal interface service.

Improvement processes

- A new shoulder management pathway to improve care for patients with shoulder problems was developed.
- Shoulder referrals through the pilot were triaged by the GPL at the referral gateway, ensuring the right time, right place concept.
- Audit and feedback to GPs on referrals was implemented.
- Education for GPs on the proposed new shoulder pathway was delivered.

Outcomes

- Of 45 referrals received for shoulder US, 40 were delivered via the pilot pathway.
- Waiting times from referral to FSA were reduced: the average time via the pilot pathway for an accepted referral to reach an FSA (inclusive of US) in the Orthopaedic Department was 92 days. This compares with 456 days minimum via the ‘traditional pathway’. This is a reduction of at least 364 days.
- The referral to treatment conversion ratio changed: the pilot timeframe and volume of referrals has not allowed for a sample sufficient to accurately determine the impact on the conversion ratio

- The number of follow-up visits required prior to and at conclusion of the pilot changed: prior to the pilot, FSA shoulders routinely resulted in referrals for US. Follow-ups were needed for the US results to be discussed with the patient. Within the pilot pathway, unnecessary FSAs and follow-ups have been averted.
- The pilot has confirmed the view held by the Orthopaedic Working Group that rapid access to shoulder US needs to underpin the new shoulder pathway.
- Informal feedback from GPs, surgeons, GPLs and radiology providers was 100% positive.
- The pilot has demonstrated the need for other case mix to be included in the rapid access pathway process, for example, soft tissue knee mass.

Sustainability

- GPs have requested direct access to shoulder US. The DHB has agreed, and this will be available as the new shoulder pathway is implemented.

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Canterbury District Health Board

Gynaecology pilot

Introduction

Pelvic ultrasound (US) is one of the essential diagnostic tools in gynaecology and is useful in planning the appropriate management of common gynaecological conditions. Of eight recently developed referral and management proformas for common gynaecological conditions, five require US prior to first specialist assessment (FSA) in order to assess priority of access to FSA. Two of the proformas require an US in order to plan management at the FSA.

Primary care access to US is limited by funding. Although guidelines have been introduced as to when an US is indicated, insufficient funding was available to meet demand. 'Did not attend' (DNA) rates were high for US due to the long delay from referral to appointment. This wasted the available resource.

Pilot aims

- Trial and evaluate GP liaison (GPL) budget holding at the gynaecology referral gateway for pelvic US.
- Improve access to pelvic US for primary care to complement recently introduced referral and management proformas.
- Ensure US is performed prior to the FSA in cases where the result will have an impact on management decisions at the FSA.
- Inform the sustainable increase in funding needed to cover the gap of US requested and able to be performed.

Improvement processes

- Additional pelvic US volumes to meet the current unmet need were purchased.
- Referrals using gynaecology management proformas were triaged by GPLs. This improved GP management and ensured appropriate referrals for FSA. It also ensured the diagnostic procedure was completed prior to FSA.

Outcomes

- 776 pelvic US were delivered via the pilot.
- Capability improved to meet community demand.
- GPs were able to directly refer patients for pelvic US when referrals were based on the newly developed clinical management proformas.
- Direct access to US resulted in more appropriate utilisation of FSAs with more patients managed in primary care.
- Referrals for FSAs that included US results increased.
- Fewer referrals were returned to GPs for further information.
- The average waiting time from referral to procedure, for non-urgent referrals, was 26 days compared with up to six months via the traditional pathway.

- Both GPs and secondary care clinicians found the process to be more efficient.
- The GPL identified the need to review follow-up protocols for patients on automatic follow-up regimes.

Sustainability

Canterbury District Health Board (CDHB) identified the following priorities as a result of the pilot:

- Increase provision of pelvic US by at least 50 procedures per week.
- Increase the number of sonographers available to meet the service demand.
- Continue to work with GPs to promote appropriateness of referrals.

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Southland District Health Board

Light at the end of the tunnel: A fair, single access gastrointestinal endoscopy service

Introduction

As a result of changes in the clinical workforce, Southland District Health Board (SDHB) experienced a reduction in the number of endoscopy procedures that were performed. Up to four clinicians prioritised and scored referrals resulting in prioritisation variation. Generally consultants scoped only those patients they had prioritised. Because patients were booked many months in advance, there were significant numbers of 'did not attends' (DNAs). There were also concerns about data integrity.

Pilot aims

- Develop a fair, single-access Gastrointestinal Endoscopy Service.
- Develop the role of the endoscopy nurse.

Improvement processes

- A comprehensive review of all components of the endoscopy service was undertaken and an action plan established to address issues identified.
- All current referrals were audited against agreed access criteria.
- DNAs to the endoscopy service were reviewed.
- All patient correspondence was reviewed.
- Endoscopy administration processes were streamlined.
- Referral guidelines and referral template, in accordance with the New Zealand Guidelines Group Colorectal Cancer guidelines, were developed.

Outcomes

- Understanding of endoscopy service inflows and outflows has improved.
- A pooled GI scoping list has been implemented.
- All endoscopy referrals are prioritised by one consultant.
- Prioritisation and management of referrals has been made consistent.
- Communication between primary and secondary care sectors has improved.
- Communication between the endoscopy service and consumers of the service has improved.
- Administration and information management processes have improved.
- A model of service improvement has been established that can be replicated to other services.
- Referral template, referral criteria, scoring tools and links to the NZGG have been published on the SDHB website.

Sustainability

This pilot has established a program of service improvements that continues to evolve. Specific areas planned for improvement include management of referrals, maximising theatre utilisation,

reducing DNAs, improving diagnostic reporting processes and maximising available administration support.

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Useful Links/References

Framework for Primary Care Access to Imaging: Right test, right time, right place. Royal College of Radiologists, Royal College of General Practitioners, 2006.

Institute for Healthcare Improvement
http://www.ihi.org/ihi

Information about Virtual First Specialist Assessment
http://www.moh.govt.nz/electiveservices

New Zealand Guidelines Group
Evidence-based Best Practice Guideline. Surveillance and management of groups at increased risk of colorectal cancer. May 2004. http://www.nzgg.org.nz/

NHS Radiology Service Improvement website
http://www.radiologyimprovement.nhs.uk

NHS 18 Weeks website
http://www.18weeks.nhs.uk

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Electronic versions of the following reports are available on request from the Elective Services team
Email: elective_services@moh.govt.nz

- *Addressing Disincentives Working Party Report*, Elective Services, Ministry of Health, May 2006.
- *GP Access to Imaging and Endoscopic Diagnostic Procedures (A GP liaison facilitated survey)* Elective Services, Ministry of Health, November 2007.
- *A Summary of the Improving Patient Pathways – Diagnostic pilots ,Elective Services*, Ministry of Health, June 2009.