



## Introduction

*We are delighted to present a book of abstracts of projects undertaken in the Diploma in Leadership and Quality in Healthcare since 2011.*

We are keen to share with the wider health system these important improvement initiatives in order to share the learning from them, to highlight the quality improvement methodology adopted and to acknowledge the leadership shown by those who carry them out.

The Diploma in Leadership and Quality in Healthcare was developed and launched in 2011 by the Health Service Executive (HSE) and the Royal College of Physicians of Ireland (RCPI) to support and develop clinical leaders to drive quality improvement across the health system.

Due to the success of the initial Diploma and the level of interest in the system, the National Quality Improvement (QI) Programme was established with the Quality Improvement Division in the HSE and RCPI in 2012, with a view to increasing QI capacity and capability within the system.

This book contains abstracts outlining the projects undertaken by graduates of the Diploma from 2011 to 2016. The projects address issues such as patient safety, leadership, quality, waste and financial matters. For ease of reference, each project has been indexed by the topics it addresses. This index is found on pages 3 & 4. The author's details are outlined for each abstract; please note the author's job titles are based on when they completed their project and may not be current.

We hope that you enjoy reading about the body of work undertaken and find it useful. Finally we would like to thank all of the graduates from the Diploma for sharing their learning and allowing the publication of this book.



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Dr Philip Crowley  
National Director,  
Quality Improvement Division, HSE  
& Co-Chair National Quality Improvement  
Programme



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Prof Conor O'Keane  
Treasurer, RCPI &  
Co-Chair National Quality Improvement  
Programme

## Framework for Improving Quality

The Framework for Improving Quality is developed to influence and guide our thinking, planning and delivery of care in our services. It is firmly orientated towards quality, safety and to improve patient experience and outcomes. It provides a strategic approach to improving quality whether at the frontline, management, board or national level. The Framework is informed by international models and evidence well as local improvement experience and learning. It has a clear aim to foster a culture of quality that continuously seeks to provide safe, effective, person centred care across all services. Building such a culture is paramount to ensure long term progress to improve quality of care.

The framework can be used as a simple tool to aid system leaders, board members and senior managers in focusing efforts and resources towards the key areas for improvement encapsulated within the six drivers. It also supports greater coordination, alignment and focus for improvement work across services and helps to create the right conditions and environment for improvement.

The Framework is comprised of 6 drivers for improving quality:

- Leadership for Quality
- Person and Family Engagement
- Staff Engagement
- Use of Improvement Methods
- Measurement for Quality
- Governance for Quality

Focusing on only one of the drivers within a service will not give the desired effect for improvement. It's the combined force of drivers working together that creates the environment and acceleration for improvement.



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# **Diploma in Leadership and Quality in Healthcare Projects 2015 - 2016**

## Listening to you: Improving communication of parent concern within PEWS

### Authors

Ms. Claire Browne, Dietitian Manager In Charge III, Temple Street Children's University Hospital

Ms. Rachel MacDonell, National Paediatric Early Warning System (PEWS) Coordinator, National Clinical Programme for Paediatrics and Neonatology, Clinical Strategy and Programmes Division, Health Service Executive

### Abstract

#### Background

PEWS is a patient safety system that incorporates standardised age-specific paediatric observation charts, a PEWS scoring tool, escalation guide, paediatric 'Sepsis 6' and ISBAR communication framework. PEWS includes concern on the part of the clinician or family as a core scoring parameter. Post-pilot evaluation highlighted the importance of scoring parent / family concern as it recognises the importance of a parent's knowledge and expertise about their own child and helps to facilitate open communication with parents. However, follow up audits in pilot sites found that there was still variation in some units in how concern is assessed and scored. The aim of this project was to increase parents' awareness of the Paediatric Early Warning System and the central role that their concern plays within PEWS, by increasing their perception of their ability to express concern about their child's condition while in hospital, by August 2016.

#### Methods

Two wards were selected in Our Lady's Children's Hospital Crumlin, (OLCHC) and a series of PDSA cycles were completed to adapt and test 'Listening to you' parent information resources and enhanced communication processes around clinical concern. A test of spread was then completed in the paediatric wards in University Hospital Limerick (UHL). Data were collected on PEWS scoring compliance, and parent and nursing staff experiences of communicating concerns.

#### Results

While parent awareness of PEWS did not increase, there was an increase in reporting concerns by parents across both sites, however this had reduced to baseline levels in OLCHC by the end. 95% (n=103) of parents thought it was useful to ask about their concerns, 98% (n=106) said it helped them feel included and 94% (n=102) said it helped them feel safer about their child's care. The proportion of parents who received information Listening to you: Improving communication of parent concern within PEWS about PEWS and 'Listening to you' increased over the period studied, with those that did providing positive feedback. PEWS concern scoring compliance improved in UHL but not in OLCHC.

#### Discussion and Conclusions

'Listening to you' should be considered in all units that implement PEWS as a way to enhance and ensure accuracy of concern scoring assessment, and as part of a wider safety culture. A toolkit of resources for parents and staff should be made available to help ensure standardisation of care nationally. Local champions are essential for successful

implication to provide clinical leadership, create a will to change and to encourage everyone to participate and own the change.

*Number of patients/clients/service users affected positively*

107 parents took part in this project across four ward areas between May – August 2016.

## Introduction of the emergency department sepsis pathway

### Authors

Dr Martin Feeley, Chief Clinical Director

Ms Susan Temple, General Manager Quality and Safety

*Tallaght Hospital*

### Abstract

Sepsis is common and is a time-dependent medical emergency that requires prompt treatment. Delays in treatment lead to increased risk of morbidity and mortality. A National Clinical Guideline for the management of sepsis was published in November 2014.

The aim of this project was to implement the Emergency Department Sepsis Pathway at Tallaght Hospital for 95% of patients presenting with suspected infection and/or two or more SIRS criteria by the 30th June 2016. The project was implemented using quality improvement methods.

The Emergency Department Sepsis Screening Tool was introduced in January and education and training in relation to the Sepsis Management Guideline was provided for staff. Audits of compliance in relation to the administration of first dose antibiotics and usage and completion of the sepsis screening tool were completed.

The guideline was not fully implemented by the 30th June 2016, as planned; however, significant progress was achieved. The audit results demonstrate that adherence to the Sepsis Pathway has improved, documentation of sepsis diagnosis has improved; however the screening form is not used consistently to document sepsis. Fluids are being administered, however, not always in compliance with the algorithm. There was no evidence of any unintended adverse outcomes as a result of implementation of the guideline.

## Improving patient care by increasing adherence to best practice in hand hygiene

### Authors

Ms Eleanor Carpenter, Assistant Director of Nursing;

Ms Linda O’Leary, Deputy General Manager;

Ms Shelagh Twomey, Quality and Safety Manager.

*Wexford General Hospital*

### Abstract

The highest risk for patients during a hospital stay is contracting a healthcare associated infection (HCAI). Prevention and control of HCAs is an important element of providing safe healthcare for patients and is achieved through compliance with the National Standards for the Prevention & Control of HCAs (Health Information and Quality Authority (HIQA), 2009). Notwithstanding the fact that Wexford General Hospital (WGH) achieved significant improvements in infection prevention following HIQA inspections in 2014 these improvements were not sustained into 2015 particularly in the area of hand hygiene (HH) - this was the rationale for choosing this topic for the QI project. The projected outcomes for the QI project were to improve compliance with HH best practice in ICU (WHO 5 moments of hand hygiene) and to improve attendance at HH training, and to monitor / reduce the incidence of ICU acquired infections.

The overall aim statement for the WGH QI Project was ‘to increase the compliance with the five moments of hand hygiene from \*50% to the HSE target of 90% for all clinical staff in ICU WGH by end of June 2016’. (\*50% was based on the baseline HH observational audits carried out the WGH Dip team amongst nursing, medical, orderly, household and HSCP staff groups in ICU in February 2016).

The Intensive Care Unit (ICU) was chosen as the area of focus for the QI project because ICU is a high risk area for Healthcare Associated Infections (HCAs). There were two phases of data collection – baseline and post improvement. Methods were drawn from improvement science methodology and included use of PDSAs, process mapping, run chart and other interventions.

Results demonstrated a measurable improvement in hand hygiene practice following post improvement phase audit from a baseline of 50% to 92% (HSE target is 90%). In addition 100% of core ICU staff had attended and were up to date with hand hygiene training by June 2016. The overall project target was reached and slightly exceeded. There were a significant number of incidental improvements as well.

## To optimise nutritional care for 100% of patients admitted to Adams McConnell Ward in Beaumont Hospital by 31st May 2016

### Authors

Ms Paula O'Connor, Dietitian Manager

Ms Elaine Bradley, Clinical Nurse Manager II

Ms Kara Cullen, Senior Dietitian

*Beaumont Hospital, Dublin*

### Abstract

#### Background

Malnutrition can be both a cause and a consequence of disease, and can lead to worse health and clinical outcomes in all social and healthcare settings. The annual healthcare costs associated with malnutrition is estimated at over €1.4billion in Ireland, exceeding that of obesity. It is estimated that in Ireland the number of inpatient bed days arising from longer length of stay (LOS) due to malnutrition exceeds 250,000 per year.

These all contribute to delayed discharge in our organisation and poorer patient outcomes.

Nutrition support intervention is known to improve clinical outcomes and quality of life. To ensure patients receive the right intervention at the right time requires that systems are in place to:

- identify patients at risk of malnutrition
- prevent patients from becoming malnourished

The QI Project Team introduced a series of quality improvement plans around nutrition (including MUST Screening, Meal Time Assistance mats, communication tools) over an eight week period.

### Methods

The QI Project Team used the Model for Improvement (MFI) as an approach to improving patient access to optimal nutritional care on a 35 bed neurosurgical ward. Combined with the Plan, Do, Study, Act (PDSA) cycle, the model is a simple & powerful tool for accelerating improvement.

A baseline audit was undertaken showing the rate of screening compliance was 0%. Over 8 weeks a number of PDSA's were introduced including:

- Ward based training
- Admission Pack Flow Sheet
- Self-auditing
- Red Mats introduction

Sampling methods were used to collect data weekly which was plotted on time series run charts.

### *Results*

Over an 8 week period, the ward team achieved a compliance rate of 100% for malnutrition screening. There was also an improvement with mealtime assistance with 100% of patients receiving timely assistance post intervention.

### *Discussion*

A significant improvement in optimising the nutritional care for patients was achieved using the MFI and PDSA cycles. There is a plan in place to spread this project to all wards across the hospital by 2017. This will benefit all patients admitted to Beaumont Hospital and is expected to reduce average LOS & reduce bed days across the organisation.

## Increasing the proportion of infectious diseases notifications received from GPs in the South-East

### Authors

Ms Gemma Leane, Research Officer, Public Health Department, HSE South East

Dr Carmel Mullaney, Specialist in Public Health Medicine, Public Health Department, HSE South East

Dr Maria O' Brien, Project Manager -"Making Every Contact Count ", HSE Health and Wellbeing

*Policy Priority Programmes and Initiatives, Health and Wellbeing Division, HSE*

### Abstract

#### Background

Infectious diseases notifications from clinicians and laboratories provide critical information to Public Health Departments for use in the control and prevention of infectious diseases and to facilitate timely public health action. Currently laboratory notifications far outnumber those received from clinicians, indicating under-reporting from clinicians.

The aim of this study was to increase the proportion of a selected group of seven infectious diseases notifications received from GPs to the Public Health Department HSE South-East from 9% to 40% of total notifications by July 15th 2016.

#### Methods

We conducted a quality improvement (QI) project using QI tools (e.g. driver diagram, process map, run charts) to assess the problem and to generate informed ideas for change. Interventions were tested by rapid plan-do-study-act (PDSA) cycles. These included stakeholder awareness and education, the use of email and electronic referral system as methods of notification. Run charts assessed the impact of change on the outcome measure i.e. proportion of notifications received from GPs in relation to total notifications from all sources.

#### Results

The proportion of notifications increased from a median of 9% to 12.5%, considerably below the target goal of 40%. One study intervention ('yes/no' email) had a positive effect and resulted in two additional notifications not otherwise notified by GPs or the laboratory. There was a lack of effect from the other PDSAs. No shift, trend or other signal of change was observed.

### *Discussion*

The stated aim was not achieved. However, the proportion of notifications did increase towards the end of the study, but the reasons may have been outside of the project due to special cause variation i.e. a national measles outbreak. The 'yes/no' email was the only intervention which resulted in additional notifications. It differed from the other tests as it required minimal effort from GPs. This may signify willingness on the part of GPs to improve notification if it is made very easy.

### *Financial implication*

The interventions resulted in no additional cost to the Public Health Department. However, there may be additional costs to GPs (admin time) for set-up of the electronic method.

### *Conclusions*

Electronic methods of notification did not result in more notifications from GPs. This will require further engagement with GP stakeholders to ensure that the notification system is simple and easy to use. Engagement with GP practice managers and admin staff will be necessary to facilitate this change. Further possibilities for the use of prompts should be explored.

## To reduce antisocial behaviour on one ground floor team at the National Drug Treatment Centre to zero by June 2016

### Authors

Dr Fiona Fenton, Consultant Psychiatrist

Ms Margaret Markey, Senior Social Worker

*HSE National Drug Treatment Centre*

### Abstract

High levels of anti-social behaviour both inside and in the vicinity of our clinic led to this project. Staff morale was low and there was recognition of the need to change. Patients referred to our clinic as “the punishment clinic” and staff saw it as merely a methadone clinic. We set about utilising the skillset of the multidisciplinary team in a more effective and therapeutic way, with the quadruple aim to improve patient experience, staff experience, patient outcomes, all at a lower cost.

Methodology involved recording and analysing incident forms, producing weekly run charts and using the data to recognise our outliers. This led us to the discovery that 7% of our patients are responsible for nearly 50% of incidents, and the realisation that these outliers were a special cause effect and needed to be managed differently and individually. Other primary drivers included the introduction of low intensity CBT interventions which included training workshops for staff and a post amicus intervention “The Welcome Back Pack”. We had great buy in from our team largely because we transferred our learning on a weekly basis from the diploma course and provided the team with visual run charts each week. Sustainability and spread will have to be managed through leadership and communication and day to day management. The team has an average of 150 patients at any time and through improved work practices, we have freed up time to work in a more therapeutic way with more emphasis on active key working and individualised care packages. There was no financial cost to the project but there are unknown potential cost savings to the Criminal Justice System, Gardai, General Hospitals, Emergency Departments and the Child and Family Agency.

## Improving the focus on quality and patient safety at national level

### Authors

Ms Joan Gallagher, Policy Analyst

Mr Dara Purcell, Corporate Secretary

*Health Service Executive*

### Abstract

This quality improvement (QI) project sought to improve the quality, [patient] safety and risk (QSR) culture at national level. Specifically it sought to increase the evidence that quality, safety and risk is formally reported to the Directorate level.

### Context

In July 2015, it was agreed to report QSR as a separate standing agenda item on all Directorate-Leadership Team meetings.

### Methodology

We applied a variety of QI tools throughout the project cycle. We developed a driver diagram, aim statement, completed a stakeholder analysis, and developed a measurement plan. The Model for Improvement guided improving the evidence of QSR reporting to the Directorate.

We report four PDSAs as test of change:

PDSA 1: Introduce QSR as a standing item on agenda

PDSA 2: Special Directorate Workshop on risk

PDSA 3: Adding reporting of Serious Reportable Events (SREs) under QSR

PDSA 4: Reporting on "Raising Concerns" at national level

Audit of meeting agendas and minutes, formal and informal discussions with the Directorate-Leadership Team and a survey using the IHI (2014) High Impact Behaviours self-assessment tool informed the project results and discussion.

### Findings and Discussion

Effective governance and monitoring requires that:

- QSR is specifically considered at meetings and
- The development of appropriate systems of reporting occurs

Reporting QSR as a standing agenda item facilitated the Directorate to focus on QSR topics, and led to improvements in the management of risk and safety and their systems of reporting. 15% of meeting times or 18% of all agenda items related to QSR reporting.

*Key QI learning*

Increasing QSR reporting at national level facilitates the Directorate-Leadership Team to demonstrate leadership for patient safety; and improve the management structures and processes for reporting QSR. QSR reporting is creating an infrastructure and platform, at national level, for future change work in the area of quality and patient safety.

## National Clinical Guideline No 6: Sepsis Management - A quality improvement initiative

### Authors

Dr Vida Hamilton – National Sepsis Clinical Lead

Ms Christina Doyle – Sepsis Programme Manager

*National Sepsis Programme*

### Abstract

Sepsis is a time-dependant medical emergency with a mortality rate of 28.8% in Ireland. This mortality rate can be reduced by the implementation of time-dependant pathways both for recognition and treatment. The National Sepsis Programme has developed tools to facilitate compliance with the National Management Guideline which was published in November 2014.

Deployment of these tools requires awareness, education, and training but most of all it requires buy-in as it involves behaviour change in order to achieve the desired outcomes. A top-down, bottom-up approach was used for the implementation of the guideline with identified roles and responsibilities for stakeholders and the formation of local sepsis committees to oversee the implementation of the guideline. Education sessions and tools were provided by the Sepsis Lead during site visits to increase awareness and to educate staff. In addition, in order to monitor progress, a timetable of national compliance audits was communicated to hospital group leads and local hospital management and ultimate progress would be monitored through the publication of an annual sepsis outcome report.

The aim of the Quality Improvement (QI) project was to undertake a baseline assessment of the:

- Usability of the sepsis screening tool (SST) in recognising sepsis
- Compliance with the use of the form. This was carried out through a series of audits in an acute hospital setting in October with further audits in January, February. A further audit of sepsis management (once diagnosed) was also performed.

### Results

Improvements were incorporated onto the SST the audit demonstrated an increase of compliance up to 50% in 3 months, time to first dose antibiotic improved over the audit period. Audit demonstrated compliance with the use of the SST of between 40 to 50%. Of patients with a sepsis diagnosis 71% patients were documented with sepsis diagnosis correctly however 29% were not. This represents a failure to recognise the severity of illness and this has been implicated as a contributory factor in patients with poor outcome. Recording of incidences of sepsis recorded via HIPE have increased by 51% from Oct 2015 to March 2016.

### *Conclusion*

Behaviour change is hard. Barriers include professionals viewing the forms as additional work, pointless, dumbing down medicine and not relevant as there is a perception that sepsis management is not a problem. The concept of requiring the same response for sepsis as for ST-elevation MI is not present. A culture change is required and this will not occur over night but rather through sustained effort in the clinical setting and with improved education in medical and nursing programmes and internal training supported by data demonstrating the effectiveness of the intervention in terms of mortality and patient length of stay. Drivers for senior management also include improved documentation leading to correct case-mix allocation and an increased bed capacity for patients on trolleys and waiting lists.

# Tackling national out-patient waiting list delays in paediatric cardiology through capacity building and improving productivity: innovative interventions for a dramatic problem but light at the end of the tunnel

## Authors

Dr Terence W. Prendiville, Consultant Cardiologist

Ms Esther Higgins, Manager

Dr Colin J. McMahon, Consultant Paediatric Cardiologist

*Department of Paediatric Cardiology, Our Lady's Children's Hospital Crumlin*

## Abstract

### Background

Chronically long delays in paediatric cardiology out-patient assessment for new patient referrals represents sub-optimal care and, occasionally, patient hazard. We aimed to reduce the waiting time for new patients to 12 months by October 2016.

### Methods

After process mapping the patient experience and collating data on referral requests, we proposed a multi-faceted strategy that focused on increasing out-patient clinic capacity and improving efficiency of workflow. Efforts were targeted at reducing the non-attendance rate, standardising management for common referring complaints, specifically requests to review children with murmurs. Progress was reviewed in Plan-Do-Study-Act (PDSA) cycles and recorded in run charts. Audit of outcome for common referral requests informed the re-design of the out-patient pathway. Data was extracted from our local Patient Administration System (PAS) and The National Treatment Purchase Fund publicly accessible website.

### Results

By increasing out-patient clinic capacity, an additional 725 patients were seen in dedicated clinics to address the longest waiting patients. Through telephoning each patient family prior to the scheduled appointment, the percentage of new patients not attending scheduled appointments ('DNA') fell from 35% in 2013 to 5% in 2016. For all out-patient (new and return) appointments over the last three months, the DNA rate has fallen to 2.2%. By streamlining patient management for the common out-patient referral request of 'murmur', dedicated 'leaner' clinics targeting new patients with the same complaint allowed safe pathways of care to rapidly review large numbers of patients without compromising on service delivered.

*Discussion / implementation*

Individually small interventions, tested through PDSA cycles and tracked on run chart tables, empowered a small group of motivated stakeholders to affect change to a problem that was seen as insurmountable.

*Financial implication*

The estimated cost savings of increased clinical capacity and less 'waste' from missed appointments is 291,800 euros.

*Number of patients / service users affected positively*

725 additional patients seen; 734 out-patient appointments reduced.

*Conclusions / plan for further development*

Sustainability requires local (hospital) and Health Service Executive corporate management teams to recognise the value and effort in 'grass roots' quality improvement initiatives and to foster start-up projects that achieve early success.

## Improving the patient's experience through the reduction in newly identified CPE cases in University Hospital Limerick

### Authors

Ms Barbara Slevin, ADON, Infection Prevention & Control

Dr Nuala O Connell, Consultant Microbiologist

Ms Patricia Treacy, Finance Operations Manager

*University of Limerick Hospitals*

### Abstract

The emergency and spread of carbapenemase-producing Enterobacteriaceae (CPE) is a clinical and public health concern both nationally and internationally. These resistant microbes are associated with significant morbidity and mortality as there are limited antimicrobials to treat associated infections. In this hospital, the first documented case of CPE was described in 2009 and since then the number of new cases has risen exponentially year on year since 2013 accounting for 53% of the total national burden in 2015.

The aim of Quality Improvement project was to improve the patient's experience through the reduction of newly identified CPE cases from 27 (the total for the first 6 months in 2015) to 13 for the first 6 months 2016. It was opportune to review all aspects of the management of CPE from a QI perspective including financial costs and the impact of the new infection control ward.

Patient surveys were conducted to ascertain the effect of CPE on patients and their families to help better understand what works and what needs to improve from the patient perspective. A communication plan was developed to engage with stakeholders to achieve the project's aim. A series of PDSA cycles were undertaken, as a consequence of baseline audits, to enhance compliance with CPE infection prevention and control processes around screening and diagnostics, hand hygiene, care bundles for devices and contact precautions. The daily cost of each of the patients in the project group and an average cost per night identified for each bed night attributable to the CPE care element of the patient stay was calculated. Sixteen new CPE cases were identified for the first 6 months of 2016.

The impact of the QI measures utilised have evidenced a safer, more efficient and higher quality of care provided to the patient population with an identifiable cost saving of €682,086 for the first 6 months of 2016. It is hoped these interventions will be useful at regional and national level as a coordinated approach has the potential to yield significant reductions in overall CPE transmission compared to traditional single institutional approaches. Investment is needed, however, to address the infrastructural challenges that may have impeded achieving the overall aim of the project.

## Pathway granularity and solutions to barriers to sepsis diagnosis and treatment on a surgical ward

### Authors

Ms Sinéad Horgan, Group Sepsis Lead for the South/Southwest Group - Assistant Director of Nursing.

Mr Grace Reidy, National Nurse Lead for the Productive Operating Theatre

*Cork University Hospital*

### Abstract

#### Background

“Sepsis is a life threatening condition that arises when the body’s response to an infection injures its own tissues and organs. Sepsis leads to shock, multiple organ failure and death especially if not recognised early and treated promptly. Sepsis remains the primary cause of death from infection despite advances in modern medicine, including vaccines, antibiotics and acute care. Millions of people die of sepsis every year worldwide.”

(Merinoff Symposium - Czura, 2011)

Staff on this busy 35 bedded surgical ward acknowledged that they had concerns with patients deteriorating due to sepsis and the processes around the current management of this cohort of patients. The staff on this ward recognized that the number of patients deteriorating needing escalation of care that were managed at ward level due to lack of intensive care bed capacity had increased.

#### Methods

We commenced with a baseline audit of 8 patient charts from November 2015 which identified that the response time by a doctor once contacted by ward staff to review a patient deteriorating from sepsis was 53 minutes. Other methods we used during our project were brainstorming workshops, process mapping of current state and open discussion around what could benefit patient outcomes. Using the model for improvement Plan, Do Study, Act (PDSA), the ideas identified were tested to identify workable solutions that would promote and change the culture around sepsis management. (Appendix D) Our project consisted of a three tiered intervention:

1. Education sessions for multidisciplinary staff
2. Introduction of a dedicated trolley for sepsis management
3. Process pathway improvement for biochemistry samples

This involved multiple PDSA cycles within each of the above areas.

### *Results*

After a five month intervention period working with the team a further 25 charts were audited. The results identified the doctor's response time to review the patient had decreased from 53 minutes to 30.91 minutes.

### *Discussion*

Financial and business planning will hopefully allow us to expand this project across all surgical specialties. This model is transferable to other hospitals.

### *Financial Implication*

Currently in the acute hospital setting there is a bed capacity crisis with an increasing demand for Intensive Care / High dependency beds. The national average length of stay for patients with severe sepsis is 26 days. The hospital cost per 24 hours for a bed on ward X is €1316 and an Intensive Care Bed is €1722. With the daily demands from waiting lists, patient flow and budget constraints optimizing patient centred care and outcomes is vital.

### *Conclusions*

Our project has proved successful in improving the prompt management of the patient with sepsis. It has allowed interdisciplinary staff to come together with a common problem and agree a mutual goal. It has empowered staff to engage in their own quality improvement process, generate their ideas, and initiate tests of change to develop workable solution.

## Improving access to multi-disciplinary team assessment for children with global developmental delay

### Authors

Ms Olwyn Hanley, Physiotherapy Manager

Ms Alma Joyce, OT Manager

Ms Catherine Flynn, SLT Manager

*Primary Care Services, HSE West*

### Abstract

Children with global developmental delay frequently require access to specialist Early Intervention Services (EIS) to ensure the best developmental and social outcomes for the child and family. In Galway, there are 2 access points to Early Intervention; direct referral onto the EIS caseload or via initial referral to Primary Care.

Anecdotal evidence suggested that there was significant variation in the age at which children who accessed Early Intervention via Primary Care were admitted to the service. Feedback from parents and staff indicated that certain children were waiting for long periods to access services, that there was duplication of resources, lack of standardisation and a uni-disciplinary approach to managing this cohort of children.

A Quality Improvement project was undertaken to address concerns regarding this pathway of care. Analysis of data of children admitted to Early Intervention revealed that certain diagnostic categories tended to be identified later as having a complex disability and accepted at a later age onto the EIS teams in Galway.

Children with global developmental delay showed considerable variation in the age at which they were admitted. In many cases they had to navigate the Primary Care system for long periods of time, waiting for each discipline to complete individual assessments in order to inform diagnosis and decide if onward referral to EIS was warranted. The key to lowering the age at which children with developmental delay were admitted to EIS was to secure a multi-disciplinary team (MDT) assessment early on in their journey through Primary Care. Such a team was set up and assessed children at monthly clinics. Following assessment and the drafting of a report, children were admitted at a much younger age than if they had followed the traditional route, with a reduction in the median age of acceptance into EIS from 38 to 26 months.

The project was a success. In order to replicate and spread the project the Quality Improvement Team made a submission to the National Primary Care Office to become a Demonstrator Site for a new initiative involving the roll out of Paediatric Primary Care Teams. The QI Team were successful in their bid and once new staff are recruited a full-time permanent team will build on the success of the project.

## **To redesign and implement individual care and treatment plans (ICTP's) in the Linn Dara CAMHS inpatient unit that achieved full compliance with Article 15 of SSI 551 Mental Health Act 2001 by 5th September 2016**

### **Authors**

Ms Lisa Corrigan, Occupational Therapy Manager

Dr Brendan Doody, Assistant Director of Nursing

Ms Martina McGuinness,

*HSE, Linn Dara CAMHS*

### **Abstract**

#### **Background**

In December 2015, the Linn Dara Child and Adolescent Inpatient service (CAMHS) moved to a purpose built unit at Cherry Orchard Campus. The bed capacity increased to be the largest CAMHS Approved Centre nationally at 22 beds. In preparation for this transition, a team intervention project was undertaken in collaboration with HSE Performance and Development (P&D).

During the Mental Health Commission's (MHC) annual inspection at Linn Dara in December 2015, they highlighted a specific area of non-compliance regarding the Individual Care Plan (ICP). It was considered timely for the QI team to aim to redesign and implement Individual Care plans (ICP's) in the Linn Dara CAMHS inpatient unit to achieve full compliance full compliance with Article 15 of SSI 551 Mental Health Act 2001 by 5<sup>th</sup> September 2016. ICP is a regulatory and quality requirement by the MHC and ensures service users are partners in their own care (NMHSC, 2010).

#### **Methods**

The Continuous Quality Improvement (CQI) model was chosen by the QI team. It is a combination of building and applying knowledge to make an improvement by asking three questions as well as using the PDSA Cycle (Deming, 1986). A project management plan, involvement of key stakeholders and the development of care planning documents, guidance documents for staff and facilitated care planning workshops for staff were used as part of the QI process.

#### **Results**

Compliance with ICP's rated at 95.9% on June 6<sup>th</sup> 2016 and when measured again on September 5<sup>th</sup> and had reached the QI project target of 100%.

### *Discussion/implementation*

While the QI project target was achieved, the project raised many other areas for development within this service. The QI process and the methodology used have been invaluable and will support the service through this transition towards a centre of excellence in child and adolescent care. The continuation and dissemination of this QI project to other areas in the service is easily achieved and will increase the focus on person centred care in the care planning process.

### *Financial implication*

This QI project was not aimed at immediate cost savings. It is anticipated that by using person centred care plans the service will be able to reduce bed time, increase throughput and progress discharge thus creating savings. This will only become evident over time. Improving quality of care cannot always be quantified.

### *Number of patients/clients/service users affected positively*

To date the revised ICP has been used with 30 young people. The bed capacity is 22, and young people are continually at different stages of their admission and treatment hence new admissions were involved in the project.

### *Conclusions/plans for further development or wider dissemination of project*

This was a QI that focused on improving standards of care and achieving full compliance with the expectations of young people, their families and achieving compliance with external regulation. Central to the project was about the changing of hearts and minds of staff and not merely focusing on the structures. The lesson learnt was the need to acknowledge what lies below the surface "cultural change". The principles and methodology used can be disseminated to community teams in child and adolescent mental health services (CAMHS). Wider dissemination is possible in adult mental health setting albeit tailoring documentation to the specific needs of a different age profile and with a different outlook on personal goals.

## **Caring for older people in a long-stay psychiatric setting: improving the experience of service users, family members and staff**

### **Authors**

Ms Rosalia Kavanagh, Director of Nursing

Ms Margaret Daly, Nurse Practice Development Co-ordinator

Dr Henry O'Connell, Consultant Psychiatrist

*Laois-Offaly Mental Health Services, HSE*

### **Abstract**

#### **Background**

This study focussed on a psychiatric elderly care ward with thirty long-stay residents, half of whom have severe and enduring mental health problems and half have dementia. While the care provided for patients is of a high standard, no formal assessments of satisfaction levels have been carried out before. Mental Health Inspectorate visits have found deficiencies in the care-planning process. Therefore, the development of a multi-disciplinary patient centred individual care planning process for all residents was identified as a key means to raise standards of care and improve satisfaction levels of patients, families and staff members. Other primary drivers included the principles of Vision for Change, patient advocacy and good clinical governance.

#### **Methods**

Through a series of small tests of change and involvement of key stakeholders with a clear communication plan, care-planning documents and process were devised and modified throughout the project. In addition to inpatient staff, the community based Psychiatry of Later Life team were also involved. Satisfaction levels for patients, family members and staff were assessed through a number of methods before, during and after completion of the project.

#### **Results**

All patients went through the care planning process once between February and June 2016 and the process will be repeated every 6 months. Audits demonstrated good compliance with the care planning process. Improvements in satisfaction levels were demonstrated for patients, family members and staff.

#### **Discussion**

Clear planning, communication and repeated tests of change helped ensure maximum involvement of patients, families and staff, with resultant improvements in satisfaction levels and care standards. The continuation and dissemination of the project principles to other settings will substantially increase the number of beneficiaries and is likely to lead to savings and efficiencies.

### *Conclusions*

This project has delivered improved standards of care and satisfaction for patients, families and staff in a long stay inpatient setting for older people. Clinical practice is now compliant with expectations and standards of the Mental Health Commission and Vision for Change. The principles involved can be disseminated to other acute and long stay settings, tailored to the needs of specific clinical settings and patient groups.

## **To improve patient safety and enhance patient/parent involvement in blood transfusion episodes by introducing a new communication tool for 80 transfusion-dependent patients in Our Lady's Children's' Hospital, Crumlin**

### **Authors**

Ms June Bowens, Senior Medical Scientist

Mr Kevin Read, Laboratory Manager

Ms Anne Thompson, Clinical Nurse Specialist

*Our Lady's Children's Hospital, Crumlin*

### **Abstract**

This project is designed to aid the correct identification of patients involved in the blood transfusion process, in situations where a name-band is not worn, to thus improve patient safety and follow international guidelines (BCSH 2012). The largest cohort of patients requiring regular blood transfusions at our paediatric hospital are patients from the haemoglobinopathy service. The 80 patients in this group accounted for 64% of the total red cells transfused in Our Lady's Children's Hospital (OLCHC) in 2015. A Blood Transfusion Card was introduced as a means of aiding the identification of these patients and alerting other centres to their special blood requirements. The project team followed The Model for Improvement (Langley et al, 2009) to set out aims and monitor changes for improvement.

Success of this initiative was measured by a number of methods:

- Patient/Parent and Staff consent and satisfaction with the cards was established by a communication plan and surveys.
- Run charts recorded progress.
- Sample and request form rejection rate due to labelling inaccuracies was measured over a period of three months.
- A number of Plan, Do, Study, Act (PDSA) cycles were performed (Langley et al, 2009)

Cards were issued to 95% of patients in the target group. A staff survey showed 87.5% agreed or strongly agreed with card introduction to other patients. Sample and request form rejection rate reduced from 11% to 3% over a three month period. Verbal feedback from patients and parents was positive and it is proposed to survey their satisfaction rate in October 2016.

Problems occurred with the initial set up of the data base for the cards. Parental/guardian consent was time consuming as considerable time was given to parental and guardian interaction and to photo identification to ensure consent was fully informed. Some patients did not consent to the card or objected to the photo ID, however, these

were in the minority. The cost of producing the card must be weighed against staff time wasted resolving patient identification issues and harm to patient if re sampling is required. An audit showed that there is a potential saving in staff and consumable costs.

Further possible developments include the roll out of the Blood Transfusion Card to patient groups who present for pre surgery assessment in the out patients department. Other centres may consider the card for transfusion dependent patients.

## Sexual health clinic quality improvement project

### Authors

Dr Patricia Cremin, Clinic Doctor, Genitourinary Medicine Department

Dr Claire Coleman, Health Advisor/Clinical Nurse Manager II, Genitourinary Medicine Department

*University Hospital Galway*

### Abstract

To improve the client experience and community health, by reducing the number of clients turned away from a 'walk-in' Sexually Transmitted Infection (STI) clinic by 50% from a median of 8 to a median of 4 over a 6 month period to May 2016.

### Methods

Our STI clinic functions as a clinical microsystem, a front-line unit providing care to a specific group of people. Microsystem tools were used to assess the clinic in terms of the 5Ps(Purpose, Professionals, Patients, Processes and Patterns). As part of this analysis, the team identified lack of capacity as a major problem. We used the processes described in the Model for Improvement to carry out our project. We constructed a driver diagram, and conducted a stakeholder analysis to identify all those who would be impacted by changes in the clinic. We held communication meetings to generate ideas for change. Our main changes were the introduction of a nurse led clinic for asymptomatic patients and revisions in our work-flow. We carried out Plan/Predict, Do, Study, Act (PDSA) cycles. We introduced small changes, with constant feedback from colleagues and patients. Workload allocation, flow through the clinic, patient satisfaction questionnaires and run diagrams were used to measure the results of the PDSA cycles in terms of process, outcome and balancing measures.

### Results

We achieved our aim and we have attained a median of 0 patients turned away since the end of April. A 28% increase in number of new patients has been noted during the six months of the project. Approximately 1500 patients were seen during the 6 months and those who were asymptomatic benefited from a more stream-lined clinic process. We have sustained these improvements for four months following the completion of the project and are working on strategies to sustain this success. We intend to commence further improvement projects including flow through the clinic and results communication. The reallocation of resources in the QI project resulted in the equivalent of one extra healthcare provider per clinic from existing staff, which represented a saving of €17, 468 over the 6 months of the project.

## **To ensure there is no patient waiting greater than three months for a new OPD appointment in gastroenterology medicine by 30th August 2016**

### **Authors**

Ms Tara Shortt, Service Delivery and Planning Manager, Saolta University Health Care Group

Dr Chris Steele, Associate Clinical Director, Gastroenterology Consultant, Letterkenny University Hospital

Mr Peter Byrne, Services Manager, Letterkenny University Hospital

### **Abstract**

#### **Background**

Letterkenny University Hospital suffered a major flood in July 2013 which flooded over 60% of the site and led to the relocation of the Outpatients Department off site. The Out Patient referrals supporting structure was split into four locations over three separate sites and this has led to a problematic system. The Out Patient waiting list continues to grow year on year both locally and nationally.

#### **Aim Statement**

To ensure there is no patient waiting greater than three months for a new OPD appointment in Gastroenterology Medicine by 30<sup>th</sup> August 2016.

#### **Methodology**

Primary drivers to support the project aim and aid implementation were identified by the project team. Employing LEAN problem solving tools, we set about using this structured approach to define, measure, analyse, improve and control. This included weekly waiting list data, referral rates, clinic flow analysis, process map, stakeholder analysis, and patient questionnaire. Through a model for improvement means, a series of Plan Do Study Act cycles were carried out leading to small process improvements each time and identifying further opportunities for positive change.

#### **Results**

The project achieved 98% reduction in the number of patients waiting greater than three months. Additional clinical support negotiated through major stakeholder involvement including senior management has led to a sustainable reduction in waiting times. Waste in terms of DNA's and poorly scheduled appointments has been significantly reduced. Re-engagement of patients in their care process has been achieved. Most importantly stakeholder engagement and collaboration has led to recommissioning of the OPD Performance Steering Group which will facilitate further change identified through process mapping and PDSA cycles.

### *Financial implication*

As a result of this QI project, Project Team engagement with senior management has allowed the appointment of a second Gastroenterologist. This has not only allowed us to deal with the OPD waiting list capacity inequity that existed but has had the dual advantage of cost savings in the region of €43,800 for OPD and has allowed the hospital to run five additional endoscopy lists per week. This has yielded a net saving of €140,000 per month equalling €1.4 million per annum. Therefore if this model was applied across OPD, could potentially lead to vast cost savings in the future yet to be calculated. The additional benefit of short wait times allows for shorter rapid patient assessment and investigations hopefully improving patient outcomes.

### *Conclusion*

Sustainable changes are achievable in the OPD acute hospital setting. These changes may have secondary benefits in other areas of patient care e.g. reduction in endoscopy waits times in this QI project. Most importantly, improvement in patient care and outcomes is most definitely achievable through establishing quality, safe, timely, efficient and effective processes to OPD waiting list management.

## Improving the care for frail older persons – Sligo University Hospital/CHO1

### Authors

Ms Maura Heffernan, Assistant Director of Nursing

Dr Grainne O'Malley, Consultant Geriatrician

Ms Jo Shortt, Senior Project Manager

*Sligo University Hospital*

### Abstract

A significant proportion of older people presenting to the acute hospital setting are frail and less likely to adapt to stressors such as acute illness. This increased vulnerability contributes to multiple adverse outcomes such as falls and increased hospital stays. The hospital and Community Health Care Organisation (CHO) where this project was implemented is severely challenged by inadequate bed capacity and a 26% increase in the number of patients on trolleys. The patient demographic is older than the national average with 14.5 % aged 65yrs and older compared to 11% nationally. There was also a lack of co-ordinated integrated approach to caring for frail older patients.

This project set out to improve the experience of care for frail older patients in one acute model 3 hospital and CHO area by the development of an integrated frailty pathway involving both acute and community sectors. The overall aim was to,

- Increase frail older patient satisfaction rating from 67% to 95%
- Decreased length of stay by 1 bed day for >70 year olds with no increase in readmission rate
- Reduce patient experience times >9 hours in ED to 0%
- Experience no increase in adverse events such as falls

These aims were addressed by establishing a frailty pathway with a particular focus on integration between community and acute services. This was achieved through a cohesive MDT approach to care and the establishment of a specialist gerontology ward.

A patient centred questionnaire showed an increase in patient satisfaction levels from 67% to 79.6% after 3 months. The median length of stay for this cohort of patients reduced from 12.6days to 9.73days, a reduction of 22% with no increase in readmission rates or adverse events. The net saving calculated on bed days saved less additional resources is estimated at €3,128,456 per year.

Undoubtedly, this project has delivered many benefits to date. Placing the patient at the centre of the project has been key to its success. Phase 2 will focus on admission avoidance and reduction in patient experience times in the Emergency Department/ Acute Assessment Unit.

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## Meeting, greeting and treating: A project to improve the front end of a Paediatric Emergency Department

### Authors

Dr Ciara Martin, Paediatric Emergency Medicine Consultant and Clinical Director

Mr Eoin Power, Paediatric Business Manager

Ms Mary Tumelty, CNM3, Paediatric Emergency Department

*Tallaght Hospital*

### Abstract

By June 2016 we aimed to have 95% of our patients receive their initial triage within 15 minutes of arrival to the Paediatric Emergency Department. For most families coming to the paediatric emergency department the triage nurse is the first clinical person they meet. We monitor the time taken for this first clinical encounter and noted that over the past few years the percentage complying with our criteria was dropping as low as 29.96%. This meant that fewer than 3 in 10 children would meet the nurse within 15 minutes and some were waiting an hour or more. This, to us, was unsafe and unacceptable.

### Methods

We started with an Emergency Department Information System (EDIS) analysis to look at the character of our problem. We used run charts to demonstrate the times when we were working well and when there were difficulties. This was followed by a stakeholder engagement phase which involved detailed process mapping combined with staff and patient surveys. We also worked on reducing non-essential computer inputs and reducing variability by removing physical tasks undertaken during the triage process.

### Results

32,000 children attend the emergency department. Following our first review we addressed the timing of the data and were able to achieve our target in 52% of cases. Our second PDSA focussed on rationalising the data captured at registration and triage. We reduced the number of computer inputs required from 49 per patient to 28. Our next steps involve changing how we move patients in the department after their triage. This should further improve our time to triage and by developing flow and streaming in the department we should set the scene for further improvements.

### Discussion

We have an opportunity now for the next few years to lay down the principles of a better system which will deliver safer patient care and will foster staff learning and wellbeing. We want to deliver more efficient care in the Paediatric

Emergency Department and to reduce unnecessary waiting and investigations. The work we have started with our staff and managers sets the scene for this change.

### *Conclusion*

Our aim was ambitious and not yet achieved but we are on our way and by engaging in this project have laid down the foundation for a solid quality improvement framework within our department and hospital.

# Improving frontline ownership of antimicrobial prescribing among NCHDs at University Hospital Waterford

## Authors

Dr Donncha O' Gradaigh, Consultant Rheumatologist, University Hospital Waterford

Ms Alice Medjaou, Deputy General Manager, University Hospital Waterford

*University Hospital Waterford*

## Abstract

### Background

Antimicrobial stewardship (AMS) is a vital area of quality improvement. Essential to ensure that antimicrobials remain effective and to prevent the emergence of resistant strains, there are also cost benefits, reductions in adverse effects of antimicrobials, and fewer complications from intravenous cannulation.

### Methods

Following analysis of antimicrobial use, a series of PDSA interventions were identified from process mapping and driver diagrams, carried out over a five month period to improve frontline ownership (FLO) of one target behaviour, switching of patients' treatment from intravenous to oral antimicrobial (IVOS) when appropriate to do so. Interventions included communication strategies, audit and feedback, and reminders targeted at the main prescribers.

### Results

There was a significant improvement in the number of IVOS candidates identified whose treatment had been switched, from 46% in a baseline total patient survey to 100% at project end, and 60% overall through the project period.

### Discussion/implementation

There was significant variation in the target behaviour which the project did not fully elucidate. Several valuable learning points were uncovered, including the need to target registrars as a key prescriber group, the range of factors driving IV antimicrobial use and the critical role played by ward pharmacists in AMS. Fully implemented, targeted interventions can increase IVOS, affecting 14 patients per day within our institution with potential cost saving of €5,000-€12,000 and re-allocation of up to ten hours of nurses' time per day valued at over €100,000.

### Future Development

The Antimicrobial Stewardship team are developing further interventions based on this project and on other strategies which the project was unable to test. The AMS team will build on the FLO culture emerging from this project to embed responsible antimicrobial prescribing as a key patient-focussed behaviour.

## Introducing “What Matters to You” story boards on two wards in two acute hospitals

### Authors

Ms Mila Whelan, Lead on supporting person centred care

Mr Greg Price, Assistant National Director

Mr John Kenny, Programme Manager

*HSE Quality Improvement Division*

### Abstract

The aim of our project was to improve experience of care by patients during an inpatient admission stay in two acute hospitals by 31<sup>st</sup> October 2016 through the introduction of “What Matters to You” story boards. Working within the Quality Improvement Division of the HSE and with a remit for “Supporting Person Centred Care”, we decided that this would be a good initiative to try as it was person centred in its approach. We worked with two wards in two acute hospitals.

“What Matters to You” initiative has been introduced successfully in a number of countries and in different settings. While working on this project, we drew on the experience of our colleagues in NHS Scotland, whose stories about what a difference “What Matters to You” made to patients’ experience truly inspired us. We carried out a detailed analysis of the context and environment of the two acute hospitals where this initiative was being introduced, engaged and communicated with the key stakeholders, set up a steering group for the project with two sub groups that designed supporting materials for the introduction of “What Matters to You” and developed a training and education programme. Baseline evaluation was carried out on each participating ward, which included semi structured interviews with patients and staff questionnaires.

In Hospital A “What Matters to You” was introduced successfully, with 30 patients having completed their story boards to date. In Hospital B the planned launch did not take place due to a number of factors which are reflected in the learning and recommendations from this project. We are continuing to work with Hospital B and have rescheduled the launch of this project for a later date in September.

While we have yet to conduct the post implementation evaluation of this project, which will include interviews with patients, qualitative data from the pre-implementation interviews suggests that asking patients about what matters to them can make a difference to their experience of care. Feedback received following staff education sessions suggests that “What Matters to You” focuses staff attention on the person, rather than just a patient or their condition, helps them to have more meaningful interactions with patients and ultimately to provide care that is more person centred

in its approach. Information gained from “What Matters to You” storyboards can be used in shared decision making and to make patients feel like active partners in their care.

Lessons learned from this project:

- Leadership commitment to support and promote the project is crucial. This includes releasing staff for training sessions, supporting local champions, helping overcome barriers and resistance.
- Active engagement with staff at ward level is required to win their hearts and minds – consider conducting interviews with staff or using front line ownership tools (<http://www.liberatingstructures.com/>)
- Regular meetings to provide updates on the progress and deal with any issues arising during the planning and implementation stages are essential.
- Front line champions with capacity to drive the project, who are supported by the management, are a critical success factor of this project.
- Anticipate resistance – seen as an addition to the workload; staff shortages, sick leave and annual leave get in the way, etc.
- Have supporting materials ready – patient information leaflets, posters, FAQs, badges for staff, etc.
- Organise a launch in the hospital – make staff on the ward feel “special”.
- Communicate clearly realistic expectations for the introductions of the project – one nurse, one patient at a time, not an entire ward.

We will use the lessons learned from this project in our continued work with the participating hospitals and to promote “What Matters to You” initiative to other acute hospitals and community care organisations.

## To reduce pressure ulcers in one ward within the hospital by 50% by the 30th November 2016

### Author

Ms Orla Mullally, Quality Improvement Department Manager, Royal College of Physicians of Ireland

### Abstract

#### *Background*

Pressure ulcers are a key safety priority within the Irish Healthcare System as identified within the Health Service Executive National Service Plan. In acute care in Ireland prevalence rates vary from 12%-18.8% (Gallagher et al. 2008, Gethin et al. 2005, Moore & Pitman 2000). The SSKIN bundle has been used in the UK in order to successfully and consistently implement pressure ulcer prevention methods. In March 2016 a specific project to support the implementation of the SSKIN bundle across the post op vascular surgery ward in a large hospital began, with the aim to reduce pressure ulcers by 50% by the end of November 2016.

#### *Methods*

After completing the stakeholder mapping and communication plan, the project team developed an approach for the ward and the wider hospital. A series of Plan-Do-Study-Act tests were designed and ran on the ward with the staff that were assigned to the project.

#### *Results*

Following three months of weekly support and input the project has not succeeded so far in reducing pressure ulcers on the ward. Following significant analysis of the data it is clear the rates have remained stable. There was some improvement seen over seven weeks where no pressure ulcers were found but the number of pressure ulcers increased following this period and returned to the average rate.

#### *Discussion/Implementation*

There are a number of reasons for the lack of improvement, some of which include lack of staff engagement and limited senior leadership support. There were also communication challenges as two of the project team members were based in organisations outside of the hospital. To reduce pressure ulcers in one ward within the hospital by 50% by the 30th November 2016

#### *Conclusions/plans for future*

There is huge learning within this project, in particular around getting the 'hearts and minds' of both frontline staff and senior management behind a quality improvement project. Before starting a project there is a need to spend time building the appetite for change and improvement. Without this internal drive for improvement, projects will fail to be successful and sustainable.

## Closing the Gap between Wards and Boards

### Authors

Dr Julie McCarthy, Consultant Cytopathologist, Cork University Hospital

Ms Celia Cronin, Quality and Safety Manager, South/South West Hospital Group

### Abstract

#### Background

Ensuring that senior hospital managers keep the patient at the centre of their decision making is difficult, given that not all executives are clinicians and the data that informs their decisions may not reflect real time patient safety events. The culture of patient safety in an organisation reflects how a hospital reacts to and manages such events and theoretically could be improved if real time events were discussed at hospital Board level.

Demonstration of patient safety events using safety crosses at ward level is a useful visual tool for capturing and displaying real time incidents of harm and harm free days. Data captured on safety crosses is simple to understand and can facilitate discussion around quality and safety trends and individual patient stories.

#### Methods

A base line measurement of the culture of patient safety was conducted on members of the Executive Management Team (EMT) in a model 4 hospital using the Manchester Patient Safety Culture assessment tool. Safety crosses were then introduced on three separate wards in three directorates within the hospital and captured incidents of falls, medication errors and time to theatre in excess of 48 hours for hip fracture patients. Safety Crosses were individually photographed weekly and emailed to the EMT for discussion at weekly meetings. The EMT was re-evaluated at the end of the three month period to assess if their patient safety culture had improved from the base line measure.

#### Results

Despite various challenges, all wards completed filling in safety crosses for the duration of the project. There was initial interest and good feedback from the members of the EMT seeing the safety cross photographs, however this was not sustained and the safety crosses were not visualised or discussed at subsequent meetings. Although engagement by EMT was disappointing, several improvements have emerged. One ward intends to maintain the safety cross as a quality improvement initiative. The incidence of reporting medication errors for the duration of the project is significantly higher than for a comparable period the previous year and a focus group to address delayed time to theatre for hip fracture patients has been re-established.

# **Diploma in Leadership and Quality in Healthcare**

## **2014 - 2015**

## Improvement of situational awareness on one ward using National Early Warning Score

### Authors

Ms Louise Collins - Director of Clinical Services

Dr Peter Kavanagh - Consultant Radiologist

Dr Eamon Leen - Clinical Director

Ms Mairead Lyons - Hospital Manager

Ms Doreen Powell - Risk Manager

*Connolly Hospital, Blanchardstown*

### Abstract

#### Aim

To use the National Early Warning Score (NEWS) Escalation Protocol to aid recognition of clinical deterioration in patients.

Secondary objectives:

- (a) Identify possible barriers to implementing NEWS;
- (b) Prioritise a patient safety culture on a specific ward and throughout the hospital;
- (c) Integrate the experience of the patient into the project analysis and follow-up;
- (d) To explore causes of variation and seeks ways to overcome them;
- (e) Devise methods to achieve sustainability so that benefits of this 1-ward project can be maintained and extended hospital-wide.

#### Materials/Methods

One 31-bedded ward was selected for the project on the basis that it represented a typical acute medical ward containing patients with a range of conditions from Gastroenterology and Rheumatology sub-specialties.

Study period: 8 months, from 1st November 2014 until 30th June 2015.

The following outcome parameters were measured as quality indicators:

- (a) ICU/CCU admissions (number of patients per month);
- (b) Cardiac arrests (number of patients per month).
- (c) Patient experience was assessed by seeking collateral follow-up history from relatives.

The following tools were employed to generate sustainability:

- (d) ISBAR (Identify, Situation, Background, Assessment, Recommendation) communication concept. This element was further examined via an ISBAR sticker that was adapted for insertion into the patient's chart;
- (e) Safety huddles, publicising quarterly NEWS forums, Project Team member dialogue to Consultants, NCHDs, and nurses, and adding project notification and updates to the agenda of other hospital meetings;

- (f) By incorporating lessons learned from the project into the analysis of Incident Reviews and Patient Complaint procedures.

Causes of variation were explored by examining the potential role of permanent versus temporary staff, previous staff training, levels of experience, and baseline attitudes.

Variables were monitored on a monthly basis. PDSA methodology (Plan, Do, Study, Act) was used to refine approaches in order to bring about incremental monthly improvements.

### *Results*

Over the study period a number of definite trends were observed. ICU/CCU admission rates decreased. Numbers of cardiac arrests decreased. Overall numbers in both these categories were small. There was a definite sense that the patient's central position was being recognised when relatives were given the opportunity to voice their opinion in regard to aspects of their relatives' care.

The role of ISBAR, in particular the modified sticker that was created for insertion into patients' charts, was found to be instrumental in standardising communication across disciplines and improving the effectiveness of communication among all members of staff. Attendance at quarterly NEWS forums steadily rose signaling a general increase in awareness about hospital-wide safety improvement efforts. Identifiable challenges to implementation were time constraints among project team leaders, competing service demands among staff, staff turnover, higher locum staff-to-permanent manpower ratios, and passive resistance and apathy among some staff members.

### *Conclusion*

Situational awareness about patient safety was improved at CHB through the use of the NEWS Escalation protocol when allied to efforts designed to reinforce staff engagement, standardise communication and reflect patient feedback in evolving hospital procedures.

## **A multi-disciplinary quality improvement project aimed at reducing avoidable readmissions through improved discharge processes**

### **Authors**

Dr Kieran O'Connor, Consultant Physician in Geriatric Medicine & General Internal Medicine

Ms Karen Donovan, Clinical Nurse Manager II

Ms Ruth Holland, Senior Social Worker / Counsellor

Dr Keith McGrath, Specialist Registrar in Geriatric Medicine & General Internal Medicine

Ms Margaret McKiernan, Director of Nursing

*Mercy University Hospital*

### **Abstract**

#### **Background**

Readmissions are costly for healthcare and undesirable for patients. Hospitals with low readmission rates ensure smooth care transitions as their patients are discharged. Our aim was to reduce avoidable readmissions by improving discharge process in our hospital.

#### **Methods**

We collected quantitative and qualitative data using a mixed methods research approach. Information from patients, carers and staff was gathered through structured and unstructured interviews. The factors influencing the achievement of our aim were represented on a driver diagram. A fishbone diagram displayed the causes of deficiencies in the current discharge process. Quality improvement interventions based on these models were tested and introduced by rapid Plan-Do-Study-Act cycles. We developed a measurement dashboard comprising of relevant run-charts to assess improvement.

#### **Results**

Our results indicate that one-third of 28-day readmissions are potentially avoidable. Some reasons for avoidable readmissions were not within a hospitals' control, nevertheless the majority of reasons related to inadequate discharge planning. During our project a "multidisciplinary discharge planning checklist", a pathway for frail older patient assessment and a "complex discharge round" were introduced. Individualised discharge plans and early telephone follow-up for complex discharges were commenced. Focused educational sessions on discharge planning were started in the hospital. Avoidable readmissions reduced by a quarter. The overall rate of 28-day unplanned readmissions fell from 9.8% during baseline period to 8.1% by the end of the project.

### *Discussion*

Managing readmissions is a complex task. Multi-component interventions such as in our project can significantly reduce readmissions. Early multi-disciplinary review for complex discharges focused patient education and medication reconciliation were additional components with great potential tested during our project. These need further development to maximise benefit. Continued education on discharge planning will be essential for spread and sustainability. Ultimately, reducing unplanned avoidable readmissions will require intensive efforts both during and after hospitalisation.

### *Conclusion*

Reducing avoidable readmissions has great potential to improve quality and lower spending throughout the healthcare service. Readmissions can be reduced by improving discharge planning and transition processes out of hospital. A person-focused approach understanding the unique issues of each high-risk individual admitted to the hospital is crucial.

## **Review of New Diabetic Referrals at Diabetic Out-Patient Clinics within 7 Days of Referral**

### **Authors**

Dr Jayant Sharma – Consultant Endocrinologist

Ms Jacqueline McNulty – Hospital Manager

Ms Maureen Nolan – Director of Nursing

Ms Siobhan McCann – Nursing Metrics Facilitator

Ms Mary Fitzpatrick – Assistant Hospital Manager

*Midland Regional Hospital, Portlaoise*

### **Abstract**

#### **Background**

The existing conventional OPD care delivery system had only limited use for diabetes care delivery. The replacement of the existing practices with a system which would be better suited to the patient needs and deliver consistent and predictable results was considered prudent. The aim of the project was that by 30th April, 2015 all new diabetic referrals will be reviewed at a Diabetic Out-Patient Clinic within 7 days of referral.

#### **Methods**

Initial steps in the project included briefing the Diabetes Service Multi-Disciplinary Team; agreeing objectives; identifying through a driver diagram factors which influenced demand and supply and gathering and reviewing data. Subsequent steps included designing a new care pathway, trialling the new pathway; identifying critical inter-relationships; seeking staff and patient feedback; re-trialling and re-executing.

#### **Results**

The existing referral - consultation - review pathway was noted to be rigid, duplicative, enforced system delays, led to unhealthy competition, over-utilized the clinical OPD model while underutilizing other resources such as patient empowerment and information and tended to lead to over-reliance on pharmacotherapy and by-pass opportunities for healthful behaviours, encouraged a didactic model of care and did not give adequate empowerment to those with diabetes. There were a number of bottle necks in the existing supply - demand model.

#### **Discussion/Implementation**

To address the bottle necks in the existing supply- demand model an alternative pathway was commissioned. The clinic work-flow was streamlined; review clinics were stratified based on patient complexity ; standard guidelines were created; standardized proforma for patient review was developed; nurse-led group information/education sessions were facilitated ; the diabetes consultation process was altered; the treatment targets and goals were highlighted for

staff and patients ; staff and patient satisfaction was reviewed; the annual review process was streamlined ; the team; the new patient clinic has been extended to 1 afternoon per week and all cancellation days per week; an Annual Review Clinic was commissioned in February. The Diabetes OPD is now stratified.

### *Conclusions*

The project demonstrated that the conventional OPD pathway can be improved to deliver safe, equitable, effective and sustainable diabetes care. The exercise documented the understanding of various micro-systems that exist in the Diabetes Care model and highlighted the multiple pitfalls in the conventional care pathway. The Team was able to demonstrate that a win-win situation for the entire macro-system of diabetes care is possible through effective system redesign. Space and manpower, however, have led to insurmountable bottlenecks and hence the process has not delivered to its true potential.

## Information vs Communication: Building a reliable handover system

### Authors

Dr Martina Healy - National Clinical Lead, PICU

Dr Cathy McMahon - Medical Director, PICU

Ms Erika Brereton - Data Manager, PICU

Ms Tracey Wall - Divisional Nurse Manager

Ms Rachel Kenna - Director of Nursing

*Our Lady's Children's Hospital, Crumlin*

### Abstract

#### Background

Paper documentation is the standard for recording patient information in our Institution; except in PICU. A Clinical Information System (ICCA) was installed in PICU in 2012. Following implementation of ICCA we recognised the quality of handover of clinical information from the electronic to paper system was suboptimal. We set about putting in place a standardised handover for medical and nursing staff. The aim of this project was to build a handover system between these two areas to maximise patient safety.

#### Methods

The main tool used was the Model for Improvement framework encompassing three main questions "What are we trying to accomplish?", "How will we know that a change is an improvement?" and "What changes can we make that will result in improvement?" Focussing on the first question allowed us to formulate our aim, using SMART aim logic.

#### Results

Following repeated measurement, audit and discussion, areas requiring change included lack of utilisation of the PICU documents, delay in medication administration, incomplete discharge documents and requirement for further communication between departments. Our quality improvement project resulted in the implementation of a standardised discharge process including a printed patient summary accompanied by verbal nursing and medical handovers, with parental involvement where applicable.

#### Discussion

Our initial aim was to build a handover from electronic to paper based system but the changes required to achieve this were more challenging than anticipated. Successful implementation of a standardised patient summary did not result in improvement of the overall process. We discovered that implementation of change locally may impact on other clinical areas, and will not be successful without the requisite training and winning of hearts and minds.

### *Conclusion*

The project encompassed much wider implementation of change than initially anticipated. Stakeholders need to be engaged at local level and forums in place to maintain this are essential. Our ultimate intention is to roll out standardised handover from PICU to every ward in the hospital.

## **‘Pausing For Safety’ in Acute Mental Health In -Patient Services**

### **Authors**

Ms Margaret Brennan, Quality and Patient Safety Manager

Dr Dominic Fannon, Consultant Psychiatrist

Mr John Meehan, Senior Manager

Mr Michael Ryan, Mental Health Consultant

*Dublin South Central Mental Health Services*

### **Abstract**

The aim of this Quality Improvement (QI) was to introduce the ‘Safety Pause’ initiative on two acute mental health wards to improve front line staff safety awareness through the implementation of the “Safety Pause” as a simple and efficient tool to share information about safety problems and concerns. The initial task was to secure the buy in of management and staff required to implement and design the Safety Pause. Based on considerations of existing models, a visit to a demonstration site, as well as evaluating their own sites needs, the local implementation teams came up with a template to run a safety pause within their inpatient settings. This template identified four relevant areas for inclusion in the safety pause, Patients, Professionals, Processes and Patterns known as the four P’s. During the implementation phase a number of challenges to the sustainability and effectiveness of the initiative arose which were addressed through a series of PDSA’s. These PDSA’s centered, around sustainability, effective communication and ‘recovery principles’ of confidentiality and inclusion. In evaluation of the project we can conclude that the ‘Safety Pause’ can be effectively implemented in an inpatient mental health setting as it occurred on practically all of the days in the pilot phase and now has been extended beyond that phase and into new areas of the unit. A structured assessment instrument “The Hospital Survey on Patient Safety Culture” used prior to, and following the introduction of the Safety Pause demonstrated some evidence of improved safety awareness and communication in the area of ‘Handoffs and Transitions’.

## The introduction of monitoring for patients on Lithium

### Authors

Ms Ellen Conalty, Community Mental Health Nurse

Dr Moyaad Kamali, Consultant Psychiatrist

Ms Córa McKenna, Director of Nursing

*Wicklow Mental Health Services*

### Abstract

There is robust, historical evidence to demonstrate that individuals with serious mental illness suffer excessive physical ill health (Farnam, 1999). There is also evidence that this cohort is more likely to experience premature death than the general population (Brown, 2010). Treatment of bipolar disorder with Lithium remains the gold standard at all stages of the disorder despite many potential serious adverse side effects and physical morbidity. These include an increased risk of developing renal disease, thyroid dysfunction and weight gain which is associated with an increased risk of developing diabetes (Kanfer, 2000) and cardiovascular disease.

In this project we aimed to address the health status of 32 patients currently on treatment with Lithium living in one of our catchment areas through the introduction of physical monitoring on a standardised, structured basis. We identified this need by observing that local primary care health services were not carrying out the required health screening in a structured manner and in some cases no screening was being offered to this patient cohort.

Following consultation with the patients, we sought to develop a service that adheres to well established international standards and addresses the needs of this cohort. We did this through the development and setting up of a Lithium monitoring clinic with dedicated nursing staff to run this initiative. This involved the drawing up of a best practice monitoring policy for this patient group based on recognised evidence. This resulted in the development of a standardised individual patient monitoring record for use with each patient.

Once the physical clinic area was identified, developed, equipped and fully established we offered this service to all 32 individuals on Lithium. We developed and printed a Lithium Information Booklet for all individuals across the entire catchment area.

This quality initiative has demonstrated the need for early assessment and regular monitoring of patients on Lithium due to its associated risks should be an integral component of the clinical management of all patients on prescribed Lithium.

In summary:

- ▶ The management of risk and patient safety is a fundamental component of all mental health professionals' work.
- ▶ Patients on Lithium are potentially at risk of developing complex physical health problems due to the side effects of this drug.
- ▶ They require regular blood/physical health monitoring to ascertain the appropriate therapeutic blood level and range for efficacy and to screen for any changes in their health status. We acknowledged the gap in service monitoring for our patients in this regard.
- ▶ In order to implement these services improvements we continually aimed to provide the staff involved in this project with "the basic knowledge and skills in order to form the foundation of modern improvement and safety science" (Nelson, 2008).

## One Step in Improving Patient Care at a Private Fertility Clinic

### Author

Raymond Skelly, Chief Executive, HARI – The National Fertility Clinic

### Abstract

#### *Background*

Invitro Fertilisation (IVF) treatment involves two minor surgical procedures, performed on a day treatment basis. These surgical procedures together with the initial diagnosis consultation with the clinician represent key points of contact between the patient and the clinician. Accordingly patients' perception of their care is greatly influenced by their experience on the occasion of each of these procedures. As a first step in improving patient care we targeted a radical improvement in the First Case On Time Starts (FCOTS) on our daily theatre list.

#### *Methods*

Through an iterative process, we identified and communicated a specific target and sought buy-in from staff. Importantly, we undertook to keep all staff informed of progress. This communication process proved to be crucial in building a group wide consensus and in developing peer pressure to improve performance. The preparation and presentation of simple diagrammatic run charts, allowed us to identify the required interventions and to track progress.

#### *Results*

The data confirmed that prior to the initiative, 81% of patients were arriving for their procedure on-time or early; yet our median measure of commencement was 41 minutes after the scheduled appointment. In the third month of the initiative, 30% of first cases started on time. While there was still considerable variation in our performance, we reduced our median lateness to 5 minutes.

#### *Discussion/Implementation*

Use of pre-existing facilities in our IT system enabled us to gather and present simple data on our timeliness. The data also provided information on the many and sometimes complex reasons for disruption and delay in theatre. The introduction of measurement alone brought about some initial improvement in performance. We encountered some setbacks arising from confusion around the measurement of start time and some extraneous factors. Remaining focused and determined to improve the start time proved to be important to our team effort.

#### *Conclusion*

A simple and targeted Quality Improvement (QI) initiative can deliver marked improvement in patient care. Complex data can and should be summarised for presentation in a constructive manner to keep staff informed and motivated. There is further room for improved performance in theatre. With good experience gained and enthusiasm developed among staff this can lead to other QI initiatives across the clinics activities. A patient survey should be conducted to inform and prioritise this work.

## Standardising patient care in the acute floor: Improving the experience for patients with suspected PE

### Authors

Dr Peter Branagan, Acute Medicine Consultant

Ms Rosaleen Cafferty, Patient Flow Manager

Ms Fiona Keogan, Head of Clinical Services and Business Planning

Ms Bernie Lynch, Nurse Manager Medical Directorate

Ms Ide O'Shaughnessy, Medical Directorate Business Lead

*Beaumont Hospital*

### Abstract

A pulmonary embolism (PE) is a medical emergency where a blood clot blocks a blood vessel in the blood circulation around the lung. This can be fatal if not recognised and treated promptly with blood thinning medications. The gold standard diagnostic test is Computed Tomography Pulmonary Angiogram (CTPA). Significant variation in our hospital exists between times of presentation by the patient to time of scan. Treatment is commenced when first clinical suspicion arises for possibility of PE. This leads to an increased length of stay (LOS) in hospital, plus potentially needless anticoagulation if scan results are negative.

The aim of this project is to ensure that 100% of patients who present to the acute floor with clinically suspected PE will be managed with a standardised plan of care from the time of presentation to the point of confirming or out ruling a PE (within core hours Monday to Friday 08:00- 17:00) by the end of May 2015.

The team applied a variety of Quality Improvement (QI) tools throughout the project cycle. Initially the team developed a Driver Diagram, and tracked patient journeys to determine delays. The team also developed a Stakeholder Map and facilitated meetings with these stakeholders to determine the rate limiting steps in the journey. From this "Plan-Do-Study-Act" (PDSA) cycles were developed including "reminders" such as "prompts" on the radiology ordering system to confirm that patients had appropriate intravenous access and normal kidney blood tests, essential requirements from a radiology perspective to minimise delays.

The initial patient observational study showed large variances across the processes in the pathway. The changes implemented enabled improved times to CTPA from presentation to hospital. The greatest improvement was seen in the cohort of patients who present to Emergency Department (ED) for investigation and who are discharged (i.e. do not require admission) average Turn Around Time (TAT) reduced from 1182 minutes to 343 minutes.

Delays in the pathway were identified and through QI strategies the team enabled an improvement in time to scanning. Longer term follow up will elucidate further the LOS in this cohort and deliver cost savings to the hospital.

Further developments include extending to outside “core working hours”, and applying the QI principles learned to the other common emergency conditions presenting to the hospital with the goal of standardising protocols for these conditions.

## Online ordering improvement process for publicly funded vaccines

### Authors

Dr Anna Clarke, Consultant in Public Health Medicine

Dr Brenda Corcoran, Consultant in Public Health Medicine

Ms Mary Dowling, Office Manager

Ms Cliona Kiersey, Chief Pharmacist

Ms Yvonne Morrissey, Information Officer

Ms Lesley Smith, General Manager

*HSE, National Immunisation Office*

### Abstract

#### Background

Two million vaccines are distributed yearly to 17,700 sites by the HSE National Cold Chain Service managed by the National Immunisation Office (NIO). To address safety, unwanted variation and waste issues and following a customer satisfaction survey an online ordering system was introduced to improve vaccine ordering and reduce wastage. The aim was to have 50% GP sites and 90% HSE sites (baseline 0%) using the system by May 1st 2015.

#### Methods

Pre and post implementation, baseline measures were recorded and staff surveys conducted. The online system requirements and training materials were implemented over a number of iterations. Early innovator customer sites were selected to use the system and to feedback any issues. A comprehensive communications plan was also put in place for staff and customer sites.

#### Results

The system was introduced in December 2014. The target for 1548 GP sites using the online stock take and ordering facility was surpassed with 82% sites completing a stock take and 78% placing orders online. The stock take uptake for 109 HSE sites was 98% and 85% placed orders. The NIO and customer service staff workload increased.

#### Discussion/Implementation

Clear communication with the sites was crucial to the success of the system. Most sites welcomed the change. The main benefits are reduction in waste through real-time stock take availability, appropriate vaccine ordering and improved patient safety. Vaccine supply restrictions were enforced on sites who did not comply with the online ordering system thus minimising the effect of variation.

*Conclusions/plans for future development or wider dissemination of project*

Implementation was successful due to careful planning, communications and change management. The online system is embedded as an integrated part of the HSE National Cold Chain Service so sustainability is ensured. No cost was incurred in the project and expected cost savings are in the region of €100,000 in 2015 as a result of the change. The online ordering system should be considered for adaptation in other parts of the health services. These results will be disseminated through the HSE and submitted for publication in a peer reviewed journal.

## Improving The Quality of Venous Thromboembolism (VTE) risk management for patients with lower limb casts

### Authors

Dr Jeremy Sargent, Consultant Haematologist

Mr Oran Quinn, Senior Pharmacist

*Our Lady's of Lourdes Hospital, Drogheda*

### Abstract

#### Background

A number of significant cast related VTE events occurred in North East Hospitals in 2014. There is no consensus on appropriate management in Ireland with many centres recommending aspirin for patients at risk. An initiative in Plymouth NHS Hospitals Group has reduced rates of VTE from 2.7% to 0.6% by identifying patients at greatest risk and offering them prophylaxis with Enoxaparin.

#### Aim

To ensure, by 31st July 2015, that 100% of patients requiring lower limb immobilisation undergo a standardised risk assessment process and that all those deemed at increased risk are offered low molecular weight heparin (LMWH) thromboprophylaxis for the duration of the immobilisation.

#### Methods

Project leads engaged with key stakeholders from Orthopaedics, Emergency Medicine, Nursing, Pharmacy and the Allied health profession. Current processes were observed and mapped and a new pathway proposed by the group was accepted by the regional Drug and Therapeutics committee. The new process included:

- A standardised risk management process including a validated risk assessment template to be completed by all patients
- Prophylaxis with low molecular weight heparin (LMWH) for patients most at risk
- Verbal and written information for all patients on the risk of VTE

#### Results

470 patients with lower limb immobilisation have presented to the fracture clinic since the new pathway was introduced. Of 180 patients reviewed, 174 (97%) had a risk assessment completed in either Emergency Department (ED), the Fracture Clinic (FC) or as an inpatient. To date only two patients had symptomatic, radiologically confirmed VTE events (below knee deep vein thrombosis, DVT) and neither patient had identifiable risk factors. This represents a reduction in the incidence of VTE from a baseline of 3% to 0.42% of patients undergoing lower limb immobilisation in our institutions.

***Discussion/implementation***

This project required that a multidisciplinary group worked together to agree and achieve a common purpose of improving the quality of VTE risk management in this patient group.

***Conclusions and plans for further development or wider dissemination of project***

The quality of the VTE risk management process has improved and the incidence of VTE has fallen significantly. This policy has been implemented in all Emergency Department sites across the North East and could be introduced in all hospitals nationwide.

## Systems Analysis Investigation: Improving the Safety Dividend

### Authors

Ms Irene O’Hanlon, Quality & Safety Manager

Ms Miriam Kelly, Assistant Director of Nursing

Dr Alan Finan, Clinical Director, Women & Children’s Services

*Our Lady’s of Lourdes Hospital, Drogheda*

### Abstract

#### Background

Harm events are common in hospitals and despite all of the investments in safety improvement there appears to be little evidence of an increased safety dividend in healthcare. One of the major contributory factors appears to be the failure to implement robust, sustainable control mechanisms in response to adverse incidents and this often comes about as a result of poor quality recommendations emerging from a systems analysis investigation. The aim of the project was to increase the SMART recommendations arising from serious adverse incident reviews to 100% by December 2015.

#### Method

A review of the number of reviews and recommendations over a ten year period was conducted. A random selection of one hundred recommendations was reviewed and graded using the SMART criteria. This was repeated following project implementation.

#### Results

Over a ten year period a total of 117 adverse incident reviews were conducted which produced a total of 1049 recommendations. One hundred of these recommendations from 2014 were assessed using the SMART criteria and found 54% were specific, 62% were measurable, 77% were assigned, 78% were realistic and 3% were timed. Following project intervention, 87 recommendations from incident reviews from the period January – June 2015 were graded using the SMART criteria. This demonstrated an improvement across the board; 84% were specific, 85% were measurable, 87% were assigned, 82% were realistic and 75% were timed.

#### Discussion

Staff undertaking clinical incident reviews and senior clinical and managerial staff in the hospital were the main focus of project intervention. Our project interventions facilitated implementation of the SMART recommendations and in so doing provide reports that would support improvement in patient quality & safety and the organisations safety culture as a whole. Including a cost dimension focused the teams on the extent of the bigger picture for the service. The safety culture within an organisation must be addressed not only to ensure patient safety and quality

improvement is at the top of our agenda but to ensure staff are prepared to meet the demands on the challenging and changing health services.

### *Conclusion*

Based on the project findings, we suggest that the multidisciplinary and multifaceted approach taken was associated with a significant improvement in terms of the issuing of SMART recommendations. The learning from this project can be shared between services and organisations and a standard approach adopted and implemented by all involved at local and national level.

# The development and introduction of a Complaints Bundle for the Emergency Department of University Hospital Limerick

## Authors

Dr James Shannon, Consultant Anaesthetist

Ms Deirdre McNamara, Corporate Lead Quality and Patient Safety

Ms Eleanor Mann, Administration

Ms Miriam McCarthy, Quality Patient Safety Manager

Dr Maeve Skelly, Consultant Gastroenterologist

*University Hospital Limerick*

## Abstract

A robust assessment of complaints-handling mechanisms, ensuring that they are accessible, consistent and provide remedies that are fair, is a key indicator of the quality of a service.

The Health Act 2004 provided for the establishment of a statutory framework for complaints procedure, requiring the Health Service Executive to establish procedures for dealing with complaints about the services it provides.

Complaints are best dealt with through local resolution where the emphasis should be on achieving quick effective resolutions to the satisfaction of all concerned.

As part of the National Quality Improvement Programme Diploma in Leadership & Quality in Healthcare, our team examined the complaints-handling procedure within our Emergency Department. Using the Model for Improvement, we developed a complaint-handling tool to improve our hospital system and patient outcome and to contribute to staff learning and professional development.

Our aim was to achieve 100% compliance within the Emergency Department with the complaints bundle by 30th June 2015. A baseline measure of staff satisfaction with the current process was ascertained, and areas in need of improvement were identified. Over the timeframe of the project, we identified 6 complaints meeting all bundle selection criteria.

The completion of the 8 critical steps of the bundle was selected as our performance indicator, and as such the complaints bundle has proven to be a robust tool. The bundle proved a fit-for-purpose tool in tracking complaints, and minimized administrative complexity.

Organisational support for the complaints bundle process was secured, which will allow staff to be trained in a consistent system, with decreased variation. We have undertaken to carry out a service user satisfaction survey once the process has been rolled out fully.

## 'Imagining Possibilities' -Changes for the Better

### Authors

Dr Simone Carton, Head of Psychology Department

Mr Derek Greene, Chief Executive

Dr Jacinta McElligott, Consultant in Rehabilitation Medicine

Ms Rosemarie Nolan, Communications Manager

Mr Eugene Roe, Programme Manager- Spinal Cord System of Care

*National Rehabilitation Hospital*

### Abstract

#### Background

The aim of this project was to reduce the length of time patients with acquired brain injury (ABI) waited to attend an outpatient Psychology service at a national tertiary specialist rehabilitation hospital. This had to be achieved in a context of staffing ratios that were significantly below recommended levels and without additional resources.

Despite these constraints, as well as the service being at a time of substantial temporary staff reductions, this was an opportunity to restructure and rebalance the service in order for patients to achieve timely access to psychology services and to adhere to best clinical evidence and practice.

#### Methods

A series of quality improvement measures (e.g. POSAs, driver diagrams, run charts, process maps and lean methodology) were used in order to retain the original aim, to assess the extent of the problem and to generate informed ideas for re-structuring.

#### Results

Following application of the methodology, the aim of this project was refined to improve access to psychology services within a specified number of days following triage of patients into three clinical categories. Clinical resources were re-deployed from in patient to outpatient services in order to reconcile the waiting list and to create four clinics (three hours per week) served by four Senior Clinical Psychologists. At the commencement of the project, 43 patients had been waiting up to 459 days to access Psychology services. At the conclusion of the project, there were 8 patients waiting no more than 51 days to access Psychology services.

#### Discussion/Implementation

The changes that have made the achievement of this project successful include (1) stratifying the reason for referral into three categories, (2) creating a Psychology specific minimum data set, (3) establishing contact with new referrals within two weeks of acceptance of referral, (4) establishing 4 dedicated outpatient clinics per week with four Senior

Clinical Psychologists and (5) rebalancing the service using Lean systems and identifying non-value time and inefficiencies.

**Conclusions**

These changes will be monitored, evaluated and revised, as necessary at key points in time over thereby maintaining an effective system that is fit for purpose, patient-centred, adheres to best practice and sustainable.

## The introduction of a staff priority pledge at Our Lady's Hospice and Care Services

### Authors

Ms Pauline Newnham, Director of Nursing, Quality and Clinical Services

Ms Audrey Houlihan, Chief Executive Officer

Dr Joan Cunningham, Consultant in Palliative Medicine

Ms Linda Kearns, Deputy Director of Nursing

Ms Mary Kirwan, Interim Head of HR

*Our Lady's Hospice and Care Services*

### Abstract

#### Background

The purpose of our project was to measure staff experience after the introduction of a Staff Priority Pledge. This followed from the successful implementation of our Patient Priority Pledge, as well as the knowledge that patient care is directly affected by the experience of staff. It appears self-evident that patient's experience and the quality of healthcare they receive are influenced by the experiences and wellbeing of the staff providing that care (Maben et Al 2012).

#### Methods

A staff experience survey was conducted (quantitative and qualitative, online and manual) with key themes of Recruitment, Empowerment, Engagement and Staff Supports being identified as instrumental in the development of our Staff Priority Pledge. The results of the survey were presented at several open forums in March 2015. In April 2015, four focus groups chaired by external facilitators were held to develop the staff priority pledge. A plenary session was organised for staff to discuss the feedback from the focus groups. In July 2015, workshops, chaired by the same facilitators were held to further develop the pledge.

#### Results

Development of the pledge is still pending and will be achieved through analysis of the results from the workshops which are in progress. One key emerging suggestion is the establishment of a staff council to oversee the implementation of measures and consider matters of concern to all staff.

#### Discussion

The feedback from the focus groups produced deeper results than that of the survey. Some participants used it to vent issues of concern, frustration and reasons for disengagement. This resulted in additional, unforeseen steps being

necessary to ensure the ongoing successful development of the pledge. Many suggestions to address concerns and opinions regarding positive workplace satisfaction also emerged.

### *Conclusion*

Whilst the project is ongoing and taking much longer than initially expected, the project team believes that by actively involving staff throughout the process, staff are now highly invested in the process which will ultimately result in the development of a highly successful Staff Priority Pledge, which will be reflected in a highly engaged workforce working in a supportive organisational climate.

## Getting Boards on Board

### Authors

Prof. Brendan T. Kinsley, Executive Clinical Director & Consultant Endocrinologist

Ms Nuala King, Clinical Governance & Standards Manager

Mr Diarmuid Ó Coimín, End-of-Life Care Co-ordinator

Ms Suzanne Roy, Operations Manager

Ms Mary Raftery, Directorate Nurse Manager

*Mater Misericordiae University Hospital*

### Abstract

#### Background

The Mater Hospital Board on Board Project began in 2014. The project was initiated to give the hospital board of directors understanding of the quality of clinical care to enable it to account for care and to facilitate continuous quality improvement. Phase one of the Board on Board project included the introduction of a board level quality dashboard. The aim of phase two outlined here was that the Board would collectively and individually get a comprehensive picture of quality of clinical care, have an understanding of the quality of clinical care indicators presented, act to hold the hospital accountable on the quality of care delivered, maintain the time spent by the board discussing the quality of clinical care.

#### Methodology

The Model for Improvement methodology was used for the identification and testing of the boards' understanding of information on two newly developed quality of clinical care indicators, Patient Experience Time (PET) and Hospital Standardised Mortality Rates (HSMR), use of a reformatted agenda to include quality of care indicators at the top of the agenda, assessment of the boards' ability to prioritise, discuss, and make actions in response to quality of care indicators. The ISBAR tool was used as a means of discussing the clinical care indicators. To measure the level of engagement of the board a five point scale was developed.

#### Results

Introduction of PET and HSMR metrics resulted in an increase in board engagement on each. The aim of 25% of board time to be spent on quality of clinical care discussions has been met and exceeded (mean 27.5%, maximum 42%, minimum 18%). Discussion of the Quality Dashboard resulted in a recommendation by a board member and as a result a model for improvement group was initiated to improve performance on this specific metric (hand hygiene compliance).

### *Conclusions*

As a result of this project the Board are now engaged on two important clinical metrics, PET and HSMR. Quality of clinical care is now in a prominent position on the board agenda. The quality dashboard forms a basis of the discussion. Board members are making recommendations on results from quality of clinical care metrics.

# **Diploma in Leadership and Quality in Healthcare**

## **2013 - 2014**

## Improving the Quality of Tallaght Hospital's Endoscopy Service

### Authors

Dr Daragh Fahey, Director of Quality, Safety and Risk Management

Ms Laura Smith, Environment, Health & Safety (EHS) Manager

*The Adelaide and Meath Hospital, Tallaght*

### Abstract

Tallaght Hospital Gastrointestinal Endoscopy (GIE) Service has been unable to meet the demand for GIE for many years with particular challenges reducing our routine, urgent and surveillance waiting lists. The aim of the project was to improve the quality of the service in Tallaght Hospital by reducing demand, improving capacity and improving patient experience.

Our approach was based on a number of evidence based, internationally recognised quality improvement techniques. As part of the initial planning phase, a baseline quantitative and qualitative analysis was undertaken to understand the nature of the problem and the opportunities for improvement. This enabled us to refine our aim statement into one which included a number of SMART objectives. It also, formed the basis for the initial driver diagrams.

We then carried out a series of stakeholder interviews and integrated themselves as part of the GIE team. This allowed us to develop a stakeholder analysis, a communication plan, process maps and develop the driver diagrams which formed the basis of our initial PDSAs. Other approaches such as focus groups with the users and process mapping meetings with key stakeholders were used to facilitate greater engagement and generate new opportunities for improvement. The effectiveness of our approaches were constantly evaluated using techniques such as run charts. Local staff, who were initially weary of taking on any new QIPs and sceptical of our ability to introduce any improvements, became more engaged after utilising many of the above techniques.

The project has delivered a number of significant improvements. Regarding demand management, we worked with the GIE consultants to agree, roll-out and provide training in a set of guidelines which indicated what patients should be offered GIE and how often. We introduced a faecal calprotectin diagnostic tests to reduce the need for endoscopy and carried out a validation exercise of those on the surveillance waiting list, which to date has removed 3% of patients and postponed the To-Come-In (TCI) date in 13-18% of cases. Regarding capacity, numerous improvements were made, one of which included introducing pre-printed bowel preparation ration prescriptions which were made available in the OPD clinics which reduced DNAs by more than 30% and reduced delays between sending appointments and the TCI date. Another notable capacity quality improvement initiative involved the introduction of Saturday Endoscopy lists. Regarding the user experience, a number of early improvements were made including improvements in the quality of information being sent to the users.

In conclusion, the project successfully improved the quality of the unit within the short time frame allocated. Although the project did not successfully reduce the waiting times, we believe this relates to many factors outside the Hospital's control such as an increase in demand from general practice without any increased staffing and the introduction of the European Working Time Directive which meant there were less NCHDs available to support both the routine Monday to Friday Endoscopy clinics as well as the additional Saturday clinics. As ever, with these projects, the need to constantly improve and evaluate is crucial both to sustain the gain achieved and drive further improvements. As well as achieving significant improvements, our work has helped the GIE team to identify and commence work on many other quality improvement projects such as managing demand by working with Healthlink to improve the GP referral process as well as increasing the efficiency, size, safety, patient centeredness and capacity of the Endoscopy Unit.

# Reducing Discharge Times on Two Paediatric Wards at Temple Street Children's University Hospital

## Authors

Dr John Murphy, Consultant Neonatologist & National Clinical Lead, Neonatology

Dr Dubhfeasa Slattery, Consultant Respiratory and General Paediatrician

Ms Lucy Nugent, Clinical & Patient Services Manager

*Children's University Hospital, Temple Street*

## Abstract

### Background

Inpatient beds and inpatient care are a scarce and expensive resource in Paediatrics. The demand frequently outstrips the capacity particularly during the winter months. The consequences are significant. Ill children requiring tertiary assessment or tertiary care are delayed or deferred. Children scheduled for elective surgery are cancelled. The cancellation rate can be as high as 25%. If flow through the inpatient hospital system is suboptimal the services cannot be delivered in an effective manner. A key component of good patient flow is high quality discharge planning. Discharge planning should be commenced as soon as the child is admitted. For most conditions the doctors and nurses can make a good estimate of the child's projected length of stay. The parents should be informed of the child's estimated date of discharge and arrangements planned around that date.

### Aim

This study aimed to reduce to less than 60 minutes the interval between formal discharge of a child to time of vacancy of cot/bed. Objectives included identification and correction of factors that could impede and delay the discharge process.

### Methods

A prospective study was performed on paediatric inpatient discharges, on two baby wards in a paediatric tertiary hospital after baseline data was gathered. The effects of changes implemented were measured.

### Results

Up to 40% of discharges were delayed: defined for the purposes of this study, as an interval of greater than 60 minutes having elapsed between a formal decision for discharge having been made and the time of vacancy of the bed/cot. A significant proportion of causes of delayed discharges are related to the functioning of the medical team and nursing staff. These can be eliminated. Other causes, particularly transfer of babies to peripheral hospitals are less easily resolved and result in significantly longer delays than others.

### *Conclusion*

Developing an active discharge plan can eliminate some of the delayed discharges. This project will be rolled out in a step-wise fashion to all the hospital. Delayed transfer of babies from a tertiary hospital to other hospitals is a significant issue. A more formal, national, retro transfer programme may be beneficial in resolving this.

## Pausing for Patient Safety – Portiuncula Hospital

### Authors

Ms Thora Burgess, Project Manager, Clinical Governance Development, HSE

Dr Mary Browne, Quality Improvement Division Lead, HSE

### Abstract

The world's leading healthcare systems position patient safety as a strategic priority for all staff. Growing a culture that supports and advances patient safety requires changes at different levels across the organisation. The Safety Pause (also known as a Safety Huddle) is one approach used within organisations to heighten safety awareness between team members and to address risks in a timely manner. Safety Huddles have been shown to help front-line clinical teams improve patient safety.

The aim of this quality improvement project was to test the introduction of the Safety Pause on St Clare's ward in Portiuncula Hospital every morning, 5 mornings a week over a 12 week period. The key objectives were to engage with senior leadership within Portiuncula hospital to gain their support; engage with staff on St. Clare's ward to ensure they understood the project and to get their buy and enthusiasm to be involved.

Six measures were identified to demonstrate achievement of the project's aim. These included:

- Compliance with Safety Pause process
- Team culture using the Healthcare Team Vitality Instrument (comparison pre and post project)
- Descriptive measures of the Pause
- Quality metrics from ward: Falls, Pressure ulcers (comparison pre and post project)
- Evaluation of local champion and ward staffs' experience of undertaking the Safety Pause

Initial feedback on the introduction of the safety pause onto St. Clare's ward has been very positive, both in terms of improving team work and increasing safety awareness on the ward. Support from the hospitals Executive Management Team and in particular from the ward Clinical Nurse was essential for the success of this project.

## Implementation of a standardised care bundle for patients with a fractured neck of femur at SRH to facilitate availability for prompt admission

### Author

Dr Fergal Hickey, Consultant in Emergency Medicine, Sligo Regional Hospital

### Abstract

#### *Background*

Fractured neck of femur is an increasingly common presentation carrying 30% one-year mortality. There is evidence that early definitive surgery can lessen mortality and other complications. The ED may not be involved in the delivery of surgery but plays a key role in making the diagnosis and facilitating admission. Similar to other conditions (Acute Coronary Syndrome etc.), ED management should be standardised and time conscious.

#### *Methods*

Results of a 2012 audit were examined. While overall performance was reasonable, outliers were noted which were looked at in detail. No single factor caused the delays; indeed evidence suggested a lack of focus and slippage at different points. Some patients presented days after injury and had clinically unimpressive presentations meaning they were not considered for the suspected fractured neck of femur Integrated Care Pathway (ICP). If a patient was not put on the ICP, delays were inevitable.

The current process was mapped and interventions identified to remove waste and accelerate value-adding steps. More general interventions were planned to heighten awareness of the condition within the ED, change any existent passive mind-set and reinforce the need for accelerated quality care using the ICP.

#### *Results*

A series of small PDSA cycles were carried out to test the impact of the interventions. To date, there have been too few patients to make definitive statements about their effectiveness; however there is reduced variation. It seems likely the suite of interventions and the focus on the condition will ultimately produce demonstrable improvements. Further interventions are to be implemented and will be studied. Implementation of a standardised care bundle for patients with a fractured neck of femur at SRH to facilitate availability for prompt admission

#### *Discussion*

This Quality Improvement Project (QIP) has occurred at a difficult time for the ED; a period characterised by medical and nursing shortages: increasing demands on the service; increasing numbers of boarders limiting access to cubicle spaces and an increasing suite of targets the ED is striving to meet. The focus on this important condition will reduce some of the process variability seen previously and an on-going audit to be fed back six-monthly should help to maintain focus. There is no evidence currently that focus on this single condition will adversely affect the care of patients with other conditions attending the ED.

### *Conclusions*

No single intervention is available to accelerate and standardise care but a general prioritisation of the condition and specific interventions directed at points in the process were identified. These are likely to further reduce variation. Longer term strategies to increase the number of ED nurses who may order x-rays and removal of the step where the Orthopaedic SHO must review the patient will further contribute to improvements.

## **'You Don't Know What You Are Missing!'**

### **Improving Medication Related Communications at Portiuncula Hospital**

#### **Author**

Ms Geraldine Colohan, Chief Pharmacist, Portiuncula Hospital

#### **Abstract**

Adverse drug events are known to be a major source of patient harm. The drug chart in our institution had been designed with a communication section to be used to communicate important information between doctors, nurses and pharmacists. It was intended that doctors would review the communication section whenever they were using the patient's drug chart. In fact an audit found that only 13% of issues in the communication section were acted on in a timely manner, defined as being within 24 hours.

It was necessary for doctors to modify their behaviour so that they would use the communication section and to this end the Pharmacy Department initiated a Quality Improvement (QI) project. The defined aim was that by a set date all issues written in the communication section of the chart would be actioned by doctors within 24 hours of being written.

To implement the improvement we obtained the co-operation and buy-in of staff by discussion and allowing them to choose their preferred method of implementing change. We devised a Clip/Cupcake scheme whereby a chart with a note in the communication section would be marked with a coloured clip. The doctor who reviewed and actioned the note then kept the clip. The clips were used to win rewards (cupcakes) for the team.

A rolling campaign was launched which used timely feedback, fun and competition and which captured the imagination of staff. By the target date 79% of notes were reviewed and actioned within 24 hours, from a baseline of 13% before the initiative. Secondary benefits were that nursing staff also started using the communication section, which they had not previously, and audited quality of notes and responses improved significantly over the study period. The improvement was maintained following the end of the campaign, and significantly doctors when surveyed were happy to continue their changed behaviour without ongoing rewards. The cost outlay was minimal and separate audit illustrated the importance of the communications themselves in avoiding patient harm. The study illustrated the use of collaboration, appropriate feedback and positive reinforcement in implementing a quality improvement initiative.

## Implementation of an integrated care system for patients presenting to hospital with an acute hip fracture

### Authors

Dr Geraldine McMahon, Consultant in Emergency Medicine

Dr Aidan Hennigan, SpR Emergency Medicine

*St James's Hospital*

### Abstract

Falls are the most common cause of injury in older people. Hip fractures are one of the most common fractures in this age group and are the most common cause of injury-related mortality. Evidence suggests that hip fracture care is often suboptimal with associated adverse effects on mortality, morbidity and healthcare costs. Our aim is that 100% of medically fit patients with hip fractures have a definitive surgical procedure within 48-hours of Emergency Department registration by October 31st 2014.

### Methods

Analysis of baseline performance data of hip fracture care was undertaken as a first step. This demonstrated high-level gaps and the performance times for each step of the patient pathway. Critical resource deficits were identified, including no theatre list for orthopaedic patients on Thursdays, no physiotherapy for post-operative care over weekend periods and no specified lead for orthogeriatric care. A number of improvement tools were utilised to design and implement a more integrated care system. These included clinical process mapping, implementation of protocolled care, innovation in the electronic patient record system, using diagnostic and consult bundles, and the introduction of standards and rule sets for bed management and theatre scheduling. The PDSA cycles of Deming were important for rapid evaluation of changes. Training the multidisciplinary team and incorporating hip fracture care to the induction programmes of changeover doctors was also critical.

### Results

80% of medically fit patients are in theatre within 48-hours, the median time to theatre is 24hours. High-level resource deficits were addressed and protocol led care was implemented. The mean time from referral to transfer to the ward has improved from a median of 5.6hrs (SD 4.4) to 3.1hrs (SD2.1). Admission to specialist ward has improved to 53% compared to 37%. We have 100% compliance with falls assessment by physiotherapy. The average length of stay is 11 days, an improvement of 31.5%.

### Conclusion

The implementation of integrated care for patients with hip fracture is an achievable goal, requiring commitment of a broad range of the multidisciplinary team. Data is central to driving improvement, being essential to understanding if the improvement works and for identification of gaps and process issues that may otherwise be overlooked. Furthermore, data is essential to embedding sustained improvement.

## Improving Integrated Healthcare for Older People Living in Nursing Homes

### Author

Dr Graham Hughes, Consultant Physician in Geriatric Medicine, St. Vincent's University Hospital, Dublin

### Abstract

#### *Background*

Pervasive negative societal attitudes to healthcare and to Older People (OP) in Ireland, the rapid ageing of our population and the recent budgetary contraction have created a challenging environment for care delivery to OP living in Nursing Homes (NHs). Poor quality data on primary and secondary care service consumption and clinical data related to lifespan, mortality and chronic disease burden required to facilitate service development in care delivery are also deficient. Initial local service development in SVUH now generates some of the clinical data required to model service development. Previous work has impacted positively on acute transfer rates from local NHs but is challenged by inequity, inefficiency and timeliness of care.

Our project aim was that all older people living in 2 NHs, under 1 General Practice's care would undergo prospective inter-disciplinary case discussion (MDT meeting) delivered by primary and secondary care between January and May 2014. The project would develop a lean sustainable model that could be up scaled for further testing and championed for wider implementation if proved valid. Other drivers included OP and family engagement, OP clinical outcomes (- type and number of decisions, medication review, advanced care planning (ACP)), costing and stakeholder mapping.

#### *Results*

All 5 scheduled clinical MDT meetings were completed and all 42 identified OP underwent discussion. The model was operationalised and refined over the period. Our cohort was elderly (median age 90, range 61-99) with a high degree of frailty [median frailty score 7, range 6-9], a high prevalence of declared and undeclared dementia [median MMSE 14, range 0-30]; and a high medication burden [median regular prescriptions 10, range 3-22].

The mean number of medications stopped per patient was 1.63 (SD 1.17) with a cost saving in a cohort (15/42) of €518.19 per resident discussed at the MDT per year. Some costing analysis is presented.

Identification of and engagement with key influencing groups over the project period should help support the planned re-testing growth phase of the project over the coming months with a planned increase in number of NHs, GPs and Geriatricians engaged.

## Decreasing agency staffing costs in Dublin Residential Service

### Author

Ms Grainne Bourke, Quality and Risk Officer, Daughters of Charity Disability Support Services (Dublin)

### Abstract

The need for proper utilisation and allocation of resources and in particular staffing resources is integral in the current fiscal climate. Furthermore this is also a key requirement of current government policy and national standards. The Value for Money Report (2012) makes it incumbent on organisations to provide value for money and demonstrate this through processes that are transparent and robust. Organisations are required to demonstrate the effective use of resources and to allocate resources based on the assessed needs of service users. Service Level Agreements with the Health Service Executive (HSE) also require organisations to effectively and efficiently use their resources and clearly demonstrate this.

This project aimed to reduce agency staffing costs by addressing these requirements through detailed measurement and analysis of the allocation of the staffing resource and to ensure that this is used efficiently and effectively, in line with the detailed measurement and description and assessment of need of service users. The particular emphasis was on the adequacy of skill mix and the efficiency and effectiveness of the allocation of the staffing resource per Service area. This process identified and mapped service areas where agency staff was employed and its associated costs and the whole time staffing equivalent (WTE).

The ultimate aim of the project was to decrease agency costs to the Service by 25% over the same five months from the previous year.

The results enabled a strategic analysis of resource allocation, staffing levels and service user needs across all aspects of the organisation. It provided a coordinated strategic approach to resource allocation. It demonstrated considerable benefits for workforce planning for the present and future; including benchmarking current service user levels of need. This process considerable built up internal capacity through training of staff and through the senior expert group to enable managers to conduct this type of exercise in the future. The information obtained allowed for the reallocation of staff per grade or Service.

Decreasing agency staffing costs in Dublin Residential Service area to reduce the agency costs to the Service. Its added benefit was to maintain or increase quality of service delivery. This project succeeded just below its target of reducing agency costs by 25%.

## Reduction in number of inappropriate duplicate blood tests conducted on patients within University of Limerick Hospitals

### Author

Mr Hugh Brady, Chief Financial Officer, University of Limerick Hospitals

### Abstract

Inappropriate clinical laboratory testing can cause patient harm and discomfort as well as wasted medical spending. Blood loss from high phlebotomy use is independently associated with the development of hospital-acquired anaemia. As with any invasive procedure, there is a risk of infection. Inappropriate testing can lead to false positive results, resulting in further inappropriate investigations and often delayed discharge.

The aim of this study was to assess inappropriate duplicate laboratory testing in a cohort of acutely unwell medical patients transferring between the University Hospital Limerick (model 4) and the model 2 (less acute) hospitals in University of Limerick Hospitals. The baseline rate of inappropriate duplicate testing for full blood counts, biochemistry profiles and coagulation screens were 29%, 29% and 15% for patients transferring to Model 2 hospitals and almost double that for patients transferring to UHL (58%, 57% and 45%) between October 2013 and January 2014. Although not as high, the rates of inappropriate duplicate testing of thyroid function tests and haematinics were also of concern.

A patient survey found that patients do not appear to be well-informed about the blood tests they undergo, with two-thirds of patients being unaware of what the tests were for. Using the Model for Improvement methodology, the following interventions were trialed to address the inefficiencies associated with the testing process in transferred patients:

- Educational poster, intern training, Grand Rounds presentation and communication to consultants re duplicate testing
- Lab prompt re minimal intervals of re-testing introduced
- Patient survey results circulated to medical staff
- Inclusion of lab test section on patient transfer document
- HSE patient booklet adapted to include section on blood tests

Monthly repeat measurements post the various interventions showed a reduction in the rates for all the tests examined by the month of May 2014. These rates equated to an absolute reduction of 2,096 inappropriate tests per year in patients transferring to or from UHL within the group, equating to a direct cost avoidance of €13,495. Staff education had the most positive impact but ultimately this intervention does not preclude human error. Future work implementing a common medical record number and a clinical worklist management system such as Order-Comms are most likely to have the biggest impact on inappropriate testing. Such improvements should reduce patient harm, improve patient experience and avoid the cost of unnecessary duplicate tests.

## Improving Hand Hygiene in Portiuncula Hospital Clean Hands-Safe Hands

### Authors

Ms Chris Kane, General Manager

Ms Máire Kelly, Clinical Support Services Director

Dr Michael Brassil, Associate Clinical Director

Ms Margaret Casey, Director of Nursing

*Portiuncula Hospital*

### Abstract

#### Background

Hand hygiene is recognised as one of the most effective ways to prevent the spread of Healthcare Acquired Infections (HCAI) and is an important component of patient safety.

At our hospital hand hygiene compliance rates were at 76% and training rates were ranging between 32% & 66%, which was significantly below the standard required. Compliance by staff category identified compliance rates across the various staff categories ranged from 71% to 79% with some as low as 54% at the lower confidence interval. The basis for choosing this quality improvement project was a realisation that hand hygiene was not embedded in the culture of the organisation. This Quality Improvement (QI) project involved a team of senior management and the infection control team.

The aim of the project was to increase hand hygiene compliance among health care workers from 76% to 95%, in general clinical areas, and to achieve 100% compliance in specific high risk areas.

#### Methods

The hospital established a project team; drivers were identified to support the overall aim and aid implementation. Strategies to improve hand hygiene were tested through a model for improvement approach, including plan-do-study-act cycles, small tests of change, measuring data for variation, run / pareto charts, observational audits, stakeholder analysis. This project further developed the hand hygiene training and education programme, including hand hygiene champions, a train the trainer programme, supporting communication plan and improved facilities/environment of the hospital.

#### Results

Overall hand hygiene compliance rates improved by 10% from 76% to 86%, training rates improved from 32% to 99%. Staff compliance by category improved overall by 12.4%. A correlated improvement was seen in a reduction in Healthcare Acquired Infection Rates with a 50% reduction in Clostridium-Difficile (c- diff) and a 30% reduction in

Methicillin Resistance Staphylococcus Aureus (MRSA). The project used a multifaceted approach focusing on Structure and Process to bring about improved Outcomes.

The approaches used in this project have proved beneficial and are pivotal to continuing to improve hand hygiene compliance and reducing harm to patients. The essence and core of this project is to improve the quality of care delivered to our patients. The improvement will be a continuous cycle to ensure that rates are achieved and sustained and that we can spread the learning across departments and other hospitals.

## Emergency Department Quality Improvement

### Authors

Ms Helen Hanrahan, Assistant Director of Nursing, Galway University Hospital

Ms Jean Kelly, Director of Nursing

*Galway University Hospital*

### Abstract

The Emergency department at Galway University Hospitals had 64,825 attendances in 2013. 20% of the attendances are paediatric patients (under 16). Emergency departments are very busy and frightening places for patients. One of the fundamental tenets of our project is to keep our patients at the centre of what we do.

The aim is to Improve the Patients Experience Time (PET) in triage category 2 & 3 from triage to decision to refer/discharge by reducing the time waiting by 50% from October 2013 to August 2014 in the Emergency Department, Galway University Hospital.'

Process mapping of the patients' journey was undertaken with all members of the multidisciplinary team. This generated information on the times where significant waits were occurring. Observation study of the process was completed with involvement from patients and staff. The patients' main concern was the long waiting times for the whole process in ED from registration to Leaving the department. The wait for investigations was significant and we decided to pilot a nurse in the role post triage to undertake Phlebotomy and order radiology tests. A rapid access nurse (RAN) was introduced from 12 midday to 1800hrs to undertake phlebotomy and order radiology tests in September 2013 as a pilot.

This pilot study was carried out in October 2014. An audit was undertaken in October 2013 when a group of 10 patients' processes were reviewed in triage category 2, 3 and 4 when there was no RAN nurse therefore no investigations carried out and when there was a RAN Nurse. The findings were significant with a two and half hour delay for patients when no investigations were carried out an analysis was undertaken of the time patients presented and the large volume present between 1100hrs to 1900hrs. This trend pattern changes on occasional days with large volumes presenting between 1800hrs and 2300hrs. No significant reason is ascertained for the change. The RAN service has been extended from 0900hrs to 1900hrs within the present resources. The rationale to commence at 0900hrs was made on demand as it was piloted to commence at 1000hrs and 1100hrs but there was always a backlog and some days it was impossible for the RAN Nurse to undertake the investigations in a timely manner. Ideally the RAN service needs to be 24hours 7 days a week to meet the demand of the service. An audit of Category 2 and 3 Major Patients (major Patients are patients who require investigations) was carried out in April and May 2014.

The April and May data for category 2 patients showed a significant difference in the median time when investigations were undertaken prior to review by a Doctor. There was a 62.86% difference in April and a 72.69% difference in May. This however is below the target time of 10 minutes for triage category 2 patients. The other variables are lack of space and personnel to review the patients.

The April and May data for category 3 patients showed a difference in the median time when investigations were undertaken prior to review by a Doctor. There was a 71.97% difference in April and a 21.43% difference in May. The variable in May was that there was a reduced RAN service from 0900hrs to 1900hrs due to shortage of nursing staff and the RAN being utilised for other duties. The delays were significant all day and well outside the target time of 60 minutes for triage category 3 patients to be assessed by an ED Doctor.

As a result of this project a proposal has been approved by the management team in May to increase staffing in the Emergency department. This increased staff will allow the allocation of a rapid access nurse twenty four hours a day, seven days a week. The recruitment process has commenced and it is hoped this service will be operational from end September 2014.

# Using a Collaborative Approach to Improve the Quality of Gentamicin Usage in Irish Hospitals

## Author

Mr Sean Egan MPharm MSc MPSI, formerly Antimicrobial Pharmacist at the Adelaide and Meath Hospital, Tallaght, Dublin

## Abstract

### *Background*

Gentamicin is a commonly used, potentially life-saving antibiotic. It is highly effective when dosed correctly, but it can be toxic in overdose and regular time sensitive serum level monitoring is required to ensure that it does not accumulate and cause toxicity. Toxic effects can include kidney damage and hearing loss. The process of dosing and monitoring can cause confusion for operatives, and is a regular source of medication error. The frequency of this problem has meant that it is a regular target for quality improvement efforts. However, in practice, hospitals often approach this problem in isolation, and learning can remain localised post improvement effort. Moreover, improvement can be hampered by the lack of an agreed standard approach to dosing and monitoring of the drug between hospitals.

### *Aim and Methods*

This project took a two pronged approach to addressing this issue. The project firstly aimed to build on prior efforts undertaken at Tallaght Hospital through use of the Model for Improvement in an effort to improve dose selection in particular. The project also took on a national slant, with the formulation of a collective approach to improvement amongst a number of key hospitals under the direction of a national expert steering group. This national collaborative effort aimed to act as the catalyst for the establishment of a wider movement to improve usage of the drug. The expert steering group agreed five quality process measures which could be applied in all recruited centres. Improvement efforts began initially in four hospitals including Tallaght Hospital.

### *Results*

Measureable improvement was identified in all recruited centres. Dosing practice improved in one patient cohort at Tallaght Hospital improved through use of the Model for Improvement. Efforts at spread were less successful at first attempt, but have resumed in earnest. Efforts to standardise practice in dosing and monitoring have also emerged from this project.

### *Conclusions*

The use of the Model for Improvement and its collaborative application to address a common problem proved to be successful in most hospitals. This project also informed the formulation of an improvement manual for further dissemination of improvement, and acted as a conduit for national standardisation in use of the drug.

## Reducing the Waiting Time for DXA (Dual Energy X-ray Absorptiometry) Examinations

### Author

Ms Suzanne Dennan, Radiographic Services Manager, St. James's Hospital, Dublin

### Abstract

#### *Background*

DXA plays a crucial role in the detection and management of osteoporosis. Effective detection and management of osteoporosis will reduce the morbidity and mortality associated with fractures in the population. This quality improvement project addressed the need to improve the waiting time for DXA examinations. A baseline analysis of waiting times indicated that the waiting time for new requests for GP and Outpatient DXA examinations was long at 8 months. The DNA rate was high at approximately 20%. It was aimed to reduce the waiting time for GP and Outpatient DXA examinations from 8 months to 3 months by 31<sup>st</sup> May 2014.

#### *Methods*

A process mapping exercise was performed to identify any service inefficiencies or bottlenecks. A patient satisfaction survey was undertaken to explore the patient experience and to identify ways to improve the quality of the DXA service for patients. The primary drivers identified to achieve the project aim were leadership support, team engagement, managing DXA demand and ensuring DXA supply.

#### *Results*

The waiting time for new requests for GP and Outpatient DXA examinations reduced from 8 months to 3 months by 31<sup>st</sup> May 2014. The target waiting time for this quality improvement project was achieved. Over the course of the project, the DNA rate has reduced from approximately 20% to 6%.

#### *Discussion/Implementation*

The reduced waiting time was achieved primarily by reducing the DNA rate for DXA examinations and by increasing DXA supply. The improvement in DNA rate was achieved because the DXA Radiographers took on the role of contacting patients by phone to remind them of their pending appointment. DXA supply was increased mainly by the reorganisation of DXA slots and by the creation of additional DXA slots. Extensions to the working day were introduced using additional Radiographer hours gained under the Haddington Road agreement. This enabled the creation of an extra slots resulting in a 20% increase in DXA capacity from November 2013.

#### *Conclusion*

This quality improvement project achieved the target aim of reducing the waiting time for new requests for GP and Outpatient DXA examinations to 3 months. The working methods adopted are transferrable to similar waiting time projects in other areas of Diagnostic Imaging. It is essential that changes implemented be customised to meet the requirements of the service area.

## Introducing an evidence based foot screening clinic for patients with diabetes in Mullingar Town

### Author

Ms Virginia Pye, Director of Public Health Nursing, Longford/Westmeath, HSE

### Abstract

The aim of this project was to provide evidence based foot screening to all patients with diabetes in a PHN caseload. Patients already under the care of a podiatrist or diabetic nurse specialist were excluded. The cohort size was 40 patients. Patients were invited by letter into a clinic based service, foot screening and patient education was carried out by a registered nurse. There was a direct referral pathway agreed to local HSE podiatrist. Failure of patients to attend appointments and lack of interest in the service was the main challenge of the project. Significant effort was made by clerical and nursing staff to increase attendance. At the end of the project 50% of the cohort was screened. One third of those screened were referred onwards to podiatry and GP services. The remaining patients will continue to be offered foot screening on an annual basis (including non attenders at this year's screening process). All patients with diabetes will have a 'red foot' sticker placed on nursing notes to increase nurse awareness and need for foot care and increase the likelihood of opportunistic patient education.

This foot screening pilot project was introduced within existing nursing resources and cost of implementing the service was minimal. The written guideline developed for the pilot can be adapted for use in other similar PHN caseloads. The pilot results confirm the inverse care law as described by Tudor Hart in 1971. 'Those most likely to benefit from a medical service are those least likely to receive it'. Public health nurses therefore must utilise all patient /nurse interactions to provide opportunistic patient education and carry out foot examinations. For this reason it is recommended that all nursing staff on the PHN integrated team undertake the education programme in foot screening and maintain competency in this area of nursing.

A telephone questionnaire to a small number of patients (post screening) revealed a high patient satisfaction with the service.

## **Reduction of number of unnecessary repeat blood testing carried out on patients who are transferred within UL Hospitals**

### **Author**

Ms Josephine Hynes, Director of Human Resources, UL Hospitals

### **Abstract**

#### ***Background***

The reasons for patients having repeat blood tests in many cases is due to the hospital group not having a single patient file operational across all hospitals, this results in many patients having tests repeated unnecessarily because either the patient chart or computer to check what test had been done prior to transfer.

#### ***Aim statement***

To reduce the number of unnecessary blood test to be repeated on transfer to another hospital within the group

#### ***Drivers and Measures of Quality***

The primary drivers for improvement were to effectively communicate to stakeholders the priority of reducing the amount of unnecessary repeat blood tests carried out on patients on transfer within the organisation. A stakeholder map identified enthusiastic supporters, those with high levels of influence, followers and some opponents. Process mapping established the journey through the hospital made by acutely ill patients. Using activity reports to examine the amount of test carried out on each site was utilised to show was there an overall reduction in the number of tests carried out across all sites, compared to a similar period in another year.

#### ***Results***

Using our flow chart we conducted a series of 'tests of change' to try and reduce the numbers of unnecessary repeat blood tests carried out on patients after transfer.

#### ***Conclusion***

There were some results from the changes introduced, however they need to be cautioned because they may not be solely attributed to the changes introduced but other factors such as the changing services delivered at our Model 2 Hospitals and also the commencement of a single laboratory in University Hospital Limerick. There is an opportunity for further research to see if the studies carried out in the U.S.A would show similar result in the Irish Health System.

# Reduction in the Waiting List for the Diabetes Out-Patient Clinic in Beaumont Hospital

## Authors

Dr Diarmuid Smith, Consultant Endocrinologist, Beaumont Hospital

## Abstract

### Background

There is currently an explosion of new cases of T2DM in the community. Lack of resource both within primary and secondary care to deal with this epidemic has put huge strain on diabetes services across the country. In Beaumont Hospital the waiting list for a new patient diagnosed with T2DM to see a consultant in the out-patient clinic had risen to over 3 years. The aim of the project was to reduce the waiting list by 30% over a 6 month period.

### Methods

Initial steps in the project included a waiting list validation exercise, establishment of a project management team and a stakeholder chart as well as an understanding of the out-patient demand and clinic capacity of the service. Longer term strategies involved looking at process mapping within the diabetes day centre of the hospital and out-patient clinic, to increase efficiency and introduce some lean strategies to the service.

### Results

Waiting list at start of the project showed over 2,500 patients waiting to be seen with a wait of over 3 years. Waiting list validation and a redesignation process dictated by the SDU reduced this number significantly to 1,029 patients. Increased clinic capacity by increasing the length of a weekly diabetes clinic and the institution of a new diabetes consultant led clinic increased clinic capacity for new patients and had reduced the number further to approximately 450 on the last waiting list validation exercise.

### Discussion/Implementation

The diabetes multidisciplinary team working with hospital management were able to deliver a significant reduction in the waiting list for new patients attending the diabetes out-patient department. The challenge will be to sustain this in the face of the increasing numbers of diabetes in the community and the lack of an integrated care programme between primary and secondary care.

### Conclusions

The project delivered its aim and introduced the team to the terminology of quality improvement and invigorated and service to continue to push for better care for our patients. The challenge on-going will be to maintain and further reduce the out-patient wait time.

## Improving Emergency Medicine Admission Patient Experience Time

### Authors

Ms Ann Cosgrove, General Manager

Ms Ann Dooley, Business Manager, Medical Directorate

Ms Fiona McHugh, Head of Corporate Development

*University Hospital Galway*

### Abstract

#### **Background**

Access to healthcare in terms of Unscheduled Care (emergency) and Scheduled (elective in-patient and outpatient waiting lists) is a key priority in health both nationally and at a hospital level. At any level it is unacceptable for an emergency admission patient to wait on a trolley for an extended period of time, whilst they are awaiting a bed. For the past three years our hospital has been actively working to reduce the numbers of these patients waiting on trolleys. The hospital usually has a daily average of 16-18 patients waiting on trolleys.

In early 2013, the National Special Delivery Unit launched the “*Unscheduled Care Strategic Plan*”. This plan was driven by the premise that prolonged occupancy of Emergency Departments (ED) leads to poorer outcomes for patients. This not only involves longer in-patient length of stay but increased morbidity and mortality (Liew et al 2003, Richardson 2006, Spivulis et al 2006, Richardson and Mountain 2009).

The Strategy was followed by Technical Guidance issued to all hospitals in 2013 focusing on organisational and operational changes necessary to improve patient experience of unscheduled care emergency pathway in Ireland.

The use of key metrics i.e. Trolley GAR and CompStat taken together with the measurement of Patient Experience Times (PET) formed the basis of key performance indicators developed for unscheduled care at a national level. These metrics are reflected in the UHG Hospital Key Performance Indicators.

Our trajectory in terms of numbers of patients waiting on trolleys for 2012 was poor but demonstrated an improving trend, in 2013 there was a concern in the early part of the year, and then showed improvement from mid June to Mid September, 2013 but again became a concern from October 2013 and continues to be a concern for the hospital. From figures available from April 14 to August 14 on PET breaches it is notable that PET breaches for UHG have increased and are now averaging 50 per week (SDU).

In late 2013, the Group and Hospital Management Teams placed a renewed focus at every level of the organisation on unscheduled care performance management. They established an Unscheduled Care Governance Group which

identified various work streams to address a number of **absolutes** associated with the unscheduled care patient journey and to manage resources more efficiently. The ultimate goal of this group is to improve the patient journey and meet the SDU Targets in relation to unscheduled care.

### **Project Aim**

The primary aim of this project is to identify issues / bottlenecks which when addressed will reduce medical emergency admission patient experience time by a minimum of 1 hour at University Hospital Galway

The project is intended to:

- Support the work of the Unscheduled Care Governance Group and work streams
- Undertake some real time data capture on the patient journey of emergency medical admissions
- Identify obstacles and bottlenecks and identify quality improvements to improve the patient experience time
- Focus is on the patient journey from the time of decision to admit in Emergency Department to time the patient arrives on the ward to their bed.

### **Approach and Methodology**

- Project Team formed
- Initial consultation undertaken with key stakeholders
- Influencing drivers identified
- Existing baseline data reviewed
- Data capture tools reviewed and agreed
- Data capture volunteers' rota prepared
- Completion of real time data capture exercise (20 patients tracked)
- Current state mapping carried out
- Patient experience survey (12 questionnaires issued)
- Engagement with key staff
- Plan Do Study Act (PDSA) cycles utilised in the process and subsequently in relation to quality improvement initiatives, together with a number of stakeholder workshops
- Small quality improvements identified for implementation.

### **Results**

Real time data captured on:

- Emergency medicine admission patient journey times
- Obstacles /bottlenecks to the patient journey
- Wider stakeholder input increasing awareness of the complexity of factors which influence the patient journey including
  - Number of emergency and elective admissions
  - Lengths of stay
  - PDD's (Predicted Date of Discharge for patients)

- Discharge times
- Support services
- Roles of bed management, patient flow co-ordinators, discharge co-ordinator, unscheduled care team
- Culture and practice impact on patient flow

The project demonstrates that there are no simple quick fixes to the issue but identifies a requirement for an ongoing multifaceted approach to manage performance with clear leadership and direction. A reaudit in the latter part of 2014 will be required to review impacts of the concerted efforts across the organisation, including project actions and a continuous cycle of improvement and focus within the organisation to achieve sustained change.

Key bottlenecks/issues to timely patient flow were identified which included multiple communication processes, requirement for clarity of roles and need for one traffic controller, system update issues, late discharges, speciality cohorting late in the day, unavailability timely data on bed readiness. The output identified the need for further development of the navigational hub and clinician involvement in the hub. The breadth and complexity of the subject matter became apparent as the project progressed and the consequent need to widen the scope of data capture. Therefore the project team were unable to complete a re-audit within the timeframe of the project submission. This re-audit is scheduled for the last quarter 2014.

The findings reflected the requirement for standardisation and redesign of the communication process, elimination of duplication, and timely update of systems data. Also the key importance of early discharges, comprehensive predicted dates of discharge for all patients, improved weekend discharges and the requirement to change culture and practice to positively impact on patient flow is reinforced. The findings have given a better understanding of data available and have increased buy in to a common goal in relation to patient flow by key stakeholders.

Work is ongoing by the project team and the unscheduled care group on the system aspects requiring attention and the work will need to extend beyond the life of this project, if it is to achieve a sustained improvement and change within the organisation.

As part of the project a small patient experience survey was undertaken with 12 questionnaires issued to patients and 6 questionnaires were returned (50%) overall reflecting a positive experience, which was not anticipated.

### **Conclusions**

From the outset this was an ambitious project and the project team were aware of its complex nature. In undertaking this project the project team through its work with key stakeholders saw a visible MDT approach to a complex environment and a willingness to adopt to new ways of improving patient flow. The real time data capture exercise showed that there was room for improvement in integrating all areas of the service in their approach to the achievement of the common goal of an improved patient flow within a wider system. To achieve sustained change and improvement will require a change in culture and practice over a period of time through a multifaceted approach. Some quick fix small tangible actions were identified with stakeholders to achieve short term improvements.

## Quality improvement project – Involving service users and the public in the development of services for end of life care in the work streams of the IHF

### Author

Ms Sharon Foley, CEO, Irish Hospice Foundation

### Abstract

The aim of this project is to improve the level of service user and public involvement in the projects relating to end of life developed by Irish Hospice Foundation (IHF), by developing and testing a self-assessment tool, which assists managers to assess the level of consumer and public involvement, by September 2014. The following were the steps taken in this approach to improve quality.

- Overview of approach used for organisational approaches towards Service User Involvement (SUI) from national and international bodies development, testing and administration, through two PDSA cycles, of a survey tool which generates a deep understanding of the drivers and barriers towards effective SUI with vulnerable groups such as those at end of life, and in the IHF – to result in an informed driver diagram for SUI for the organisation also looks to measure current levels of SUI within the organisation development, from the initial tool, of an ongoing measurement tool that will measure the quality and frequency of SUI for the future.
- Development of an action plan for further work.

The project was moderately successful in starting this process of improved SUI and a clear plan for the next stages of the project is now in place. There were delays and extra steps required that weren't visible at the start of the project.

### *Recommendations to improve SUI within an organisation*

1. Strengthen organisational commitment towards SUI through a clearly articulated policy on SUI.
2. Strengthen organisational capacity towards SUI through engagement on the process and full staff training so that staff are able to build this into their existing work programmes.
3. Assign one staff member to take an organisational lead on SUI.
4. Recognise that staff resources are required to engage in SUI and build this element of work into annual business plans and projects with protected time assigned to engage in SUI.
5. Document the many ways the organisation is already doing SUI and ensure stakeholders are aware of the level of SUI underway.
6. Ensure that levels of SUI are monitored through a structured data collection process – this project estimated that data collection every month would work to capture levels of SUI in each department.
7. Report on the levels of SUI so as to provide the evidence of progress.

## Improving Access to Sexual Health Care GUIDE clinic

### Author

Dr Aisling Loy, Specialist in Genito-Urinary Medicine, St James's Hospital, Dublin

### Abstract

The GUIDE clinic at St James's hospital is the largest and only provider of a same day free walk in STI service in Ireland, we have approximately 25,000 patients per year attending the various outpatient services that our clinic provides. We are also the largest provider of HIV care. We are challenged to provide a service to everyone that presents on a particular day and we have always strived to provide open and equitable access for all as is recommended in the sexual health strategy (N.I, no Irish strategy).

Often we have to turn away patients due to limited capacity. There are many barriers for people presenting for STI screening and by turning them away when they present we are creating another barrier and risking the chance that they will not present again. STIs are on the increase in Ireland and we need to improve the accessibility to diagnosis and treatment without compromising care.

The aim of this project was to see all comers to the GUIDE clinic on the day they present for STI screening. With no increase in staff capacity our only option was to increase our efficiency. We did this by introducing a new method of STI testing, the self taken swab, for those that met certain criteria.

Over the course of this project we successfully introduced a new system of STI screening in the GUIDE clinic. This allowed us to increase our capacity without compromising patient safety. We have had a significant reduction in staff in the same timeframe but we have managed to see more patients with less staff. We increased the number of STIs detected and treated in our HIV cohort by 540%.

Self taken STI testing (fast track) has decreased the barriers to STI screening leading to an increase in STI diagnosis and treatment. This system now ensures that patients are seeing appropriate providers and more complex patients have more time devoted to them. This project has subsequently disseminated into our HIV patient care model and has led to a significant improvement the detection of STIs in this cohort.

## Reducing telephone demand in a General Practice

### Author

Dr Barry Cosgrove, General Practitioner, Boyle Medical Centre and Sligo Clinic

### Abstract

#### *Background*

The telephone plays an important role in the day to day running of a general practice. Its increasing use and reliance however carries inherent risks compared to face to face contact with patients. It can impinge on the quality of care given to the patients attending the practice and overuse can affect the efficient running of the practice. This project focuses on one general practice where telephone demand was having unintended consequences across its services. A quality improvement project was undertaken with the aim to reduce telephone demand in the practice by 30% over nine months.

#### *Methods*

Baseline studies were undertaken to quantify telephone demand in the practice. The number of incoming and outgoing calls made and reasons for same were recorded over weekly periods. Approximately 140 incoming calls were received weekly with a similar number of outgoing calls. Nine hours per week was estimated to be spent solely on calls by staff in the practice. A significant volume of workload was also generated as a result.

A review was undertaken in the practice by staff as a team exercise to identify initiatives to reduce the telephone demand and reliance. Each initiative was then tested individually using the PDSA quality improvement model. Call volumes were monitored subsequently on a weekly cycle to see the effect if any of the change introduced.

#### *Results*

A total of seven tests of change were introduced in the project to date. No significant shifts or trends in telephone demand were observed as a result of the changes so far introduced. The number of incoming and outgoing calls remained relatively static.

#### *Discussion*

One potential reason for lack of effect on reducing telephone demand may be that a significant portion of it is beyond the control of the practice. More time may be required to see combined effect of changes to date. We underestimated the reliance on the telephone within the practice and at target of 30 percent reduction in volumes was overly ambitious.

#### *Conclusion*

Despite the outcome so far the process of reviewing telephone demand has however led to tangible improvements in quality, safety and reliability across several processes and systems in the practice. Further changes are planned with more specific focus on effecting change in those areas within the control of the practice and sustaining quality improvements achieved to date.

## Increasing Capacity in Prostate Cancer Related Services at Galway University Hospitals

### Authors

Ms Elaine Prendergast, General Manager, Roscommon Hospital

Ms John Shaughnessy, Director of Human Resources, West North West Hospitals Group

Professor Frank Sullivan, National Director, Prostate Brachytherapy Programme, NCCP; Professor, Radiation Oncology, NUI Galway; Lead Clinician, Radiation Oncology, UHG; Director, Prostate Cancer Institute (PCI), West Northwest Hospital Group

### Abstract

The increasing need to provide further efficiencies in acute healthcare has never been so evident in Ireland than over the past five years as the impact of the recession has led to significant retraction of resources. From a peak of €16 billion per annum in 2008, it is expected that expenditure will ultimately reduce to €11.68 billion by 2015. Health expenditure is now the main driver for productivity in acute hospital services. In that context, it is incumbent on all service areas to seek to minimise spend while maximising quality and patient welfare. The aim of this project is to illustrate how a Brachytherapy service can respond to the need to adopt innovations in diagnosis and treatment, and increase capacity in Prostate Cancer related services, while improving patient welfare and safety in the process.

The basic premise in this project is that, with some creativity and flexibility, an additional patient can have a biopsy performed, in the same operating session, using a safer and more accurate procedure (template-guided) which reduces the risk of infection, and improves the ability to target areas at high risk for cancer, compared to the more traditional and invasive trans-rectal approach; that this procedure is conducted outside of a General Theatre environment, thereby freeing a slot on the list, and that the quality of the diagnosis is and capacity is enhanced. All this is to be accomplished at no added cost to the service.

The principles applied through the course of the project include the need for reform from within the service area, persuading the key stakeholders of the benefits of the proposed changes and stressing that enhanced capacity and functionality as well as excellent outcomes are achievable through more efficient processes. The intelligent use of resources with an immovable focus on quality and outcome can be achieved despite cuts in spending. The first patient to benefit from this project had his biopsy on June 13<sup>th</sup> 2014, within the time allocation which was critical to persuading stakeholders to continue with this initiative. There are associated or collateral benefits which can also be promoted like the fact that this service to even one patient a week will free up fifty two slots per annum in general theatre, thereby improving access and reducing waiting times. The results achieved to date (August 2014) are proof that there is scope to build further on the initiative and to consider further application both within the Prostate Cancer service and beyond.

## The Nurses for Night Care Service will be accessed more equitably

### Author

Ms Marie Lynch, Programme Manager, Irish Hospice Foundation

### Abstract

The IHF nurses for Night Care service, which commenced in 2007, supports people with diseases other than cancer to die at home with dignity and respect throughout Ireland. However on examination of the access trends it has been determined that this service is not provided equitably across the country.

The aim of this project was to support more equitable access to this service, and the initial targets were those regions where there were very low referral rates to the service. However as the project evolved and there was more sophisticated interpretation of the data it was clear there was also a need to engage with those regions who had more frequent use of the service to establish whether their use of the service was within the service criteria.

A range of quality improvement methods were used to enable optimal engagement and reflection with the key stakeholders and introduce more effective measurement and monitoring of the service activity. These methods included stakeholder mapping; initial sharing of service activity information to champions and critical friends of the service and seeking feedback; using run charts to present service activity to all regions; updating the run charts based on input from the stakeholders which focused on variables, comparisons and sophisticated measurements; clarifying service criteria and introduction of electronic referral process to facilitate service access and monitoring.

The results have demonstrated that those referring to the service are willing to take more responsibility for the service, once they have the right information and made aware of trends and service patterns that may indicate potential for service improvements. The organisational learning from the perspective of the IHF has highlighted that more emphasis needs to be given to use of data mining and sharing of existing service activity to support service improvement, efficacy and equity.

The challenge in terms of project sustainability and identifying methods to ensure service user engagement remains. It is hoped that these dimensions of quality improvement will be addressed in the next phase of the project, with the ultimate outcome that more people who wish to die at home have access to appropriate levels of night nursing service, whilst also ensuring effective use of precious resources.

## Improving Post-operative Care for Patients after Emergency Laparotomy

### Author

Dr Noelle Murphy, Fellow in Critical Outreach, Kings College Hospital

### Abstract

The Association of Surgeons of Great Britain and Ireland have frequently highlighted that the standard of care for patients who present for emergency surgery requires improvement. In particular patients who present for an emergency laparotomy (EL), who are at an alarmingly high risk of death (14% thirty-day mortality). A recent national audit in the UK highlighted the variable and often inferior care, delivered to patients post EL. An important deficiency of care noted in this audit was failure to admit patients to intensive care (ITU) post-operatively.

The aim of this quality improvement initiative was to improve the postoperative management of patients presenting for an emergency laparotomy in Kings College Hospital London (KCH).

Baseline data collected from Oct 2013 to March 2014 showed that the 30-mortality post EL was 18% in KCH, which is greater than the national average. This data also revealed that only two-thirds of patients presenting for EL were admitted to ITU post-operatively. Analysis of critical care occupancy rates indicated that throughout the study period ICU occupancy was greater than 100%, perhaps accounting for the relatively low admission rate to ITU.

This QI project aimed to develop clinical infrastructure to ensure that all patients presenting for an EL will be managed by critical care post-operatively.

This care may be delivered in the ITU, or if ITU capacity is lacking- critical care outreach will manage these patients on the general wards. An EL postoperative care pathway was developed, to enhance peri-operative patient care.

## To Provide a Public Health Nursing Led Doppler Clinic

### Author

Ms Noreen Goonan, Assistant Director of Public Health Nursing, PCCC HSE West Tuam Health Network, Co. Galway

### Abstract

#### *Background*

In Tuam Network the Public Health Nursing service saw a need to set up a 'Public Health Nursing Led Doppler Clinic' as clients who were attending their dressing/wound clinic were waiting for months for Doppler studies in the local hospital.

#### *Methods*

The provision of the service was discussed informally first among the relevant nurses and then formally with the other relevant stakeholders. Nurses volunteered to be up skilled so that they would be competent to provide this service. Funding for education and equipment were the resources required and sourced.

#### *Results*

In this Network 4 nurses have been trained and deemed competent. In June the clinic was established and 8 Doppler studies have been completed to date. Clinics will be held regularly.

#### *Discussion and Implementation*

The whole nursing Team saw the need for this service for the clients. The Public Health Nursing service nurses staff including the DPHN and ADPHNs linked with the relevant education provider and sourced the funding required for education and essential equipment.

#### *Conclusion and Plans for the Future*

Guideline and documentation are in the process of being up dated. Information on the service and referral pathways will be sent to GP in the Network in September. The plan is to increase the clinics as required and as the PHN workload allows. We will monitor the demand and waiting lists. This clinic is also being set up in other networks in Galway so the nurses will meet as a group at least yearly to share information and ideas, they may meet more often initially.

## Sensible Test Ordering Practice in an Emergency Department

### Authors

Dr Gerard Boran, Clinical Director of Diagnostics, the Adelaide Meath Hospital, Tallaght & Clinical Lead, HSE/RCPI, National Clinical Programme in Pathology

Mr Peter Gaffney, MSc FAMLS Chief Medical Scientist, the Adelaide Meath Hospital, Tallaght

Ms Sarah Condell, PhD, Nursing & Midwifery, Research & Development Lead, HSE

### Abstract

Inappropriate use of diagnostic laboratory services, particularly over-ordering, can result in diagnostic error, poor patient outcomes and experience, as well as increased costs and waste of hospital resources.

### Aim

Our aim was to encourage Sensible Test Ordering Practice to reduce the requesting of selected pathology tests by 50% in the Emergency Department of a large Irish teaching hospital by the end of April 2014. We focused on a range of clinical chemistry and haematology tests including coagulation screens, blood glucose, and c-reactive protein.

### Methods

We used the “S.T.O.P. and think!” technique successfully developed in 2004 in Sydney, Australia, and published in 2013 as the influential Guideline for Pathology Testing in the Emergency Department by the Royal College of Pathologists of Australasia and the Australasian College for Emergency Medicine.

Baseline data on tests ordered were collected and analysed. A working group that included all stakeholders was established. Measurement commenced in January 2014 and consisted of an annotated run chart with results provided weekly to the Emergency Department staff. Other measures included process mapping and observation, a staff satisfaction survey, an analysis of cost savings achieved, and an assessment for any changes in patient length of stay as a result of the interventions.

Plan-Do-Study-Act cycles were conducted around five interventions; (1) education at induction, (2) scheduled teaching sessions, (3) development of a visual aid for guidance in test ordering, (4) improved test turnaround time, and finally (5) redesign of the pathology test ordering panels on the electronic ordering system which turned out to be the critical intervention.

### Results

Our aim was achieved after 4 months and 5 cycles, with a 50% reduction in coagulation screens, 98% reduction in blood glucose tests, and significant reductions in several other pathology tests. Savings due to the total reduction in pathology testing were estimated at €94,500 per annum. We also confirmed that patient length of stay was not adversely affected by the reduction in pathology testing.

### **Conclusion**

This project demonstrated that successfully reducing unnecessary pathology testing in Emergency Departments is possible using the tools of quality improvement following identification and careful selection of the optimal intervention.

## Reduction in Blood Culture Contamination at a Model 3 Regional Hospital – A Quality Improvement Project

### Authors

Dr Shu Hoashi MRCP(UK) FRCPI, Clinical Director and Consultant Physician, Midland Regional Hospital Mullingar

### Abstract

Blood cultures are essential diagnostic tools for detecting bacteraemia or fungaemia in inpatients suspected of severe infection. However, studies have shown that contamination of blood cultures (false positive blood cultures) can impact clinically with additional blood and other tests, inappropriate use of antimicrobials, and leads to waste in hospital resources from unnecessary prolongation of hospital stay by patients.

In 2012 and 2013 respectively in a regional tri-located (acute medicine / surgery, obstetrics and paediatrics) hospital, blood culture contamination prevalence in samples taken from adults and paediatric patients were 7.7% (14.0% adult patients) and 7.3% (9.3% adult patients). We sought to reduce this contamination rate by 50% within 6 months. Following process mapping, several measures were identified for improvement process; these included introduction of sterile blood culture packs, revision of blood culture drawing techniques by non consultant hospital doctors and minimising blood culture drawing from peripheral intravenous cannulas. A communication plan was devised to implement these changes from February 2014.

### Results

In 2013, prevalence of blood culture contaminants (BCC) was 7.3% (9.3% in adult patients and 2.6% in paediatric patients). Since January 2014, the overall BCC prevalence per consecutive month was 9.0%, 5.6%, 3.3%, 6.5%, 2.9%, 4.9% and 4.7% to end July 2014 and mean BCC following implementation February to end July was 4.6% (37% reduction). In adult patients, respective monthly BCC was 11.0%, 7.0%, 5.1%, 8.8%, 4.4%, 6.4%, 5.4% and 6 months average was 6.2%. In paediatric patients, the respective monthly BCC was 4.1%, 3.0%, 0.7%, 2.7%, 0, 1.5%, 2.9% and 6 months average was 1.8%. Based on 2013 data, and the run rate since project implementation, there has been a reduction in 42 BCC over 6 months. Extrapolated to full one year, the estimated savings are 442 bed days, and €524,304.

### Conclusion

A systematic approach using quality improvement tools have significantly reduced prevalence of blood culture contaminant rates with associated clinical benefits for patients and economic benefits for the hospital.

## Reducing the rates of unscheduled “walk-ins” to the GP out of hours service in the HSE midlands area - A quality improvement initiative

### Authors

Dr Samantha Hughes, Team Lead, Quality Clinical Audit and Research, Quality and Patient Safety Team, HSE DML  
Mr Joseph Ruane, Area Manager, HSE Midlands Area

### Abstract

This improvement project was undertaken to examine and reduce the rate of walk-ins to the Out of Hours Services in the Midlands Area. Midoc is the GP Out of Hours Service for Laois, Offaly, Longford, and Westmeath. The Out of Hours Service is not a drop-in clinic nor an emergency service. Walk-ins are defined in this project as service users who attend the GP Out of Hours Service without a scheduled appointment. The Out of Hours Service is appropriately accessed by contacting an 1850 number where calls can be triaged and prioritised accordingly. Prior to undertaking the data collection for this project, there was uncertainty within the system in relation to the exact number of walk-ins for each clinics, the time of walk-ins, who was walking in and for what reasons.

This project provided accurate data for a number of weeks of each month from Dec 13 to May 14 (excluding January due to changes in service provision during Christmas and the New Year). This data greatly assisted the project team understand what service users were walking in to the Out of Hours Service, why they were walking in, what times they were walking in and for what reasons. The data collected highlighted a number of key issues:

- a high rate of walk-ins amongst different user groups;
  - parents with young children and infants
  - adults between 20 and 40 years

There is some indication of inappropriate use of the service by a number of those who walk-in to the service as they did not appear from the questionnaire to have an urgent need which could not be dealt with by a GP during day time hours. Some of these respondents indicated that they walked-in to the Out of Hours Service because they either could not get an appointment with their GP at a time suitable to them or they could not get to the GP during working hours due to work commitments.

- A high rate of those who walked in to the service reported that they did not know that they were supposed to ring in advance of attending the Out of Hours Clinic to make an appointment.
- Others reported that they did not know how to contact the Out of Hours service to make an appointment.
- There were also indications that some referrers were not properly communicating to the public the correct processes for accessing the Out of Hours Services.

This information helped the project team identify improvements that needed to be made based on the data that was obtained from the service users themselves. Using plan-do- study –act (PDSA) cycles, data was collected over a period

of 6 months between December 2013 and May 2014. Changes were made over the course of the project and data was further analysed to identify if these changes impacted on the rate of walk-ins.

Changes were as follows:

- Communication with Out of Hours staff and management re the risks of walk-ins to the service and notification of service of intention to study and reduce walk-ins.
- Re-issuing and re-enforcement of Procedure re the management of walk-ins to Out of Hours Clinics.
- Communication with Health Promotion re linking with traveller communities to clarify the process for accessing Out of Hours Clinics.
- Teleconference with lead GPs for each Out of Hours clinics, reiterating risks of walk-ins, clarification of process for managing walk-ins and request that GPs help us identify solutions.
- Issue highlighted again at MIDOC Management Meetings to continue to ensure that the walk-in procedure is being implemented by all staff and that the implementation is standardised across all of the Out of Hours Services. This includes the requirement to get walk-ins to dial the 1850 number and get an appointment via that route. In addition, staff reminded that they cannot enter the details of walk-ins on to the system - this can only be done by the call centre in Ardee.
- Website amended to reflect that it is an urgent out of hours service.

Detailed analysis of overall results from the 6 month study was undertaken and further actions were identified as a result. These actions to be implemented between June and September 2014:

- Letter to re-enforce the processes to be used to access the Out of Hours Service to be sent to the GP practices in the Midlands Area.
- Posters and Leaflets in relation to the Out of Hours Services to be re-issued to all the GP Practices.
- Letter, Posters and Leaflets in relation to the Out of Hours Services to be sent to the key three Maternity Hospitals linked to the Midlands (MRHP, MRHM and Ballinasloe). The letter will suggest that the leaflet be provided with the antenatal packs given to mothers - or be accessible to mothers in the clinic.
- Letter, Posters and Leaflets in relation to the Out of Hours Services to be sent to the key three Midland Hospitals. The letter will suggest that the leaflets/ posters be placed in public areas and the leaflets be accessible to the public.
- Leaflets and cards in relation to the Out of Hours Services to be provided to Health Promotion, to be given to the Community Health Workers linking with Travellers.
- Meeting with the Health Promotion Manager to discuss the results of the study.
- Presentation of report and results to the Primary Care and Out of Hours Management Team to identify further actions for improvement.
- Some reductions in walk-in rates were observed during the course of the project. Some of this may be attributable to natural variation but overall it is the view of the project team that the interventions have resulted in.

- Increased awareness by service users and referrers of the requirement to ring the 1850 number to get an appointment to attend the Out of Hours Service.
- Increased understanding by the service of the service users who walk in and the reasons why they walk-in.
- Increased knowledge of the times walk-ins are most likely to occur.
- Increased knowledge of walk-ins and the Out of Hours Service in general to assist with informed decision making.
- Increased communication and information to the public and referrers in relation to the function and purpose of the Out of Hours Service and the correct processes for.
- Greater adherence to processes for the management of walk-ins by staff within the centres.
- Tighter controls: Patient details can only be entered on the Out of Hours database by the Triage nurse and so all walk-ins must call the 1850 number prior to getting an appointment with the GP.
- Implement planned changes between June 2014 and end September 2014.
- Undertake data collection in September and October 2014 to identify if these changes have resulted in an improvement.
- Discuss results with relevant Primary Care and Area Governance Committees and identify any additional interventions to be considered.

To conclude, the project team will continue to endeavour to reduce the rate of walk-ins to the Out of Hours Services in the Midlands. To completely address all the issues highlighted by the data collected during this project it is possible that there is a requirement for larger scale changes in relation to how in-hour and out-of-hour primary care services are designed and delivered in Ireland.

## Referral to treat for EVAR & AAA Surveillance

### Authors

Mr Des O'Toole, Business Manager, Surgical Directorate

Ms Marie Kelly, Directorate Manager, Surgical Directorate

*Beaumont Hospital*

### Abstract

This thesis documents a change initiative undertaken to reduce the length of time from referral to treat for EVAR for patients with abdominal aortic aneurysm ("AAA") requiring surgery, and the development of an AAA surveillance programme. The context is the surgical directorate in a large Dublin Teaching Hospital (the "Hospital"). The Hospital has been involved in many change and lean initiatives to improve the patient journey, mainly for unscheduled care. While there are noticeable improvements to the unscheduled patient pathway, the scheduled surgical patient's journey appears to have unimproved. This may be partly due to both groups of patients pulling from the one cohort of surgical beds. However, the processes in place for scheduled care are inefficient and lead to delay in treatment. Rather than look at all surgery, as this would be an impossible task, it was decided to focus on AAA for one surgeon in the vascular unit of the Hospital. The quality improvement initiative, using lean methodology and quality improvement tools has shown how, when staff stepped back and reviewed present systems of care, they were able to design a future state with a streamlined patient pathway from admission to discharge. For the change to happen, there was much engagement required with a variety of healthcare workers across the organisation. Involvement of a lead surgeon and clinician was vital to the success of the change.

An interesting development was the introduction of a surveillance clinic to buffer patients away from the regular OPD vascular clinic. Sixty three patients have been enrolled in the programme in its first PDSA cycle. It is managed by the non invasive vascular ultrasound team ("NIVU"). Its success in becoming a one stop clinic for patients who were not yet at the stage of requiring surgery, has improved the patient journey and staff experience, while saving on resources. The potential benefit for patients, staff and the Hospital's resources is enormous if this is transferable to all surgeons in the vascular service, and indeed all specialties within surgery. Changing how we do things in a complex organisation such as the Hospital is challenging, however mapping the patient journey from front-door to back-door, highlights the waste and inefficiencies that exist and need to be fixed. Involving all staff that touch the patient on his journey, and having the support of the Hospital's senior managers are key to its ongoing success.

## Improving the Quality of Discharge Prescribing from the Acute Medical Unit, CUH

### Author

Ms Deirdre Lynch, Chief Pharmacist, Cork University Hospital

### Abstract

#### *Background*

Prescribing of medicines is a common intervention made by healthcare professionals, and is a major source of potentially harmful medication error, particularly at admission to and discharge from hospitals. When hand-written transcription of medications is required at these interfaces, the potential for inaccuracies or unintended changes significantly increases. This project aims to improve the quality of discharge prescribing from the Acute Medical Unit, initially through the introduction of an electronic discharge prescribing system to the Unit.

Method: A baseline audit measured the number of non-reconciliation medication events on hand-written discharge prescriptions encountered over a 4-week period. The electronic system was then introduced and a re-audit of non-reconciliation events carried out on the electronically generated discharge prescriptions.

#### *Results*

The baseline audit supported the rationale for the change as 70% of 53 hand-written prescriptions were found to have non-reconciliation events. Omission was the most common type of event, occurring in 28% of hand-written prescriptions. Introduction of the electronic prescribing system was found to have a significantly beneficial effect on the quality of discharge prescribing. Only 13% of 46 electronically generated discharge prescriptions had a non-reconciliation event. Omission was again the most common, but the occurrence had dropped to 8%. The rate of generic prescribing improved from 75% in hand-written prescriptions to 80% using the electronically-generated prescriptions. A repeat audit following a six month adjustment period is intended. A prescriber questionnaire will also be used to evaluate the effectiveness of the change.

#### *Conclusion*

The quality of discharge prescribing has been significantly improved through the introduction of this electronic prescribing system. Further improvement strategies have been improving the Quality of Discharge Prescribing in the Acute Medical Unit, CUH.

## Antibiotic stewardship: Improving I.V. to Oral Switch Decision

### Authors

Ms Olivia Sinclair, Director of Nursing

Dr Lisa Cogan, Medical Director

*The Royal Hospital, Donnybrook*

### Abstract

#### Background

Interventions aimed at optimising use of antibiotics-referred to as antibiotic stewardship-can reduce antibiotic resistance and improve patient outcomes (Davey et al, 2013). One such set of interventions focuses on improving the quality of antibiotic prescribing, specifically prescribing decisions made at review of the patient 2 to 3 days after commencing antibiotic treatment. Antibiotics prescribed in secondary care are often continued unnecessarily, particularly when responsibility for review of the patient is transferred from one physician to another, for example at weekends and out of hours review.

This problem has led to the development of initiatives to standardise practice in the form of an antibiotic care bundle “Start Smart-then Focus” (Ashiru-Oredope, 2012; RCPI, 2012). One element of the care bundle is the “switch” prescribing decision i.e. to switch from intravenous (IV) to oral (PO) antibiotics if appropriate. This project is a quality improvement project aimed at improving documented antibiotic prescribing decisions in a 158 bed rehabilitation and continuing care facility. The facility provides post-acute in-patient care to frail, older adults discharged from acute hospital. In 2013, a national point prevalence study showed the national median antimicrobial use prevalence was 9.8%, while local use was 20.7%. A retrospective chart review showed that prescribing decisions were documented in only 44% of cases reviewed.

#### Methods

The Model for Improvement (Langley et al, 2009) was used as the framework for improvement. The aim of the project was to increase the documented prescribing decision I.V. to Oral Switch for all patients commenced on I.V. antibiotics. A goal of 90% was set. Tests of change using PDSA cycles were used and included education, real time feedback, development of local guidelines and use of a healthcare record sticker.

#### Results

From the start there was improvement which has been sustained. From October 2013 to July 2014, 40 patients were prescribed I.V. antibiotics. Following case note review, 75% (n30) had the switch decision made and documented by Day 3. This represents a 31% increase from the baseline audit.

#### Discussion

Antibiotic resistance (AR) has emerged as a significant global threat to public health. Infections caused by antibiotic resistance organisms in hospitals and in the community are associated with increased morbidity, mortality and

healthcare costs (HPSC, 2009). AR is closely linked to antibiotic use and judicious prescribing of antibiotics is the responsibility of every clinician. To facilitate this healthcare organisations need to ensure that structures are in place to monitor and when required improve practice.

### *Conclusions*

Using a quality improvement approach to improve practice has resulted in a significant improvement in compliance with an intervention known to improve patient safety.

# **Diploma in Leadership and Quality in Healthcare**

## **2012 - 2013**

## Improving theatre start times

### Authors

Dr Margaret Bourke, Consultant Anaesthetist, Beaumont Hospital

Dr Deborah McNamara, Consultant General and Colorectal Surgeon, Beaumont Hospital

Ms Helen Ryan, Clinical Governance Manager, Beaumont Hospital

### Abstract

Timely theatre starts are important to patients and a useful measure of theatre efficiency. We identified delayed theatre start time as a challenge in our hospital. Using quality improvement methodology, we worked to develop a profound knowledge of processes around theatre start time.

### Methods

All elements of the patient journey from booking to arrival in theatre were directly observed and process-mapped to identify and fix barriers to patient progress. The project was approached in a stepwise, collaborative fashion relying on collective goodwill and influencing strategies. Guided by identified drivers for timely starts, we tested strategies for change using a series of PDSA cycles.

### Results

We improved theatre start times over a period of six months by more clearly defining, simplifying and reducing the potential for error in our process and by engaging with other change initiatives within the institution. A number of changes that resulted in improvement were identified. Firstly, the operating list must be clearly set in advance, in the correct order and if possible starting with a day case. Secondly, confirmation of patient attendance and fitness for surgery should be systematically verified. Thirdly, processing of all patients should be restructured and based upon the order of the list. Fourthly, all surgery and anaesthesia change initiatives should share common goals. Finally, staff must be empowered to sustain the improvement and feedback about performance should be disseminated.

### Discussion and Implementation

Change will only be sustained if an expectation that theatre should start on time is created. Empowering staff to seek and correct reasons for delay is a key step. Senior management support and implementation of consistent goals, expected even at times of crisis, are necessary. Change initiatives outside of theatre have the potential to adversely impact theatre efficiency. The percentage of elective theatres starting on time is a useful balancing measure to avoid unanticipated consequences of other changes.

### Conclusions/plans for further development or wider dissemination of project

Further improvement is possible by reducing variability in processes across the hospital. A system change whereby the first patient is routinely presented to theatre reception at 8am would simplify the process considerably.

## Eliminating waits for inpatient beds for medical patients from the time a decision to admit is made

### Authors

Ms Catherine Donohoe, Director of Nursing and Midwifery, Mayo General Hospital

Dr Ronan S. Ryan, Consultant Radiologist, Mayo General Hospital

### Abstract

It is now well accepted throughout the developed world that patient mortality is negatively impacted by the length of time they spent waiting in the Emergency Department (ED) awaiting admission to an inpatient bed. This quality improvement project focused on eliminating that risk for patients in our institution by the end of June 2013. The expectation is that on achieving this aim a number of other quality improvements will be achieved. Throughout 2012 patients in the ED in Mayo General Hospital (MGH) experienced increasing wait times for transfer to an inpatient bed after the decision was made to admit by the duty Medical team.

In 2011 MGH had achieved a 52% reduction in the number of patients experiencing prolonged trolley waits. This was done by reconstituting a number of surgical beds as medical beds, ring fencing the remaining surgical beds for surgical admissions only and renewed focus on daily bed management. In 2012 there was a significant increase in the number of ED attendances and acute admissions - these factors, in tandem with the reality that we had not truly got to the bottom of the underlying problem meant we were back in daily crisis management mode every day.

The plan was to analyse why the waiting occurred and what areas needed most attention. This was quickly and clearly identified to be patients requiring medical care admission. The "why" took some more time to analyse - the authors will expand later in the report.

### Results

We have reduced our patient numbers waiting for medical beds from May 2013 to June 2013 from 130 patients to 5 patients. We have generated clear savings of €25,000.00 in nursing salaries alone. We achieved better compliance in 5 of the 6 KPIs of the HSE's national acute medical programmes. Patient satisfaction for the month of June was consistently high (this audit consisted of 32 patients per month in the medical wards). The average length of stay (ALOS) for medical patients from the first quarter of 2013 to the second quarter of 2013 was 6.3 - 6.2. The ALOS of 6.03 in May 2013. There has been much achieved but clearly there is much more to do if we are to maintain this improvement through the winter months.

## Improving Quality of Care in Patients with Limb Fractures

### Authors

Dr Brian Creedon, Consultant in Palliative Care Medicine, Waterford Regional Hospital

Dr Mark Doyle, Consultant in Emergency Medicine, Waterford Regional Hospital

Mr Joseph O'Beirne, Consultant Orthopaedic Surgeon, Waterford Regional Hospital

### Abstract

#### Background

An issue was identified in the delivery of fracture care in a regional service in those patients with limb fractures requiring Orthopaedic intervention were initially transported by ambulance to the local hospital, and then required a second ambulance journey to the site of definitive treatment. This led to delays, and on occasion complaints and media attention.

It was envisaged that the quality of patient care could be improved by a protocol whereby, in specific circumstances, when a patient had a limb fracture with obvious deformity, the ambulance crews would be allowed to bring the patient directly to the site of definitive treatment.

#### Methods

The initiative was undertaken with the support of the National Ambulance Service Management, Medical Directorate, Operations and Control, and the receiving departments of Emergency Medicine and Orthopaedic Surgery. Operational guidelines were drawn up to guide the ambulance crews in implementation of the initiative.

#### Results

Before commencement, in October/November 2012, eighteen patients were identified with isolated limb fractures who had had two ambulance journeys to get to the site of definitive treatment. The protocol was initiated in one of the three ambulance catchment areas in the region (outside that of the definitive care centre) from December 2012. In the six months from December 2012 to May 2013, nine patients from this area who fulfilled the criteria were transported by ambulance directly. This was estimated as representing a saving in ambulance time of 45 minutes per case. There were six "missed opportunities" in the same period, but none after February 2013. No patient who did not fulfil the criteria was inappropriately brought directly during this period. From June 2013, the initiative has been extended to the other two catchment areas in the region.

#### Discussion/implementation

Difficulties were initially experienced in pursuing this initiative, due to long established patterns of practice, but progress was made during the study period, with positive feedback from stakeholders.

### *Conclusions*

We believe that the principles illustrated in this study are valid, transferable to other regions, and transferable to care pathways in other specialties where direct transport of patients to the site of definitive treatment will enhance the quality of patient care. A key driver for success in this type of quality improvement initiative is the meaningful engagement of stakeholders.

## Strategies to Improve Quality and Effect Cost Savings by Rationalisation of the Medication Use Process

### Authors

Prof Colm Bergin, Clinical Director, St James's Hospital

Mr Paul Gallagher, Director of Nursing, St James's Hospital

Dr Corina Sadlier, Specialist Registrar, St James's Hospital

### Abstract

#### Objective

The safe management and use of medication is essential for the delivery of optimal health care to patients and to the efficient use of resources. The projects conducted in St. James's Hospital, Dublin sought to improve quality and effect cost savings by rationalising the medication use process. Three clinical sites were involved comprising outpatient and inpatient settings and involving active engagement from patients along with a multidisciplinary team. The projects were relevant in addressing two key components of service change and quality improvement – patient safety and service cost.

The objectives identified for the three sub-projects were as follows:

1. To decrease waste of ARV's (antiretrovirals) dispensed from the Department of GU Medicine and Infectious Diseases (GUIDE) pharmacy.
2. To introduce the use of patients' own drugs (PODs) on an infectious diseases in-patient ward.
3. To improve medication safety in the acute medical ward setting by introducing individualised medication storage units for specific medications.

#### Methods

A mixed approach was utilised throughout the three sub-projects incorporating qualitative and quantitative methodologies. Plan-Do-Study-Act (PDSA) cycles, patient and staff surveys, undisguised observation technique, process mapping and test and re-test approaches were adopted. The projects were targeted by locations (specific in-patient wards within a single service and directorate; specific specialty for in-patient and out-patient programmes), by medication type (antiretroviral therapies, insulin pens, topical creams and inhalers) and by patient group (HIV-infected cohort and general medical patients)

#### Results

The first sub-project included a staff survey which identified that 96% of respondents felt that wastage of ARV's was occurring and that there was poor patient awareness of the costs associated with this group of medications. A patient survey showed that a large proportion of patients surveyed were in fact aware of the high costs associated with their ARV treatment. 100% of patients reported that they would be happy to use their personal ARV therapy on admission to hospital. Initial projected savings of €300,000 was identified.

The second sub-project identified a high level of compliance with the introduction of the use of POD's on the infectious diseases ward. At the commencement of the project compliance with PODs was 65% but 100% during the last month of the initiative. To date the net savings to the hospital in-patient drugs budget of is €5,000.

The third sub-project involved the trial of medication safes on two medical wards. Safety benefits were identified and enthusiasm from staff supported the development of the project. The nurse managers on both wards agreed that if the initiative is to progress, a custom designed patient bedside locker, incorporating a secure medication safe would be the preferred choice so that nursing staff could ensure the safer delivery of specific medications (e.g. insulin and inhalers) to patients.

### *Conclusions*

Significant monetary savings have been achieved through a number of simple sustainable interventions. Feedback of results to stakeholders has ensured buy in from clinicians and patients. A formal system of reporting along with processes to facilitate ongoing measurement of ARV wastage has ensured sustainability of this initiative.

The initiative using POD's on one ward has been successfully introduced. The use of POD's has been incorporated into routine care of HIV infected patients on the ward.

The trial of the individualised medication storage unit will require further focus and a business case to expand this sub-project across the institution is being progressed.

## **Ambulatory Blood Pressure Monitoring referral processes and pathways in the Cardiology Department**

### **Authors**

Ms Bridie O'Sullivan, Director of Nursing, Mercy University Hospital

Prof David Kerins, Consultant Physician, Mercy University Hospital

### **Abstract**

Enhancing organisational performance is a key target of the health reform agenda. Improving performance must also embrace the improvement of service quality and patient and staff satisfaction. This project focused on these important factors within the Department of Cardiology and defined the overall long-term aim of the project which is to ensure that 90% of patients referred to the hospital for blood pressure monitoring service are seen within 6 weeks of referral and following diagnosis are placed on the appropriate pathway.

The project involved two phases. The first was an analysis of the current referral processes and designing an improved system. The second phase involved designing the patient pathway following diagnosis.

### **Results**

The project has made significant improvements to date and has had a positive impact on team working and staff relationships. Achievements in phase one include the establishment of an information technology system that accurately captured data enabling the team to record, monitor and analyse. A new system for managing referrals was designed providing a tracking system with transparency and standardisation. Clinic capacity has not yet reached its target and the team are continuing to work on the referral backlog. Phase two of the project is in place. A policy has been agreed that has enabled the standardisation of the patient pathway following diagnosis. The benefits achieved from working together have greatly enhanced team spirit and motivation. This benefit should not be underestimated in the project outcomes.

## To reduce the number of Loan Applications made under the Fair Deal Process (Nursing Home Support Scheme)

### Author

Mr David Walsh, Regional Director for Performance and Integration, HSE

### Abstract

The Nursing Home Support Scheme Act, 2009, introduced a standardised scheme of financial assistance for older persons who require long term care. This scheme is known in the vernacular as the Fair Deal Scheme.

The scheme has two main aspects; firstly, a standardised care needs assessment (CSAR) to determine whether or not a person requires long term care, and, secondly, a standardised financial assessment of the persons means to determine the level of contribution that the person should make towards their care.

As it is now the main gateway to long term care the efficient operation of this scheme is essential to the management of each acute hospital in the country. The fact that patients are not obliged to leave the hospital while the Fair Deal is in progress increases the pressure on hospitals to assist patients to complete their applications as quickly as possible.

Most hospitals have relatively efficient processes to progress the care needs assessment aspect of the application and this is not seen as a major issue in contributing towards delays.

The financial assessment is more problematic as it involves working not only with patients and their families but interacting with one of the HSE Nursing Home Support Scheme Offices (NHSO) nationally. There are 17 such offices and each office processes the financial applications under the scheme for patients living within the administrative area covered by that office.

Hospital Social Work services have had to acquire the skills to assist families and patients to navigate this financial assessment in order to ensure that applications are submitted and processed in a timely fashion.

Unfortunately, where a loan is required, certain legal processes in relation to title checks and the placing of a charge against the title can add many weeks to the processing of financial applications. The opportunity cost of each loan applications to an acute hospital is considerable.

- Taking the opportunity cost of having an acute hospital in appropriately occupied at €8,000 per week and an average loan processing time of 12 weeks.
- Opportunity cost €8000 X 12 = €96,000

This is a considerable cost when acute hospital budgets are under relentless pressure and where waiting times for access are under intense public scrutiny.

### *Outcome*

The project aim was to reduce the number of loan applications made under the Nursing Home Support Scheme. Front line staff were engaged in a process of PDSA cycles to establish the potential to achieve this. This facilitated senior management buy in which in turn delivered an organisational focus on improvement which has already achieved significant positive results.

## Improving the National Profile of 'Patient Safety First'

### Author

Dr Eibhlín Connolly, Deputy CMO, Patient Safety Unit, Department of Health

### Abstract

The Patient Safety First initiative was launched by the then Minister for Health in late 2010. The *Patient Safety First* brand provides a common banner under which various stakeholders - ranging across statutory, non-statutory and voluntary organisations, - declare their focus on patient safety and aspire to playing their part in improving the safety and quality of services. The initiative also involved the launch of a *Patient Safety First* website intended to be a primary vehicle in the promotion of the *Patient Safety First* brand. Over time, it is intended that the website will become a key national resource and focal point for all patient safety related information, news and activities. However, the website has not been used as actively as was intended at the original launch.

The objective of this project was to increase the usefulness and effectiveness of the website with a target of increasing the number of visits to the website by 30%. A number of drivers for improvement were identified. The project focused on increasing stakeholder engagement with the website by encouraging its use as a communication tool and seeking to regularly update its content.

Overall the website activity showed an increase over the previous year. In particular, the decision to utilise the website as part of the promotion process for the National Patient Safety Conference in June resulted in a very significant increase in its use. The presentations and abstracts from the Conference are being made available on the website to ensure maximal benefit.

There is enormous scope for further website development and this project is on-going. It is proposed to establish a Patient Safety Agency later this year. It is envisaged that the responsibility for Patient Safety First will transfer to the Agency which will provide the opportunity for increased expansion of its role and functions.

## **Increase one to one clinic based Physiotherapy interventions by the Tullamore, Daingean and Clara Primary Care Team by 20% by June 2013**

### **Author**

Ms Emma Benton, Therapy Professions Advisor, Clinical Strategy and Programmes Directorate, HSE

### **Abstract**

There is a heightened emphasis on productivity in order to ensure greater access to services by patients. Therefore increasing access to primary care physiotherapy assessment and interventions is of key significance. Accordingly there also needs to be in place standard operating procedure to support this to ensure that primary care physiotherapy services manage effectively appointment capacity while ensuring that the service is provided in the most appropriate setting to enable best outcomes for the patient.

The objective of this project was to increase clinic based Physiotherapy one to one interventions in a selected primary care team by 20% by June 2013 by developing a Home/Clinic Appointment Standard Operating Procedure. This would provide a standard working tool that would minimise variation and promote a consistent approach to determining whether patients referred to Primary Care Physiotherapy should be offered a clinical or home based appointment.

The method used was to introduce a Home/ Clinic Appointment Standard Operating Procedure to the physiotherapy service of a primary care team with the aim of replacing the existing guideline that merely outlined six reasons why a home visit should be carried out to adult patients.

Data from the physiotherapy Primary Care Team for the period February to May 2012 was compared with data from the same team for the period February to May 2013. The results showed a very slight increase in the number of patients seen on a one to one basis in a clinic setting the target of a 20% increase was not achieved. However in implementing the home/clinic visit SOP there was a reduction in the level of variability between those seen in clinics in 2012 and 2013.

The implementation of this SOP showed that while not written down in a comprehensive way that this team inherently adhered to many of the principals of the SOP. However having a group of experienced senior clinicians involved in developing such as SOP was of great value in ensuring that the SOP developed is fit for purpose. This is a project that with support could be rolled out to many more primary care teams.

## Semi-Private Clinic; Improving the Patient Experience at the National Maternity Hospital

### Authors

Mr Ronan Gavin, Secretary General Manager, The National Maternity Hospital

Ms Mary Brosnan, Director of Midwifery & Nursing, The National Maternity Hospital

### Abstract

#### *Background*

The National Maternity Hospital has experienced an increase of more than 30% in activity levels between 2005 and 2012 due to the population boom which has been well documented in the national media and in hospital reports. Waiting times in antenatal clinics have been problematic. The income from semi private patient bed occupancy is an essential element of the hospitals annual operational budget. Therefore it was an imperative of the Executive Management Team to improve the attractiveness of this semi-private model of care, by addressing the issues of patient experience and patient flow by reducing waiting times. The introduction of timed appointments was deemed to be an important aspect of this service improvement.

#### *Method*

Two clinic sessions were reviewed to assess the capacity of that clinic, the volume being booked, the 'Did not attend' rate and the time of arrival of each doctor. The review of this data then led to discussions with clinic staff to re-enforce the need for patients to be seen based on appointment time rather than arrival time. Three PDSA cycles were undertaken. To ensure data integrity for this study a designated administrator conducted an observational study of times women arrived and were reviewed by the doctor.

#### *Results*

The aim was to have a maximum waiting time of 20 minutes for each patient prior to being reviewed by the doctor in the clinic. This was partially achieved by the time of report submission. In PDSA 1, 12% of women were seen by a consultant within 20 minutes. At the time of PDSA 3, 4 months later, 42% of women were seen within 20 mins. The waiting time for women diminished considerably during the study period. At the start of the project only 17% of women were seen by the consultant within 30 mins. By the third PDSA 58% of women were seen within 30 minutes of their appointment time.

#### *Discussion*

The patient experience of attendees at the clinic appeared to be improved over the study period. This was achieved as a result of several factors, auditing of the start time and finish times of the clinic, written explanatory communication with women attending and staff meetings.

### **Conclusion**

The project has resulted in an improved patient flow through the clinic during each session. The repeat survey of patient experience demonstrated an improvement in the feedback from women about waiting times and reduction in overcrowding and consequently increased satisfaction with their visit to the Semi Private clinic.

## Improving prescribing in an Old Age Psychiatry Ward: a Quality Improvement Project

### Author

Dr Mary Cosgrave, Executive Clinical Director and Consultant in Psychiatry of Old Age, North Dublin Mental Health Service, HSE North Dublin

### Abstract

#### *Background*

Inpatients in an acute ward in an old age psychiatry service are usually frail with co-morbid medical and psychiatric problems. Excellence in prescribing is extremely important in this setting. Trainees in psychiatry may not be familiar with some of the medications in use in this population.

#### *Project Aim*

To improve the quality and safety of prescribing in an old age psychiatry admission ward and to spread any gains throughout the service

#### *Methods*

Information, communication and education around quality improvement science and prescribing were emphasised before, during and after the data collection. Several specific interventions with key personnel such as visiting doctors, ward nurses and the pharmacy were carried out. Four outcome measures for prescribers working in the ward were identified. These were increase in generic prescribing, providing all details requested on the patients, providing prescribers Medical Council registration Number (MCRN) and replacing the drug cardex after four lines were crossed out. The focus was on quality, safety, cost effectiveness and adherence to regulation from the Medical Council. Cardexes were audited on a weekly basis during the period December 2012 to February 2013 and three further audits took place during March and April 2013.

#### *Results*

The four outcome measures showed increased adherence during the project that was sustained throughout and seemed robust. The biggest improvement was seen in the increase in generic prescribing. Some decisions were made around where generic prescribing was ideal and where proprietary prescribing might be better such as for medicines with a narrow therapeutic index. As the pharmacy had a formulary and issued generic drugs there was no cost saving directly associated with the project. There would be cost savings in other settings however.

#### *Conclusion*

Adherence to the target behaviours improved and was sustained. A quality improvement project in a small setting such as this can be successful. It may give a sound basis for wider spread of this initiative and quality improvement in general within the service. Interventions around communication, education and achieving buy in from critical staff were seen to be effective.

## Critical Care Daily Plan

### Author

Dr Michael Power, Consultant in Anaesthesia and Intensive Care, Beaumont Hospital, Dublin

### Abstract

#### *Background*

The outcome of critically ill patients is related to the quality of the critical care delivery process. Critical care delivery combines clinical decision making with implementation of critical care interventions, treatments and supports. Critical care decision making is the formation of an integrated, prioritised, multidisciplinary critical care plan followed by prompt communication and implementation. To this end, the critical care Daily Plan is an instrument which records and communicates this integrated, prioritised multidisciplinary plan.

#### *Methods*

A critical care Daily Plan was drafted and agreed by colleague clinicians, intensivists, nursing, therapy professionals, colleague surgeons and physicians. The Daily Plan was launched in Feb 2013. Critical care safety was included in the Plan with 'bundles' for ventilator-associated pneumonia (VAP) and catheter-related blood stream infection (CRBSI) prevention. Three improvement cycles were completed between February and May 2013. There were two measurements: 1. Usage of the Daily Plan and 2. Correlation of the daily plan with the actual critical care activity delivered

#### *Results*

Implementation of the Daily Plan was variable. After initial enthusiasm (81%), the project subsequently collapsed. After re-design to the instrument and after a second consensus round, the Daily Plan was re-launched. Subsequent implementation was gradual and sustained (63%).

Correlation of the Care Plan with subsequent actual critical care activity was analysed. There was partial failure of implementation of the care plan in 2 of 8 patients in one 24 hour period where the clinical decision and the actual care delivery did not correlate exactly. Happily no adverse event occurred.

#### *Discussion/Implementation*

Implementation of the Daily Plan was initial perceptions of increased workload with some initial negative reaction. After the instrument was abbreviated to a Diagnosis/Plan format, there was widespread acceptance and implementation. The project passed an implementation "tipping point" transitioning from a negative perception and collapse to a positive perception and partial implementation. The partial failure of the Daily Plan in two instances in two patients on one day illustrates that despite planning clarity, it may arise that due to the open, dynamic nature of critical care, alternative clinical decisions are made and implemented. This may be appropriate after re-evaluation where there has been an error. Alternatively, such process variation may arise due to miscommunication or perhaps due to an existing or an emerging "parallel" decision-making process.

### *Conclusions/Further plans*

This study shows it is possible to support the critical care decision-making process and to implement this change. The hypothesis remains unproven- that decision-making support impacts to improve critically ill patient survival. However, if it emerges through Audit, there is an increase in critically ill patient survival; it may be possible to infer a temporal association between improved survival and the implementation of critical care decision making support.

## **Introduction of ISBAR as a communication tool for Our Lady's Children's Hospital, Crumlin**

### **Authors**

Mr Lorcan Birthistle, Chief Executive Officer, Our Lady's Children's Hospital, Crumlin

Ms Geraldine Regan, Director of Nursing / Deputy CEO, Our Lady's Children's Hospital, Crumlin

Dr Sean Walsh, Chair Medical Executive, Consultant in Emergency Medicine, Our Lady's Children's Hospital, Crumlin

### **Abstract**

#### **"Start spreading the news"**

A major contributing factor to adverse incidents in hospitals is poor communication. Our Lady's Children's Hospital, Crumlin introduced a standardised technique ISBAR (Identify, Situation, Background, Assessment, Recommendation) for clinical telephone conversations.

This project report describes and evaluates the implementation of ISBAR in the hospital using the Model for Improvement Framework (Langley et Al 2009) and Deming's system of profound knowledge (1993).

Recommendations for further development of ISBAR within the hospital and within the hospital group are included.

## Quality and Safety Survey Tools for use in General Practice

### Improving your practice's safety and performance

#### Authors:

Ms Barbara Kearns, General Practitioner, Blackrock Medical Clinic

Dr Philip Crowley, National Director, Quality and Patient Safety Division, Health Service Executive & General Practitioner, Mountjoy Street Family Practice

#### Abstract

Safety has been a major focus in healthcare over the last ten years internationally and more recently in Ireland (IOM 1999). In Ireland the development of the National Division for Quality and Patient Safety in the HSE in 2010 has given national leadership in this area and the Health Information and Quality Authority has lead the development of new national health care standards.

Internationally and in Ireland efforts to measure and improve quality and safety have in the main focused on acute hospital care with a lesser emphasis on General Practice.

The National Standards for Safer Better Healthcare have been designed so that they can be implemented in all healthcare settings including General Practice.

The Diploma in Leadership in Quality and Healthcare requires that we, as healthcare providers, work in a group on a subject area that seeks to drive quality and safety improvement in a healthcare setting. The project we worked on built on and further developed the work of a previous Diploma Group (Maher, Dempsey et al 2012) and focused on developing user friendly tools for General Practitioners to assess the quality and safety of current practice from both the patient and practice staff perspective. Then using these tools seeks to improve the Quality and Safety of General Practice based on the feedback arising from the analysis.

#### Methods

1. Review evidence of best practice internationally on measurement of patient experience and safety culture in General Practice.
2. Undertake a pilot survey of volunteer general practices to assess the current culture in relation to patient safety amongst staff in these practices
3. Undertake a survey regarding patients' perception of quality and safety in relation to the general practice they attend.
4. Modify the survey tools used in the pilot practices and retrial them to ensure they are fit for purpose.
5. Present these tools at the Irish College of General Practitioners Summer School forum
6. Gather feedback data on these tools and modify as required
7. Distribute the tools for use in practices to those general practitioners attending the summer school

8. Roll the tools out nationally to all General Practitioners through the Irish College of General Practitioner faculties and ultimately make them available to all general practitioners.

## Results

### Patient Experience Survey

The two practices surveyed received very positive results, in general. Of the patients who completed the questionnaire most were extremely satisfied with the care they received. The areas of most concern were identified as timeliness of appointments, continuity of care with the same GP and waiting time. The concerns highlighted by the questionnaires allowed the trial practice to introduce small positive changes almost immediately e.g. In the suburban practice the identification that patients wanted notification of their results, even normal ones, led to the development and implementation of a small improvement project where all patients (who consented) were sent a text message about all normal results. The phone survey feedback on this improvement was overwhelmingly positive and is now part of the practice standard communication protocol.

### Staff Safety Culture Survey

In the practice surveyed, the findings demonstrate a good understanding of quality and safety. There was strong leadership which advocated an open and transparent culture supporting the reporting and management of adverse incidents. The other trial practice has not yet completed the survey due to senior management staff lack of buy in. This highlighted to us the importance of introducing these tools in the correct way to maximise leadership engagement through our collegial support network.

### GP meeting Lyrath

The presentation of this tool to the 33 General Practitioners present at the Irish College of General Practitioners summer school received feedback from the GPs which was in general very positive. 39 % of those G.P.'s present expressed personal reticence and admitted to the fact that they might find negative feedback difficult to manage personally. Regarding the patient experience tool 33% of G.P.'s expressed concern that they would be unable to make changes in response to the patient identified areas of concern due to lack of time and financial resources. 24% felt patients would not understand the financial constraints they were under and the same percentage felt the patient would have unrealistic expectations, which in the practices surveyed was not in general the case. We presented the feedback and in general very positive results of the patients experience survey in the 2 trial practices and also the changes made as a result of the feedback received. We also emphasised that overall positive feedback was very encouraging for the practice staff; to see their hard work was noted and appreciated. Regarding the use of the staff safety culture assessment tool, some G.P.'s raised several valid concerns, most importantly the inability to change some of the areas highlighted as a concern e.g. excessive workload. Also the potential that the survey would not be completed honestly due to lack of anonymity in a small practice with possible negative repercussions for staff and leadership as a result of the survey. Several possible ways to get around this were explored with the group which proved to be a good group learning experience.

### *Conclusion*

We have successfully developed user friendly assessment tools for estimating the current perception of both patient and staff of the safety and quality of care received and provided in General Practice in Ireland. These tools have been positively received by our General Practice colleagues, with requests from both individual ICGP faculty groups and the College to present and provide their members with these practice tools.

For us the areas of learning have been that of overcoming our own fears about receiving negative feedback. Those patients, in general, are realistic in their expectations of what the practice can deliver. The feedback received from patients is insightful and can, if acted on, bring improvements in safety, communication and improve time management in the practice. Patients and staff are happy to be involved in the development of the practice and it brings about better cohesion in the delivery of safer more effective care.

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## Improving Medication Safety - Elimination of drug kardex re-transcription in HDU

### Author

Dr Stephen Frohlich, Specialist Registrar, St Vincent's University Hospital

### Abstract

#### *Background*

The introduction of quality improvement programmes in the U.S.A and Britain within the past two decades has marked a growing trend in international healthcare which is now becoming established in this country. Medication errors are a key area which compromise patient safety; up to two thirds of patients admitted to hospital have at least one medication error during their stay. One route cause of medication error is unnecessary duplication and re-transcription of prescription charts.

#### *Aim*

To reduce medication error in the Bloomfield HDU of St Vincent's Hospital by eliminating the need for re-transcription of the drug kardex for patients admitted from a public ward or operating theatre.

#### *Methods*

One month audit of number of drug kardex's re-transcribed and resultant medication errors conducted. Barriers to change identified and tackled using a "small test of change" approach initially.

#### *Results*

Initial audit revealed 65 kardex's re-transcribed over this time period with 46 medication errors. An initial pilot study reduced this to zero. Long term implementation of this quality improvement initiative has been delayed by purported legal and risk issues at a senior medical level.

#### *Conclusion*

Despite empiric evidence of reduced medication error senior decision makers are not prepared to take on this initiative. Patient safety does not feature as an important tenet of our institution.

## Improving Access to Inpatient Specialist Rehabilitation Services in Ireland

### Author

Ms Valerie Twomey, Division Liaison & Portfolio Manager, HSE

### Abstract

In Rehabilitation Medicine, medical referrers (including general practitioners) usually refer patients to named consultants; thus, waiting times for this particular medical specialty can vary greatly even within a single centre. An alternative is to pool the waiting list, with patients treated in turn by the consultant and/or specialist bed available.

This is a 'standardisation' project involving the management of the Waiting List and Inpatient Beds of the Brain Injury Programme at the National Rehabilitation Hospital. Analysis of baseline data revealed significant delay for some patients accessing inpatient beds with 47% of patients waiting longer than the targeted 70 days (range: 5 - 321 days)

Significant waste and duplication along with significant variation was identified in how patient information was managed and communicated. Processes were not consistent or standardised and this subsequently led to delay in responding to referrals, loss of referral information, delay in patients being put on the system and significant delay admission of patients. This subsequently led to concerns for patient safety, service cost and equity of access.

A Waiting List Management Policy and Standard Operating Procedure was developed and implemented. Responsibility for monitoring of patients waiting and decision making for patients to be admitted to dedicated specialist beds on a weekly basis was given to a multidisciplinary team. KPIs included 'days waiting for admission' from the date of entry onto the Inpatient Waiting List (IPWL) on the hospital's Patient Administration System (PAS).

Feedback obtained from service users and referrers indicated the need for a transparent, clear and efficient referrals and waitlist management system. Drivers identified within the Programme included the need for a comprehensive 'whole-programme' waiting list for Improving Access to Inpatient Specialist Rehabilitation Services in Ireland admission decisions and bed management in four ward areas. A key factor in managing the change was to incorporate a seamless transition between the 'old' and the 'new' systems and the extension of our current IT (Patient Administration System - PAS) system to support administrative staff.

A system of pooled-shared lists has been introduced since January 2013. The percentage of patients waiting longer than 70 days for admission to NRH has now dropped from 56% to 28% and average days waiting for admission has dropped from 97 (Sept 2012) to 51 (Apr 2013). This has resulted in increased access for patients, and more importantly, this is NOT a chronological list for management and ensures that clinical responsibility remains with a Consultant at all times. This system now ensures that patients referred are admitted into beds designated to their Consultant with the exception of when the patient has waited longer than the recommended waiting time for admission.

Resulting from this project has been the designation of highly complex beds for our Disorder of Consciousness and Neurobehavioural patients, the re-opening of 10 'early access' beds for our low/medium dependency patients and the introduction of a standardised measure of dependency.

## Increasing General Anaesthetic Day Case Procedures in Surgical Day Ward

### Authors

Mr. Karl Sweeney, Director of Surgery, West Northwest Hospital Group

Ms. Julie Nohilly, Assistant Director of Nursing, West Northwest Hospital Group

Ms. Ailish Mohan, A/Business Manager, West Northwest Hospital Group

### Abstract

The introduction of a quality improvement project aimed to achieve National targets as set out for Day Case Surgery. Although the previous National Key Performance Indicator of the 'Basket of 24' outlined the optimum target of 75%, data gathered locally indicated a shortfall in day case activity from the designated Surgical Day Ward.

Following several presentations to the Diploma Faculty, a final S.M.A.R.T. (Specific, Measureable, Achievable, Realistic, Timely) aim statement was generated and the drivers elucidated. The team presented the proposal to the hospital executive and with their approval, established a Surgical Day Ward (SDW) working group.

The initial phase of the project was to establish the 'As Is' situation. This involved walking the patient pathway, shadowing the staff (administrative, nursing and clinical) and building a process map.

Following this a series of high level meetings were carried out to map the 'To Be' process. Key major changes included the integration of staff and equipment from a remote day access area (Day Care Unit) into the SDW, transfer of staff from the admissions office to the SDW, reconfiguration of office space adjacent to the SDW into a registration office and changing area and opening of an unused recovery area adjacent to the SDW.

Additional staff was recruited including the estates manager and the chief admissions officer.

The next step was to run some small tests of change to examine the redundancy in the system. This included measuring the types of patients in the SDW at given times before and after capping the numbers of preoperative patients, replacing trolleys with recovery chairs and transferring the admissions to SDW from the lobby of the hospital to the SDW.

The tests confirmed that moving the admission process to the SDW resulted in a reduced patient waiting time. The potential underutilised capacity of the SDW observed in the initial test of volume of patients in the SDW was confirmed when the Chairs activity was brought into the SDW without any reduction in numbers of patients treated. It is expected that the opening of the recovery area adjacent to the SDW and the building of a registration desk and changing area will increase the number of GA cases from 55 per week to 70 in the next few weeks. Despite various levels of enthusiasm and a history of failed attempts at SDW improvement, the project remains on target to deliver on its aim statement.

## **To Optimise and Standardise a Clozapine Monitoring Programme on Two Service Sites, Leading to Enhanced Clinician Decision Making, Improved Management of Side Effects along with Enhanced Well Being and Service Experience for Patients**

### **Authors**

Dr Justin Brophy, Executive Clinical Director, Mental Health Services, HSE, Dublin South East/ Wicklow

Ms Kathleen Beggan, Area Director of Nursing, Mental Health Services, HSE, Dublin South East/ Wicklow

Mr Kevin Brady, Business Manager, Mental Health Services, HSE, Dublin South East/ Wicklow

### **Abstract**

The project aim was to optimise and standardise the clozapine monitoring programme on two service sites, leading to enhanced clinician decision making, improved management of side effects along with enhanced well being and service experience for patients.

Using a process of change management and quality improvement, several measures were introduced across the services that led to enhanced monitoring. The change was implemented using the change model as a guiding tool.

A systematic approach to monitoring adverse effects of clozapine was implemented in both service sites. A range of qualitative and quantitative measures were used to evaluate if the changes attained the set objectives, and also identify further continuous quality improvements. These included systematic scheduling of testing, systematic checking of test completion, test review and result forwarding to a clinical setting. Using this quality improvement methodology, enhanced patient safety, service efficiency and participant satisfaction was achieved. The results also indicate that such an approach can work on different sites if planning and leadership can recruit and troubleshoot site specific issues. Cost saving measures were not only realised but can in fact lead to enhance monitoring and safety. This important finding indicates that the project if applied in other sites could lead to further cost savings across the system without compromising patient safety.

## Increasing Access to Speech and Language Therapy Intervention

### Author

Ms Anne Healy, Speech and Language Therapy Manager, Dublin South Central, HSE

### Abstract

#### *Background*

This work was carried out in the Speech and Language therapy department in Former Dublin South City LHO. In 2011, the service held long waiting lists for assessment and therapy and initiatives introduced at that time succeeded in reducing the time clients wait for therapy. Waiting times remained constant in 2012 but were falling short of the HSE standard set. As staffing resource would not improve, further initiatives were required to increase the number of clients accessing therapy services.

#### *Aim*

To increase the number of clients (children) receiving speech and language therapy in each therapy cycle by 25% per WTE staffing by 1st September 2013.

#### *Methods*

A number of measures were put in place to increase caseload numbers. The existing system structure was altered to facilitate more access to therapy through an increase in the number and size of groups. Structures were put in place to facilitate this increase. A standard planning process was put in place. A range of data was collected and analysed to support the process.

#### *Results*

The aim of increasing caseload size per WTE was achieved. Baseline data from 2012 identified an average of 19 clients were seen per WTE per therapy cycle. Data to date has identified the mean is now 26 clients. The projected increase in total number of clients who receive therapy in 2013 is 14% resulting in a potential saving of €25,975.80 in salary costs.

#### *Discussion/Recommendations*

This work has successfully increased the number of clients accessing the service. The improvements represent a cost saving in salary costs. A number of initiatives were put in place and standard processes were developed. Further work is required to include parents in the therapy process and to further increase the number and size of groups formed. There is also a need to encourage attendance as data indicates that number of clients who are identified to the clinic as required intervention, falls far short of the estimated prevalence in the population.

## Coding of General Surgery Procedures

### Authors

Prof. Arnold D. K. Hill, Consultant Surgeon, Beaumont Hospital

Dr. Maimoona Azhar Salim, Beaumont Hospital

Mr Desmond O'Toole, Beaumont Hospital

Ms Marie Kelly, Beaumont Hospital

### Abstract

#### Introduction

The healthcare system is switching to the model set by 'Money Follows the Patient' (MFTP) policy which is designed on the principle of equity and transparency and is based on a prospective, case-based payment system developed using the Diagnosis Related Group System (DRG). This will replace the current block grant allocation to the public hospitals. The coding is done by the clinical coders trained in using Hospital In-Patient Enquiry Scheme (HIPE). It is important for the surgeons to develop an understanding of the clinical coding system so that their patients can be more appropriately classified into DRGs. This is also critical to accuracy in budgeting, billing as well as for clinical audit and research.

#### Aim

To study the impact of implemented change for completion of 100% coding within 30 days of patient discharge.

#### Methodology

Data was collected from HIPE and % of cases coded out of total number of discharges per month for the months of March, April and May 2013 to analyze the % of coding being done prior to the implemented change in the specialties of General Surgery, Vascular, Colorectal and Plastic surgery. The average % of coding done during these 3 months was considered as a benchmark for the implemented change.

#### Results

The average % of episodes of care coded during the months of March, April and May 2013 was only 42% per month. The implemented strategy's yield was completion of 100% of coding within 30 days of patient discharge.

#### Conclusion

Involvement of surgeons and their teams is essential to facilitate timely completion of discharge letters and forwarding of the charts to the coding department in order to achieve the target of 100% coding within 30 days of patients discharge, as set by MFTP.

## Improving waiting times at outpatient clinics

### Author

Dr Barry White, Consultant Haematologist, St James's Hospital

### Abstract

#### *Background*

Waiting time is a key determinant of patient satisfaction with outpatient services. Excess waiting times have previously been defined as those in excess of 30 minutes. The aim of the project was to ensure that 100% of patients waiting at a single Monday morning outpatient clinic (index clinic) waited less than 30 minutes from their appointment time to the time they were seen by a doctor.

#### *Methods*

The Institute for Healthcare Improvement (IHI) method of quality improvement was used to improve waiting times. A variety of measurements and intervention were used including seeing patients on the basis of appointment times rather than arrival times, changing physician practice style, measuring average duration of different types of consultations and scheduling appointment times to match the average duration of consultation times.

#### *Results*

The baseline percentage of patients waiting less than 30 minutes was approximately 45%. When all factors were included, the average consultation time required for each patient was 10 minutes and patients were scheduled on this basis. At the end of the study period, the percentage of patients at the index clinic waiting less than 30 minutes increased to >90%. The scheduling system was extended to all clinics within the Department and this resulted in an increase from 45% to 75% in patients waiting less than 30 minutes.

#### *Discussion*

The system was perfectly designed to generate long waiting times at the clinic. The key factor influencing waiting time was the appointment system. Previously held concerns regarding the need to overbook patients at the start of the clinic to account for poor patient timeliness were proved to be incorrect when tested. The whole service was engaged from the start, which facilitated the roll out across the department.

#### *Conclusion*

A structured approach to improving quality improvement based on measurement and sequential P-D-S-A cycle empowered the staff to improve a previously "insurmountable" problem of long waits at outpatients. Further PDSA cycles have commenced to improve the whole department performance to the target level and to ensure that the performance in the index clinic is maintained.

## Quality Improvement Project - Urology Service Surveillance Clinic: Patient Pathway

### Author

Ms Bernie Lee, Clinical Risk Manager, National Rehabilitation Hospital

### Abstract

#### Background

In the last decade, the growing evidence that quality of Healthcare is at best uneven has prompted greater attention to Quality Improvement (QI). Healthcare employees are integral to hospital QI efforts, but focusing their efforts on these activities is difficult. Using the IHI framework, helps categorise the key themes & barriers with regard to implementation of QI efforts. To overcome barriers, hospitals need to employ a variety of strategies, which must include selling the message of QI by explaining the process, the tools available & the potential outcomes. The goal of this project was to improve the patient pathway at a Urology Nurse-led Surveillance Clinic by identifying a number of measures to be complete by end of July 2013.

- >90% of patients go through a registration process on arrival at the clinic .
- Reduce the turnaround time between consultation and post clinic outcome letter to the patient's GP by 7 days.
- 100% of patients have their nursing assessment completed using ISBAR Framework.
- Develop and Implement policies around the management of the Urology Service – Target 1 policy and 1 SOP.
- 75% of patients attending the surveillance clinic will receive information on the clinic outcome visit and this to be complete by end of July.

#### Methods

QI toolkits allow the leveraging of existing resources and expertise that can provide a promising framework for crafting QI. In this team project process flow data was collected to establish the baseline. Data was then collected following various PDSA cycles and presented in run charts to easily identify the improvements.

#### Results

- 78% of patients go through patient registration on arrival at the clinic compared with the pre QI of 33%.
- 6 day reduction in turnaround time between Consultant consultation and posting outcome letter to the patient's GP with a reduction from 16 days to 10 days.
- 100% of patients have their nursing assessment completed using ISBAR Framework. No formal framework being used prior to QI process.
- Urology Service Policy approved by Consultant Urologist. SOP for Nurse-led clinic under development. There was no formal policy or procedure in place.
- 30% of patients now receive written information on clinic outcome compared with a pre QI rate of 0.05%.

***Discussion/implementation***

This project clearly demonstrates that the IHI Model for Improvement is an effective tool in QI. While all targets were not achieved, improvements were noted in all processes measured in addition to unexpected improvement in work flow for the team.

***Conclusions/plans for further development or wider dissemination of project***

This QI project will continue and will be presented to the hospital to establish if QI can be replicated at other out-patient clinics in the hospital.

## Adopting governance rules for the Emergency Theatre in OLOLH

### Author

Dr Dara Diviney, Consultant Anaesthetist, Our Lady of Lourdes Hospital, Drogheda

### Abstract

Patients requiring emergency surgical management are among the sickest patients treated in the Irish Healthcare system. Efficient and effective delivery of emergency surgical care is dependent upon the availability of experienced clinicians working together in teams to provide the best outcomes for patients. The aim of this project is to adopt a set of governance rules for the Emergency Theatre in Our Lady of Lourdes Hospital Drogheda in order to ensure optimal pathways are in place for patients requiring unscheduled surgical care.

### Methods

The following methods were used to facilitate this project.

- A team of interested parties was formed.
- Stakeholder engagement was sought and “permission” to undertake the project was agreed upon.
- Senior management support was sought.
- All theatre staff were surveyed to define what the perceived/real problems with the Emergency were.
- Process mapping of patients flow from the ED to the Emergency Theatre was undertaken
- Baseline data was collected and analysed to define the reality of the Emergency theatre activity and to dispel some of the myths.
- Changes were made to the physical state of the Emergency List to improve communication, eliminate some inefficiencies and to improve patient safety.
- A rule set for governance of the Emergency Theatre was developed.
- Agreement from all stakeholders is ongoing.

### Results

There was general agreement amongst all stakeholders that there were serious problems with the governance of the Emergency Theatre (ET). However baseline data collected suggested that many of the problems were perceived rather than the reality. An analysis of the utilization of the ET by specialty showed that the majority of cases done in the ET were general surgical cases. Surgery not required was the lead reason for a patient being cancelled from the list. The information supplied about the patient was inadequate and potentially had safety implications for the patients. The analysis of flow of the patient from the ED to the theatre had clear elements that led to delays, a waste of resources and potential risk for the patient.

### Conclusion

The Emergency List (EL) in OLOLH was fraught with problems. The main issue was a lack of governance. Stakeholder engagement and analysis of data has lead to an agreement that a set of governance rules will be agreed on.

## Improving Access to Occupational Therapy Services in Dublin South City Community Services Area

### Author

Ms Ellen O’Dea, Occupational Therapist Manager, HSE Dublin South Central

### Abstract

#### Background

The key driver for this project was the increasing waiting lists experienced by an Occupational Therapy Department in Primary Care. On examination of the waiting list and waiting times it was identified that there were both:

- Capacity issues in terms of demand versus available therapy hours.
- Legacy issues where the gap between capacity and demand had increased wait times.

The project aim was to increase the number of patients seen for an Occupational Therapy Assessment by 10% per Occupational Therapist in a Primary Care Network over a 7 month period.

#### Methods

Methods used included:

- Staff engagement through tools such as SWOT analysis, creating a shared vision, process mapping and identifying with clients.
- Utilizing available administration support and streamlining administration processes.
- Increasing use of clinical space.
- Using data to monitor change and identify variance.

#### Results

Significant productivity gains were made with an increase of 47% of cases opened and a 12.3 % increase in interventions. Cost savings over a year period are estimated as between €26,105 to €109,156 depending on grade of therapist and whether the data from increased cases opened or increased interventions is used.

#### Discussion/implementation

Access to Occupational Therapy services in Primary care can be improved through a multifactorial approach. The key learning is the benefit of effectively engaging with therapists and admin through the use of mapping tools and data. Though feedback was sought from clients on service changes future projects would be enhanced by recording outcomes when working on increasing productivity. The decrease in interventions per case opened needs to be investigated further to determine the root cause and ensure productivity increases have not resulted in decreases in outcomes or quality of intervention.

*Conclusions/plans for further development or wider dissemination of project*

At local level the focus needs to be on both sustaining this project and spreading it across the service. Opportunities to present this work to colleagues nationally will be utilised. Recommendations for further developments include:

- Evaluating outcomes at the same time as making productivity improvements.
- Developing a predictive model for primary care.
- Looking at opportunities for skill mix through use of admin and assistants.

# Improving the Quality of Service Provided at a General Paediatric Outpatient Clinic

*Enhancing the Patient Experience*

*Improving the Learning Experience for Doctors*

## Author

Dr Emma Curtis, Consultant Paediatrician, The Adelaide and Meath Hospital, Tallaght

## Abstract

### Background

Quality measures must have direct relevance to patients' lives including functional outcomes (e.g. returning to work, or school in the case of children) as well as their experience of and satisfaction with the care they receive (Mountford and Shojania, 2012). This project studies a general and developmental paediatric outpatient clinic with the aim of improving it. There were a number of problems with the clinic including (i) the waiting time from referral to being seen at the clinic being too long and (ii) the waiting time to be seen in the clinic being too long. Both of these factors have the potential to impact negatively on patient health and on the patient's experience of the service. The second impacts negatively on the clinical staff involved in the delivery of the clinic.

The aim of the project was to reduce wait time in the outpatient clinic so that 80% of patients were seen within half an hour of their stated appointment time and, as a secondary aim, to reduce wait time for an outpatient appointment so that 80% of routine referrals would be seen within 3 months.

### Methods

It was necessary to measure what was happening. The patient journey through each stage of the clinic was measured and we also requested the patients' views on what was positive and negative about the clinic. The Doctor's journey through the clinic was also measured.

### Results

The initial measurement identified that on average, patients waited 41 minutes prior to being seen by a doctor with a variation of +/- 27 minutes. Wait time lengthened as the clinic progressed. The total time spent at clinic was 1 hour 27 minutes with a variation of +/- 35 minutes. The average wait time for the doctor in training for the consultant to see his/her patient was 34 minutes with a variation of 18 minutes. Patients' response to the clinic was surprisingly positive remarking on friendly staff, cleanliness, efficiency and a welcoming atmosphere. However, there were also comments on the lengthy waiting time as being a negative aspect of the clinic. Non consultant hospital doctors waited an average of 34 minutes for the consultant to review their patient.

### *Discussion/Implementation*

The above data, along with the identification of the drivers and the use of small tests of change provided a useful understanding of why this clinic did not function efficiently. Studying the flow and the patient experience provided information which could be used in improving the clinic. Following the introduction of changes 70% of children were seen within 30 minutes of their appointment time.

### *Conclusions*

It is possible to improve the patient experience and the delivery of care in a varied general paediatric (and developmental) outpatient clinic. In order to do so, it was necessary to gain an understanding of the clinic flow and identify where the obstacles lay. There is further work to be done on the clinic. The work above was carried out without a formal re-scheduling of the clinic. In order for the improvement to be sustained, this needs to be done. In numerical terms, the feedback from patients was low. It may be that those who did not return their forms had a worse experience than those who did. There needs to be an improvement in the quantity of patient feedback. This is an ongoing task but the project has helped to establish where the problems lie and how they might be addressed.

## Reducing the “Did Not Attend” (DNA) Rate at Public Health TB Contact Tracing Clinics

### Author

Dr John Cuddihy, Specialist in Public Health Medicine, Department of Public Health, Kilkenny

### Abstract

#### *Background*

The aim of this Quality Improvement Project is to reduce the “Did not Attend” (DNA\*) rate at Public Health TB contact tracing clinics by 10% compared with the current baseline DNA rate in the six month period of this project. TB patients and their contacts are often a “hard to reach” group and their attendance at clinics is suboptimal. By reducing the DNA rate at clinics the efficiency and quality of the service can be improved.

#### *Methodology*

The current baseline DNA rate was calculated following an audit of attendance at public health TB contact tracing clinics in the three months prior to this initiative. DNA rates following this quality improvement initiative were tracked in order to measure the change and this tracking is ongoing.

The principal intervention of this quality improvement project was to send SMS text reminders to all patients on the clinic list, 24 hours prior to clinic appointments.

#### *Results*

The average DNA rate in the 19 clinics following the text messaging reminder system implementation was 50% compared with an average DNA rate of 24% in the 39 clinics that took place in the 3 months prior to this project. Satisfaction with implementation of this initiative was high among patients and providers.

#### *Discussion*

While the change in DNA rate after this initiative was disappointing, a number of possible explanations are presented and further study is proposed.

#### *Conclusion*

A text message reminder and alert system for TB Contact Tracing Clinics is a feasible initiative in the Public Health Department and this mode of communication met with broad satisfaction from patients and providers.

## Reduction of number of patients waiting on trolleys in an Emergency

### Department

#### Authors

Dr Cornelius Cronin, Clinical Director Medicine

Ms Ann Doherty, Chief Executive Officer

Prof Pierce Grace, Chief Clinical Director

Dr John Kennedy, Clinical Director Perioperative Care

Dr Bryan Kenny, Clinical Director Diagnostics

Dr Roy Philip, Clinical Director Maternal & Child Health

Ms Noreen Spillane, Group Director of Nursing & Midwifery

*Office of the CEO, UL Hospitals*

#### Abstract

##### Background

The reasons for patients waiting on trolleys in emergency departments (ED) are multi-factorial and attempts to solve this problem often reveal the complexity of the organisation and the structures and processes required to fix it. ED overcrowding leads to poor patient outcomes, prolonged pain and suffering, patient dissatisfaction and increased healthcare cost. Prolonged 'trolley wait' is a symptom of patient-flow failure across the whole hospital and not just in the ED. Traditionally we responded reactively to events but through our quality improvement project we attempted to proactively manage our ED waiting times using systems thinking and the model for improvement tools adapted to our circumstances.

##### Aim statement

To reduce the number of people waiting on a trolley in our ED at 8.00am to less than 15 per day by 1 July 2013

##### Drivers and Measures of Quality

We identified three primary drivers for improvement, i.e. leadership, establishing the *status quo*, and effectively communicating to stakeholders the priority of reducing 'trolley waits' for the organisation. A stakeholder map identified enthusiastic supporters, those with high levels of influence, followers and some opponents. Process mapping established the journey through the hospital made by acutely ill patients. A suite of information generated daily by IT gave visibility to patient flow and analysis of these data allowed us to develop a flow chart tracking the numbers of patients waiting on trolleys in ED each morning at 8.00 a.m.

### **Results**

Using our flow chart we conducted a series of 'tests of change' to try and reduce the trolley numbers. Over a six-month period the following tests of change were tried and documented with variable degrees of success: opening of an MAU and appointment of three acute medicine physicians, a 'blitz response' to high trolley numbers on specific days, creation of extra in-patient beds, closure and protection of MAU after 8.00 p.m. each day, a directive to the consultant physicians from the CEO, channelling the emergency medical take through the MAU, simplification of the medical roster, extending selected take to a second Model 2 hospital, provision of a short stay unit and instigation of a daily conference call across our six operational sites.

### **Conclusion**

Through coordinated and persistent efforts we were able effect change. From a peak of 45 trolleys in ED we frequently now achieve our target of less than 15 trolleys each day at 8.00 a.m. However, we realise that considerable organisational commitment and targeted resource diversion is required on an ongoing basis to sustain the changes initiated. This project has brought the participants together as an effective team that can drive prioritised patient-centred change in our organisation.

## Reducing the amount of discarded chemotherapy in an ambulatory oncology-haematology unit

### Authors

Ms Lisa Toland, Quality and Patient Safety Officer, Our Lady of Lourdes Hospital, Drogheda

### Abstract

The aim of this quality improvement (QI) project was to reduce the cash amount of wasted chemotherapy in the oncology-haematology day unit in Our Lady of Lourdes hospital, Drogheda, by 50% by September 2013.

### Methods

The following methods were used to facilitate this project.

- A stakeholder engagement and communication plan was developed;
- The current process of prescribing and administering chemotherapeutic agents was mapped;
- The most frequent causes of wastage were identified using a Pareto analysis;
- The most appropriate team was formed to address the problems identified;
- Baseline data was collected;
- A brainstorming session was held to outline the extent of the problem and to seek suggestions from all team members as to how best to tackle this problem.

Baseline data suggested that approximately €150,000 of chemotherapy was being discarded or otherwise wasted annually in OLOL oncology-haematology day unit. The most common reasons for wastage included chemotherapy prescribed but not given for medical reasons, (neutropenia, admitted to hospital, prior side effects or toxicity).

### Interventions

Numerous interventions were tested, evaluated and if effective, utilized on a larger scale. These included:

- Bringing patients in a day prior to chemotherapy and checking a full blood count; if neutropenic, chemotherapy was deferred
- Providing information to staff about the cost of chemotherapy and the amount of wasted chemotherapy
- Providing weekly feedback to the team of the prior week's wastage costs
- Improving the communication process within the hospital so that the oncology-haematology team would be informed in a timely manner about emergency admissions of their patients
- Providing targeted education to key staff, including nursing and trainee doctors
- Identifying chemotherapy drugs which could potentially be re-used at a later date if not used on the scheduled day instead of being discarded

### Results

Over a 9 month period, the amount of wasted chemotherapy decreased by approximately 50%, in the face of increasing demand and utilization; in 2011, 5.2% of chemotherapy by value was discarded; by end June 2013, this had

decreased to 2.1%. An additional benefit was that the intra-hospital communication process was improved markedly; at baseline the oncology-haematology teams were informed of approximately 5% of oncology-haematology patients admitted as emergencies; following a number of interventions, this increased to >90% within six months. This improvement contributed to a reduction in discarded chemotherapy for inpatients and also improved the patient experience.

### **Conclusions**

We have reduced the amount of chemotherapy wasted in OLOL by approximately 50% by the stated date. For commercial reasons we are not in a position to outline the exact cost savings but they are very substantial. We have as a secondary benefit improved patient experience and quality of care. Our methods are replicable across different healthcare settings and have the potential not just to drive down costs but also improve patient experience.

## Implementation of a Ventilator Associated Pneumonia bundle in an Intensive Care Unit

### Authors

Dr Jérôme Fennell, Consultant Microbiologist

Ms Mairead Holland, Clinical Nurse Specialist, Infection Prevention and Control Team

Mr Eddie McCullagh, Chief Scientist, Department of Clinical Microbiology

*The Adelaide and Meath Hospital, Tallaght*

### Abstract

#### Aim

This quality improvement project sets out to implement a ventilator-associated pneumonia (VAP) prevention bundle in the Intensive Care Unit (ICU) in Tallaght Hospital and to achieve 100% compliance within six months.

#### Method

Our approach was based on the Model for Improvement as developed by Langley, Nolan and Nolan in 1992 and advocated by the Institute for Healthcare Improvement (IHI).

This guided us through the improvement process, particularly focusing on Plan-Do-Study-Act cycles and small tests of change. We mapped change through the application of run charts and trend analyses. We also referred to their guidance on how to prevent VAP by implementing selected aspects of the IHI bundle (IHI, 2012). Although some of our bundle components were different, the same principles could be applied. Engaging with key stakeholders was crucial to the success of the project. This was assisted by stakeholder mapping during the planning stage and on-going interaction and education as the project progressed. We failed to implement a surveillance programme within this timeframe due to mitigating factors but it is our intention to pursue this goal and compare prospective with retrospective data to determine the effect of bundle application on patient outcome measures.

#### Results

Our results to date have been positive. We saw marked and sustained improvement in correct patient and ventilator tube positioning. Measures related to weaning of ventilation and sedation proved more complex and it was difficult to sustain improvement. Each of these cycles was accomplished through smaller interventions and tests of change.

This project is on-going. We observed improved compliance with the VAP care bundle and a reduction in antibiotic use, length of ventilation and length of ICU stay. We need to continue to measure, engage and educate to ensure it is reliably embedded in the ICU culture of care.

### *Conclusion*

The VAP bundle was successfully implemented and was associated with improved outcome measures. This is a project that will need to continue and serve as a basis for other quality improvement projects in the ICU and throughout the hospital.

## Development of a Self Assessment Tool for staff to improve the process of managing a serious incident

### Authors

Ms Maria Lordan Dunphy, Assistant National Director

Ms Cornelia Stuart, HSE Lead for Quality Improvement

Ms C Mc Caughan, Co-Chair, National Incident Management Team (NIMT)

Mr John Kenny, Programme Manager

*HSE, Quality Improvement Division*

### Abstract

In the last number of decades considerable strides have been made nationally and internationally in promoting patient safety through the use of quality improvement methodologies in particular in Scotland, Wales, England and United States.

The economic difficulties facing many countries in recent times has put increased pressure on healthcare services having to provide greater services with reducing budgets. There is an increasing need for improving how the HSE delivers services with reduced funding whilst keeping services as safe as possible. This makes quality improvement an important priority for the organisation.

During the period between 2010 and 2013, it became apparent to the HSE National Incident Management team and Regional Managers for Quality & Safety through their respective incident management and oversight roles, that there was a need to ensure more effective management processes for the management of incidents including serious incidents. It was also identified that there was a need for greater clarity and guidance in relation to the systems analysis methodology and provision of hands on support.

This led to the development of a self-assessment tool for staff to enable them to reflect on and learn from their participation in management of a serious incident. This tool was tested on two sites and following feedback from staff a serious incident management checklist was developed to assist staff to follow the flow process for serious incident management as per HSE policy.

### Results

It was identified that the use of a self-assessment tool is a useful tool, to support incident management learning. There was 100% participation by staff and feedback was used to develop a quality improvement plan to provide staff with further support in participation in the incident management process.

## Improving Patient Experience Time for Admitted Patients within the Emergency Department

### Author

Ms Mary Day, Chief Executive Officer, Mater Misericordiae University Hospital

### Abstract

There has been a significant investment of time, effort and leadership in addressing sub-optimal unscheduled care performance within the author's organisation. However, the Hospital now believes it is at a critical juncture in terms of progressing further change. There are a number of initiatives progressing in 2013, which will deliver sustained improvement in unscheduled care performance which is driven by an extensive internal organisation reform structure to deliver transformational change. As part of this structure the Hospital is embedding quality at the heart of all change and has embarked on an exciting development of lean programme across the campus.

The project selected by the author is part of a whole system change delivery programme for unscheduled care, which consist of, improving patient experience time in the Emergency Department (ED), Transformation of Speciality wards, Development of an acute floor concept, Changing a model for post-acute care and a comprehensive programme of improvement for Integrated Discharge Planning.

The National Target for patient waiting times in the Emergency Department is:

- 95% of all Emergency Department attendees to be discharged or admitted within 6 hours of registration
- 100% of all Emergency Department attendees to be discharged or admitted within 9 hours of registration

The aim of this project was to reduce the Patient Experience Time (PET) in the Emergency Department by focusing specifically on the segment of the patient journey from *decision to admit to when a patient occupies an inpatient bed*. This segment at the time of the project had an average wait of **13 hours**, the aim was to reduce it by 6 hours.

## Improving first line paediatric antibiotic prescribing in Primary Care

### Author

Dr Michelle Mary McEvoy, General Paediatrician, Children's University Hospital, Temple Street

### Abstract

#### *Background*

One of the primary contributing factors leading to antibiotic resistance is overuse and misuse of antibiotics. Young children are the main recipients of antibiotics in the European Union. In Ireland, approximately 80% of all prescriptions for antibiotics are written by general practitioners. A variety of interventions to improve prescribing in primary care have been described, however no intervention has resulted in consistent positive change.

#### *Methods*

Guidelines on first line antibiotic prescribing for the four most common paediatric conditions presenting in Primary Care were agreed in accordance with national guidelines. A 'Pop up' intervention, listing the recommended antibiotics, was created and embedded into the GPs Practice Management Software. An audit tool was created to allow GPs to audit their prescribing pre and post intervention. The audit tool and 'Pop up' was trialled in 3 large GP practices in Ireland.

#### *Results*

Over the 10-week period of study, the number of first line antibiotics prescribed increased, with an associated decrease in the number of non first line antibiotics prescribed. Compared to the same time period in 2012, there was an 11% increase in prescribing of first line antibiotics, an 18% decrease in overall prescription rates and a marked increase in prescribing of amoxicillin over amoxicillin/clavulanic acid.

#### *Discussion & Conclusion*

Overall, the results indicate that it is possible to positively influence prescribing patterns by the use of a simple 'Pop up' at the time of prescribing. This has huge potential to influence prescribing patterns on a national level. 'Pop ups' could potentially be installed for every drug prescribed in primary care to help ensure appropriate and evidence based prescribing.

## Timely Provision of Acute Medicine Performance Information for Irish Hospitals

### Author

Dr Orlaith O'Reilly, National Clinical Lead for Health and Wellbeing, HSE

### Abstract

The Irish Acute Medicine Programme is a quality aims to increase quality and safety of medical care, improve access and reduce inpatient bed use. Key performance data was required to drive these improvements across all Irish hospitals. A specific work stream for health intelligence was developed. The authors are part of the National Team leading on health intelligence, performance improvement and service planning. The project began in 2010 and ran till the end of May 2013.

### Problem

KPIs were needed to drive improved performance, these needed to be standardised and benchmarked. In 2010 hospital discharge data was only available one year in arrears and the data was considered inaccurate. There was varying ability among hospitals to access, analyse or interpret data. A standard approach and national leadership was needed to develop the data sets, ensure timely collection and feedback, to provide managerial and clinical confidence.

### Assessment of Problem and Analysis of its Causes

The time to access hospital discharge data was measured. Usable data was only available one year in arrears. A major cause of delay was the requirement to have data fully discharge coded. Meetings were set up with key stakeholders in the national data repository, health service analysis and performance management units. The importance of rapid access to performance information to implement and steer improvements in the national programme were explained.

### Engaging Staff

Hospital performance information for acute medicine, and how it was computed were presented at workshops to different levels of the organisation. The short comings of available information were highlighted and roles of staff at various levels identified. Needed changes in data collection practices and staff turnaround times were identified and groups engaged by explaining the importance of their role in helping to drive clinical improvement throughout the system.

### Strategy for Change

Senior clinical staff, managers and data coders were engaged in workshops to clarify the project aim and identify the changes which would be required.

The aim of the project was agreed as "to provide each hospital in the country with monthly updates of their acute medicine performance information within 30 days of the previous month". A stakeholder mapping exercise was carried out to identify key people and prioritise the targeting of the change strategy. A process mapping exercise was carried out to map the process flow of information. This was used with staff to identify potential areas to shorten and simplify the processes.

### *Intervention*

- KPIs researched, benchmarked, defined and agreed nationally.
- KPIs baselines calculated and circulated to hospitals.
- Data collection process mapped and drivers for change identified.
- Stakeholders identified and mapped, stakeholder meetings and workshops.
- Key elements for change identified to shorten feedback of information.
- Computerised analysis set up.
- Key elements; inclusion of PAS registration data as well as fully coded (HIPE) inpatient activity data.
- Monthly feedback to hospitals at quality improvement meetings, calculation and dissemination of KPIs.
- Critical breakthroughs were; the inclusion of partially coded data and closing feedback loop by setting up automated systems of dissemination.
- Use of formal PDSA cycles and run chart to drive quality and improvement.

### *Measurement of Improvement*

Within six months suitable key performance indicators were researched, their definition and benchmarks agreed nationally. Baseline information was calculated and circulated to each hospital. Runcharts were used to chart the improvement in feedback time, following each PDSA cycle to address barriers and delays.

Originally the information was fully coded discharge data. The first PDSA cycles only improved this to six months. A critical breakthrough occurred when partially coded data was found usable and could be provided quickly. Further PDSA cycles showed up other areas for improvement; closing feedback loops to hospitals and automating systems of dissemination. In 2010 feedback of performance information on acute medicine to hospitals was one year in arrears, at the end of the project in May 2013, the aim had been achieved and each hospital was receiving monthly updates within 30 days of the previous month.

### *Effects of Change*

Improved feedback of performance to hospitals in “near real time” has supported hospitals to considerably improve their performance. The setting and benchmarking of KPIs which mirror the medical patient pathway has allowed hospitals to pinpoint areas which require intervention and track their improvements. Overall medical length of stay has reduced from 8.48 days in 2010 to 7.1 days in June 2013. The proportion of referred patients whose admission was avoided by the medical assessment units has doubled to 22%. Considerable efficiency gains in bed usage have been achieved through the Acute Medicine Programme, underpinned by this quality improvement project for improving the timeliness of information. It is now possible to track improvements monthly both nationally and for each hospital.

### *Lessons Learned*

- Demonstration of the power of data to clinicians and managers to change practice.
- Weaknesses in information governance within the organisation identified.

- Increased trust in information and enthusiasm for its use by Clinicians and Hospital Managers.
- Improved accuracy of data as it is now in active use.
- Enabled Clinical Performance data to be used at top management scorecard level.
- Need to engage clinicians, managers, coders, and data analysts in a shared aim to achieve the result.
- Greater understanding of the human response to performance information and change management gained.
- The value of quality and improvement education and tools demonstrated

### *Message for Others*

The main message is that quality improvement programmes need to be underpinned by robust and real time data. Time taken in standardisation of this information and feedback is essential. Good information pinpoints areas where improvements are working and identifies parts of the patient pathway where improvement has not yet occurred. This enables staff to target their efforts effectively and results in an improved and safer experience for patients together with efficiencies for the health care system.

## Implementation of Pre-Assessment, Day of Surgery Admission and Enhanced Recovery Programme for all Colorectal Cancer Patients in St James Hospital

### Authors

Ms Fiona Murphy, Assistant Director of Nursing with responsibility for O.R.I.A.N. Directorate

Mr Paul McCormick, Consultant General and Colorectal Surgeon

*St James's Hospital*

### Abstract

#### Background

Elective surgical patient care has been based on a traditional model, which has evolved without regard to optimum patient care or resource utilisation. Our aim was the implementation of Pre-Assessment, Day of Surgery Admission and an Enhanced Recovery Programme for all Colorectal Cancer Patients in St. James hospital by end August 2013

#### Methods

Multi-disciplinary development of an enhanced recovery programme involving all disciplines caring for colorectal surgical patients, using evidence based medicine and constant enhancement using the model for improvement. Introduction of full pre-assessment: this required numerous specialties and involved some of them taking extra workloads. This required much negotiation and productive influencing of participants. Shift towards day of surgery admissions as opposed to night before admissions again required negotiation with several units in order to provide services outside their normal routine. More importantly it required participation of the executive to alter their policy in relation to admissions but also bed usage.

#### Results

Rather than full and permanent implementation of all three steps the negotiated nature of the project meant that it was agreed to run it as a two month trial. In the course of this trial 11 patients completed the designed flow pathway. During the trial the pathway was altered a number of times due to trial findings. All patients were successfully pre-assessed, all were admitted on the day of surgery, none were cancelled, none were held up due to bed availability at any stage of their journey and the average length of stay of these patients was 7 days as opposed to the standard of 12.

#### Conclusions

Our project was a success on two separate fronts. Firstly in relation to our aim: we successfully introduced full pre-assessment, day of surgery admission and an enhanced recovery programme to all colorectal cancer patients with benefits to the patients and the institution. Secondly as an introduction to and education in management techniques it has been a benefit to both of us.

*Discussion*

Financial and business planning will hopefully allow us to expand this model across all surgical specialties. This model is transferable to all hospitals in Ireland.

## Improving Efficiency in Physiotherapy Clinics in Primary Care

### Author

Ms Paula Barron, Physiotherapy Manager, Dublin South Central ISA

### Abstract

The location for this project is the primary care physiotherapy service situated in Dublin South City part of Dublin South Central ISA. While physiotherapists in primary care have a diverse caseload and provide care in a variety of settings-(home visits, clinic, and groups), this project focussed on Physiotherapy Clinic Services. As with all healthcare services, one of the main challenges is managing services in response to increasing demands and decreasing resources, and to be as efficient as possible in delivery of services. Staff reported challenges regarding the number of clients who Did Not Attend (DNA) their appointments (797 in 2012), and the amount of time spent doing administrative duties (admin), both resulting in inefficient services and frustration for staff. Reviewing the data for 2012 showed DNA rate at 14%, and variation in activity levels. An admin log showed that 20% of therapists time is spent doing admin.

The aims of the project were to increase the attendances at clinic by 15% and decrease DNA rates to 10%. The key tasks involved were standardisation of process re DNA, admin support, process mapping of services, and demand capacity scheduling. Other key tasks were education and communication with key stakeholders.

The results showed reduction in DNA rate to 10-12%, and increase in attendances by 24% and in capacity by 27%. The main learning points were that text messaging/phoning reminders of appointments improved DNA rate. Even the small amount of increased admin support received affected clinical activity. The need for admin was highlighted, and the opportunity to increase productivity and provide cost savings was escalated to senior management. Another effect on activity was the increased awareness of staff of their capacity and how to schedule accordingly. Some of the challenges included how to reduce late cancellations which are counted as DNAs, and getting consistent admin support. The achievements and success of this project need to be sustained and spread across services. The conclusions /recommendations from this project were to rollout text messaging reminders of appointment, to have adequate admin support in primary care, and to use demand capacity and process mapping as part of standard practice.

## Reducing Peri-Operative Blood Transfusions in Patients Undergoing Elective Hip and Knee Arthroplasty

### Authors

Dr Louise Moran, Consultant Anaesthetist

Mr Sean Murphy, General Manager

Dr Anne Flood, Director of Nursing

*Letterkenny General Hospital*

### Abstract

Letterkenny General Hospital (LGH) has 340 beds and serves a population of 150,000. The elective orthopaedic joint replacement programme is well established and follows the principles of Enhanced Recovery after Surgery (Kehlet, 2008). The numbers of THA/TKAs performed were 196, 177 and 263 in 2010, 2011 and 2012 respectively. The ABT rate for these operations in LGH were 18%, 19% and 12% respectively. The project team felt a further reduction of the LGH ABT rate for elective joint arthroplasties from 12% was possible and desirable.

The aim of this project was to reduce the percentage of post-operative blood transfusions with the assistance of a blood management programme.

Quality improvement methods included measuring the percentage of patients presenting for elective THA/TKA who were anaemic, measuring the percentage of anaemic patients after identification and optimisation of their haemoglobin level, measuring the percentage of patients receiving tranexamic acid peri-operatively and monitoring the rate of blood transfusion post-operatively. This was a small scale PDSA cycle which allowed us to make adjustments to our plan on a monthly basis. Finally we plotted a run chart of blood transfusion over time to be able to observe any variation in the system.

The introduction of the tranexamic acid protocol combined with an increased awareness of patient blood management has resulted in a decreased blood transfusion rate. The rate of ABT was 18 %, 19% and 12% for 2010, 2011 and 2012 respectively. The overall transfusion rate from January to July 2013 was 3.8% (5/130).

Of the 5 patients transfused all were anaemic pre-operatively suggesting the introduction of a Hb screening and optimisation programme may have eliminated these ABT. Three of the five did not receive tranexamic acid which may have contributed to an increased blood loss and an increased risk of transfusion. Encouragingly only one of the five patients was transfused inappropriately i.e. their Hb was above the trigger level recommended by the Hospital Transfusion Guidelines. All of the five patients received 2 units of blood and all of them had a post transfusion Hb 1g/dL greater than their transfusion trigger suggesting that one unit of blood would have been adequate. The introduction of a single unit policy may therefore have reduced the blood usage by half.

## **BASIC: Bundle and Algorithm Integration Systems in Intensive Care**

### **Authors**

Dr Dermot Doherty, Consultant Paediatric Intensivist

Dr Atif Awan, Consultant Nephrologist & Director of Nephrology & Transplantation

Ms Annette Hanlon, Clinical Nurse Manager, PICU

*Children's University Hospital, Temple Street*

### **Abstract**

The Paediatric Intensive Care Unit (PICU) is charged with caring for the most critically ill patients in the hospital. It is a highly complex and dynamic environment, pivotal to the operation of a modern children's teaching hospital. This is achieved through the integration of highly skilled and focused clinical teams, advanced diagnostic testing, challenging therapeutic interventions which all rest on multiple technological platforms. The patient population in the PICU ranges from pre-term neonates on the one hand, to fully grown teenagers on the other.

They can present with a diverse spectrum of medical conditions, therapeutic interventions and logistical requirements.

Despite the heterogeneous nature of the PICU, it must function as a high-reliability organization, ensuring that each patient receives therapies and care processes known to be helpful and avoid those that either are unhelpful or harmful. Yet, while this is a seemingly obvious requirement, the opportunity of error and accident are vast. The purpose of BASIC is to unobtrusively integrate standards of care and safety checklists at key decision moments in a patient's care and record them as a quality assurance metric.

### **Outcome**

We developed, implemented, tested and reviewed a tool that check listed the integration of three separate quality and safety bundles into the daily ward round. The tool was refined and re-launched and now is part of the normal work flow in the PICU.

# **Diploma in Leadership and Quality in Healthcare**

**2011 - 2012**

## Improving the Effectiveness of Medicines Reconciliation

### Authors

Ms Ciara Kirke, Drug Safety Coordinator, The Adelaide and Meath Hospital, Tallaght

### Abstract

Patients are at risk of preventable harm from medication error at admission and error or failure to communicate medication changes on discharge from hospital. Reducing this harm is a worldwide priority and challenge. Research and process improvement in Tallaght Hospital has improved medicines reconciliation (med rec) performance, with clinical pharmacists carrying out a high-quality med rec process post-admission for approximately 60% of adult medical/surgical in-patients. However, the pharmacist's interventions were effective (reached the patient at any time during the admission) in only 54% of cases. This project aimed to improve effectiveness and decrease time to effect, in a resource-neutral way. Model for Improvement methodology was used to understand the processes and process performance and identify, prioritise and test ideas for change. Testing found that adding verbal pharmacist/doctor contact to the previous process post-med rec increased effectiveness of pharmacists' interventions from 55% to 79% and reduced time to effect from a mean of 34 to 9 hours, with no additional pharmacist or doctor time expenditure. This change has been implemented hospital-wide. The medicines reconciliation improvement programme is continuing to make progress in the key driver areas of measurement, leadership and governance, process improvement and infrastructure.

## Monitoring Quality and Safety Performance in General Practice

### Authors

Ms Suzanne Dempsey, Director of Nursing, Temple Street Children's University Hospital

Ms Ruth Maher, Head of Monitoring, Quality and Patient Safety Division, HSE

Dr David Hanlon, ICGP clinical lead co-ordinator, Easton Medical Centre

Prof Conor O'Keane, Consultant Pathologist, Mater Misericordiae University Hospital

### Abstract

Quality improvement is an outgrowth of quality assurance and addresses the responsibility of organisations and healthcare providers to continually examine the quality of services, identify and target opportunities for improvement and support and evaluate innovations (Tapp et al 2009). In recent times there has been an increased focus on quality and patient safety in healthcare. Most of this work has been conducted in the acute hospital setting with little or none in primary care. Mindful of this the 'project metrics group' agreed to undertake a change project which initially endeavoured to define quality indicators that would form part of a dashboard to 'Monitor Quality and Safety Performance in General Practice'.

Following an initial review of the relevant literature and discussions with the Diploma Faculty in the Royal College of Physicians of Ireland, it was then agreed to refine this aim to a number of more realistic ones that could be facilitated in the timeframe allocated with the intention that the findings could be used to inform the broader aim. Broadly these included collating information on the culture of quality and safety in GP practices using a cultural survey tool for staff. In parallel it was hoped to explore the perceptions of service users (patients) towards quality and patient safety. From the results it was anticipated that a proposed set of validated metrics that can be easily collected and collated will be presented for consideration to the HSE.

In line with work by the Quality and Patient Safety Directorate, HSE, the group decided to use the Agency for Healthcare Research and Quality's (AHRQ) Survey tool. It is specifically designed to measure the culture of patient safety in outpatient medical offices by assessing staff and provider attitudes and beliefs about patient safety (AHRQ) Monitoring Quality and Safety Performance in General Practice

<http://www.ahrq.gov/qual/patientsafetyculture/mosurvindex.htm>.

The service user questionnaire is a validated tool developed by the Picker Institute

<http://www.pickereurope.org/adult-and-patient-service-user-surveys>, which was amended for the purposes of this project.

### Methodology

Both questionnaires were adapted to reflect the Irish healthcare setting. Self-selecting GP's who attended a regional study day for general practitioners were invited to part take in the survey on line. A convenience sample of patients

from one GP practice was asked to complete the service user questionnaire which explored their perceptions of quality and safety within the practice.

### **Results**

Patient Safety Culture Survey of GP's – of the 9% returned, the findings demonstrate a good understanding of quality and safety. There was strong leadership which advocated an open and transparent culture supporting the reporting and management of adverse incidents. The area of most concern highlighted was the interface between primary care and the acute hospital setting.

### **Service User Patient Perception Survey**

Of the 21 patients who completed the questionnaire all were extremely satisfied with the care they received. The area of most concern was related to the cost of access to GP's. Interestingly, the findings correspond to the literature which posits that quality and safety as defined by the healthcare professional is in terms of errors, whilst the patient determines it in relation to softer indicators such as communication and cost. This important difference of focus must be reflected in the development of suitable metrics for inclusion in a Quality and Patient Safety Dashboard.

## Improving the Quality of Delivery in the Second Stage of Labour

### Authors

Ms Fionnuala Duffy, Assistant National Director, Quality and Patient Safety Directorate, HSE

Dr Shane Higgins, Consultant Obstetrician & Gynaecologist, the National Maternity Hospital

Ms Lorraine Murphy, International Fellow, NHS Institute for Innovation and Improvement, Research Fellow, Waterford Institute of Technology and Health Service Executive

Prof Michael Turner, UCD Centre for Human Reproduction, Coombe Women & Infants University Hospital

### Abstract

This project was undertaken as part of the Royal College of Physicians of Ireland Post Graduate Diploma in Leadership and Quality in Healthcare 2011 -2012. A key component of the course was to undertake a quality improvement project in an Irish healthcare setting to address an area where the opportunity to improve quality had been recognised. In selecting an Obstetrics Project the authors agreed that it would be appropriate to focus on a specific area where variation in practice and outcomes had been observed. It was anticipated the improvement work would improve services at local level with the potential to inform key national and strategic obstetric objectives: The model for improvement's three questions and improvement methodology and approaches guided this work.

### *What are we trying to accomplish?*

A SMART checklist was used to support the development of the project aim: "To reduce number of unsuccessful instrumental deliveries at the NMH by 20% by 30th September 2012". A driver diagram was developed that depicted the interconnectedness between the local and strategic objectives, team's hunch, theories and the predicted improved outcome.

### *How will we know that change is an improvement?*

A total of five metrics comprising of outcome, process and balancing measures were agreed to measure for improvement and denote shifts in processes as a consequence of change interventions. To ensure consistency, reliability and understanding of what the measures meant for the purpose of the improvement work, the team agreed operational definitions for each measure. It was anticipated tests of change would be determined through a process of engagement with staff using the 5 why approach. The Myers-Brigg indicator served as a useful aid in supporting these interactions. Despite the tests of change, staff awareness, consultant discussion forum and rotation of staff, no change was noted of the percentage of emergency Caesarean Sections (c/s) to total c/s. The SPC reflects the stability in the current system with common cause variation only. We predicted that there would be less emergency c/s to total c/s numbers. However in figures 2 and 3 strongly suggest a reduction in the overall c/s rate and the rate of emergency c/s when compared to the overall number of deliveries in the unit. The data coupled with content expertise predicts that this downward trend will continue. Continued measurement is required to confirm this prediction of improvement.

*What change can we make that will result in improvement?*

Preliminary results suggest a shift in process as a potential combined consequence of

- The Hawthorn effect
- A staff awareness campaign
- Rotation of junior doctors.

Whilst the project team predict further improvement, this project has not as yet reached a conclusion. However the greatest success of this project is attributable to the application of improvement methodologies in a real life setting. Furthermore the blend of project team expertise from diverse backgrounds was valuable in terms of understanding improvement through different professional lens. The project team have agreed recommendations that they will each bring forward to future improvement work.

## **To decrease the amount of administering errors of patients own drugs, through the introduction of patient own drugs bedside storage, to zero by the 1st May 2012.**

### **Authors**

Mr Gordon Dunne, CEO, Cappagh Orthopaedic Hospital

### **Abstract**

Medication errors are perhaps the most prevalent patient related incident reported across all health care settings. However there has been an unwillingness to develop management systems to mitigate the risk to patients and for too long the solution has been to encourage and promote greater reporting. The NHS along with other health care providers has promoted the use of Patients Own Drugs in the hospital setting as a means to improving medication safety in the health care setting.

The primary aim of this project is to test the ability to reduce the amount of administering errors of patients own drugs through the introduction of patient own drug bedside storage to zero by the 1st May 2012. This is indeed a lofty aim however Berwick and his contemporaries teach us to set ambitious goals. Such goals only highlight our current failings in the quality battle and encourage others to strive towards a common goal. Through the introduction of POD's in a 30 bed elective orthopaedic surgical ward it was demonstrated that systemic change to the use of POD's with supporting process evolution in reconciliation of medicine on admission it was demonstrated that meaningful improvement in medicine administering can be achieved. This development has lead to the ongoing evolution of the drug administering process which has the potential to further improve the quality of medication management within the hospital.

## **Reduction in Asthma Out-Patient Visit Numbers by 50% in Asthmatic Children Aged 4-12 Years within 6 Months**

### **Authors**

Dr Michael O'Neill, Consultant Paediatrician, Clinical Director, HSE, Mayo General Hospital

Dr Patrick Manning, Consultant Respiratory Physician, HSE, Midland Regional Hospital, National Clinical Lead - Asthma (HSE-RCPI)

### **Abstract**

Asthma is the commonest chronic childhood disease in Ireland with more than one in five children across all socio-economic groups having a diagnosis. Poor asthma control leads to costly utilisation of secondary health systems. Specialist clinic-based asthma education combined with telemonitoring case management in children appears to be more effective than providing information alone in improving effective paediatric asthma control. This project in utilising mobile phone telemonitoring for asthma patient management, has a specific target, to reduce attendances by 50% over 6 months of review visit in patients identified as being well and controlled at the consultant out-patient asthma clinic, through the use of the Children-Asthma Control Test (C-ACT) and a Respiratory Proforma for children ages 4 - 12 years. This program has now been in effect for 6 months and is working well and we have achieved our goal demonstrating a capacity to change while respecting parent values and preferences. Utilising the approach, the results from this study show a 52% reduction in return visits and that this outcome was acceptable to the majority of parents and could form the basis for quality improvement within the health system and the National Asthma Programme.

## **Improving Access to a General Respiratory Outpatients: A Quality Improvement Project**

### **Author**

Dr Tim McDonnell, St. Michael's Hospital, Dun Laoghaire, Co. Dublin

### **Abstract**

Overcrowding in the respiratory OPD has led to delays in patients accessing care as well as potential safety issues. Our overall aim was to reduce the numbers of patients who were required to be seen in the clinic. Two separate projects were constructed; to reduce the numbers of new patients needing to be seen and to discharge more review patients. Following a series of PDSA's a nurse led assessment clinic was shown to be effective in reducing the need to see new patients in the OPD. However, significant barriers to implementation were identified and an approach aimed at reducing return number of patients was implemented. A checklist was refined through a series of PDSA's and was used to facilitate the discharge of patients but also acted to enhance the quality of care of COPD patients in the OPD.

## Redesigning Peri-operative Care for Patients Undergoing Joint Replacement Surgery

### Author

Dr Paul O'Connor, Clinical Director, Letterkenny General Hospital

### Abstract

The introduction of quality improvement programmes in the U.S.A and Britain within the past two decades has marked a growing trend in international healthcare which is now beginning to take root in this country. Peri-operative process changes in particular are quite well developed elsewhere and constitute a roadmap for Irish hospitals. Joint replacement surgery is known to be effective per quality-adjusted life year gained and is growing in demand due to an ageing Irish population. This project aimed to introduce day of surgery admission as the standard of care (target > 90%) in the Letterkenny Joint Replacement Program and to reduce length of stay (LOS) in hospital from a mean of 8.8 days in 2010 to 6.8 days in 2012.

### Results

Results from the HIPE dataset of 182 patients discharged between 1st Jan and 31st July 2012 indicate that 76% of patients were admitted on the morning of the procedure. Although lower than target, this is expected to exceed 95% for the remainder of the year. Mean LOS achieved was 5.1 days which was significantly better than expected. Using 2010 cost data, it is estimated that savings of over €700,000 will accrue in 2012 as a result. Overall patient satisfaction scores were high and there was no evidence of unplanned hospital readmissions.

## **Medication Safety: Developing a system of feedback in reporting medication errors for nurses using quality improvement techniques**

### **Author**

Ms Sarah McCloskey, St Patrick's University Hospital, Marymount University Hospice

### **Abstract**

The project undertaken looks at introducing systems of feedback for learning in relation to incident reporting, in medication errors. The project uses techniques associated with quality improvement methodology. The project is ultimately about the implementation of a medication safety news bulletin within my hospital, to enhance the feedback and thus learning that is associated with incident reporting. The project describes development of an aim, understanding process, drivers for change, the importance of measurement and how from the practicality of the project I learnt about the methodology and theory of quality improvement. The project encompasses my reflections of what I have learned in regard to quality improvement through embarking on this project.

## Using Quality Profiles to monitor quality and identify areas for improvement

### Author

Ms Cornelia Stuart, Regional Quality & Patient Safety Manager, HSE Dublin North East Region

### Abstract

Currently a significant amount of clinical and management data is collected within our Acute Hospitals. Whilst there is consistent management focus on data relating to the cost of care delivered, the quantum of care delivered and the human resources used to deliver that care, there is less consistent emphasis on data relating to the quality of that care. Internationally significant effort has focused on the creation of a balanced system of measures which ensures that quality indicators are included in the overall assessment of performance. Currently in the HSE there is work ongoing in relation to the identification of a comprehensive suite of quality indicators which it is hoped will form the basis of performance monitoring in the future. The availability of these measures would provide hospital, Area and Regional Management teams with a mechanism to evaluate/monitor the performance of the overall system of service delivery provide information upon which the public could base their assurance in relation to services they access and contribute to strategic quality improvement planning.

This project was therefore established to identify and utilize any currently available quality indicators and to present them collectively in a manner that was useful and accessible to a range of stakeholders clinical and managerial. The areas of patient safety, clinical effectiveness and patient experience were identified as the key dimensions upon which a Quality Profile should be based.

Whilst this project set out to utilise only existing relevant performance indicators at an early stage it became obvious that the main barrier to achieving the stated outcome related to a lack of existing indicators for the identified key quality dimensions. The focus of the project then changed to concentrate solely on Healthcare Associated Infection (HCAI), an area where national data for a number of related indicators existed.

This resulted in the development of a HCAI Profile which has been made available for use to infection control teams, hospital, Area and Regional Management Teams. This has been well received with all stakeholders indicating that the HCAI profile has succeeded in the presenting complex data in an accessible and relevant manner. The HCAI profile developed also allows hospitals to compare their performance with other hospitals in similar categories and has negated the need for Infection Prevention and Control Teams to develop customised reports for management from the scientific data. It is also made available concurrently to hospitals, Areas and the Region thereby ensuring that all stakeholders have access to a uniform set of data for their monitoring purposes. It is planned to develop this tool further through the addition of further HCAI indicators as these become available.

The use of the Profile tool has application to other areas of data and is currently being piloted in relation to Patient Experience Indicators.

## Enhancing a Culture of Patient Safety by using the Paediatric Trigger Tool to Measure Harm at the Children's University Hospital, Temple Street

### Authors

Ms Mona Baker, CEO, Children's University Hospital, Temple Street

Prof Alf Nicholson, Consultant Paediatrician, Children's University Hospital, Temple Street

Dr Colin Doherty, Consultant Neurologist, St James's Hospital

Dr John Fitzsimons, Consultant Paediatrician, Our Lady of Lourdes Hospital, Drogheda

### Abstract

Patient safety is characterised by preventing, reducing or ameliorating harm to patients which occurs during care. Measuring and learning about harm is an important step in making care safe. The Paediatric Trigger Tool (PTT) is a mechanism whereby harm is discovered and recorded in order to improve patient care.

### Project Aims

To train and resource a multidisciplinary team to measure and record the harm from adverse events in hospitalised children in Temple St, by reviewing 30 sets of notes per month from May 2012.

### Measures for Quality Improvement

We are measuring the level of harm and categorising it. We are also measuring the process of the PTT and the emerging knowledge from around the world.

### Results

We have implemented the PTT and examined 120 sets of notes in the 4 months since May. Average harm rate per month is 4 ½ events per month. Most harm recorded is temporary.

### Discussion of Project Implementation

The project was implemented with clear and active leadership which organised, communicated and encouraged local champions.

### Conclusions

We now have a measure of patient harm which helps staff to discuss methods which will reduce this, with the ultimate aim of eliminating it.

## Access to Mental Health Care: A Quality Improvement Project

### Authors

Dr Mary Clarke, Consultant Psychiatrist, DETECT Early Intervention Services

Dr Harry Doyle, Consultant Psychiatrist & Clinical Director, St Stephens Hospital

Dr Maurice Gervin, Consultant Psychiatrist, Laois Offaly Mental Health Services

Ms Marie Kehoe, Regional General Manager, Quality and Patient Safety, HSE South

### Abstract

Mental health disorders are common and costly both in human and economic terms. As with any disorder early identification and treatment is associated with improved outcomes. We are facing economic austerity that has and will continue to severely impact on the resources of the health care system and it is a challenge for providers and clinicians to develop high quality care in the face of continual budgetary cuts. Quality may be viewed from many perspectives but as a starting point rapid access to assessment and treatment is important from the viewpoint of patient, family and healthcare providers.

This project aimed to improve the quality of the access pathway to mental health care by addressing flow through the system. In order to do this multidisciplinary staff were trained in mental health assessment and several measures of quality were used to evaluate the process. The results showed that multidisciplinary team members with the relevant training can provide high quality assessments. Widening the access points to mental health assessments reduced waiting times and improved the capacity of the system to respond to extra demand. Issues with regard to standardization and further training are ongoing but a collaborative network of mental health care clinicians has been created across three of the national integrated service areas.

## Hemiplegic Upper Limb Self Management Project

### Authors

Dr Áine Carroll, Clinical Lead, Rehabilitation Medicine Clinical Programme, National Rehabilitation Hospital

### Abstract

#### *Introduction*

A self-management approach to upper limb management following stroke has received little attention in the literature but may improve self efficacy and reduce attendances in OPD.

#### *Aim*

The aim of the project was to increase independence in administering an upper limb self management programme thus reducing dependence on therapists and increasing self determination.

#### *Drivers*

Primary and secondary drivers were identified that were felt to have a direct impact on the overall aim of increasing independence in a home exercise programme (HEP). These drivers were felt to act in concert to achieve the overall aim.

#### *Measures*

Percentage independence in HEP and patient satisfaction percentage were identified as the most relevant measures for the project.

#### *Results*

The project met many barriers that had not been anticipated and significant modification of the original project plan was required with multiple PDSAs to simplify the process and make implementation and sustainability more attainable.

#### *Conclusion*

Despite many challenges, the revised and simplified project has started to meet its aims through quality improvement processes.

## **A Safer Approach to Specialty Follow-up for Patients Discharged from Emergency Departments**

### **Authors**

Dr Eleanor Carton, Consultant General Surgeon, Our Lady of Lourdes Hospital, Drogheda, Co. Louth

Dr Colm Henry, Consultant Geriatrician, Mercy University Hospital, Cork

Dr Una Geary, Consultant in Emergency Medicine, St James's Hospital, Dublin 8

### **Abstract**

This quality improvement project aims to develop a safer approach for the management of follow-up arrangements for patients discharged by specialty teams from Emergency Departments (EDs). Assessments of existing practice at three acute hospitals indicated that there was poor documentation of post-discharge patient follow-up and no reliable processes to ensure follow-up existed on any site. A standardised discharge proforma was implemented and a process was instituted for the review of discharge care plans by the Consultant responsible for the patient's care. The proforma was paper-based on two sites but existing ICT infrastructure enabled an electronic proforma and communication system to be developed on one site. Analysis of results indicated that the proforma was used on all three sites and that significant improvement in the completion rates of follow-up arrangements was achievable. Challenges regarding the sustainability of the system were identified. Recently published HIQA recommendations will require all hospitals to develop reliable systems for patient follow-up after discharge from EDs. This project provides a safer, effective approach to managing ED patient follow-up arrangements that is implementable across multiple acute hospital sites.

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