QUALITY INITIATIVES

Entries in the 19th Annual ACHS Quality Improvement Awards 2016
Quality Initiatives

*Entries in the 19th Annual ACHS Quality Improvement Awards 2016.*

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**Introduction**

**The ACHS Quality Improvement Awards**

The annual ACHS Quality Improvement (QI) Awards were introduced in 1998 to acknowledge and encourage outstanding quality improvement activities, programs or strategies that have been implemented in healthcare organisations.

In 2016, the 19th Annual ACHS QI Awards were open to submissions from all domestic ACHS and international ACHSI member organisations following the ACHS NSQHS (National Safety and Quality Health Service) Standards Program, EQuiP5 (Evaluation and Quality Improvement Program), EQuiPNational, EQuiPNational Corporate Health Services, EQuiPNational Day Procedure Centres, and the ACHS Clinical Indicator Program.

This year 67% were submitted in the Clinical Excellence and Patient Safety category, 21% in the Non-Clinical Service Delivery category and 12% in the Healthcare Measurement category.

Judging was conducted externally with separate panels of three judges for each of the QI Awards categories:

- **Clinical Excellence and Patient Safety**: This category recognises innovation and demonstrated quality improvement in the delivery of safe, effective patient care.

- **Non-Clinical Service Delivery**: This category acknowledges a demonstrated outcome of improvement and innovation in patient and/or consumer services and organisation-wide practice including services provided by community and allied health organisations.

- **Healthcare Measurement**: This category recognises organisations that have measured an aspect of clinical management and/or outcome of care, taken appropriate action in response to that measurement, and demonstrated improved patient care and organisational performance upon further measurement. Healthcare measurement can include data collected from the ACHS Clinical Indicator program or other methods of monitoring patient care processes or outcomes. Both quantitative and qualitative data can be used, however this category must describe the initial measurement, the analysis of that measurement, the action(s) implemented, and the improved measurement(s).

Each judging panel consisted of an ACHS Councillor, an ACHS surveyor and a representative from an ACHS member organisation.

Submissions were required to meet specific criteria that were weighted equally:

- Judges assessed all eligible submissions on the five (5) ACHS principles of: consumer focus, effective leadership, continuous improvement, evidence of outcomes and best practice;

- Judges assessed additional criteria: improvement in patient safety and care, measured outcomes, applicability in other settings, innovation in patient care and/or processes and relevance to the QI Awards category;

- The submission MUST relate to a period of up to no more than two (2) years prior to the year of entry.
The 19th Annual ACHS QI Awards 2016

Winner Submissions

Clinical Excellence and Patient Safety
Bankstown-Lidcombe Hospital
Multiple Departments
Doctors, Pharmacists, Nurses, Administrative staff, Patients and Carers – the new multidisciplinary team

Lucy Nair, Karma Mekhail, Natalie Raffoul, Wendy Harmer
Full Submission page 5

Non-Clinical Service Delivery
Children’s Health Queensland Hospital and Health Service
Good Start Program, Child and Youth Community Health Service
Good Start to Life – Co-designing optimal maternal and infant nutrition resources for and by Maori and Pacific Islanders families living in Queensland

Sebastien Brignano, Losa Seiler, Kirstine Kira
Full Submission page 55

Healthcare Measurement
Osborne Park Hospital
Ambulatory Service
Sustaining Improvement in the management of the Endoscopy Waitlist

Anne MacDonald, Clare Matthews, Michael Levitt, Hooi Ee, Dev Segarajasingam
Full Submission page 83

Each winning submission in the ACHS QI Awards receives a Certificate of Acknowledgement, a QI Awards trophy, and a cash prize provided by ACHS.

ACHS publishes submissions from all participating organisations to share and encourage exceptional quality improvement strategies amongst the ACHS member organisations.

The full version of this document will be published on the ACHS website (www.achs.org.au).
## Highly Commended Submissions

### Clinical Excellence and Patient Safety

**The Royal Children’s Hospital**

**Complex Care Service**

**Simplifying Complex Care**

*Lisa Stephens, Nicki Mountford, Susan Gibb, Doug Bryan*

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**King Edward Memorial Hospital - Women and Newborn Health Service**

Department of Pharmacy, Department of Safety, Quality and Performance, Medication Safety Review Group, Department of Postgraduate Medical Education, Antimicrobial Stewardship

**From reflective learning to action: Reducing medication-related problem with an innovative, interdisciplinary, site-specific, targeted education model**

*Stephanie Teoh, Tamara Lebedevs, Nabeelah Mukadam, Amy Fitzgerald, Caroline Kerr, Patrick Yapp, Michael Petrovski, Caroline Hussey*

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### Non-Clinical Service Delivery

**St Vincents Public Hospital Sydney**

Environmental Services Darlinghurst Campus, St Vincent’s Public Hospital level 9 Xavier South BMT ward, level 7 and 8 Xavier North and South.

**St Vincents Hospital Sydney Clean, Reliable, Trustworthy, Proven, Sustained Excellence in Patient & Resident Care – The Environmental Cleaning Review & NSW Blood & Bone Marrow Transplant Cleaning Project**

*Rob Gordon, Emily Heinnen, Joanna Uribe, Kirsten Bruchhauser, Kylie Naudi, Michelle Wilson, Giulietta Pontivivo, Brett Gardiner*

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### Healthcare Measurement

**Prince of Wales Hospital**

Emergency Department

**ED Navigator: impact and evaluation of ED performance of an extended service model**

*Wayne Varndell, Elizabeth Ryan*

Summary Abstract page 111
A. AIM

In an effort to empower patients and carers to contribute towards their own medication management and safety, a multidisciplinary clinical workforce team collaborated with the patients and carers of Bankstown-Lidcombe Hospital to implement the NSW Health Medication Management Plan (MMP).

This project aimed to enhance collaboration between patients, carers and the clinical workforce to increase medication safety and reduce adverse events as a result of inadvertent medication errors throughout every patient journey.

B. SUMMARY ABSTRACT

Hospital Executives, Nursing, Medical and Pharmacy representatives formed a working party with the primary aim of ensuring that 100% of patients receive a Best Possible Medication History (BPMH) documented on a Medication Management Plan (MMP). A policy mandating MMPs for every inpatient was developed outlining accountability and detailed instructions on how to complete a BPMH, confirmed with two sources. Intensive education of 1,200 staff members, resource folders and lanyard cards provided a ready reference to staff. MMP education was included in facility orientation, clinical handover and Patient Journey Boards. Multilingual paper based and electronic posters targeting patients and staff were rolled out across the hospital.

Frequent hospital-wide audits showed that within two months, 100% of patients had a MMP at the point of care (i.e. the bedside). Approximately 92% of MMPs included a BPMH and over 60% had their BPMH reconciled with their medication chart. A multidisciplinary approach was successfully adopted with 41% of MMPs initiated by Pharmacists, 38% by Medical Officers and the remaining 16% by Nurses. These results continue to be sustained as determined by monthly audits, with the most recent audit in April 2016 showing 100% of patients had a MMP and 88% of MMPs included a BPMH. Results demonstrate a positive effect on patient safety with a considerable reduction in the average number of medication errors from 1.8 errors per patient in October 2013 to 0.8 in April 2015.

Collaboration between the clinical workforce proved successful in implementing an effective process of medication reconciliation with reduced incidence in medication errors.

C. REPORT

APPLICATION OF ACHS PRINCIPLES

1. Consumer Focus

Collaboration between patients, carers and the clinical workforce of BLH was crucial to the successful implementation of NSW Health’s Medication Management Plan (MMP). Patients and carers formed the centre of the multidisciplinary team with Medical Officers, Pharmacists, Nurses and administrative staff working with them as a trusted source to ensure a BPMH was documented and accurate for every patient on every admission. Not only did this project focus on empowering patients and carers to contribute towards the management of their medications, it also aimed to enhance medication safety more broadly and reduce adverse events due to inadvertent medication errors which in turn would reduce re-admission rates related to medication errors.

2. Effective Leadership

This project was led by a working party that contained senior Executives including the General Manager, Director Medical & Clinical Services, Director Nursing & Midwifery Services, Director Pharmacy and Quality & Risk Manager. There was a
multidisciplinary approach to implementing this change and the ability to make such substantial changes in such a short period of time demonstrates how effective this multidisciplinary leadership approach was.


During the National Accreditation process, it was identified that not all patients admitted to Bankstown-Lidcombe Hospital had a BPMH documented. If a BPMH had been completed, it was not always readily available at the point of care or at the point of clinical handover. This meant that medication related adverse events were potentially higher than they should be. This was confirmed by an audit conducted in October 2013 which showed patients were being exposed to medication errors related to the absence of a BPMH. More than half of all patients were missing at least one of their medications (Figure 1) and approximately 81% of all medication errors had the potential to cause moderate or severe patient harm (Figure 2).

In December 2014, only 39% of BLH’s patients were having a BPMH documented during their admission – not even half of these being available at the point of care (i.e. the bedside). It was also identified that pharmacists were solely contributing to 83% of these BPMHs which demonstrated a lack of engagement and understanding from the clinical workforce. The value of a BPMH being available at the patient’s bedside in a hospital setting has been well established (Lau et al., 2000, Jacobson, 2002).
This was confirmed in Bankstown-Lidcombe Hospital when a hospital wide snapshot audit conducted in October 2013 showed that 271 medication errors were identified by utilising the MMP at the bedside and over half of these errors were rectified by medical officers within 48 hours (Sourial Mekhail et al., 2014).

4. **Planning and Implementing Solutions**

Bankstown-Lidcombe Hospital established a working party in November 2014 (including Executive, Nursing, Medical and Pharmacy representatives). To ensure that every patient received a BPMH, all disciplines were mandated to complete a MMP using at least two sources to document a medication history – one of which was strongly encouraged to be the patient and/or carer. In order to facilitate the hospital-wide rollout of the MMP, a policy was developed which provided instructions on how to complete MMPs and outlined the accountability for each section.

Further to this, intensive education sessions begun in December 2014. The first phase of education included an overview of the importance of medication safety and how the MMP contributed to reducing medication-related adverse events. The second phase was a practical demonstration on how to complete the MMP. In total, over 1200 staff members from BLH attended these sessions. An introduction to the MMP was also included as part of facility orientation for ALL new staff. This education campaign emphasised that medication reconciliation was the responsibility of the entire clinical workforce and highlighted the need to collaborate with patients and carers as sources of information.
In order to educate patients and carers regarding the purpose and value of the MMP, posters were developed and displayed across ward areas. Bedside information bulletins also included prompts for patients to work with their clinical team to ensure their medications were accurately documented. Posters were made available in English as well as the five most popular languages of the local area. The bulletins were also displayed electronically in the hospital foyer.

MMP resource folders (including a sample MMP, the policy and guides to completion) were designed and made accessible on every ward of Bankstown-Lidcombe Hospital to ensure readily available information for all staff. To assist clinical staff in filling out the MMP, a lanyard card detailing instructions was developed.

To ensure that a BPMH is available to patients, carers and clinicians at the point of clinical handover, a MMP column was included in all Bankstown-Lidcombe Hospital Patient Journey Boards (PJB) to facilitate discussion during daily meetings. Further to this, nursing and medical handover checklists were updated to include MMPs.

5. Evidence of Outcomes
To monitor the outcomes of this project, monthly audits capturing a large sample size (30% of inpatients randomly selected from each ward) are conducted. The following Figures 4 – 7 provide compiled results of the audits to date. Results demonstrate that all patients in BLH have their MMP available at the bedside with almost all of these having a completed BPMH (Figures 4 and 5).
Results also demonstrate active involvement from the multidisciplinary team with a shared responsibility for medication reconciliation across disciplines (Figure 6). The majority of patients (84%) have their BPMHs reconciled with their National Impatient Medication Chart (NIMC) (Figure 7) which ensures medication discrepancies are identified and a clear record of medication changes during admission is maintained.

In attempts to quantify the effect of these interventions on patient safety, a follow up audit was conducted in April 2015. Results show a vast improvement in medication errors at BLH (Figure 8) with a considerable reduction in the average number of medication errors per patient (Table 1).

Table 1: Average number of medication errors per patient.

<table>
<thead>
<tr>
<th>Date</th>
<th>Average medication errors per patient</th>
</tr>
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<tbody>
<tr>
<td>October 2013</td>
<td>1.8</td>
</tr>
<tr>
<td>April 2015</td>
<td>0.8</td>
</tr>
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</table>
6. Continuous Improvement
Monthly audits continue to be conducted and fed back across the hospital so that the sustainability of this project can be monitored. Practical education sessions continue to be offered every month to all clinical staff with patient-focused posters and information readily available. Ongoing education also continues to be provided during facility orientation for all new clinical staff.

The facility policy and MMP resource folders remain accessible in every inpatient ward at BLH and updated versions of the MMP lanyard card are currently being processed.

7. Striving for Best Practice
According to the National Standards, all patients should have a best possible medication history documented (4.6.1) and the medication history and current clinical information should be available at the point of care (4.6.2). The improvements made throughout this project indicate Bankstown-Lidcombe Hospital’s commitment to achieving best practice and reducing medication errors as a result.

INNOVATION IN PRACTICE AND PROCESS
The process of medication reconciliation has historically been perceived as solely pharmacy driven. This project successfully demonstrated that medication reconciliation is the responsibility of the clinical workforce in conjunction with the patient and their carer and the processes implemented have supported the multidisciplinary approach to medication reconciliation.

APPLICABILITY TO OTHER SETTINGS
Plans to make the MMP available electronically when Electronic Medication Management is put into operation at Bankstown-Lidcombe Hospital are underway. It is expected that prescribers will be able to directly populate the list of medications from the BPMH to the NIMC, further reducing the potential for medication discrepancies to occur.

The methods used to implement this project at Bankstown-Lidcombe Hospital are directly applicable to all hospitals in Australia who can learn from the multidisciplinary and patient-centred approach that was applied at Bankstown-Lidcombe Hospital. Bankstown-Lidcombe Hospital has been providing strategic direction to other NSW hospitals on a regular basis as well as sharing poster designs and education packages with other NSW Health entities to ensure results are reproducible in other hospitals.

F. REFERENCES


The Royal Children’s Hospital
Complex Care Service

Simplifying Complex Care
Lisa Stephens, Nicki Mountford, Susan Gibb, Doug Bryan

A. AIM
The aim of this project was to establish an integrated and coordinated model of care for children with complex medical needs at The Royal Children’s Hospital (RCH). The expected outcomes were to improve quality of care for these patients and their families and efficiently use hospital resources.

B. SUMMARY ABSTRACT
Background: It is an international and growing phenomenon that a small proportion of patients with complex healthcare needs can use a disproportionately large amount of healthcare services (Berry et al., 2013). As a result of medical advances and technology improving the life expectancy for previously life threatening conditions, the number and proportion of complex patients are increasing (Burns et al., 2010). The delivery of healthcare has not kept up with the changes required to meet the needs of this growing population of children and it will not be sustainable to continue to care for complex patients within our current healthcare systems. Literature review and benchmarking clearly indicate that there are efficiencies to be gained by improving the models of care, systems and workforce utilisation strategies used to care for these patients (Cohen et al., 2011).

Diagnostics and solutions design: The diagnostics and solutions phases of the project were conducted over a six-month period. The diagnostics were robust and consisted of data analysis, process mapping, issue identification and gap analysis sessions conducted with multidisciplinary staff. Consumer consultation and direction was sought by conducting semi-structured interviews with current complex patients and families, reviewing of over 50 complaints from complex patient and families and consulting with the RCH Family Advisory Council. Literature review and benchmarking were undertaken to review evidence of best practice in this area.

During the diagnostic phase three key areas for improvement were identified:

1. family partnership in care
2. care coordination, both within RCH and across community services
3. timely access to ambulatory advice and proactive support.

These three key areas for improvement became the primary drivers of service development and the tangible interventions were identified using a driver diagram analysis (Appendix 1). These interventions were prioritised using an impact-effort matrix by the steering committee and then quantified or qualified with voice of customer and data analysis, laying the foundations of the pilot program (Appendix 2).

Scope: The RCH defined complex care children by utilising four cardinal domains, as outlined by Rosenbaum et al. (2008), to describe complexity in healthcare needs as outlined below:
1. Chronicity: Child’s condition is expected to last at least six months.
2. Complexity: Involvement of, or anticipated need for, three or more medical specialties.
3. Fragility: The child has had five or more admissions in the past year or is anticipated to need this e.g. neonate.
4. Intensity of care: Functional difficulty resulting in interventional healthcare needs. e.g. tracheostomy tube.

(Patients must fit all criteria to be eligible.)

**Phase 1 (Pilot):** The complex care pilot program enrolled 20 patients with complex healthcare needs between March and June 2014. The patients were identified using hospital administration data of existing Respiratory, Developmental Medicine and Nephrology patients that met the above four criteria. Clinician input was then sought to determine eligibility.

Patients enrolled were diverse in age, geographic location and medical conditions. English proficiency did not limit access to the pilot program. Baseline data was collected on their bed days, ED presentations, inpatient admissions and Specialist Clinic appointments. Families also completed a survey to understand their experience of care across 15 components of service provision. These patients and their families were supported by the complex care pilot program for a period of six months (July – December 2014) and during this time there was regular consultation with families and staff to ensure flexible and responsive development of service provision.

A detailed evaluation plan demonstrated specific actions of the program that had direct impact on service provision resulting in a 30 per cent improvement in the patient and family experience of care leading to a better quality of life and more efficient use of RCH resources, specifically a 45 per cent reduction in bed days and a 43 percent reduction in Emergency Department (ED) presentations.

**Phase 2 (Expansion):** As a result of the pilot’s success, establishment and transition funding for service expansion was supported for the next two years. The RCH CCS is currently expanding to provide support for up to 200 patients and their families. The implementation plan for expansion of service provision is a considered and measured approach spanning two years, planned in two distinct stages. The first stage is focusing on building sustainable systems within and across organisations to support further spread of this work; and the second stage will focus on proofing these systems and developing partnerships with community providers. This staged approach includes regular evaluation and review phases, including consumer consultation.

To date the results of the expansion have mirrored the pilot results with improved experience of care and satisfaction of consumers with a significant reduction in the use of hospital resources.
A. AIM

Our initiatives aimed to address and reduce medication incidents with targeted, designation-specific and site-specific education and learning using retrospective clinical incidents and pharmacists’ intervention data.

The primary objective was to obtain an in-depth understanding of the pharmacists’ clinical interventions and a thorough evaluation of the potential impact of these interventions in preventing Medication-Related Problems (MRPs). An additional objective was to investigate all reported clinical incidents by analysing the trends of medication incidents to uncover common types of errors and any trends within our specialist women and newborn health service.

Lastly, we explored how multifaceted strategies and reflective targeted education and learning could provide a continuous feedback loop to staff on common medication-related problems with the goal of preventing future incidents.

B. SUMMARY ABSTRACT

Pharmacist Clinical Interventions

Pharmacist interventions are explained as “any professional activity by the pharmacist directed towards improving the quality use of medicines and resulting in a recommendation for a change in the patient’s medication therapy, means of administration or medication-taking behaviour” (SHPA 2013).

A retrospective study involving data analysis of all interventions documented by pharmacists was performed (tween Jan 2005-Dec 2014. All clinical interventions documented were evaluated to primarily identify common medications involved within each specialty area (neonatology, obstetrics and gynaecology), and to assess the risks of the Medication Related Problems (MRPs) likely to have been prevented; as well as to obtain institution specific MRPs for future staff education.

Data analysis of pharmacist interventions also revealed trends that allowed planning of continuous improvement activities that would positively impact patients’ health outcomes. The recorded interventions were collated according to ward, medication involved, description of the intervention, and the risk classification. The compiled results were presented to all clinical staff as a self-directed learning presentation as well as ward area in-service sessions. Staff were invited to provide satisfaction feedback on the collated results and presentations.

Medication Incident Reporting

The reporting of clinical incidents is managed and monitored by the hospital risk management coordinator via the state-wide Clinical Incident Management System (CIMS). Trends of all incidents are analysed and strategies to prevent future incidents are discussed and put in place. We performed an in-depth analysis of all medication incidents every two months for 12-months with a thorough discussion on the trends of incidents, common types of incidents and ways to improve medication management to prevent future incidents.

All medication incidents are subsequently presented at the following hospital committee meetings: Drug and Therapeutics Committee, Medication Safety Review Group, Antimicrobial Stewardship Group, Neonatal Coordinating Group, Patient Identification Committee, and the Pharmacy clinical meeting to disseminate the investigation and outcome of the error and the strategies to prevent future occurrences.

The in-depth investigation and analysis of medication incidents has led to many positive outcomes. Strategies put in place to reduce medication incidents include: changes to some clinical practice processes and guideline review and education, for example, a review of the Dosing Guideline to avoid confusing dosing regimens; avoiding look-a-like drugs by changing medication packaging with the manufacturer, ‘The Reporting of Medication Incidents’ and ‘Near Misses’.
At the resident medical officers’ orientation, medication-related problems including prescribing errors that are common, relevant or have had a significant potential for harm, are presented using real-life examples to junior doctors, followed by an open discussion of the incidents. A self-directed learning package developed and delivered by a resident medical officer and a clinical pharmacist on medication-related problems is also available with additional education sessions carried out through the department of Postgraduate Medical Education (PGME) for existing medical employees. The number of incidents reported after the introduction of these education initiatives reduced significantly over the next 6 months (see figure 11).

Other methods of disseminating the information on medication-related problems in the hospital include a Pharmacy Newsletter, ward in-service sessions and notice board displays highlighting the number of incidents in specific ward areas compared to the incident occurrence organisation-wide.

**Targeted Education**

We projected that our speciality-specific targeted education may have a greater impact on reducing prescribing errors and improving staff satisfaction by utilising this multifaceted interdisciplinary approach. Pharmacists have traditionally provided medication education based largely on generic prescribing errors, rather than institution or speciality specific examples. The organisation implemented this range of strategies to enable and encourage targeted, reflective learning to staff members using real-life examples to address medication incidents with the goal of preventing future medication incidents.

The speciality-specific education sessions are very well received by the staff members in the hospital. A satisfaction survey conducted in September 2015 demonstrated that in general staff from various health professionals enjoyed the self-directed learning package and benefited from the site specific medication clinical incident data.

**Conclusion**

These studies demonstrated that hospital pharmacists contribute to the reduction of Medication-Related Problems including some potentially fatal adverse medicine events. The analysis of medication clinical incidents promotes reflective learning and helps to identify institutional and speciality-specific medication related problems. A continued innovative strategy by multidisciplinary team members is required to augment and reinforce the safe use of medicines.

Pharmacists are well equipped to identify common, recurring prescribing errors and design educational sessions to target these. By designing education sessions integrating pharmacist knowledge with the needs and expectations of clinical staff, we have provided a more effective prescriber education programme. The flow on effect of targeted, specific, integrative education is a focus on continuous improvement and methods to effectively improve patient safety by reducing the harm caused by medication errors. Subsequently, hospital medication incidents continue to be analysed post education interventions for up to date trends in reported medication incidents.

Our interdisciplinary education model demonstrates many benefits including high satisfaction rates. We propose utilising this interdisciplinary, targeted approach as a tool to address site-specific issues with this model being potentially adaptable across a range of settings and professions.
## Category: Clinical Excellence and Patient Safety

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### Improving the Management and Outcomes of Elderly Patients with Hip Fractures
Albury Wodonga Health
Orthopaedic Unit: Surgical Ward 1

*Jenny Funnell, Lynne Frost, Elie Khoury, Jeremy Kolt, Franz Eversheim, Hong Yu, Barbara Robertson, David Lawrence*

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AIM: The aim of this project was to implement a patient blood management program (PBMP) amongst orthopaedic surgeons performing primary total hip arthroplasty at the Mater Private Hospital, Sydney. This PBMP involved assessment of a patient’s preoperative blood to identify and treat abnormalities (e.g. anaemia and iron deficiency) prior to surgery. The desirable outcome was reduction in the unnecessary exposure to allogeneic blood transfusion.

SUMMARY ABSTRACT: Blood transfusion has become a common mode of treatment for peri-operative anaemia. Reinforcing the use of the National Blood Authority’s Patient Blood Management Program (PBMP) guidelines, we conducted an intervention for orthopaedic surgeons to improve pre-operative patient assessment and reduce peri-operative blood transfusion.

Methods: Using a before-and-after study design, we recruited a convenience sample of surgeons who perform primary total hip arthroplasty at the Mater private hospital, Sydney. Surgeons received a single educational intervention to inform them about the PBMP and to encourage adherence to the PBMP guidelines. We also used monthly reminder emails, Blood Safe e-learning on the hospital’s intranet and posters that were changed monthly. Interactive nursing education was conducted with orthopaedic nurses and in February 2015 mid-way through the implementation phase, 35 patients were audited and the results were reported back to the surgeons. This audit feedback mechanism was useful as it indicated the progress of the individual surgeons in the program. Pre and post-audit were conducted to evaluate the type and number of blood tests ordered by the surgeons and the number and frequency of blood units administered to patients on the day of surgery until discharge (day 5-7).

Results: Three surgeons agreed to participate, 239 pre- and 263 post-intervention patient audits were conducted. A significantly increased proportion of patients had the required pre-operative blood tests including full blood count, full iron studies, (negative reactive protein and urea, creatinine & electrolytes from pre to post-intervention (0% to 94.6%). Administration of allogeneic blood transfusions transfused on day of surgery until discharge on Day 5-7 of the post-operative period decreased from 9.2% (n=22) pre-intervention to 2.3% (n=6) post-intervention. The use of single unit blood transfusions increased from 14% in the pre-intervention to 83% in the post-intervention phase. Those patients who received two or more units decreased from 86% (n=19) pre-intervention to 16.7% (n=1) in the post-intervention phase. No patients received pre-operative iron infusions in the pre-intervention phase whereas 4.5% (n=12) had an iron infusion in the post-intervention phase.

Conclusion: We successfully changed clinician behaviour in line with best practice, all the more notable as this was in a private hospital setting. Our results are indicative of the need for clinician support to implement practice change in orthopaedic surgery through pre-operative assessment for elective patients to diagnose and treat anaemia and iron deficiency. An effective PBMP can avoid unnecessary allogeneic blood transfusion and therefore mitigates risk to the patient.
to forms and education roll-out along with monthly informal problem solving sessions to assist with the ongoing staff needs.

Phase three: Evaluation. Trial evaluations have indicated that staff are becoming more educated and as a result more confident in the care they are now providing to patients and their carers. Patients with a Cognitive Impairment as well as separate diagnostic groups, including the three most common patient presentations - strokes, orthopaedic fractures and patients admitted for re-conditioning (Appendix 2). The project illustrated the importance and efficacy of applying a “back to basics” approach, utilising QI methodology, multidisciplinary team input, collaborative partnerships, effective rehabilitation processes, and evidence-based practice in clinical care to meet organisational and patient outcomes to a level that surpasses expectations.

Setting: Initial trial has occurred on the combined medical/rehabilitation ward of National Capital Private Hospital which is an acute care 130-bed private facility.

Results: Staff questions on confidence, comfort, job satisfaction and organisation support in caring for patients with a Cognitive Impairment resulted in less than 67% for all questions responding with either a neutral or considerate level in all areas. There was only 13% or less of all staff questionnaires stating a high level in any of these areas. Similar results were provided from Consumers of care (Carers of patients with a cognitive Impairment or patient’s themselves where possible), with questions surrounding their perception of staff understanding of their patient’s capabilities, understanding challenging behaviours, providing information to assist the carer on discharge all responding with less than 67%. Trial evaluations occurred at the end of the second roll-out with an increase in all baseline measures from 67% to 80% Implementation commenced in April 2016 to the next department, with plans to roll to all departments during the 2016 year.

Conclusion: The development of a specific program for National Capital Private Hospital to meet the care needs of patients and carers of Cognitive Impairment will increase the quality of care. This will be evidenced by increased consumer satisfaction, increased staff satisfaction. Further data is being obtained and analysed to support a decline in staff incidents related to managing difficult behaviors associated with a patient’s Cognitive Impairment, as it is hoped this program assists with preventative management.

Reduction of Cognitive Impairment and Staff Confidence using a QI Team Approach to a level better than the public sector benchmark comparison

Reduction of Cognitive Impairment and Staff Confidence using a QI Team Approach to a level better than the public sector benchmark comparison

A joint quality improvement (QI) project was initiated in 2012 between staff at CPHB and the Australasian Rehabilitation Outcomes Centre (AROC), which continued independently by CPHB over the latter three years. The project involved a broad range of stakeholders, including management staff, medical officers, nurses, allied health staff (from physiotherapy, occupational therapy, social work, psychology, dietetics, speech pathology and pharmacy) and administrative staff/ward clerks of the Aged Care and Rehabilitation Unit. The project team worked in genuine collaboration to identify reasons why patient LOS in the rehabilitation unit and their functional outcomes were poor compared to other facilities. Various improvement strategies were subsequently implemented.

Staff instigated more consistent rehabilitation processes. The rehabilitation journey and expectations were explained to new patients; nursing staff focused on guiding patients with their daily activities rather than doing tasks for them; continence pads and bed pans were discouraged if patients were continent in order to encourage mobility to the toilet; no monkey bars were provided unless determined by the physiotherapist or occupational therapist; patients were served meals in the dining room rather than their bedroom; and they attended exercise classes from the first day of their rehabilitation admission, with class times recorded in every room and the multidisciplinary team encouraging participation. FIM training and credentialing was also instigated to facilitate more reliable recording of patient functional scores. The date of discharge was established early for every patient and discussed in case conferences. More effective discharge planning was instigated by optimising referrals to community services when available.

For all rehabilitation impairments, data provided to AROC from 2009 to 2015 revealed a significant reduction in hospital LOS from 33.1 days in 2012 when the project started, to 30.0 days in 2013 and 27.2 days in 2014 (Appendix 1). The LOS in 2015 had increased to 29.6 days, and explanations can be provided for this. At CPHB, the average age of patients admitted for rehabilitation over 2015 is 78 years, compared to 74 years in facilities across Australia. Patients of the CPHB rehabilitation unit have been in hospital longer (ie. on other wards), with an average of 24.3 days compared with 12.0 days in other hospitals. 35% of CPHB patients have start delays in the rehabilitation facility compared with 9% in other facilities, and this can be attributed to insufficient rehabilitation beds. The delays may result in further deconditioning of patients. Patients at CPHB are waiting an average of 3.1 days from the time they are deemed appropriate for rehabilitation to the time they commence rehabilitation, compared with 0.4 days in other Australian facilities (AROC All Impairments Report, Calvary Public Hospital ACT, Jan 2015 – Dec 2015, p.4).

The change in functional scores from admission to discharge indicate a significant and ongoing improvement, with a steeper line of improvement since the project commenced in 2012, to a level well above the public sector benchmark comparison. These improvements apply to all impairments grouped together, as well as separate diagnostic groups, including the three most common patient presentations - strokes, orthopaedic fractures and patients admitted for re-conditioning (Appendix 2). The project illustrated the importance and efficacy of applying a “back to basics” approach, utilising QI methodology, multidisciplinary team input, collaborative partnerships, effective rehabilitation processes, and evidence-based practice in clinical care to meet organisational and patient outcomes to a level that surpasses expectations.

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Category: Clinical Excellence and Patient Safety

Abstracts

Reduction of Cognitive Impairment and Staff Confidence using a QI Team Approach to a level better than the public sector benchmark comparison

Reducing hospital length of stay while improving functional outcomes for patients admitted to the rehabilitation unit at Calvary Hospital in the ACT

Calvary Public Hospital Bruce Aged Care and Rehabilitation Unit

Jennifer Azurin, Caroline Fargher

Aim: (1) Reduce hospital length of stay for patients admitted to the Aged Care and Rehabilitation Unit at Calvary Public Hospital Bruce by at least two days each year until public sector benchmark comparison is met; and (2) Improve patient functional outcomes from admission to discharge from the Aged Care and Rehabilitation Unit to a level better than the public sector benchmark comparison.

Summary abstract: From approximately 140 public hospital rehabilitation facilities in Australia, the Department of Health & Ageing identified 12 facilities who were performing poorly on length of stay (LOS) and/or functional outcomes as measured by the Functional Independence Measure (FIM). Calvary Public Hospital Bruce (CPHB) in the ACT was one of those facilities who performed poorly with both hospital LOS and functional outcomes compared to other public sector facilities.
A virtual clinic: Cutting distance, empowering patients
Hunter New England Health Local Health District
Greater Newcastle Cluster Diabetes Service
Marion Hawker, Susan Neuner, Rosalie Arnold, Michelle Kriss, Shamsusnder H Acharya

AIM: To provide effective, more frequent, comprehensive and convenient patient review for patients requiring insulin dose titration through a “virtual clinic” - a telephone consultation service which reduces the need for clinic visits for insulin adjustments.

SUMMARY ABSTRACT: Initiating and adjusting insulin treatment often involves frequent visits over many months. Face-to-face appointments can be problematic for patients living distant from clinics, without transport or for those who have work and/or family commitments.

The telephone titration program was established by Greater Newcastle Sector (GNS) Diabetes Service to replace face-to-face insulin adjustments. The virtual clinic effects titration of insulin doses through planned and unplanned telephone contacts with Diabetes Educators, who are able to problem-solve issues relating to the patient’s care as they arise, on the spot. The program aims to both improve the health of patients on insulin therapy and improve the care experience. When the program was established in 2013, the goal was to enrol 1000 clients into the program by the end of 2015. The approach was highly successful, as assessed in an audit of a sample of attendees, resulting in a reduction in Diabetes Specialist clinic consultations, less travel, reduced waiting time and other related cost savings. Since this initial phase of the initiative, a further 500 patients have been enrolled in the program this year, from January to June 2016.

GRACE and New South Wales Ambulance enhanced Collaboration
Hornsby Hospital
Emergency aged care (GRACE) Geriatric Rapid Acute Care Evaluation
Nadia Yazdani, Michelle Shiel, Jonathon Tunhavasana

AIM: To reduce the number of avoidable presentations to the Emergency Department (ED) from Residential Aged Care Facilities. To reduce the number of avoidable calls to NSW Ambulance.

SUMMARY ABSTRACT: NSW Ambulance and GRACE (Geriatric Acute Care Evaluation) team at Hornsby Ku-ring-gai Health Service (HKHHS) has developed and implemented a simple low cost mechanism taking advantage of already available resources in the local health district to streamline patient presentations to the ED (Emergency Department) with sub-acute or chronic health issues. This mechanism allows the GRACE team access to the booking icon alert when an ambulance is booked for response to RACFs (Residential Aged Care Facility) in the area. As a result of this innovation we have achieved a 15% reduction in unnecessary hospital presentations.

Let’s Wed and See – Promoting Optimisation of Antimicrobials via the Marriage of GuidanceMS and the eMMS Prescribing System
Prince of Wales Hospital Pharmacy
Julie Mansy, Lucy Lin, Ross Vergios, Joanne Rimmington

AIM: From the results of previous Antibiotic Stewardship and GuidanceMS utilisation audits, it was identified at an organisational level that certain clinical areas uptake of this decision support and approval tool was at minimal levels. A decision was made to closely collaborate with the electronic Medication Management System (eMMS) team to embed Guidance MS within the electronic Medication (eMEDS) system throughout the hospital to enable the interface between the two systems to enhance greater usage of GuidanceMS by prescribers and thus streamline clinical practice workflow and promote greater optimisation of antimicrobial therapy.

SUMMARY ABSTRACT: The Antimicrobial Stewardship (AMS) committee at the Prince of Wales hospital (POWH) was established in July 2011. In 2012, a formal AMS Program was developed to improve patient outcomes through judicious optimization of antimicrobial use. Within the AMS program, GuidanceMS, an electronic decision support and approval tool, is utilized to allow effective monitoring of antimicrobial usage by the AMS team.

In line with POWH’s antimicrobial policy, an approval number is required from GuidanceMS before prescribing restricted antimicrobials on the written National Inpatient Medication Chart (NIMC). Whilst this would have ideally occurred in all cases, doctors were still able to prescribe antimicrobials without obtaining the necessary automated approval number, which meant nurses were still able to administer those medications to the patients. Pharmacists would trigger an alert on GuidanceMS if these medications were prescribed without approval during their daily clinical review of the NIMC. This notified the AMS team to follow up and encourage the prescriber to complete the approval process. If the patient’s medications were not reviewed by a pharmacist however and the patient was also not seen by the Infectious Disease physician during their admission, the approval process in these cases and hence, judicious use of antimicrobials may have been compromised.

Poor compliance with GuidanceMS was often claimed to be due to time constraints, lack of awareness of the system and local AMS policy and minimal policy enforcement across the hospital by senior clinicians other than Infectious Diseases.

In 2014, the AMS team began negotiations with the electronic Medication Management System (eMMS) team to collaborate on a way to integrate the GuidanceMS tool within eMMS as one interface, with the aim of increasing uptake of GuidanceMS and streamlining the prescribing process. The GuidanceMS tool in eMMS is triggered once the prescriber chooses a restricted antibiotic and mandates that the doctor obtains an approval number from GuidanceMS at the point of prescribing. This requires them to actively consider whether that particular antimicrobial is suitable for the indication they are using and provides guidelines and information on the correct dose and duration of therapy.

During preparation for the rollout of eMMS across the hospital, issues and concerns from different clinical areas of the hospital were raised regarding GuidanceMS and these were subsequently addressed by the AMS and eMMS teams. Training sessions conducted alongside the eMMS team were organized for doctors to promote the use of GuidanceMS within the electronic prescribing workflow and logins were organized for all prescribers. The AMS team maintained a highly visible profile in the hospital during eMMS roll out to promote rational antimicrobial prescribing through GuidanceMS. The Antimicrobial Stewardship and Knowledge (ASK) team provided guidelines that were adapted for electronic prescribing of antimicrobials. As the Emergency Department at POWH had demonstrated minimal uptake of the GuidanceMS tool evidenced through previous AMS audits, despite being at the forefront of initiating antimicrobial therapy for many patients, the subsequent recruitment of ED consultants as clinical champions to advocate and promote the use of GuidanceMS was a powerful way to ensure the culture of antimicrobial awareness was maintained throughout ED.
A snapshot study was carried out in the Emergency Department to determine clinician usage of GuidanceMS prior to and post implementation of eMMS to determine whether the integration of two systems in a single interface altered the number of approvals generated. This highlighted a dramatic increase in clinician utilisation of GuidanceMS post implementation. This suggests that the integration of the GuidanceMS tool in eMMS alongside the AMS team’s education and training program has been successful in promoting its use thus contributing to appropriate prescribing of antimicrobials in the POWH Emergency Department.

In addition, across other clinical areas at POWH, ‘pharmacy alerts’ for doctors to action into active approvals in GuidanceMS have simultaneously reduced but are still necessary on occasion which highlights that prescriber uptake with Guidance MS is not at full capacity everywhere despite the mandatory notification in eMMS. This reflects the need for further surveillance to ensure maximal uptake of GuidanceMS and concordance with Therapeutic guidelines and hospital guidelines.

User satisfaction surveys conducted by the AMS team will provide ongoing feedback to the AMS committee regarding GuidanceMS program effectiveness now it has been integrated within eMMS. This will allow ongoing improvements to be made while eMMS is continually upgraded and address issues of changing practice which may cause limitations with the program. Regular audits such as the National Antimicrobial Prescribing Survey (NAPS) and reports generated via eMMS will allow monitoring of GuidanceMS use to determine whether these initiatives instituted by the AMS team have been successful on an ongoing basis or whether other methods need to be additionally utilized in order to improve the overall provision of AMS at POWH.

GuidanceMS is not a program restricted solely for AMS. It has benefits in consolidating clinical guidelines, algorithms and patient care pathways regarding antimicrobials to allow monitoring of patient outcomes and optimise their judicious use. The GuidanceMS tool also has the potential, now it is integrated into eMMS, to be further extended to other clinical areas for monitoring and prescribing of high risk medications such as anticoagulants, insulin and narcotics.

GuidanceMS has been indispensable in monitoring restricted antimicrobials by the AMS team at POWH. Though there was limited uptake initially, the innovative approach of integrating GuidanceMS into eMMS has improved total number of approvals generated as evidenced in audits conducted post implementation. The success of this integration has attracted attention from other clinical areas with a view to adopting and adapting the system to monitor their specific patient cohort and clinical outcomes and also from other Local Health Districts currently using or rolling out eMMS in their hospital sites. Significantly fewer doctors. This after-hours period reportedly poses an increase risk of adverse events for patients, attributed to resourcing and hospital systems load. To address this, a realigned JMO rostering system was developed in collaboration with JMOs, Consultants and nursing staff and implemented as a trial during 2015. There was evidence of improvements in access to care for patients, handover of care issues to the evening JMO, support to day-shift JMO workload and continuity of care and patient flow, without significantly impacting on the learning and development of the JMOs. Implementation of the change was facilitated through broad collaboration with all affected staff, in particular JMOs and establishment of an oversight committee that identified and resolved minor issues as the trial progressed. This JMO staffing structure breaks the mould of aligning medical staffing levels to traditional working hours, moving it to better reflect patient care demands across the whole day. It has not previously been successfully rolled out in NSW. The initial two-term trial has been extended for the full year and whole-of-hospital roll out was supported by SWSLHD, HETI and Liverpool Hospital for 2016. Key results and lessons learned include the requirement for wide collaboration and support to successfully change working arrangements, to build rapport, trust and engagement and to identify common aims with a win-win outcome. The implementation committee has been critical to success, supporting collaboration and issue resolution. Challenges remain in effectively communicating relevant and concise information across the hospital community and maintaining momentum of the change with continued improvement.

**Implementation of Stereotactic Body Radiotherapy (SBRT) for Lung, Liver, & Bone Metastases with Dual Benefits:**
providing improved patient outcomes & increasing access for more courses per year.
Royal North Shore Hospital Radiotherapy Unit, Northern Sydney Cancer Centre Carolyn McGregor

**AIM:** To provide precise targeted small field, high dose Stereotactic Body Radiation Therapy (SBRT) to patients with secondary liver, lung, bone, spine and isolated pelvic lymph node lesions, resulting in effective palliation of symptoms in a reduced number of fractions compared to standard treatment courses, thus increasing patient capacity per annum.

**SUMMARY ABSTRACT:** Implementation of short course Stereotactic Radiotherapy (SBRT1) for lung, liver, spine, bone and isolated pelvic lymph node metastases has involved restructuring departmental protocols and staffing rosters to deliver significant gains for both our patients and our Centre. There have been dual benefits: for patients, the high dose delivered to small targeted treatment volumes has improved outcomes and reduced the number of treatment sessions required; and the centre has achieved efficiency gains by freeing space for more patient courses per year.

Significant collaborations across disciplines have developed protocols for patient selection, consistency in treatment planning techniques, plan verification quality assurance checks, & accurate image-guided SBRT treatment for selected palliative sites, utilizing our most sophisticated equipment with latest high dose rate beam capability.

**JETS: JMO Evening Team Staffing**
Liverpool Hospital
Medical Administration
Robynne Cooke, Jenelle Matic, David Massasso, Tim West, Russ Schedlich, Michael Njou

**AIM:** (1) To improve access to JMOs after hours for patients and their families. (2) To continue care by the day teams with an aim to improve patient flow, patient safety and patient care. (3) Reduce the shift length and overtime requirements for the JMO staff in the hospital. (4) To improve the workload distribution in the after-hours period for JMOs.

**SUMMARY ABSTRACT:** In Liverpool Hospital, over 90% of Junior Medical Officers (JMOs) were rostered during normal weekday working hours. However, demand for medical support extends into evening hours and on weekends, when there were...
The EPIC Project (Excellent Practice in Communication)
Nursing Clinical Handover Improvement Practices among acute inpatients
Liverpool Hospital
Clinical Nurse Consultant (CNC) Research Group
Kylie M. Wright
AIM: This project aimed to conduct an audit of nursing clinical handover practices, to implement evidence-based best practice recommendations and assess the impact of these changes in improving the effectiveness of nursing clinical handover across 11 units in a large tertiary hospital. The overall purpose of this project was to increase staff compliance with nursing clinical handover best practice recommendations and ensure there was timely, relevant and structured clinical handover that supports safe patient care. Objectives included:
- To improve the local practice of delivering nursing clinical handover
- To ensure nursing staff have been educated regarding best practice and the policy of clinical handover
- To ensure patient and family engagement in the clinical handover process

SUMMARY ABSTRACT: The nursing handover normally occurs at the beginning of a nurse's shift and is considered essential for continuity of care. Nursing handover has the potential to communicate accurate information about a patient's condition, treatment and anticipated needs but also has the potential to be ineffective or even harmful if information is incomplete or omitted. The Australian Commission on Safety and Quality in Health Care has recognised clinical handover as a National Standard, thus reinforcing its importance.

This project aimed to conduct an audit of nursing clinical handover practices, to implement evidence-based best practice recommendations, to assess the effectiveness of these strategies to maximise the effectiveness of clinical handover across 11 units in a large tertiary hospital.

The project used the Joanna Briggs Institute's Practical Application of Clinical Evidence System and Getting Research into Practice tool for promoting change in healthcare practice. A baseline audit of 330 observations of nursing clinical handover was conducted and measured against seven best practice recommendations, followed by the implementation of targeted strategies and follow-up audits.

The baseline audit revealed significant deficits between current practice and best practice in all but one criterion. Barriers for implementation of nursing clinical handover best practice criteria were identified by the project team and a bundled education strategy was implemented. There were significantly improved outcomes across all best practice criteria in the follow up audit and across sustainability audits conducted nine months later.

The findings showed how audit may be used to promote best practice in healthcare and that focussed education and provision of relevant resources can have an immediate and positive impact on clinical practice. Some of the measured criteria improved to a moderate degree, leaving room for improvement, however by the end of the project attitudes towards nursing clinical handover had been ‘transformed’ from a passive, routine ‘must do’ task, to an active process with a focus on safety and patient/carer engagement. A spread and sustainability plan has been implemented and sustainability audits are continuing to demonstrate promising results.

There is an 'eye' in team. Experiences of merging two emergency departments.
Sydney Sydney Eye Hospital
Sydney / Sydney Eye Emergency Department
Angela Duncan, Danielle Newman
AIM: The purpose of the project was to amalgamate the Sydney and Sydney Eye Emergency Departments (ED) without major disruption to the service, or a reduction in the standard of care provided, then evaluate the effectiveness of the processes implemented to ensure the needs of the patients treated in the newly merged Sydney/Sydney Eye Hospital Emergency Department (SSEHED) were being met.

SUMMARY ABSTRACT: Background: The Sydney/Sydney Eye Hospital has a long and proud history. It was the first hospital in Australia, and since its opening in 1811 it has met the needs of the people of Sydney and beyond. In recent years the Hospital has emerged as the major hand and ophthalmic referral hospital for the state. Since September 1995 there have been two emergency departments located on the same site, one caring for general ED patients and the other caring for patients with ophthalmic complaints. Since its inception, the assessment and care of ophthalmic patients between the hours of 0800-1700hrs (Monday to Friday) were conducted in the Sydney Eye ED. On weekends and between 1700-0800hrs the general ED cared for both general and ophthalmic patients. This often led to confusion amongst patients and increased clinical risk. In August 2015, the decision was made to merge the two EDs within the existing footprint of the General ED.

On Monday the 16th of November 2015, Sydney Hospital Emergency Department (ED) and Sydney Eye ED amalgamated to form a single unified ED in order to streamline the care of emergency ophthalmic patients and make better use of the resources within the organisation.

Method: This project required a highly collaborative approach, both in pre and post intervention stages and was conducted in three main phases.

Phase one: In order to complete this task within the 12 week time frame outlined by hospital executive and district, steps were taken to identify the key stakeholders to commence consultation, planning, training and equipment procurement. Communication pathways were established through the use of a number of mediums, such as, SharePoint, email, meetings and bi-weekly newsletters in order to ensure the information relevant to the merger was distributed widely.

An analysis of the previous three years FirstNet data was conducted in order to establish the anticipated increase in patient presentation numbers, as well as the types of ophthalmic presentations that could be expected. By establishing this, the organisation allotted additional nursing and medical personnel to work in the newly merged department and an education program was developed to up-skill the general ED nurses to care for the top 5 most common ophthalmic ED presentations. This program was then used as a platform to develop the ongoing collaborative general/ophthalmic education program now implemented at Sydney/Sydney Eye ED (SSEHED). In order to manage the increase in patient presentation numbers the department's internal processes were reviewed and altered based on the projected data available prior to the merger. Once developed these new processes were tested in mock scenarios leading up to the merger and the findings proved to be invaluable.

There were no major capital works done within the Emergency Department and the project team made alterations to the existing layout of the department within the current footprint to try and support the suggested model of care.
Additional equipment was required in order to care for the ophthalmic population and was purchased leading up to ‘go live’ date.

Phase two: On the 16th of November 2015, the Sydney and Sydney Eye EDs were merged to create one department. During the initial weeks of the merger a daily huddle was held at 1600hrs daily to discuss any pressing issues that needed to be addressed and to provide staff with forum for discussion. Issues that required more immediate action were addressed and others were prioritised for further discussion at a later date.

Phase three: Three months after the merger a formative evaluation (Duncan, Newman, 2016) was conducted to review the newly implemented processes, models of care, physical environment, staffing levels, patient safety, staff and patient satisfaction and equipment. This was conducted through a review of the IIMS system, analysis of FirstNet data reports, risk presentations, staff and patient surveys, discussion groups and process mapping.

Results: Since the merger the SSEHED has seen an average of 94 patient presentations a day. This is on average a 77% increase in presentation numbers to the Sydney ED than that of the same period last year. A total of 4885 ophthalmic patients and 3869 general patients were seen in the ED. Of the 4885 ophthalmic presentations seen in the three month period being evaluated, approximately 13% were considered clinically complex, requiring significant time, resources and senior consultation in order to manage them effectively. Despite the significant increase in presentation numbers following the merger, the Emergency Target Performance (ETP) only dropped by 1.1%, with an average ETP of 88% which is just below the state target of 90%. (Duncan, Newman, 2016)

Overall patient satisfaction was good with 50% of those previously treated in the old eye ED stating that their experience was better. The remaining 50% stated it had remained the same. Staff satisfaction changed as a direct result of the merger. Many felt that the physical environment and staffing levels contributed largely to a drop in staff satisfaction.

IIMS data was reviewed and certain trends did emerge. These included: clerical/data processes, streaming processes, system and resource overload and patient safety. Risk analyses were performed and highlighted several environmental risks that required further work to address and overcome.

The process mapping attended, supported the findings of the IIMS review and provided a clear starting point from which to make some positive changes to processes, directly impacting on patient flow and staff satisfaction.

Conclusion: The collaborative, systematic approach conducted in preparation for the amalgamation of the two EDs adequately prepared the department and its staff to meet the needs of the ophthalmic patients now seen at SSEHED. This was able to be done with limited disruption to the service as evidenced by the sustained high ETP and in most cases improved the ophthalmic patient journey in the ED. This did however come at a cost with staff satisfaction being negatively affected.

The 3 month formative evaluation highlighted the victories and provided tangible evidence for improvement that the organisation can now act on, to increase staff satisfaction and further improve the service and standard of care provided to our ED patients.

**Person-Centred Nursing Orientation**

**Sydney/ Sydney Eye Hospital**

Clinical Nursing Services Department, Sydney/Sydney Eye Hospital and Clinical Practice Improvement Unit (CPIU), Prince of Wales Hospital

**Lynette Higgs, Katy Rivas, Agnes Shear**

**AIM:** To illustrate how the concept of a person-centred approach is a fundamental element in the orientation of all nurses employed at Sydney/Sydney Eye Hospital (SSEH) with the aim of: building workforce capacity; achieving workplace readiness and standardising current clinical practice which is aligned with endorsed policies and procedures.

**SUMMARY ABSTRACT:** Background: Located in Sydney’s Central Business District (CBD), SSEH is the oldest hospital in Australia. SSEH provides general and specialist health care to the public and community including 24 hour emergency care services, general medicine including high dependency, peri-operative services, day surgery, ear, nose and throat surgery. As a specialised tertiary referral facility of South Eastern Sydney Local Health District, SSEH is a Centre of Excellence for the specialty of Ophthalmology, providing ocular health services to patients with ophthalmic diseases and disorders, and for the specialty of patients with Hand disorders, requiring complex Hand surgery.

The Hospital provides services to a local population of 50,000 plus visitors, tourists and workers in the CBD and a large population of homeless persons. It has a bed capacity of 94 beds with 10 of these beds dedicated to Surgical Day Procedure patients.

Person-centred orientation is critical to successful transition of nurses into a workforce with defined clinical specialty streams. Traditionally, orientation of nurses commencing employment consisted of a one day program of face to face presentations including: Intravenous (IV) medication administration, anaphylaxis, blood and blood products, drug and alcohol, local patient deterioration processes, basic life support and an examination to assess competencies of knowledge of relevant policies. Overall, summative feedback was positive, however, it was not sufficient to indicate a level of nurses’ readiness for the actual workplace environment.

The project’s focus is on enhancing the one day Hospital orientation program provided to all nurses that is followed by a ward/unit based orientation specifically targeting the clinical specialty, work demands and expectations of that area.

**Method:** The Health Innovation Network (2016) describes person-centred care as ‘a way of thinking and doing things’. It ensures the needs of everyone involved are considered. In a recent ‘Patient Experience Symposium’ held in Sydney, Thompson (2016) poignantly stated ‘Keep the patient at the forefront and everything will unfold from there’. This person-centred ethos has informed the approach and foundation on which we reengineered the nursing orientation program. To achieve this, the Project Team utilised the Essentials of Care (EoC) quality improvement framework, which has been utilised at SSEH since 2009.

EoC is a NSW state-wide patient safety and quality program underpinned by the principles of practice development, which requires that all stakeholders have the opportunity to participate in the identification of shared values and collection of data to inform meaningful conversations about practice. This provides a baseline for understanding, challenging and changing rituals and assumptions, enabling new ways of working for teams that are values and evidence based to improve patient care.

The project lead consulted with eight key stakeholders involved in orientation of nurses in the workplace, to participate in
revision of the program. The Clinical Nurse Educators, a Clinical Nurse Consultant together with the Nurse Manager, worked towards developing a program that was authentic and produced a foundation from which to build a further specific workplace/ward based induction.

There were three phases to re-designing and implementing the revised one day program:

Phase 1 - the group developed ways of working to ensure equity of voice, contribution and acknowledgement of everyone’s expertise in their clinical specialties. Secondly, using the EoC values clarification process, the group determined shared values and beliefs regarding orientation, enabling ownership and consensus to strategise and determine essential deliverables for person-centred nursing orientation.

Phase 2 – the group developed the new model of orientation using the shared values as the foundation to consensus to choose core content. Using brainstorming technique, the group identified a patient journey approach as the best model to deliver key content. This entailed following the patient journey from admission through to discharge, incorporating key content underpinned by the principles of quality, safe, compassionate care throughout the journey (Appendix 1).

An ophthalmic patient profile was chosen and developed to map the patient journey with the group’s professional expertise of achieving workplace readiness with standardised current clinical practice (Appendix 2). Critical elements included: safe work practices; policies/procedures; assessment and effective communication including correct documentation, handover and escalation protocols. A draft program was critiqued, amended and piloted to produce the final prototype. A resource inventory was collated and equipment sourced, including intravenous protocols, clinical equipment and role play props for presenters to utilise during presentations.

Phase 3 - comprised of the implementation and evaluation of the new model of orientation program. The beginning of 2016 provided an ideal opportunity to introduce the new program with a large intake of new staff including first year transitioning registered nurses.

The structure of the nursing orientation program included the following sessions: Director of Nursing and Support Services welcome, Emergency Department presentation, Perioperative journey including admission to the Day Procedure Unit and transfer to Operating Theatres (Pre-operative to Post anaesthetic care phases), post-operative journey to the Ophthalmology ward, and transfer to the Medical High Dependency Unit for management of a critical event (Appendix 3).

Whilst the patient journey results in a safe discharge to home, trajectory scenarios are posed to incorporate clinical variances such as a basic life support interactive session. Additionally, alcohol use is flagged as an unknown co-morbidity complicating the patient admission, providing an opportunity to introduce drug and alcohol assessment, management, referral and consultative processes. Such sessions allow for problem thinking skills whilst maintaining clinical authenticity during the orientation.

Since its inception, the program has been repeated in this format in April and June and a total of twenty nine (29) nurses have been orientated to SSEH.

Conclusion: Evaluation feedback demonstrates participant’s familiarisation with established communication processes, policies and procedures, and local documentation requirements contributing to workplace readiness (Appendix 4). Incorporating the concept of a person-centred approach utilising a patient journey to transform the SSEH nursing orientation program has had a positive outcome for both participants and presenters. Opportunities to build resource capacity through succession planning are evident with the group’s ability to present and lead across key content areas in a confident manner. The improvement of the nursing orientation program is an example of sustaining workforce capacity by utilising the principles of practice development.

Improving the Management and Outcomes of Elderly Patients with Hip Fractures
Albury Wodonga Health Orthopaedic Unit: Surgical Ward 1
Jenny Furness, Lynne Frost, Elie Khoury, Jeremy Kolt, Franz Eversheim, Hong Yu, Barbara Robertson, David Lawrence

AIM: To improve the pre and post-operative management and outcomes of Elderly Patients with a Fractured Neck of Femur, with the introduction of a shared bed card arrangement, at Albury Wodonga Health (AWH). With a patient centred care focus the intended benefits would be a reduction in the pre and post-operative complications, improved patient outcomes and a reduction in hospital length of stay.

SUMMARY ABSTRACT: A review of medical records data by admission diagnosis showed statistically that an average of 150 elderly patients presented to Albury Wodonga Health with a Fractured Neck of Femur each year.

There was a current clinical pathway in place however this patient population was of particular high risk and it was noted that medical emergencies, complications and mortality were frequent and regularly under review at the morbidity and mortality meeting.

With the need for clinical improvement, better patient outcomes and a review to identify where current process/pathway was working well or failing, a multidisciplinary group at AWH initiated a review of the “Management of Patients with Hip Fractures” as published by the NSW Agency for Clinical Innovation (ACI) December 2013.

The first step was to formalise a working party with a multidisciplinary team approach and review the minimum standard recommendations as outlined by the NSW Agency for Clinical Innovation (ACI) December 2013. Representation was sought from Orthopaedics, Medicine, Geriatrics, Anaesthetics/Pain Management, Rehabilitation Medicine, Senior Nurses, and Allied Health.

Seven minimum standards were outlined by the ACI:
- Standard 1: Orthogeriatric clinical management of each patient
- Standard 2: Optimal pain management
- Standard 3: Surgery within 48 hours and in daytime hours (regardless of inter-hospital transfers)
- Standard 4: Surgery is not cancelled
- Standard 5: Commencement of mobilisation within 24 hours of surgery
- Standard 6: Re-fracture prevention
- Standard 7: Local ownership of data systems/processes to drive improvements in care.

A variance analysis was undertaken for the clinical pathway. At this time a review of the “Care of the Older Person Toolkit” (Department of Human Services, 2012) was also taken into consideration and the pathway was updated to incorporate “Best Practice” with a “Patient Centred Care Focus”.
Baseline data was collected to identify variances. Mortality, complications, time until theatre, medical emergency calls and length of stay were reviewed.

The Team identified the objectives which were achieved and resulted in a new a model of care.

Objectives:
- Working party to be established and identified
- Orthogeriatrician model to be developed for shared care of Fractured Neck of Femur Patients
- Baseline audit data to be collected and reviewed for comparison years
- Review and update of the current Fractured Neck of Femur pathway to ensure standard recommendations are incorporated
- Review and update pathway in relation to clinical issues in relation to the older person for the identification and prevention of delirium, pressure ulcers, falls, nutritional support, VTE prophylaxis, discharge and transfer planning process
- Development of alert system to identify this patient population early at the point of admission
- Multidisciplinary rounding
- Action plan completion
- Education and roll out
- Ongoing review and feedback to Executive Management and other Teams.

**Perineal Protection**

Bankstown-Lidcombe Hospital

Maternity Services

Rebecca Moore, Ronia Awick, Pauline Kelly, Renae Hains, Amanda Vujanovic

**AIM:** The aim of Perineal Protection was to reduce the incidence of obstetric anal sphincter injuries sustained during normal birth and improve management and follow up for those women who sustain an OASI.

**SUMMARY ABSTRACT:** A quality project was initiated to reduce the incidence of obstetric anal sphincter injuries (OASI) sustained during normal birth. This project was led by the midwifery leadership team. The project used multiple evidenced based strategies to reduce the rates of OASI sustained during normal birth. These strategies included:

- Actual incidence of OASI was measured through notes audit and review.
- A comprehensive education package was developed and delivered to the midwifery staff of Maternity Services
- A patient leaflet about Perineal Massage was developed and given to expectant women in the antenatal clinic
- A new evidence-based policy Warm compress application during second stage of labour was developed and implemented
- New episiotomy scissors were purchased
- A flowchart to improve follow up for women who have sustained an OASI was developed and implemented
- The ongoing rates of OASI were monitored and staff were provided with feedback.
- Staff and consumer satisfaction surveys measured the project

As a result of the implementation of the above strategies, Bankstown-Lidcombe Hospital has successfully reduced the rates of OASI sustained from normal birth. There have been no 4th degree tears from any vaginal births since January 2015 and no 3C tears from a normal birth since January 2016. There have been no third or fourth degree tears from a normal birth in April or May 2016.

**Doctors, Pharmacists, Nurses, Administrative staff, Patients and Carers – the new multidisciplinary team**

Bankstown-Lidcombe Hospital

Multiple Departments

Lucy Nair, Karma Mekhail, Natalie Raffoul, Wendy Harmer, Chris Leahy, Caroline Farmer, Linda Campbell

**AIM:** In an effort to empower patients and carers to contribute towards their own medication management and safety, a multidisciplinary clinical workforce team collaborated with the patients and carers of Bankstown-Lidcombe Hospital to implement the NSW Health Medication Management Plan (MMP).

**SUMMARY ABSTRACT:** This project aimed to enhance collaboration between patients, carers and the clinical workforce to increase medication safety and reduce adverse events as a result of inadvertent medication errors throughout every patient journey.

Hospital Executives, Nursing, Medical and Pharmacy representatives formed a working party with the primary aim of ensuring that 100% of patients receive a Best Possible Medication History (BPMH) documented on a Medication Management Plan (MMP). A policy mandating MMPs for every inpatient was developed outlining accountability and detailed instructions on how to complete a BPMH, confirmed with two sources. Intensive education of 1,200 staff members, resource folders and lanyard cards provided a ready reference to staff. MMP education was included in facility orientation, clinical handover and Patient Journey Boards. Multilingual paper based and electronic posters targeting patients and staff were rolled out across the hospital.

Frequent hospital-wide audits showed that within two months, 100% of patients had a MMP at the point of care (i.e. the bedside). Approximately 92% of MMPs included a BPMH and over 60% had their BPMH reconciled with their medication chart. A multidisciplinary approach was successfully adopted with 41% of MMPs initiated by Pharmacists, 38% by Medical Officers and the remaining 16% by Nurses. These results continue to be sustained as determined by monthly audits, with the most recent audit in April 2016 showing 100% of patients had a MMP and 88% of MMPs included a BPMH. Results demonstrate a positive effect on patient safety with a considerable reduction in the average number of medication errors from 1.8 errors per patient in October 2013 to 0.8 in April 2015.

Collaboration between the clinical workforce proved successful in implementing an effective process of medication reconciliation with reduced incidence in medication errors.

**Hourly Patient Rounding – building relationships**

CCLHD

MAU

Tracy Southwood

**AIM:** The aim was to reduce, falls to less than 4 per 1000 bed days, hospital acquired pressure injuries (HAPI) to less than 1.5 per 1000 bed days, missed medication incidents by half while improving patient satisfaction within 3 months of introducing HPR

**SUMMARY ABSTRACT:** The aim of every nurse is to provide quality patient care, maintain patient safety and promote patient satisfaction. Hourly patient rounding (HPR) is a patient centred care approach to proactively interact with patients every hour, using focused key words to assess and address patient needs. Using Practice development (PD) methodology, the MAU developed a tailored HPR framework which aimed to reduce falls, hospital acquired pressure injuries (HAPI) and...
Knees Up... It’s Hip to be Educated – a Compulsory Joint Education Program
Northern Beaches Health Service – Northern Sydney Local Health District
Mona Vale Hospital
Deb Stewart, Samantha West, Rachelle Fuxton, Angela Hermes, Jayne Eagleton

AIM: Review of Mona Vale Hospital length of stay (LOS) data identified our longer than average LOS for elective joint replacements. The need to drive improvement in the process combined with new surgical techniques such as an anterior approach in total hip replacements led to the identification of the need for change. Our aim was to collaborate with consumers and the multidisciplinary team to improve consumer outcomes and experiences, and reduce the higher than average length of hospital stay for elective hip and knee replacements at Mona Vale Hospital. The team was also aiming to reduce the potential delays to surgery due to underlying medical conditions, reduce the high number of consumers requiring inpatient rehabilitation and reduce complaints of poor management of hospital stays with no set discharge plan.

SUMMARY ABSTRACT: Mona Vale Hospital length of stay (LOS) data is compared to peer hospitals, and it was review of this data that identified our longer than average LOS for elective joint replacements. The need to drive improvement in LOS combined with the knowledge that waiting and preparing for elective surgery for a hip or knee replacement can be a daunting prospect for many consumers led to the identification of the need for change in consumer education, redefining the journey for this group of consumers. At the same time Mona Vale Hospital recognised the need for a focus on patient centred care, including the use of consumer feedback in the planning and delivery of care.

The Compulsory Joint Education Session (CJES) was developed and has been running at Mona Vale Hospital for over a year. It is proving to be a hit with consumers and is helping to prepare them for their surgical journey.

In developing the CJES the vision of the multidisciplinary team was clear. For the community our aims were to:

- Provide consistent information to our consumers - including a booklet to refer to after the session and to bring with them to hospital
- Introduce consumers to staff and the process they would be participating in
- Provide consumers with an interactive opportunity to listen and share their preparations for surgery
- Provide consumers with the opportunity to ask questions about their surgery and their recovery

The vision was also clear for the organisation. We wanted to:

- Minimise the risk of surgery being cancelled
- Efficiently plan for the consumer’s surgical journey with a renewed person centred approach to care

With multidisciplinary team input, and review of consumer feedback information, the CJES was developed. A session is scheduled for each consumer as soon as a recommendation for admission (RFA) request is received from the Orthopaedic Surgeon, when consumers are booked on to the waiting list. The collaboration between the consumer and the hospital starts with this early contact and commences the partnership between the consumer and the hospital, defining the expectations between all players. A conscious decision was made by the team to start this collaboration early in the consumer’s surgical journey. The usual practice was for education of consumers requiring joint replacements to occur in a Pre Admission Clinic setting, and this was often scheduled very close to the time of surgery.

The CJES are held once a month and are interactive. The team provides consumers and their families/carers with extensive information on how to best prepare for their elective surgery with a strong emphasis on health promotion activities such as weight reduction, alcohol minimisation and smoking cessation prior to surgery. This early contact prior to surgery allows consumers to make informed decisions about lifestyle changes required in order to optimise their ability to prepare and recover from their surgery. Other aspects of the sessions focus on what consumers can expect in hospital, how they will recover postoperatively, and what will happen after they are discharged from hospital.

The sessions are run jointly by nursing, physiotherapy and occupational therapy staff with input from medical and pharmacy staff. Approximately 12 consumers attend this group session prior to receiving their date for surgery, and family/carers are invited to participate as well. Sessions run for 1 hour, and include ample opportunities for questions and discussions with clinical staff. At the beginning of the session consumers are provided with an information pack, health promotion material and pathology request forms to obtain baseline bloods. The contents are explained to consumers – instruction is given on what to complete and bring back for the Pre Admission Clinic appointment. Consumers are targeted for specific requirements, for example those who have diabetes are highlighted before the CJES and referred to the diabetic nurse educator who then sees them at the session to offer support, education and advice.

Aiming to Localise Long-term Innovation to Achieve Networks within the Community including E-health (ALLIANCE)
South Western Sydney Local Health District
Wollondilly Health Alliance, Clinical Innovation & Business Unit

AIM: The aim of the ALLIANCE project is to proactively address the ongoing health issues facing the Wollondilly Shire community; and work towards creating a better serviced and healthier Wollondilly community, by developing new and innovative ways to connect services in the region. It is also aimed to maximise community participation, harness emerging technologies and optimise interagency coordination.

SUMMARY ABSTRACT: Until recently, Wollondilly Shire has not had a sufficiently concentrated population to support a range of health services. The Health Needs Assessment Report (2014) for the Wollondilly Shire has identified a range of gaps. Examples include:

- Shortage of General Practitioners, especially female
The Australian Council on Healthcare Standards  
19th Annual ACHS Quality Improvement Awards 2016

**Category: Clinical Excellence and Patient Safety**

- Lack of afterhours services
- Limited access to range of services, e.g. medical specialists
- Limited public transport services
- Limited residential aged care facilities
- Health literacy and awareness about available health services
- Health service planning aligned to Wollondilly growth projections
- High levels of obesity; drug use and smoking
- Connectedness between health providers

A review of statistical data from the NSW Adult Population Health Survey identified higher rates of people from the Wollondilly community reporting they are overweight, consuming alcohol at levels posing lifetime risk, and smoking during pregnancy when compared to NSW. The region also has higher rates of lung cancer compared with NSW.

An extensive consultation process with Wollondilly residents to examine their experience and perceptions of health issues and services in the Shire presented strong and consistent concerns about the very limited availability of and poor access to health services in Wollondilly.

In March 2014, the South Western Sydney Local Health District (SWSLHD) partnered with the South Western Sydney Primary Health Network (SWSPHN), Wollondilly Shire Council, local General Practitioners, Non-Government Organisations and private industries to establish the Wollondilly Health Alliance (WHA) to design a service model aimed at identifying and addressing health care access issues in Wollondilly Shire.

A priority setting workshop with WHA members identified the following strategies to address priority issues.

- Future planning for health services aligned to predicted population increase
- Better sharing of patient health information between health providers
- Improving access to a number of community health services
- Increasing community awareness about local health care services and treatment options
- Attracting and retaining health professionals
- Preventative health

The health priorities for Wollondilly Shire underwent a validation process with General Practitioners (GPs) across the Wollondilly and Macarthur Local Government Areas. In depth semi-structured interviews with five GPs and one practice owner were conducted. There was overall support and agreement for each priority area with several suggestions provided from the perspective of primary health.

The prime focus of the Wollondilly Health Alliance is on capacity building, in terms of:

- Health service availability
- Provider ability to provide coordinated care in partnership with primary health care
- The populations’ ability to partake in preventative health and self-management

At the centre of this approach is partnerships: both engaging the community in designing and planning innovative models of integrated care and evaluating the approaches in partnership with the community; and partnerships with service providers (government, primary care and non-government agencies), to implement these models by realigning current services and to promote improved access to the limited resources available in Wollondilly Shire.

Following the formation of the Wollondilly Health Alliance and the development of a comprehensive needs assessment, the first planning workshop with members of the Wollondilly Health Alliance and other key stakeholders was undertaken to identify strategies and actions to address priority issues. This included established working groups tasked with identifying and scoping priority models of care and resources required for implementation in order to select suggested areas for action. The working groups were formed in relation to two of the integrated care elements of Care Process and Health Promotion.

The first initiatives implemented across Wollondilly aimed to address the areas of: Accessibility; Chronic Disease Management; Health Information; Outreach; Social Planning; and Telehealth.

In an effort to facilitate change, smaller action groups have been formed to operationalise suggested areas for action. The action groups comprise of stakeholders who are at the forefront of service delivery and the consumer needs. This has proven pivotal in driving initiatives forward.

A range of key initiatives to support the service model have been developed by mapping the top health priorities and issues derived from extensive consultation, with integrated care core elements. Driven by key stakeholders, these projects have achieved a range of outcomes, including improved coordination of care across the health system, better targeting of services for patients with chronic and complex conditions and improved patient experiences.

**How does the anxious patient benefit from a Pre Admission visit in our acute care facility**

**St Vincent’s Private Hospital Sydney**

**Pre Admission Centre**

**Eilish Hoy, Laura Hunter**

**AIM:** Pre Admission Centre aims to reduce anxiety in elective surgical patients and to prepare them mentally and physically for surgery to assist them to achieve a full recovery in the shortest possible time with the least amount of discomfort.

**SUMMARY ABSTRACT:** Anxiety can be a dominating feeling for many patients prior to surgery. This pre-operative patient cohort is very vulnerable as there is a fear of the unknown, surgery, anaesthesia, pain, altered body image and also a fear of death. Managing anxiety in the pre-operative patient is very important as identified by (Berth et al., 2007) who states that “those with an elevated level of pre-operative anxiety require larger doses of anaesthetic, have on average a greater post-operative reliance on analgesics and require longer stays in hospital”. This is reiteratd by (Kl et al., 2012), (Hobson et al., 2006) and (Ebirim and Tobin, 2011). The Pre-admission service has implemented mixed methods to reduce anxiety in this vulnerable patient’s population. The aim of pre-admission assessment and education is to prepare the patient mentally and physically for surgery to assist in a full recovery in the shortest possible time with the least amount of discomfort and empower patients to make an informed decision about their care by reducing anxiety through rapport and education.


**EBIRIM, L. N. & TOBIN, M. 2011. Factors Responsible For Pre-Operative Anxiety In Elective Surgical Patients At A University Teaching Hospital: A Pilot Study. Internet Journal of Anesthesiologyology, 29, 1-11 p.**


St Vincent’s Private Hospital Sydney, raising the bar in Breast Cancer related lymphoedema: L-Dex™ is best!
St Vincent’s Private Hospital Sydney
Breast Care Nurse Clinical Nurse Consultant
Deborah Maguire
AIM: To ensure patients who undergo surgery for breast cancer are accurately assessed and have a better understanding of early identification and management of lymphoedema.

SUMMARY ABSTRACT: DiSipio’s study estimated a 21.4% incidence of unilateral arm lymphoedema when restricted to data from prospective cohort studies (30 studies) (DiSipio, 2013). This already vulnerable patients population can suffer from the long term physical, emotional and financial burden that has been historically associated with lymphoedema post breast surgery. The Breast Care Nurse and Breast Surgeons have invested in an evidence based measurement ‘L-Dex™’ and supportive education empowering this patient population to identify signs and symptoms of lymphoedema and seek early management. The L-Dex™ assessment has replaced a crude measurement that was fraught with inaccuracy. In the short term these vulnerable patients who undergo surgery for breast cancer are accurately assessed and have a better understanding of early identification and management of lymphoedema. In the long term they are better positioned and empowered to prevention of associated arm morbidity leading to better outcomes and quality of life for this patient population.

St Vincent’s Private Hospital Sydney, raising the bar in Breast Cancer related lymphoedema: L-Dex™ is best!
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St Vincent’s Health Australia: Thermal Care Collaborative
St Vincent’s Health Australia
Private and Public Divisions
AIM: This project aimed to prevent the occurrence of perioperative hypothermia (being cold) in our adult surgical patients. Keeping patients warm is an important action for the prevention of an all too common problem: letting our patients get cold. Research has shown that allowing patients’ body temperature to fall below 36.5 degrees can lead to some potentially very nasty side effects such as increased risk of cardiac problems and bleeding. Our project introduced three simple actions to prevent our patients getting cold (1) Assess their risk for this happening; (2) take and record their temperature regularly; (3), if found to be cold, actively warm them. Over the 18 months of the collaborative project we increased the number of patients having their risk of getting cold assessed significantly, as did the proportion of patients who had their temperature recorded and then were actively warmed when found to be cold.

SUMMARY ABSTRACT: This project aimed to prevent the occurrence of perioperative hypothermia (being cold) in our adult surgical patients. Keeping patients warm is an important action for the prevention of an all too common problem: letting our patients get cold. Research has shown that allowing patients’ body temperature to fall below 36.5 degrees can lead to some potentially very nasty side effects such as increased risk of cardiac problems and bleeding. Our project introduced three simple actions to prevent our patients getting cold (1) Assess their risk for this happening; (2) take and record their temperature regularly; (3), if found to be cold, actively warm them. Over the 18 months of the collaborative project we increased the number of patients having their risk of getting cold assessed significantly, as did the proportion of patients who had their temperature recorded and then were actively warmed when found to be cold.

Don’t Restrict My Ability – Restricted Weight Bearing in Orthopaedics
SLHD Orthopaedics
Megan White, Breda Doyle, Tim Sinclair, Nichola Boyle, Jai Sungaran, Peter Walker, Priya Nathan
AIM: The aim of Don’t Restrict my Ability is to improve patient flow through an acute Orthopaedic unit, promote positive patient satisfaction and encourage patient engagement through the implementation of a new Model of Care and Reconditioning Program for Restricted Weight Bearing in Orthopaedics.

SUMMARY ABSTRACT: An ageing population, orthopaedic presentations, in particular fragility fractures, are projected to increase annually, according to the Clinical Excellence Commission, one in three people over the age of 65 will fall at least once a year, therefore increasing demand on orthopaedic services. RWB is very topical in most orthopaedic clinical settings due to delayed discharge processes and little insight into the most appropriate way to care for this patient cohort, past solutions include cost shifting or waiting their RWB time out on the acute care ward, at times this can be up to thirty days. There is little evidence in the literature to support any Model of care to optimise outcomes, improve patient flow and reduce deconditioning of patients. This project highlights the importance of client centred care to improve patient flow and recondition patients to give them ownership and become active partners in their recovery.

The Orthopaedic service prides itself on optimising patient outcomes by regularly evaluating clinical practice across the continuum of the patient experience. This is achieved through regular monitoring and reviewing practice to assist with the identification of barriers to discharge planning. This will inform and assist in future planning for the orthopaedic service.

An identified barrier to patient flow through the orthopaedic service at Concord hospital are patients admitted with an orthopaedic condition resulting in the restricted weight bearing (RWB) of patients. RWB is medical terminology used to describe the amount of weight bearing that is recommended for patients with an orthopaedic condition to place through their affected limb. Reasons for RWB following a fracture are due to the pattern of the fracture, location of the fracture, bone quality, fracture stability and alignment. RWB is prescribed to protect the healing bone and/or surgical construct while providing a stimulus for bone growth. Restricted weight bearing in Orthopaedic challenges clinicians and patients with discharge planning due to the limiting discharge options for subacute care and limitations for patients meeting admission criteria’s – often patients would ‘wait’ their time in acute settings.

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This redesign project describes the implementation of a Model of Care for RWB in Orthopaedics and Reconditioning Program designed to promote patient and staff engagement, improve communication processes and promote positive patient experiences. The reconditioning program is designed to be tailored for individual recovery. It consists of a three tier exercise program (a daily hour class) and functional goal set up by the Occupational Therapist with one on one coaching three times a week. Medical and Nursing staff then daily encourage patients to reach their goals and nursing staff have direction to assist patients in reaching their functional goals.

The methodology of this redesign project included:
- Design and implementation of a new Model of Care for the Multidisciplinary team
- Implementation of a Reconditioning program designed to optimise outcomes for patients and keep patients reconditioned in the Acute care setting
- Leadership and role modelling of senior team members
- Client centred goals – set up in consultation with the patient and the Multidisciplinary team, family members or significant others are also invited to the meeting
- Skills training in implementing a Reconditioning program – in-servicing for staff, written documents to assist in care planning and structural definitions for RWB for effective documentation
- Evaluation and monitoring of patient satisfaction, patient outcomes and staff satisfaction and knowledge

Data analysis from the implementation of a Model of Care in RWB for Orthopaedics and a reconditioning program (July 2015) in the acute setting has seen a reduction in LoS (reduction of 14days), improvement in patient satisfaction (90%), improve communication processes between health professionals and patients (100% accuracy of postoperative documentation of RWB and duration), client-centred goals (Weekly increase in FIM scores) and streamlined discharge processes (improved communication with subacute facilities and TACP).

Data collection for this change of practice has been supported through pre intervention data and post intervention data.

The development of a Model of care for RWB and the implementation of a reconditioning program and patient education booklets has seen the improved management of RWB patients, there is now a clear pathway for patients to commence reconditioning following orthopaedic injury/ surgery.

This Model of Care is evidence based and transferable across all contexts with the LHD, including international interest. With presentations of this new Model of Care at local and international conferences and the interest generated in the Model of care will facilitate spread and sustainability and improve outcomes for RWB patients.

According to the New South Wales (NSW) Sexually Transmissible Infections (STI) Strategy 2016 – 2020, GBM bear a disproportionate burden of sexually transmissible infections (STIs), including HIV. SLHD had a Tier 2 KPI, set by the NSW Ministry of Health (MoH) to increase HIV testing by 50% in 2014/15 and an additional 30% in 2015/16. A formal partnership has been established with non-government organisation ACON (formerly the AIDS Council of NSW) to promote and increase access to HIV testing among local GBM. A community-based model of HIV and STI testing has been established on King St Newtown, known as a[TEST] Newtown, where the RPA Sexual Health Clinic provides clinical staff and governance, and ACON provide peers to facilitate engagement with fellow GBM. An accompanying social marketing campaign using public space advertising and novel online social media strategies was trialled in two phases to promote local HIV testing services at the RPA Sexual Health Clinic and a[TEST] Newtown to GBM. An increase in HIV testing activity for both sites was achieved during and immediately after implementation of the campaign. The partnership and campaign was a key strategy for SLHD in achieving a 42% increase in HIV testing in 2014/15.

**Novel approaches for delivering and promoting HIV testing to gay men in Inner West Sydney**

**Community Health Sydney Local Health District**

**Brooke Rhiannon Dailey, A/Prof Catherine O’Connor, Renee Moreton, Sue Amanatidis, A/Prof David Templeton, Nicky Sharp**

**Aim:** To increase HIV testing rates in gay men and bisexual men that live, work or socialise in Inner West Sydney.

**Summary Abstract:** According to the University of Sydney (2015) Sydney Local Health District (SLHD) has the highest prevalence and incidence of HIV in Australia. There is a high proportion of gay and bisexual men (GBM) residing in SLHD.

**Integrating Electronic Prescribing – A New Model for Targeted Patient Care**

**Royal Darwin Hospital**

**Quality Unit in conjunction with Pharmacy Department and Health Informatics**

**John Shanks, Toby Maddern, Kylie St George, Anna Ralph, Joanna Wallace**

**Aim:** The goal of this project was to develop and test an electronic prescription support tool to improve identification of errors in antimicrobial prescribing. The tool was designed for use during multidisciplinary antimicrobial stewardship (AMS) ward rounds undertaken by the AMS pharmacist and the AMS physician.

**Summary Abstract:** Background: Antimicrobial agents are first in the APICANS list of high-risk medicines developed by the ACSQHC and CEC (Ha 2016). Many have a low therapeutic index and their addition can interact with a patients regular medications resulting in failure of the antibiotic or other medications.

Antimicrobial resistance has been deemed a major global threat by the World Health Organisation (WHO 2014). In 2011 the ACSQHC published guidelines for Antimicrobial Stewardship (AMS) in Australian Hospitals, which promote the use of electronic Clinical Decision Support Systems (CDSS) and regular AMS ward rounds to help improve patient safety and promote appropriate antibiotic use (Duguid & Cruickshank 2011). A problem faced by healthcare systems implementing AMS rounds is the difficulty identifying priority patients amongst the hundreds prescribed antibiotics daily.

Over a 19 month period a CDSS was developed based on four key targets for potential antibiotic misuse which could be identified from online prescribing and health service pathology systems. These included: incorrect dose, lengthy duration of an intravenous (IV) antibiotic, drug interactions and mismatches between antibiotic vs micro-organisms identified from the pathology database (‘drug-bug’ mismatches).

**Design and Method:** A pre/post intervention approach was used to compare rates of intervention following implementation of each of the four targets for the CDSS. The site for testing was the...
Royal Darwin Hospital and no interventions performed at health service satellite sites were recorded during any of the 6 phases of the projects development. The six phases of development consisted of:

Phase 1: Baseline evaluation, over an 11-month period (11/2014 – 10/2015), all prescriptions reviewed on AMS rounds were entered into a database. Wards not using electronic prescribing (intensive care and the emergency department) were excluded. Each intervention was categorised and graded according to the National Antimicrobial Prescribing Survey (NAPS) (Upjohn et al. 2015). The uptake rate for each recommendation was evaluated the morning after each intervention was made.

Phase 2: Implementation of a drug interaction checking module. A module was developed to identify any of 167 clinically significant drug interactions relevant to antimicrobials (see appendix 1), and run daily for all inpatient medication lists. Patients were added to the AMS ward round for review if an interaction was detected.

Phase 3: Implementation of an IV antibiotic duration checking module. A module was developed which identified any patients receiving an IV antibiotic for >2 days which had not been validated as appropriate by the AMS team.

Phase 4: Implementation of a dose checking module. A module was developed to check the dose for each antimicrobial prescribed against the standard dose range acceptable for that antibiotic type. Each entry which fell outside of this range was automatically added to the daily ward list for review on AMS rounds.

Phase 5: Implementation of a ‘drug-bug’ mismatch identifier. A module was developed which added patients to the antimicrobial ward round list if they were prescribed an antibiotic to which an identified organism was resistant (e.g. a penicillin for methicillin-resistant S. aureus), or which appeared unnecessarily broad-spectrum (e.g. vancomycin for penicillin sensitive staphylococcal infections). The need for a specialist team approach to review identified mismatches was acknowledged, given that identified organisms may not represent the complete clinical picture.

Phase 6: Evaluation; the primary outcome targets assessed were total numbers of 19 intervention types made (see appendix) both pre and post implementation of the CDSS, and the uptake rate for each intervention type the morning after the intervention was made.

Results: A total of 5984 antimicrobial prescriptions were audited over the 19-month audit period. During the initial evaluation, patients identified with a clinically relevant drug interaction or drug-bug mismatch were low (only 0.76% and 3.24% of recommendations made over the pilot period respectively), while suggestions highlighting incorrect dosages and lengthy IV antibiotic courses made up a large proportion of recommendations (with 4.57% and 14.86% of recommendations made respectively).

Following the implementation of the project, there was no statistically significant increase in dose change recommendations or recommendations made to switch to oral (P=0.811 and P=0.709 respectively). There was however a pronounced and statistically significant increase in clinically significant drug interactions and drug-bug mismatches identified after phase 2 and phase 5 (P<0.001 and P=0.001) with a 27 fold increase in the number of clinically significant drug interactions identified and 3.8 fold increase in the number of drug-bug mismatches identified. Overall recommendation uptake rate remained almost unchanged after implementation of the project at 67.4% pre implementation vs 68% post implementation.

Discussion and Conclusion: Scientific and clinical knowledge have expanded beyond the capacity of the average practitioner to apply knowledge at the bedside (Pestotnik & Olson, 2007). The results of this project prove that implementation of a bespoke CDSS affect the outcomes of AMS ward rounds, with a significant effect on patient safety.

The failure to show improvement with the implementation of dose and duration checking modules in the CDSS can be seen as a lesson for other AMS programs intending to implement their own CDSS systems. The use of CDSS for nebulous identifiers such as long term IV medications is fraught. There are multiple factors which need to be considered when identifying whether a patient is ready to switch to oral which are beyond the current capabilities of CDSS.

The implementation of a dose checking module for CDSS is also unlikely to be of benefit as this is already performed at the front end in the electronic prescribing environment, so limited benefit is seen by repeating the check after prescribing.

The greatest benefits from back end CDSS identified by this project have been interaction checking and drug-bug mismatch reporting. This owes its success to the relative simplicity of the identifier being checked, and the vast amounts of data which can be reviewed by the modern desktop computer, allowing review of thousands of prescriptions in just a matter of seconds.

This allows fast and comprehensive identification of patients who need review and allows a specialist unit such as the AMS service to oversee regionally isolated or smaller facilities who otherwise would not benefit from such a service.

The Power of Consumers Auditing Clinical Handover (CH)
Royal Brisbane and Women’s Hospital
Safety and Quality Unit
Lisa Mitchell, Helena Lake, Faileen James

AIM: (1) To represent consumer perspectives on clinical handover (CH) at the RBWH. (2) To identify improvement areas around clinical handover and patient communication. (3) To understand clinical environments and clinical handover processes. (4) To target CH education strategies for the future.

SUMMARY ABSTRACT: Background: Annually, over 700 patients participate in the Royal Brisbane & Women’s Hospital (RBWH) Patient Experience Survey. While this survey provides useful information, it was determined that it would be valuable to enhance these findings by undertaking focused surveys in the area of Clinical Handover. The RBWH’s Safety and Quality Unit decided a more patient focussed initiative for Clinical Handover (CH) should be undertaken, with the aim of assessing patient involvement in, and improving patient input into, the process of CH. Consequently, two consumer representatives on the CH Committee worked with a staff member to design, develop, conduct and report on 40 patient interviews to gain their viewpoints.

Methods: Consumer audit training consisted of definitions, scripts, identification, introductions, selection and reporting concerns. Questionnaire development included information from annual patient experience survey, Australian Safety &Quality Commission report on consumer engagement barriers, clinical weekly audit results and consumer feedback. A randomised approach was undertaken with 10 inpatients interviewed from 4 wards in surgical and medical units. Participants’ ages ranged between 23 – 92 years, with equal number of females and males.
Findings and Results: Quantitative methods were used and demonstrated majority of adequate clinical handover. However qualitative findings revealed improvement areas. These included; conflicting information given by health providers, not involving patients and family in clinical handover, difference between patients and staff perceptions of escalation issues, staff personal communication characteristics, and patient clinical characteristics influenced and impacted on effective communication. (See attached PPT for graphs and findings)

Recommendations
1. Develop the culture to include consumers
2. Focus staff training on patient centred care
3. Timing and delivery of patient information

Lessons Learnt
1. Consumer Engagement takes time and planning
2. Easier than originally thought
3. Not unexpected results
4. Triangular methods revealed valuable insights
5. Staff interest in negative and positive feedback
6. Power of using consumers to deliver results

Outcomes: The consumer conducted patient interviews have contributed to consumers’ influence on the service provision process and strengthened the consumers’ voice. This initiative has contributed to changing the health providers’ understanding by raising awareness of consumers communication needs. This is evident by improvements in 2016 bedside handover and clinical bedside audit results, consumer involvement in new projects, model developments and committee representation.

Reductions the incidence of falls for Infant and Toddlers at Ellen Barron Family Centre
Children’s Health Queensland Hospital and Health Service
Ellen Barron Family Centre, Child and Youth Community Health Service
Denise Hayes, Catherine Marron

AIM: To improve patient safety through reducing the incidence of infant and toddler falls during admission to the Ellen Barron Family Centre through early identification of injury risk from falls and implementing strategies to address falls risks.

SUMMARY ABSTRACT: The Ellen Barron Family Centre (EBFC) is a 45 bed Residential Early Parenting Centre providing inpatient care for well families with children aged birth to 3 years. EBFC specialises in providing child and family health information, parenting education and skills development and support in a multidisciplinary environment. Families are admitted to EBFC for up to 10 days and receive medical, nursing and allied health care during admission. Most are admitted on a Monday or Tuesday.

In 2014 the program director was questioned regarding the number of falls reported in the centre and took a closer look to test the thought that the falls were developmental falls expected in toddlers. Through reviewing clinical incident reports, an initial trend in infant and toddler falls from beds/cots was identified. A workgroup was assembled to address falls from cots/toddler beds and improvements were progressed using The Productive Ward module for falls to analyse and plan interventions.

Other trends became apparent; children were at greater risk of falls during the first 24 hours of admission, from the high chair in the dining room and of falls in the bathroom. A number of interventions were implemented to address risks as they arose and a Falls Incidents Measures Board was introduced to the residential area for all staff and consumers to be informed of the safety concerns, initiatives and performance within the centre. It highlights the service audits focus months for National Safety and Quality Healthcare Standards at EBFC.

Lift the Lip Browns Plains Pilot Project - Improving Access to Oral Health Care for Children 0 – 5 Years of Age
Children’s Health Queensland Hospital and Health Service (in conjunction with Metro North Hospital and Health Service, Metro South Hospital and Health Service) Child & Youth Community Health Service, Metro North Oral Health Services
Alison Dickinson, Margaret Pukalus, Nicola Sutton

AIM: The Lift the Lip program aims to reduce the rate and severity of dental disease experience for all Brisbane children aged 0 – 5 years through the establishment of a referral pathway from Child Health Nurses to oral health professionals.

SUMMARY ABSTRACT: All Child Health Nurses will be trained to identify signs of early childhood caries and key risk factors for dental disease, and provide oral health guidance to parents. A Lift the Lip screening will be incorporated within the “Head to Toe” assessment undertaken at key ages and children identified as being at risk of dental disease will be referred to oral health professionals.

Assessment of oral health status and early referral will lead to better oral health literacy among parents of very young children, and our success will be measured by the rate of children referred by nurses, the increase in number of children who remain free of dental diseases by age 6, and a reduction in the number of very young children requiring dental treatment under general anaesthetic.

Evidence shows that earlier engagement will lead to improved oral health outcomes for children. Decay in deciduous teeth is a predictor of decay in permanent teeth. If identified early, preventive measures can be undertaken to prevent the progress of decay.

In recent years, Queensland children’s oral health has deteriorated across all age groups and dental attendance before the age of 2 years is extremely rare due to historical public sector eligibility criteria. Identified communities within the metropolitan Brisbane such as Caboolture, Redcliffe and Logan-Beaudesert have a high proportion of children who are known to be at high risk of developing oral health diseases. By the time these children present for their first dental appointment in the public sector at age 4 years, most of their deciduous dentition has been compromised; children’s teeth are either grossly decayed or developing white spot lesions. A study of caries in the primary teeth determined that by grade one (mean age 6.4 years), 78 percent of children in the Logan-Beaudesert experienced decay in their deciduous dentition (Newman, 2007). Many require dental extractions. Local data suggests that most children do not present for treatment until 7+ years of age. With tooth decay in deciduous teeth often identified late, a general anaesthetic is required for treatment, with its associated costs and risks. The average waiting time for treatment under general anaesthetic is as long as 26 months (Caboolture area, Information System Oral Health, July 2015); this does not meet current Key Performance Indicators set by Queensland Health for category 1, 2 or 3 patients.

Although children do not traditionally present to public sector oral health facilities for care prior to two years of age, contact with other health professionals is high. Research shows that early intervention and greater involvement of parents will improve oral health outcomes for children. Other programs have successfully proved that partnering with other health service providers who work closely with children and their parents can improve access to more timely oral health services for young children and improve oral health outcomes (Rogers, 2011). Anecdotal evidence showed that Child Health staff are equally concerned with the status of children’s oral health and in April 2015 Metro North Oral Health Services (MNOHS), Metro South
Oral Health (MSOH) and Children’s Health Queensland – Child Health Service (CHQCHS) entered a partnership aimed at implementing a program to improve early access to oral health treatment for children aged 0–5 years.

In consultation with a Consumer Representative, a program has been developed by a team representing three Queensland Hospital and Health Services that targets Child Health Nurses working in public sector community health clinics throughout metropolitan Brisbane. The Consumer Representative requested that a Lift the Lip program was implemented so a Queensland version has been adapted from successful programs implemented in other Australian states and territories to Queensland Health systems operating within Children’s Health Queensland Hospital and Health Service, Metro North Oral Health Services and Metro South Oral Health. Key amendments were made to patient intake processes for children referred by Child Health Nurses including relaxation of public sector eligibility criteria; establishment of a referral pathway and single oral health point of contact for Child Health staff; and the introduction of a more patient-focused appointment making system. To ensure success the program, Lift the Lip, was designed to complement an existing Fluoride Varnish program (MNOHS), Hygiene Assessment program (MSOHs), and the Key Age Developmental Screening program (CHQHHS), and tie in with existing child health Oral Health Promotion and Anticipatory Guidance. Comprehensive training packages were developed and delivered to all participating Child Health and Oral Health staff, supported by a suite of promotional and oral health educational material.

In March 2016 a pilot site was established within the Browns Plains/Inala/Beaudesert Child Health community service area (Cluster 5) prior to the planned implementation of Lift the Lip throughout Brisbane, and eventually Queensland. The program incorporates major components: Dental Screening; Caries Assessment; and Dental Referral. Child Health Nurses from Cluster 5 would screen all children attending child health clinics or participating in home visits. At key ages, (6, 12, and 18 months, 2.5y, 3.5y and 4-5 years [Child Health Services, 2014]), core contact visits take place at the child health clinic or during home visits. During these visits child health nurses will “lift the lip” and provide Anticipatory Guidance and Motivational Interviewing to convey oral health messages to parents. Child Health clinical assessments will be more structured, evidence based and ensure consistency of oral health information and screening. All infants/children will be referred to public sector oral health clinics as required, for a comprehensive oral health assessment and treatment by an oral health professional. Referral is based on observed dental needs and/or prioritised demographic factors and referral pathways will include the option of patients attending their own private sector dental practice.

On conclusion of the pilot project on 31 May 2016, a very high satisfaction rate for nurses involved with the program has been maintained and an extremely high (95%) referral rate on 01 June, 2016, and all metropolitan areas will implement Lift the Lip by October 2016. Based on expressions of interest received, future planning has commenced for introduction of the program in regional, rural, remote, and indigenous communities serviced by public sector entities and Non-Government Organisations.

Category: Clinical Excellence and Patient Safety

Abstracts

**Continuing Quality Improvement in Computed Tomography**

Gold Coast Hospital and Health Service

**Medical Imaging**

**Timothy Ireland, Daniel Martin, Deborah Tout, James Rogers, Mitchell Ashton, Natalia Diaz**

AIM: The aim of this quality improvement initiative was to develop a multidisciplinary leadership team with the task of systematically reviewing current practice in Computed Tomography (CT) imaging across the Gold Coast Hospital and Health Service (GCHHS) and, where appropriate, implement and review changes to reduce radiation exposure to the patient while maintaining acceptable image quality. This group was focused to perform CT dose audits, monitor referral patterns, provide clinical justification for implementation of optimisation strategies, and review changes through quantitative analysis of clinical data.

**SUMMARY ABSTRACT:** CT imaging is increasingly used as a diagnostic tool in healthcare [1], and now contributes to about three-quarters of the total patient radiation exposure from diagnostic imaging in Australia [2]. There has been increased awareness and scrutiny of radiation exposure from CT in recent years, both within Australia and internationally, as a result of articles on increased cancer incidence associated with CT [3,4], particularly associated with exposure during childhood [5,6]. The introduction of the Image Geniely [7] and Image Wisely [8] campaigns has also increased awareness of the need to optimise imaging techniques and, when available, utilize new technological advances for CT dose reduction.

The majority of CT examinations at the GCHHS are performed on any of four CT scanners (from three manufacturers) used both in the Emergency and Medical Imaging departments. Scanners range from three years to nine years old, with the newer scanners benefiting from recent advances in image quality improvement and dose reduction techniques such as iterative reconstruction, enhanced detector technology, automatic kV selection etc. These advances in technology lead to many novel and remarkable imaging capabilities but also require significant oversight to ensure implementation and optimisation whilst ensuring radiation exposure to the patient is as low as reasonably achievable. Ongoing optimisation of established techniques is also required to ensure that the full benefits of the available dose-saving technologies are realised.

To achieve this goal, the GCHHS established a multidisciplinary leadership team with the task of systematically reviewing current practice in CT imaging and, where appropriate, implement and review changes to reduce radiation exposure to the patient while maintaining acceptable image quality. The group comprises radiographers, medical physicists, radiologists and service management to utilise clinical, technical and scientific expertise. This group was focused to perform CT dose audits, monitor referral patterns, provide clinical justification for implementation of optimisation strategies and review evidence of the quality improvements implemented to quantify benefits to the patient.

Through peer reviewed literature review, clinical experience and cross-site collaboration, the group has successfully implemented several initiatives. The main examples of these initiatives implemented over the past twelve months are detailed below:

1. ARUPANSA NDRL CT Protocols: During data collection for the ARUPANSA (Australian Radiation Protection and Nuclear Safety Agency) CT National Diagnostic Reference Level (NDRL) survey in 2015, additional data were also collected to provide an objective measure of image quality which allowed inter-scanner comparison and identification of opportunities for optimisation for all scanners across the GCHHS (see Appendix 1). The most
significant result was a significant reduction in radiation dose for CT abdomen in larger patients on one particular CT scanner which increased radiation dose with patient size at a more rapid rate compared to other CT scanners. The resulting radiation doses on this scanner far exceeding NDRs and were significantly greater than doses on other scanners within GCHHS. A separate imaging protocol was created for abdominal imaging of larger patients. The new protocol yielded doses reductions of up to 35% in this patient cohort without loss of image quality compared to other scanners in the GCHHS (see Appendix 2).

2. CT Kidney, Ureter, Bladder (KUB): A dose audit and review of referral patterns for CT KUB was performed. An audit was performed on the outcome of the KUB showing approximately 70% of studies were positive for the presence of renal calculi. Comparison with data in the literature shows that this rate of positive studies was within the target range, therefore no improvement was required. A review of dose and image quality for CT KUB routinely performed on three of the CT scanners showed significant variation, and indicated optimisation was required. Weight-based protocols were introduced on the first scanner to achieve more consistent image quality, and resulted in an approximately 15% decrease in image noise in larger patients as images in this patient cohort were identified as suboptimal in the initial audit. Changes to automatic exposure control (AEC) parameters on the second scanner lead to 5-21% dose reductions (depending on patient size) and on the third scanner reductions of approximately 33% were achieved across all patient sizes (see Appendix 3). Comparisons with dose audits requested from other Queensland Health (QH) sites showed the revised doses were in line with or lower than those achieved at the other QH sites. A review of CT KUB image quality by radiologists is ongoing.

3. CT Chest Low Dose Protocol: Attendance at conference workshops indicated low-dose CT chest protocols could be implemented without compromising diagnostic image quality for certain indications (typically lung nodule follow-ups). A literature review was conducted of published data detailing implementation of low-dose CT chest imaging with positive outcomes. A low-dose chest CT protocol was initiated on three scanners based on manufacturer recommended protocols and information from the literature review. A subsequent audit of dose metrics showed a reduction in radiation dose of 33%, 64% and 66% on the three scanners, and images were deemed to be clinically acceptable from an ongoing review by radiologists (see Appendix 4).

4. Paediatric CT Protocols: No paediatric-specific CT protocols existed in the current CT manual. New requirements from Radiation Health dictated that (amongst other requirements) CT imaging of paediatrics must be authorized by a radiologist in the form of a written protocol developed specifically for paediatrics. The specialist paediatric radiologist, in conjunction with members of the group, liaised with colleagues at the Lady Cilento Children’s Hospital for advice, and a total of 9 anatomy-specific paediatric protocols were developed and added to the CT manual (see Appendix 5). Additional paediatric guidelines were added including approval pathways, the consideration of non-ionising radiation imaging, protocol optimisation and contrast guidelines. Paediatric protocols will be reviewed after 1 year, including an audit on compliance.

AIM: The aim of the Hospital at Night (HAN) program at Ipswich Hospital was introduced to ensure patients who are either on shift during the day or night are cared for by the right person with the right skills at the right time optimising patient safety, focusing on a safe system of care that reduces variation, standardises practice and provides multi-disciplinary clinical and operational leadership at night.

SUMMARY ABSTRACT: Recognition and Responding to the Deteriorating Patient Afterhours – The Hospital at Night (HAN) Program, Ipswich Hospital

HAN is a clinically driven patient focused change program implemented at Ipswich Hospital, West Moreton Hospital & Health Service (WMHHS) in May 2014. The program was initiated and supported by the National Health Service (NHS) Modernization Agency in 2004 in the UK that introduced a model using a multi-disciplinary approach to delivering care at night to ensure optimal patient outcomes. HAN was introduced to ensure patients who are either on shift during the day or night are cared for by the right person with the right skills at the right time, focusing on a safe system of care that reduces variation, standardises practice and provides multi-disciplinary clinical and operational leadership at night.

Drivers for change for this program were the increased demands within the WMHHS and analysis of the Health Round Table data (Source: Health Round Table, 2009-2014) comparing morbidity and mortality rates for all patients, presenting to Ipswich Hospital compared to a weekday and weekend. The standardised risk of mortality increased by 31% for patients presenting on a weekend, compared to a week day (Source: Health Round Table, 2009-2014).

HAN is a multidisciplinary team consisting of a Senior Medical Registrar, Grade 6 Night Response Nurse, Night Ward Call and led by a Grade 7 Clinical Care Coordinator operating from 1800-0630hrs seven days a week. The interdisciplinary team is involved in managing, coordinating and identifying clinical care requirements of patients after hours including: early identification of the unwell patient; monitoring of the patients of concern and providing clinical leadership and mentorship to the staff rostered afterhours.

Since implementation HAN has demonstrated a reduction in the number of code blue calls and intensive care transfers from ward areas afterhours; a reduction in the standardised mortality rate; early recognition of the deteriorating patient; monitoring of ‘patients of concern’ and increased staff satisfaction secondary to support, guidance and mentorship.

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Improving Nutritional Intake in Hospital
Royal Brisbane and Women’s Hospital Nutrition and Dietetics, Allied Health Professions Adrienne Young, Merrilyn Banks, Alison Mudge, Jennifer Ellick, Philip Juffs

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HOP After school hours adolescent pain management program: Implementing evidence based practice to establish a group program to support adolescents who can still attend school.

St Vincent’s Private Hospital Brisbane

Pain Services

Hoiyan Karen Li

AIM: Reports of pain are common in adolescents; for example, 74.4% of 404206 adolescent participants of an international sample reported the prevalence of some form of pain (e.g. headaches, abdominal pain, and back pain) within the last 6 months (Swain et al., 2014). Common strategies reported by adolescents in the community used to manage acute and persistent pain include medications, distractions and rest (Fouldabakhsh, Vallerand, & Jenwine, 2012; Keogh & Eccleston, 2006; Rambod, Forsyth, Sharif, & Khair, 2016). In order to expand the repertoire of strategies for adolescents, self-management of persistent pain for adolescents are taught via self-guided (Charette et al., 2015; Palermo et al., 2015; Palermo, Wilson, Peters, Lewandowski, & Somhegyi, 2009), individual (Kachko et al., 2014) and group modalities either by a single discipline or multiple disciplines (e.g. psychology, physiotherapy, occupational therapy). Group run pain programs have the benefit over individual services of creating social support for patients and having greater clinical gains through peer modelling. Local government and non-government pain services, however, target primarily 0-17 (individual services) or 18+ (individual and group services) age brackets and operate during normal school hours leaving adolescents with very few suitable services. SVPHB Pain Management Services have the only ongoing group adolescent pain rehabilitation program (LEAP) in Australia. However, the LEAP program is geared towards those with a greater level of need for pain services (e.g. patients who struggle to attend school). This left adolescents pain patients who are still able to attend school full time with very few options for multidisciplinary treatment during school terms. To meet the need of local adolescent pain patients the HOP (Helping Outside of school hours Pain) Program, the after school hours adolescent pain program was born. As far as we are aware, this is the first after school hours group pain program for adolescents run in Australia and this pushes the boundaries of our traditional hospital treatment models.

SUMMARY ABSTRACT: Adolescents who suffer with persistent pain but are still able to attend school often fall through the gap for accessing standard treatment facilities. In response to consumer demand, this current project is an implementation of a new self-management program which combines learning for both adolescents and their families by providing group services after school hours as an alternative to traditional care models. Group and individual sessions with the pain services team include topics on pain self-management, graded exercise, sleep hygiene, stress management, lifestyle balance, cognitive-behavioural therapy, mindfulness, ergonomics and communication skills. Two cohorts of six participants have now participated in the 8 week program (including booster session). Compared to participants of our traditional care model program, after school hours participants reported greater coping abilities at intake. Preliminary findings of the project revealed a decrease in self-reported pain and carer burden. Lessons from the implementation of this program may help to inform other adolescent pain management services, and service delivery models.

Working Together to Connect Care Response Project

Metro North Hospital and Health Service – Royal Brisbane and Women’s Hospital and MNHHS Oral Health Service

Patient Flow and Emergency Department (ED)/ED Frequent Presenters Response Project Group

Debra Harcourt, Leonie Cartlidge-Gann, Clancy McDonald

AIM: To respond more effectively to vulnerable individuals who frequently present to the Royal Brisbane & Women’s Hospital Emergency Department through a shared commitment across hospital departments and community organisations.

SUMMARY ABSTRACT: The ethos of the ED Frequent Presenters Response Project is to work in partnership through a shared commitment across hospital departments and community organisations to respond more effectively to individuals who frequently present to the Royal Brisbane and Women’s Hospital, Emergency Department.

Quality Improvement question: Does the implementation of an individualised, consumer focused multidisciplinary plan within the ED coupled with improved linkages to and direct follow up by community and primary health care providers decrease the number of presentations to the emergency department for people who are known to frequently present?

Objectives: The main objective for this initiative is to ensure the individual who frequently presents to the emergency department is effectively supported in their community and therefore has improved stability in health, housing and social requirements. As an outcome of this support it is hypothesised...
that there will be a decrease in presentations to the emergency department.

Methodology: A ’proof of process’ design was undertaken and rolled out across the Emergency Department. There were several stages to the development of the new process which included, a review and mapping of the existing processes; development, based on research findings, of a new process; operationalising the process throughout ED and the community services and, embedding the process into a ‘business as usual’ framework. The new process has seven phases which include, flagging in the emergency department IT system, consent for information sharing, referrals to appropriate community services, case management in the individual’s community, case review, client centred case conference and the development and dissemination of an acute management plan. There are three process pathways the individual may progress along which are determined by patient involvement in pre-existing services and the patient’s consent to share information.

Preliminary Findings: 3 months after the “go live” date there are thirty three active participants in the program, ten are on the ‘Mental Health’ pathway, and two participants are on the ‘No Consent’ pathway. On average there are three persons recruited to the program every week. The cohort demographics reveal that fourteen (42%) are female, three (9%) identify as Aboriginal descent, a third (n =10, 33%) have housing vulnerabilities and eighteen (54%) attend multiple emergency departments. The number of presentations to the RBWH emergency department for this cohort from 1st January to 31st May 2016 was 679 (range = 3 to 85 presentations for this period). An ambulance was the most common mode of arrival (n= 495, 74%). The leading service event was ‘discharge from the emergency department’ (335, 53% of presentations) with ‘admission to hospital’ the second most common service event (n = 194, 29% of presentations). It is expected that due to the high complexity and vulnerability of this cohort that it will take months of community support to elicit change in an individual’s behaviour however with the development of an individualised, patient centred Acute Management Plan all services involved in care provision are aware of set goals and care directions therefore decreasing the risk of fragmented care.

**Eat Walk Engage – Better care for older hospitalised patients**

**Royal Brisbane and Women’s Hospital**

Eat Walk Engage Program, Internal Medicine Services

Alison Mudge, Mrs Prue McAra, Ms Karen Lee-Steere, Mrs Marion Ward, Mrs Adrienne Young, Dr Merrilyn Banks, Mr Mark Cruickshank

**AIM:** To embed and sustain an evidence-based multidisciplinary delirium and functional decline prevention program (Eat Walk Engage) in a range of non-geriatric wards in a major teaching hospital.

**SUMMARY ABSTRACT:** Background: Older people have a much higher rate of hospitalisation than those aged less than 65 (Australian Institute of Health and Welfare, 2007), and a hospital stay is often a decisive turning point in an older persons’ health (Covinsky et al., 2011). Regardless of the reason for hospitalisation, older patients are at high risk of leaving hospital worse, not better. Geriatric syndromes including delirium and functional decline lead to falls and pressure injuries, longer hospital stays, transfer to sub-acute care or nursing home placement. (Inouye et al.,2007, Buurman et al., 2011, Covinsky et al., 2011).

Better hospital care can reduce these adverse impacts (Covinsky et al., 2011, Hshieh et al., 2015, Mudge et al., 2008). Embedding several crucial practices (support of early ambulation and independence, support of oral nutrition and hydration, and individual/group activities for cognitive stimulation) can reduce delirium and functional decline and improve outcomes. However implementing these good geriatric principles of care across non-geriatric acute care wards remains challenging (Bakker et al., 2011).

We previously developed and piloted “Eat Walk Engage” as an evidence-based program to improve care of older patients on two wards (general medical ward, vascular surgical ward) at Royal Brisbane and Women’s Hospital (RBWH) (2011-2013). The program supports the multidisciplinary team to optimise nutrition and hydration, encourage mobility and independence, and provide meaningful cognitive activities for all older patients from the very beginning of an acute hospital stay. We demonstrated improvements in processes of care and reduction in geriatric syndromes (including delirium, functional decline, falls and pressure injuries) and acute length of stay in our pilot before-after evaluations (Mudge et al., 2013b, Mudge et al., 2015). Based on these improvements, our hospital executive supported implementation of Eat Walk Engage on another 6 acute wards over 2 years (2014-2016).

**Aim:** To embed and sustain Eat Walk Engage in a range of non-geriatric wards in a major teaching hospital

**Method:** Setting: RBWH is the largest public teaching hospital in Queensland. Eat Walk Engage was incrementally implemented in 6 wards (an oncology ward, 2 general medical wards, an infectious diseases ward, an orthopaedic ward and a general surgical ward). These wards were identified as having a high proportion of older inpatients.

**Design:** Iterative ward level re-design of care processes using participatory action research methods.

**Implementation approach:** To meet the challenge of redesign in a complex environment, we used the i-PARIHS framework (Promoting Action on Research Implementation in Health Services) (Harvey and Kitson, 2016) to guide implementation. Two lead facilitators trained novice facilitators to use an enabling facilitation approach to support patients and the multidisciplinary team on each ward to recognize gaps, identify barriers and develop and trial solutions. Facilitation strategies included engaging directly with patients to be responsive to their needs and priorities; understanding the context of each ward; facilitating clinician leaders to make practice changes at ward level; involving the teams in meaningful data collection and feedback; and tailoring the intervention to the ward. The novice facilitators supported change at the local ward level while the two lead facilitators engaged clinical and executive leaders, supported system level solutions to consistent barriers, and supported a tailored evaluation plan.

**Evaluation:** Evaluation of ward-level changes has included process and outcome measures. Process measures have included patient interviews, observational mealtime audits and observational activity mapping (Kuyk et al., 2012). Outcome measures have used available organizational data including age-stratified incidents (falls and pressure injuries), use of AIN staff, and age-stratified length of stay. Resources required to scale up from 2 wards to 8 wards have been identified.

**Results:** Eat Walk Engage has been incrementally implemented in 6 wards over the past 2 years. This has included training and mentoring 4 novice facilitators (senior health professionals, 1.6 FTE); training and supporting 8 multi-professional allied health assistants (5 FTE); and educating staff from multiple disciplines in key principles of care for older people. The program has engaged more than 130 older patients in semi-structured
interviews to ensure consumer views are represented in improvements.

Facilitators have successfully engaged a multidisciplinary workgroup on each ward which meets 1-3 monthly, building common goals and designing and assessing strategies to improve mobility, nutrition and/or cognitive engagement. Contextual differences between wards required locally tailored strategies to achieve the program goals. For example, the oncology ward has a large courtyard where staff can host a weekly morning tea assisted by hospital volunteers, whereas other wards have set up small sitting areas for shared activities.

Facilitators have also addressed organisation-level barriers by engaging with a wide range of clinical and executive stakeholders. For example, they have facilitated routine provision of fortified diets for older inpatients; developed consistent systems for delegating to multi-professional allied health assistants; negotiated subsidised television access for patients at high risk of delirium; and assisted in developing an older person friendly approach to refurbishment of wards and patient lounges.

Measurement of process improvements has occurred in collaboration with each ward, based on identified priorities. For example, on a medical ward where improving mealtime set-up and assistance was identified as a priority, the proportion of patients needing set up assistance and receiving help within 10 minutes improved from 63% to 88% and the proportion of patients needing feeding assistance receiving help within 10 minutes has increased from 65% to 100%. Other medical wards who chose to focus on improving cognitive engagement have shown a decrease in the number of shifts of additional nursing assistant (AIN) required to assist with patients because of “confusion, aggression or falls risk”. While it is too early in the roll-out to quantify full benefits across wards, a reduction in falls, length of stay and sub-acute care requirements has been sustained on the two pilot wards.

Conclusions: Eat Walk Engage is transferable across medical, surgical and oncology wards, supporting better care and improved outcomes for older patients regardless of their reason for hospitalisation. Spreading from 2 pilot wards to 8 wards required a systematic and coordinated approach with additional staff resources and training; engagement of local consumers and multidisciplinary staff to identify and address barriers; engaging the support of clinical and organisational leaders; and tailored responsive measurement strategies. Promising initial findings suggest the program can lead to sustainable process and outcomes, and ongoing evaluation of these findings will be tested in an ongoing trial in 4 hospitals.

Translating Evidence to Practice through the Prevention of Catheter Acquired Urinary Tract Infection and Trauma (CAUTIT)
West Moreton Hospital and Health Service
Avis Macdonald, Cheryl Burns

AIM: Stop unnecessary urinary catheter insertions and ensure a safe and sterile insertion technique, resulting in:
• Reduction in Catheter Acquired Urinary Tract Infection
• Reduction in catheter related trauma and resulting complications requiring further surgery/treatment

SUMMARY ABSTRACT: Introduction: The aim of the Prevention of Catheter Acquired Urinary Tract Infection and Trauma project, West Moreton Hospital and Health Service WMHHS, Queensland Health, was to build on the excellent work performed at Hunter New England Local Health District, NSW and CatheterOut.org , USA, and develop a care bundle that reduced insertion and length of time of a urinary catheter, achieved by critical thinking before catheter insertion and nurse-initiated removal protocol post-insertion.

Design and Method: After the establishment of a steering group to provide governance and support, a project plan was developed.

Phase 1 – gather the data. Data was collected and analysed using CatheterOut.org resources. A retrospective health record audit was conducted of sixty one patients admitted during 2014/2015 who were diagnosed with urinary catheterisation as the cause of abnormal reaction of the patient, or of a later complication, without mention of misadventure for the time of procedure (ICD Code Y84.6). A point prevalence audit was conducted of all in-patients at Ipswich Hospital. A Catheter usage audit was conducted over eight working days of the ward with highest prevalence i.e. Urology/Surgical Ward 4F. An Emergency Department Insertion Rate Audit of patients admitted from ED to the clinical wards was completed over 24 hours, and a staff survey was conducted to measure knowledge and skills of medical and nursing staff. A literature review was conducted and resources developed to support the implementation of the project.

Phase 2 – engage, educate and execute. The following resources were developed with the collaboration of the steering group and expert clinicians, utilising resources from Hunter New England Local Health District (LHD), NSW. Appropriate and inappropriate insertion criteria were developed based on the resources provided by Catheter Out.org. Procedures for urinary catheter insertion and management and intermittent catheterisation were developed in collaboration with clinical experts and published on the WMHHS Intranet. A nurse-initiated removal protocol was developed in collaboration with the Urology team. A documentation label alert for catheter insertion and management was adapted from Hunter New England LHD and manufactured into the sterile catheter pack. An online learning package, quiz and skills assessment tool were developed and published for medical and nursing staff, and a skills development opportunity process established for difficult male catheter insertion under supervision of Urology team. Finally, a power-point presentation was developed for staff education and promotional posters and screen savers published to promote the project and care bundle across the West Moreton HHS. A trial was also conducted of a closed system in-out catheter to reduce risk of infection and improve staff safety.

Phase 3 – evaluate and sustain. A post implementation point prevalence audit was conducted to estimate catheter usage rates following staff education, and funding secured to undertake a health record audit six months post implementation to measure infection and trauma rates. The Centre for Excellence was established as Ward 4F, Ipswich Hospital, to ensure ongoing sustainability of the program.

Results: The health record audit found that twenty three patients experienced one or more adverse events following insertion of an indwelling catheter (IDC) over a twelve month period and all but one patient was male. There were 70% of patientswho experienced trauma, 57% suffered urinary retention after removal of the catheter, and 70% went home with an IDC in situ. There were 43% of patients with a colonisation in the presence of an IDC, and 31% of patients with a confirmed urinary tract infection. There were 50% of patients whose insertion did not meet appropriate insertion criteria. A third of these patients experienced trauma from insertion. It was found that of the twenty one IDC insertions that resulted in trauma, 27% were conducted by RNS, 35% were conducted by Medical Officers and 38% were of unknown designation due to incomplete documentation.
The point prevalence study found that prevalence across the hospital was 12%. Ward 4F, Urology/General Surgery Ward, Ipswich Hospital was the ward of highest prevalence at 29%. The Emergency Department Catheter Insertion Audit found that there were no insertions during the 24 hour audit period. The staff survey found that whilst confidence in undertaking male catheterisation was fairly high, this was not matched by level of skill, which suggests that the procedure of urinary catheterisation is not considered to be of high risk.

The findings of the health record audit identified that trauma is a significant adverse event of male urinary catheter insertion. However, the focus of urinary catheter events has been on catheter acquired urinary tract infection, with the acronym of NO-CAUTI being universally studied. It was decided that the focus of this project must include trauma, and the project was re-named “Prevention of Catheter Acquired Urinary Tract Infection and Trauma” or CAUTIT.

After an education program of over three hundred nursing and medical staff, emphasising the “FIVE STEPS” approach to safe urinary catheterisation, a repeat point prevalence audit was conducted at Ipswich Hospital, and it was found that overall prevalence of patients with an indwelling urinary catheter has reduced from 12% to 5%. Studies have shown that some form of IDC alert system can reduce infection by better management and more timely removal. The documentation label alert is being manufactured into the sterile catheter pack by supplier Multigate, and has been approved for state-wide use, listed in the Standing Offer Arrangement.

Conclusion: There are adverse events associated with male urinary catheter insertion, and ensuring staff competency is essential in reducing adverse events. The most common events are trauma and retention, leading to delayed hospital discharge and with an IDC in situ, and ongoing treatment for complications arising from trauma. Infection is difficult to measure, as hospital acquired urinary tract infection is not reported under the Centre for Healthcare Related Infection Surveillance and Prevention program. A comprehensive staff education program has proved to be effective in ensuring appropriate catheter insertions, with the reduction in prevalence of indwelling urinary catheters from 12% at the beginning of the project to 5% at completion of the project.

The final report was forwarded to the Queensland Health Clinical Excellence Commission Deputy Director General for consideration regarding implementing this model across all Queensland Health facilities.

West Moreton would be available as a contact to share this work across Queensland and Australia.

Increasing Access to Quality Endoscopy in Queensland
Metro South Hospital and Health Service
Logan Hospital Endoscopy Unit

Dianne Jones, Lea Wiggins, Lee Poole, Robert Simpson

AIM: The aim of the Queensland Health Nurse Endoscopy program is to increase access to quality diagnostic and therapeutic endoscopy procedures, the following activities were undertaken:

- Development of a Master’s level quality-assured endoscopy training program;
- Supported the trialling of nurse endoscopy at Logan Hospital;
- Enabling state-wide adoption of nurses performing endoscopies as part of multi-disciplinary teams;
- Measuring nurse endoscopist performance against international benchmark standards;
- Creating an education framework and pathway for advanced practice nursing;
- Enabling a career pathway in advanced clinical practice for nurses, thereby aiding the sustainability of the endoscopy workforce through an additional model of service delivery.

This program has increased the number of patients receiving endoscopy procedures at Logan Hospital, increased endoscopy suite utilization, produced nurse endoscopists performing high quality colonoscopies, surpassing international benchmark standards, and achieving high ratings on patient experience surveys. The quality improvement framework surrounding this program has identified the opportunity to further enhance the program and outcomes by extending the educational preparation for nurse endoscopists to that of nurse practitioners with advanced procedural skills in endoscopy.

Implementation of Advance Care Directives and Resuscitation Planning
Central Adelaide Local Health Network
Safety Quality and Risk Management Unit
Virginia Wilkinson, Karen Stead, Karen Court

AIM: To implement a framework for best practice in decision making and clinical care planning for resuscitation and end of life
SUMMARY ABSTRACT: There is inconsistency around end of life care practice leading to variation in application of resuscitation measures. Clinical decision-making can be influenced by the degree of distress of the patient and family, their preparation and understanding of end of life care, the patient’s level of deterioration and capacity to decide, the amount of time available for discussion, the communication skills of all parties involved and staff knowledge and experience in end of life care. Medical Orders documented in case notes are often recorded as “Not for Resuscitation” or “NFR” and may not necessarily be supplemented by documentation of decision-making and the treatment or care to be provided.

In South Australia, the Advance Care Directives Act (2013) and changes to the Consent to Medical Treatment and Palliative Care Act 1995 came into effect on 1 July 2014. The changes included the release of an Advance Care Directive form enabling a person to appoint a substitute decision maker and/or document their values and instructions regarding their health care. In addition, the Department for Health and Ageing, South Australia released a new Resuscitation Plan – 7 Step Pathway form providing a framework to assist clinicians to make decisions about resuscitation and other life-sustaining treatment with patients near the end of their lives; to document those decisions and develop an end-of-life clinical care plan. The Resuscitation Plan complements the introduction of Advance Care Directives (completed by the patient) as the Resuscitation Plan -7 Step Pathway (completed by the Medical Officer) form is used to develop and document clinical care plans consistent with the patient’s wishes as expressed in an Advance Care Directive.

The objectives in implementing the Resuscitation Plan – 7 Step Pathway at CALHN were to support a consistent approach to decision making for end of life care and documentation of clinical care plans, and improve clinician awareness of the steps for best practice decision making and clinical care planning at end of life.

The implementation of the Resuscitation Plan -7 Step Pathway aligns with the National Safety and Quality Health Service Standards 1: Governance, 2: Partnering with Consumers and 9: Recognising and Responding to Clinical Deterioration.

The implementation of Advance Care Directives and Resuscitation Planning commenced with clinical, administrative, and safety and quality staff attending a four-hour Department for Health and Ageing training program (A Clear Path to Care: Advance Care Directives, Consent and Resuscitation Planning). The attendees subsequently provided education and advice in their clinical area through their role as CALHN Advance Care Directive and Resuscitation Planning Trainers and Mentors. Education was also supported through CALHN Staff Development.

Following introduction of education related to Advance Care Directives, risks to implementation were considered prior to rollout of the Resuscitation Plan. Areas of deficit included insufficient coverage of medical trainers in all specialties and different levels of engagement by senior multidisciplinary clinical leadership. There were advantages however in introducing the

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**Improving rehabilitation outcomes through community day leave for forensic patients**

Tasmanian Health Service

Forensic Health Services

**Ann Marie Mallett, Hannah Miller, Madeleine Nicholls**

**AIM:** The aim of this project was to improve rehabilitation outcomes for consumers housed within the secure mental health unit through accessing community leave. The leave program was redesigned, focusing on a collaborative approach with staff and consumers. The review and evaluation of this program, has led to increased consumer engagement within a recovery model framework that aims to keep the consumer, staff and the community safe.

**SUMMARY ABSTRACT:** Background: Community day leave is an integral part of a forensic consumer’s journey to recovery. It is an opportunity to promote rehabilitation within a complex and realistic environment. It aims to improve quality of life and maintain community links, however, it can present a risk to the organisation, the community and the consumer and these risks require careful consideration and management. There needs to be an opportunity to create occupational opportunities and support client centered practice and goals while minimizing this risk.

Within the western world the use of forensic mental health services is expanding (Janson-Hart, Seto, Crocker, Nicholls & Cote, 2011). Throughout the literature there is a focus on providing recovery based care (Farkas, 2007; Corrigan, 2006; Farnworth & Munoz, 2009; McKenna et al, 2014). Recovery is difficult to define within a forensic setting as there is a balance between rehabilitation and custodial care (Aston & Coffey, 2012). With the involvement of multidisciplinary teams in a forensic setting, there is an evolutionary progression from a custodial or medical model to one of rehabilitation and recovery. Occupational therapy can assist in rehabilitation, through community reintegration via community day leave. The
literature identifies that community day leave is beneficial for; consumer’s goals (Skipworth, 2005; Heap, 2003; Green & Baglioni, 1998), works to increase an individual’s skills, encourages social inclusion (Fitzgerald, 2011) readies the individuals for discharge, and combats occupational deprivation. Green and Baglioni (1998) state, “a graded release system using conditional leave allows for actual functioning and behaviour to be monitored, promotes rehabilitation and is more responsible and reliable system then simply labelling patients as ‘dangerous’ or ‘not dangerous’” (p.845). Across the literature community day leave supports positive changes for patients.

Within the secure mental health unit in Tasmania it was identified that the community day leave program was not being utilised to its full potential nor was it fully engaging patients in the leave program. With the implementation of the new Mental Health Act 2013 in February 2014 an overhaul of the leave program was undertaken. This started as a way to increase rehabilitation opportunities and make better use of the existing resources and evolved to promote consumer participation, increase risk management, increase staff and patient safety and promote education of staff.

Setting: Wilfred Lopes Centre is a 35 bed secure mental health unit in Tasmania, the current funding model is for 23 beds. The client population includes; prisoners with mental illnesses; civil patients who are unable to be managed within the civil setting, people with mental illnesses appearing in court, and those found Not Guilty by Reason of Insanity (NGRI) or Unfit to Plead and placed on a Forensic Order. A patient subject to a Forensic Order cannot be released to the community unless discharged by the Supreme Court. Despite having slightly different approval processes, all patients within the secure mental health unit can access rehabilitation leave. The leave program is a mandatory requirement, but currently not funded.

Design and Method: The design and method of this project was a six stage cyclic process. Each phase led onto the next with a natural progression and was allowed to evolve during implementation.

Phase one: Was the inclusion of alternative venues for leave.

Phase two: Was the implementation of more thorough risk plans and tailored risk management plans that accompanied leave programs when submitted for approval.

Phase three: Was a review of the training provided to staff in order to escort patients on leave. As part of the review flow charts on the process were developed (appendix 1 a, b and c).

Phase four: Was the implementation of more complex leaves including overnight, unescorted leaves and leaves shared with another patient

Phase five: Was the implementation of a leave planning group. This increased consumer involvement and allowed consumers the opportunity to reflect, feedback and comment on their leave.

Phase six: This is a continual process and involves the evaluation of the program including an evaluation of each individual leave as well as an evaluation when a leave program has been completed. It includes staff feedback about leaves and leave training, examining statistics of number of leaves that occur, or are cancelled and consumer feedback.

Results: Even though recovery is said to be an evolving concept both Andrews et al. (1990) and McKenna et al. (2014) outline the importance of consumer involvement to promote recovery and rehabilitation. This has been achieved with the implementation of a restructure in the way leave is undertaken from the secure mental health unit. Consumer engagement has increased, and consumers show improved satisfaction with their leave program. Within the last 11 months there has been a 154% increase in the number of leave hours undertaken compared to 2014/2015 (with an outlier removed) (Appendix 2). Unescorted leave has increased from 0 to 102 leaves. The percentage of leave cancellations have remained similar however the amount cancelled due to staffing has increased from 23% to 50% due to current pressures on staffing. The number of leaves cancelled due to patient factors (risk or behaviour) has decreased. Consumer engagement has meant leave programs are more suitably designed to prevent the need for consumers or staff to cancel based on consumer factors and consumers are beginning to move towards their rehabilitation goals and eventual discharge.

Conclusion: The restructuring of the leave program has meant the rehabilitative opportunities for consumers within the secure mental health unit have dramatically increased. An increase in leave hours, an increase in unescorted leave and a decrease in cancellations due to consumer factors has been measured. Consumers have embraced this collaborative approach and in turn rehabilitation goals are being achieved and engagement has been increased. It has provided the opportunity for patients to have different experiences prior to discharge, to expose patients to more challenges and to hopefully increase success when reintegrated into the community. A recovery model within the service has been adopted, occupational deprivation has been addressed, the environment has been expanded and the education to staff has resulted in a safer leave program for consumers, staff and the community.

Prevention of clinical deterioration by developing a new model of care to manage post-operative complications that delay mobilisation in high risk surgical patients: An Advanced Scope of Practice Physiotherapy Role

Austin Health Physiotherapy

Susan Berney, Danielle Dunlop, Mel Gregory, Debbie Muero

AIM: To improve patient outcomes by better managing post-operative complications and clinical deterioration through use of an Advanced Scope of Practice Physiotherapy role to detect, monitor and manage postoperative complications that are barriers to early mobility and reduce the incidence of post-operative pulmonary complications and acute hospital length of stay.

SUMMARY ABSTRACT: Postoperative pulmonary complications following major abdominal surgery increase morbidity, mortality, hospital length of stay and costs (Story, 2011). In 2009, the Department of Health funded a Post Operative Surveillance Team to assist in the early identification and subsequent management of post-operative complications in a high risk open upper abdominal surgical cohort. (Austin Health Post-Operative Surveillance Team (POST) Investigators, 2010) High risk was defined as patients who were older than 55 years undergoing unplanned surgery; patients who older than 80 years undergoing elective surgery and patient who require an intensive care unit admission during their post-operative course.

The results of the Post-Operative Surveillance study follow up of these high risk patients showed that in these high risk patients post-operative pulmonary complications were extremely common (42%, two thirds of which occurred within the first two post-operative days), which represented a threefold increase compared to other patients undergoing upper abdominal surgery at Austin Health. (Haines et al., 2013, Parry et al., 2014) These post-operative pulmonary complications were directly
related to an increased length of hospital stay and costs, and patients were also more likely to require a Medical Emergency Team review for acute clinical deterioration and utilise critical care outreach resources.\cite{Parry2014, Haines2013}

Consistent with recent evidence, the results of the Post Operative Surveillance Team study showed that delayed mobilisation\cite{Haines2013} (patients who did not mobilise before the end of the first postoperative day) was directly associated with the aforementioned threefold increase in post-operative pulmonary complications. The most common barrier to early mobilisation was hypotension, which was present in over 60% of cases, with cardiac arrhythmias, pain and nausea also reported to delay mobilisation.\cite{Haines2013}

The historic model of care predominantly required medical and nursing staff to undertake assessment and surveillance of clinical deterioration and management of post-operative complications. However, nursing workload, reduced accessibility to members of the surgical unit and a high level of acuteness across the surgical wards has potentially contributed to delayed recognition and an inattentive approach to increased surveillance of clinical deterioration or identification of barriers to mobilisation. A new model of care was proposed to address this: use a senior, critical care physiotherapist with additional training in recognition of deterioration and cardiovascular physiology and measurement to identify the presence of barriers to mobility, and remEDIATE these barriers as early as possible to ensure early mobilisation occurs. This advanced scope of practice physiotherapist co-ordinates postoperative care of these patients alongside an Intensive Care Fellow, a Anaesthetics Registrar/Acute Pain Service Team Member and senior nursing staff.

A steering committee designed the role, identified specific educational needs and oversaw credentialing of the advanced scope role. This committee included senior medical and physiotherapy staff from Intensive Care, Anaesthesia and Physiotherapy. It reflected the collaborative intent of the model and delivered the strong leadership required to undertake an effective trial. Specific hospital based training modules in the detection and management of deterioration and cardiovascular physiology and measurements as well as an external University affiliated course in Transthoracic Echocardiography were undertaken. The role was commenced in October 2015.

In the new model, the Physiotherapist works alongside ward based nurses and senior medical staff from Intensive Care and Anaesthesia to provide a rapid and individualised response to clinical deterioration. They also address other barriers to mobilisation, like pain and haemodynamic compromise, so patients are able to participate in their care to reduce the risks associated with post-operative immobility.

The results have demonstrated improved outcomes for patients. There has been a 65% reduction in the incidence of post-operative pulmonary complications with patients less likely to require a Medical Emergency review or an admission to intensive care post-operatively because of clinical deterioration. There has also been an 11 day reduction in mean hospital length of stay resulting in an estimated 1635 additional bed days per annum being available for other patients requiring surgery. This reduced length of stay combined with less post-operative morbidity has resulted in a mean cost saving per admission of $55,670.

This new model of care has resulted in improved outcomes for patients and strengthened relationships between medical, nursing and physiotherapy disciplines in the detection and management of clinical deterioration for high risk patients. This project has facilitated the translation of evidence into practice resulting in delivery of clinical best practice and exceptional care for patients.

**Abstracts**

**Improving and reviewing Correct Patient, Correct Side and Correct Site practices at Western Health.**

Western Health Perioperative Services
Dianne Buttigieg, Elizabeth Hessian, Patricia Kitney, Oliver Evans

**AIM:** The aim of the project was to review the current “Passport To Surgery” practices at Western Health and to ensure that there was compliance with Western Health’s Best Care Framework, the World Health Organisation (WHO) & Australian College of Operating Room Nurses (ACORN) standards and the meeting National Safety and Quality Health Standards (NSQHS) standards.

**SUMMARY ABSTRACT:** A review was made of the existing approach to Western Health “Passport To Surgery” (now known as “Time Out”) practices and the roles and responsibilities of the surgical team were clarified, ensuring 100% achievement of correct patient, correct side and correct site for all patients undergoing invasive procedures.

Real time audits were conducted to determine discrepancies between current practice and intended, standard procedure. “Passport to Surgery” paperwork was modified, re-badge as “Team Time Out “and an education package rolled out. This included education for nursing, technician staff, anaesthetists and surgeons. Improvement with “Team Time Out” compliance and communication was observed as a result and a further real time audit of compliance was conducted after the education package and documentation changes were implemented. This data was compared to the pre education audits and a demonstrable improvement achieved.

**Improving the use of standardised handover tools and best practice principles in the perioperative setting.**

Western Health Perioperative Services
Patricia Kitney, David Bramley, Raymond Tam, Dianne Buttigieg, Oliver Evans

**AIM:** The aim of the clinical project was to improve compliance with accepted Western Health Clinical Handover Standards (ISBAR Principles) in the Perioperative environment.

**SUMMARY ABSTRACT:** With the introduction of ISBAR as Western Health’s (WH) handover framework an investigation was launched to determine handover practices between Perioperative health care professionals when transferring the care of the Perioperative patient. This investigation determined that compliance to the ISBAR handover framework was poor and thus interventions were implemented to improve compliance.

A series of audits of clinical handover were conducted in the Perioperative Unit at two campuses of Western Health. Perioperative patients were selected based on their admission during the weeks of conducting the audits. The audit tool was completed by Educators and Post Anaesthetic Care Unit (PACU) staff and collected by the project investigator. Audits were conducted of the Handover received from initial Ward to Holding Bay, from Anaesthetists to PACU, Circulating nurse to PACU, PACU to destination ward nurse.

Results of the audits demonstrated that compliance with accepted clinical handover standards is below the 100% expected and that improvement may be achieved with education of staff and innovative promotional strategies of the ISBAR principles.
Oral Chemotherapy Clinic – “Improving education and care for cancer patients”

Western Health & Melbourne Health Cancer Services

Catherine Oakman, Ilana Hornung, Georgina Akers, Kerry Shannah, Sue Thomas, Paula Nelson, Jayne Watson

AIm: The aim of this project was to develop and implement an innovative nurse-led model of care to improve the education and support of patients receiving oral chemotherapy at Western Health and Melbourne Health.

SUMMARY ABSTRACT: Background: The rapid emergence in recent times of a diverse range of oral chemotherapy regimens has resulted in the delivery of agents that are unfamiliar to many health care practitioners and have potential serious toxicities. To ensure the safe delivery and management of chemotherapy treatments, patients should be given an understanding of the prescribed drugs, how the treatment will be delivered, any monitoring of blood levels required between cycles of chemotherapy and the possible side effects that could be experienced. It has been recognised that while patients receiving intravenous chemotherapy receive formal education prior to their treatment commencing within the Day Chemotherapy Unit, those prescribed oral chemotherapy do not. Clinicians from two public hospitals, Western Health (WH) and Melbourne Health (MH), partnered in a Western & Central Melbourne Integrated Cancer Services (WCMICS) funded project which aimed to review and improve the information and support provided to patients about to commence oral chemotherapy. For the purposes of this project, the term oral chemotherapy refers to both cytotoxic and biological agents.

Design and Method:
1) Retrospective audit of patients receiving oral chemotherapy
Pharmacy audits were conducted over a two month period to capture the number and types of outpatient chemotherapy prescriptions in the Medical Oncology and Haematology outpatient clinics at MH and WH. This provided a snapshot of prescribing practices and identified the drugs to be specifically addressed for patient education in this project.

2) Consumer consultation
Patients who had been prescribed oral chemotherapy were identified and invited to participate in a telephone or face-to-face interview to establish an understanding of their experiences with a focus on; the delivery of drug education, issues encountered with drug dispensing, adverse events experienced, knowledge of how to seek help and identification of areas for improvement.

3) Clinician consultation to establish enablers and barriers to prescribing oral chemotherapy
Clinicians were invited to complete a survey to measure their oral chemotherapy prescribing activity, details of the drug education provided to patients (including written or online resources) and instructions provided to patients regarding when and how to make contact with the health service for management of adverse events.

4) Development, trial and evaluation of a dedicated Oral Chemotherapy Clinic (OCC)
A model of care for a nurse-led OCC, adapted to meet the individual needs of each clinical setting, was developed to provide a structured intervention for patient education and support. A pilot was conducted at each site for a six month period. At the completion of the pilot period, an evaluation of the referrals as well as patient and clinician experiences was conducted.

Results: The review phase demonstrated significant gaps between the information and support required and that provided to patients prescribed oral chemotherapy in order to safely manage their treatment. In baseline surveys, clinicians reported a need for formalised patient education and an access point for ongoing support. Patients reported frustrations with drug dispensing and varied levels of pre-treatment education. The retrospective pharmacy audit identified the most common drugs prescribed in the outpatient clinics and indicated that the proposed resources would be adequate for the workload expected in the pilot period.

During the project development phase, a protocol was developed for a nurse-led OCC including referral processes, delivery of patient education as well as communication and review processes. This model was successfully instituted during the pilot phase with a total of 25 patients referred to the OCC at both organisations. Evaluation surveys conducted at the end of the project from both clinicians and patients demonstrated greater confidence in the correct and safe administration of oral agents with the support of the OCC.

Conclusion: In keeping with the known rapid emergence of new treatments, oral chemotherapy and biological agents are prescribed more regularly. Prior to this project, Oncologists who prescribed oral chemotherapy would provide patients with a prescription to be dispensed at either the hospital or local Pharmacy and the patient was reviewed in outpatient clinics, most typically every 4-6 weeks. This process was markedly different to those patients prescribed IV agents who are provided with education and ongoing support within the Chemotherapy Day Unit setting. Through the introduction of an OCC, MH and WH were able to provide more comprehensive and consistent education and support to patients. The model was welcomed and widely supported by clinicians and patients. The pilot clinic was shown to be feasible at both WH and MH and will continue as an ongoing service. The findings from this project provide a valuable resource for health services intending to introduce a similar model for their patients.

Partnering with a local community health organisation to provide rehabilitation to cancer survivors

Western Health Cancer Services
Meron Pitcher
Ruth Martin, Alice Jermakoff, Roshan Rathnayaka, Tammy Dinh

AIm: To implement an exercise- and education-based rehabilitation program for breast and prostate cancer survivors in the western region of Melbourne.

SUMMARY ABSTRACT: Background: It is internationally recognised that exercise programs are beneficial for cancer survivors and should be integrated into the cancer care pathway. However, for patients residing in the Western region of Melbourne, there are currently no health service specific cancer rehabilitation programs available. Through the support of a Western and Central Melbourne Integrated Cancer Services (WCMICS) funding grant, Western Health (WH) partnered with...
Djerriwath Health Services (DHHS) to develop and pilot a rehabilitation program at Melton Health (MH).

Methods: Two separate breast and prostate cancer specific rehabilitation programs were developed and implemented at MH. The programs consisted of a one hour education session and one hour individualised exercise session, twice a week for six weeks. The education programs were designed following close consultation with consumers and individual exercise plans prescribed by a Physiotherapist and Exercise Physiologist. Exclusion criteria were tumour streams other than breast or prostate, patients receiving active radiotherapy and/or chemotherapy and those unable to independently participate in a group setting either due to physical or cognitive limitations.

Results: Two breast and one prostate cancer rehabilitation group were piloted at MH. A total of 39 patients were referred, with each group enrolling 5-8 patients. Of those referred reasons for non-enrolment included not feeling ready to exercise, not feeling well enough or already returned to pre-morbid level of functioning. Breast and prostate cancer participants completed an average of eight and seven sessions respectively over the course of six weeks. All participants reported the program to be beneficial and provided them with self-management strategies. Participants also reported a change in attitude towards exercise and valued the social element that the program provided.

Conclusion: An effective partnership was developed between a tertiary and a community health service to establish a cancer specific rehabilitation program that was feasible and acceptable for patients with breast or prostate cancer. The breast cancer rehabilitation group is now embedded as part of the exercise rehabilitation program at MH. A men’s cancer exercise group is currently being developed in response to the outcomes from the pilot prostate cancer group, aiming to commence at the end of 2016.

Diagnostics and solutions design: The diagnostics and solutions phases of the project were conducted over a six-month period. The diagnostics were robust and consisted of data analysis, process mapping, issue identification and gap analysis sessions conducted with multidisciplinary staff. Consumer consultation and direction was sought by conducting semi-structured interviews with current complex patients and families, reviewing of over 50 complaints from complex patient and families and consulting with the RCH Family Advisory Council. Literature review and benchmarking were undertaken to review evidence of best practice in this area.

During the diagnostic phase three key areas for improvement were identified:
- family partnership in care
- care coordination, both within RCH and across community services
- timely access to ambulatory advice and proactive support.

These three key areas for improvement became the primary drivers of service development and the tangible interventions were identified using a driver diagram analysis (Appendix 1). These interventions were prioritised using an impact-effort matrix by the steering committee and then quantified or qualified with voice of customer and data analysis, laying the foundations of the pilot program (Appendix 2).

Scope: The RCH defined complex care children by utilising four cardinal domains, as outlined by Rosenbaum et al. (2008), to describe complexity in healthcare needs as outlined below:
- Chronicity: Child’s condition is expected to last at least six months
- Complexity: Involvement of, or anticipated need for, three or more medical specialties
- Fragility: The child has had five or more admissions in the past year or is anticipated to need this e.g. neonate
- Intensity of care: Functional difficulty resulting in interventional healthcare needs. e.g. tracheostomy tube (Patients must fit all criteria to be eligible.)

Phase 1 (Pilot): The complex care pilot program enrolled 20 patients with complex healthcare needs between March and June 2014. The patients were identified using hospital administration data of existing Respiratory, Developmental Medicine and Nephrology patients that met the above four criteria. Clinician input was then sought to determine eligibility.

Patients enrolled were diverse in age, geographic location and medical conditions. English proficiency did not limit access to the pilot program. Baseline data was collected on their bed days, ED presentations, inpatient admissions and Specialist Clinic
appointments. Families also completed a survey to understand their experience of care across 15 components of service provision. These patients and their families were supported by the complex care pilot program for a period of six months (July – December 2014) and during this time there was regular consultation with families and staff to ensure flexible and responsive development of service provision.

A detailed evaluation plan demonstrated specific actions of the program that had direct impact on service provision resulting in a 30 per cent improvement in the patient and family experience of care leading to a better quality of life and more efficient use of RCH resources, specifically a 45 per cent reduction in bed days and a 43 percent reduction in Emergency Department (ED) presentations.

Phase 2 (Expansion): As a result of the pilot’s success, establishment and transition funding for service expansion was supported for the next two years. The RCH CCS is currently expanding to provide support for up to 200 patients and their families. The implementation plan for expansion of service provision is a considered and measured approach spanning two years, planned in two distinct stages. The first stage is focusing on building sustainable systems within and across organisations to support further spread of this work; and the second stage will focus on focusing these systems and developing partnerships with community providers. This staged approach includes regular evaluation and review phases, including consumer consultation.

To date the results of the expansion have mirrored the pilot results with improved experience of care and satisfaction of consumers with a significant reduction in the use of hospital resources.


The Benefits of Sustaining a Streamlined Hip Fracture Management
South West Healthcare Orthopaedics
Alasdair Sutherland, Tyler Mow, Jennifer Lukeis, Denis O’Leary, Leanne McCann, Nolan McDonnell

AIM: The aim of this improvement work was to reduce the time from presentation to the Emergency Department (ED) to undergoing surgery for patient’s presenting with hip fracture to a regional health service, as a factor in improving mortality and morbidity rates in this patient cohort.

SUMMARY ABSTRACT: Background: Hip fracture is an end-of-life event associated with significant complications. The mortality rate at 30 days is ~ 8% (RCP 2014) and at one year can be 30% (Lisk& Yeong 2014). The associated morbidity and mortality associated with this injury can be reduced by minimising delays to surgical treatment. The management is a complex and costly venture often without ideal outcomes (Sund et al. 2009, Egerod et al. 2010, NICE 2015). In those patients that survive, infective complications, including chest, urinary sepsis and wound infection, can reach 30%. Protracted hospital stays are also common, with acute hospital stay ranging from 9 -15 days (Ireland et al. 2015), often followed by rehabilitation time. Cost estimates for acute inpatient stays vary but are in the region of $910 - 1147 per day (Ireland et al. 2015).

The emphasis in published guidelines has been placed upon expert preparation of the patient for surgery and rapid progress to surgery, with an appreciation that a delay in surgery beyond 48 hours leads to excess preventable morbidity and mortality (Simunovic et al. 2010). In large volumes, the volume of hip fracture patients presenting mandates an organised approach to their management, and makes the arguments for resource allocation easier to sustain. The challenge for a smaller regional hospital is one of less predictable presentation of hip fracture patients, making maintenance of co-ordinated management processes more challenging, and overall care less consistent.

Restructuring of healthcare management processes will traditionally employ standard techniques to examine the so-called Pillars of Management – Hard (structure, process, systems) and Soft (people, relationships) (Morieux 2011). In order to facilitate the change, meetings of various groups are arranged to seek compromise, avoiding conflict between parts of the organisation rather than to optimise the outcome of the new process. Compromise rarely achieves the best possible process, only the least challenging to the various groups involved. Newer models of restructuring, such as Redesign and Smart Simplicity, aim to drive change by improving interplay and co-operation rather than compromise (Morieux 2011). At South West Healthcare (SWH) an existing Clinical Pathway for Hip Fracture had been in use for some years, with minimal success in achieving timely transfer to surgery. The theatre suite was under pressure, with difficulties in timely management of both elective and emergency surgery, and staff discontent with current systems capacity and skyrocketing overtime. This was all underpinned by the lack of data to support surgical work, including the monitoring of the Key Performance Indicator (KPI) of time from ED presentation to surgery < 48 hours. Valid baseline data was collected, indicating patients with hip fracture were taking an average of 72 hours for surgical treatment.

Aim: To reduce the time from presentation to the Emergency Department to undergoing surgery for patient’s presenting with hip fracture.

Method: A service redesign model that utilised the principles of Smart Simplicity, a management strategy that lays emphasis on collaboration to achieve desired goals. Pre and post implementation intervention approach, with ongoing measurement built in to sustain the improvement. A Work Group was constituted to examine closely the process of hip fracture care in its current state, conduct the literature review, and plan and implement the improvement work. Work Group membership included relevant multidisciplinary stakeholders, Executive Sponsorship and a dedicated facilitator. A single KPI of ‘Surgery within 48 hours’ was adopted. The use of a patient journey heat map also facilitated agreement of best practice steps and the assessment of current performance against these criteria.

Results: In the first three months of a pilot pathway, 16 of 18 patients had surgery < 48 hours of presentation (89%). In a six month follow up audit after almost two years of implementation, 36 of 39 patients were treated < 48 hours (92%), with the remaining 3 requiring significant medical optimisation before surgery. Of these 39 patients, 12 proceeded...
to theatre < 12 hours (31%), and 15 < 24 hours (38%). The mean time to surgery was reduced from 72 hours to 36 hours, a saving in an annual acute bed stay cost of AU$152,000, and may accrue additional savings in reduced morbidity and mortality. Recent data, the first 3 months in 2016, indicates the average time from ED to surgery is now at 21 hours, a significant and sustained outcome from the baseline of 72 hours.

Discussion: The Hip Fracture Working Group used a redesign model of Smart Simplicity to achieve significant institution-wide cultural change and to overcome prejudices held against prioritising elderly patients with hip fractures. Treatment < 48 hrs is a well-established measure of optimal treatment and the recommended practice within the literature (Shiga et al. 2008, Simunovic et al. 2010). Other studies have demonstrated that surgery < 12 hours of presentation conveys a further increase in the 30 day survival rate (Bretherton & Parker 2015). The reduction from a mean time to surgery of 72 hours to 36 hours, and currently at 21 hours was achieved by a focus on a co-operative interplay of services rather than compromise (Morieux 2011), a structured and streamlined approach to management. Data from the 6-month audit at almost 2 years post implementation suggests that by decreasing time to theatre, we were on average saving 36 hours of acute inpatient bedtime, an estimated saving of $152,000 annually. This saving can make a big difference to a small regional hospital, and further saving may well accrue due to the overall better outcomes achieved with early surgery, although making these calculations is more complex. The average length of acute orthopaedic inpatient stay was 6.3 days, lower than the national average (9-14 days), which may be reflective of the relatively low numbers reviewed, or ready availability of rehabilitation beds. The total in-patient cost, from acute admission to discharge from rehabilitation is considerably more complex to assess, and the comparison of small regional hospitals with metropolitan centres can be difficult.

Conclusion: The development of a streamlined multidisciplinary approach to the management of patients with hip fracture allows a significant reduction in the time to theatre. This has achieved the best standard of care, and a significant cost saving within a rural healthcare setting despite the relatively low numbers treated. Service redesign, although making these calculations is more complex, has been received easily accessible and up to date, and involvement from different disciplines, as part of the education series, has been received with positive feedback. The falls and balance program is now well established within South Eastern Private Hospital and is providing a reliable, consistent, specifically targeted program to those clientele most at risk of falls in the general population.

**Day Rehabilitation Falls and Balance Program – Changes and Improvements**

**South Eastern Private Hospital – Healthcared**

**Allied Health – Day Rehabilitation**

**Hannah Wood, Alex Lan, Caroline Hussey**

**AIM:** To provide the hospital and local community with a falls prevention and balance program running consistently throughout the year, targeting the population most at risk of falls. To ensure that up-to-date resources, evidence based practice and a multi-disciplinary approach was used to provide a well rounded program to encapsulate a variety of areas addressing falls prevention.

**SUMMARY ABSTRACT:** In 2015 a falls and balance program was underway at the South Eastern Private Hospital for day rehabilitation patients. However, the program in this previous format was poorly organised, had limited resources and had consistently poor attendance. As attendance varied from between zero or one patient per session, therapist time was inefficiently used, particularly as treatment time still needed to be allocated to therapists and space within the rehabilitation hospital needed to be reserved. Prior to the new format, this previous falls and balance program had not been operational for some months.

In mid 2015 the falls and balance program underwent changes to focus on increasing referrals, improving attendance and increasing visibility of the program within the hospital. This involved researching latest evidence for falls prevention education and exercise programs; recruitment of other disciplines to provide a more varied, interesting and relevant education timetable; liaising the with marketing manager to promote the program amongst local doctors and medical services; and, compiling existing resources and creating new resources for patients and therapists.

This report highlights the changes that have been made to update the program to its current format and how outcome measures are now reflecting the benefits of the program to patients. Overall referrals and attendance has dramatically improved, resources for sessions for therapists and patients are easily accessible and up to date, and involvement from different disciplines, as part of the education series, has been received with positive feedback. The falls and balance program is now well established within South Eastern Private Hospital and is providing a reliable, consistent, specifically targeted program to those clientele most at risk of falls in the general population.

**One Patient is One Too Many: Preventing Hospital-Acquired Venous Thromboembolism**

Melbourne Health

Transformation and Quality, Office of the Chief Executive, Pharmacy Department, Department of Plastic Surgery

Stella Kravtsov, Daryl Williams, Joanne Young, Kirstie MacGill

**AIM:** To raise awareness of the organisation’s VTE Prevention procedure and Risk Screening tool and improve compliance with completion of VTE Risk screening on the National Inpatient Medication Chart (NIMC) to 85% by July 2016. Mandatory VTE Risk Screening would improve appropriateness of prophylaxis in accordance with the MH VTE Prophylaxis Guidelines and reduce rates of hospital-acquired VTE.

**SUMMARY ABSTRACT:** Background: In 2009, the National Health and Medical Research Council (NHMRC) established Guidelines for VTE Prevention which stated all hospitals should have a policy to assess the risk of VTE. The Institute for Healthcare Improvement (IHI) and the National Institute of Health Care and Excellence (NICE, UK 2016) highlights risk screening on admission as the initial key element to appropriate prophylaxis of hospital-acquired VTE.

**Consensus Guideline Development for VTE prophylaxis:** In 2013, Melbourne Health (MH) established a VTE Prophylaxis Working Group, implemented an organisation-wide “Venous Thromboembolism Prevention” Procedure, including a VTE Risk Screen Form to be completed for all multi-day patients, and introduced a MH VTE Prophylaxis Clinical Guideline. In May 2014, the RMH Bedside Clinical Audit showed only 14% of inpatients had a completed VTE Risk Screen, whereas appropriateness of VTE Prophylaxis prescribing was 76%.

**Intervention to improve risk screening:** In 2015, following continued poor compliance, benchmarking with peer health services and consultation with junior and senior medical staff, the VTE Risk Screen was abbreviated and integrated onto the front of the –NIMC - to provide ease of access in a simplified format. During 2015, bimonthly RMH Interdisciplinary Documentation Audits showed continuing poor compliance with VTE Risk Screen completion, ranging from 18-23%.

In early 2016, the Executive and Board endorsed an improvement plan to mandate VTE Risk Screening for all multi-day stay patients using frequent auditing, timely feedback and transparency of results to achieve compliance. This plan included the following:
1. The Executive Director Royal Melbourne Hospital (RMH) supported by the VTE Prevention Working Group with the Pharmacy Department implemented weekly auditing of medication charts across all clinical areas for 10 weeks to raise awareness of the VTE Risk Screen tool and improve compliance. Audits were conducted using an electronic auditing system for data capture and analysis. Pharmacists reviewed medication charts and entered VTE Risk screen compliance data based on a pre-defined decision-tree.

2. Weekly analysis and reporting of compliance was provided at an organisational, divisional, unit and ward level with approximately 400 medication charts audited per week, across 23 wards and 39 units. Weekly compliance results were fed back to Divisional Directors, Heads of Units, Nurse Unit Managers and pharmacists, uploaded onto the intranet VTE Audit webpage, discussed at unit clinical meetings and displayed on the wards’ Knowing How You’re Doing boards.

3. Clinicians across all disciplines were encouraged to provide timely feedback to their colleagues and ‘Speak Up’ if a colleague was not using the VTE Risk Screen. Clinical outcome data for hospital-acquired VTE events was monitored and provided to units as well as readmission rates for patients diagnosed with VTE events.

Outcome: Compliance with VTE Risk Screen completion improved from 22% to 84% at the end of the 10 week audit period. This coincided with a reduction in hospital-acquired deep vein thrombosis (DVT) and pulmonary embolism (PE) rates with 138 DVT and PE episodes in 2014-2015 compared with 99 (2015-2016 YTD – as at 14/06/2016; based on coded inpatient data). The reductions in hospital-acquired VTE rates were supported by continuous improvement in appropriateness of VTE Prophylaxis rates which improved from 68% in 2013 to 80% in 2015.

Key learning: Essential elements to success were strong medical leadership and commitment, a clear directive from the Chief Executive and Executive Director RMH to improve compliance with VTE Risk Screening and a dedicated resource to drive the improvement process.

Contributors to the significant improvement in VTE Risk Screen compliance and reduction of VTE events included: weekly feedback of audit results at divisional, unit and ward level; recognition of highest performing units/ward; direct communication by the Executive Director with individual Heads of Unit and discussion at unit meetings; promotion of strategies employed by wards/units to achieve compliance in hospital newsletters; and encouragement of clinical staff to provide timely feedback directly to their colleagues about completing the VTE Risk Screen.

Sustainability: To ensure sustainability of improvements planned monthly local area auditing will be undertaken by unit medical staff. For units with compliance >95% and sustained results for at least three months, audits will transition to quarterly. Six monthly ‘external’ audits will be conducted by Pharmacists to validate the local audit results. Clinicians will continue to use the organisation’s Accountability Framework and ‘Speaking up for Patient Safety’ methodology to support timely feedback to clinicians about completing the VTE Risk Screen. The organisation has invested in development of reporting of real-time DVT/PE rates using daily imaging results for inpatients diagnosed with DVT/PE, enabling the ability to identify failure mode/s and implement improvements in a timely manner. Units will monitor readmission rates for patients developing DVT/PE post-discharge from their units, adding this to the suite of clinical outcome metrics available as a dashboard application. Consumers will be involved in the development of patient information on VTE Risk during hospital stay and post-discharge to empower patients to be part of the VTE Prevention program.

Conclusion: Committed organisational leadership is crucial to effecting change. Mandatory VTE Risk Screening promotes patient safety – no ‘special rules’. Measurement with timely and intensive feedback improves compliance, reduces variability in practice and preventable complications. A multidisciplinary team approach is required to promote change in practice at unit level – patient safety is everyone’s responsibility.

Breastfeeding Circle: outpatient service providing support and advice to postnatal mothers
St John of God Subiaco Hospital Maternity Services
Lisa Black, Heather Marin, Helen McAllister, Janie Brown, Alannah Cooper
AIM: To provide mothers who have had babies at St John of God Subiaco Hospital with timely access to breastfeeding support and advice through a small group format following discharge, to assist with the challenges they may encounter in the early postpartum period in response to reducing lengths of stay in hospital.

SUMMARY ABSTRACT: St John of God Subiaco Hospital (SJGSH) is the largest private provider of maternity services in Western Australia. In 2014/2015 more than 3,365 babies were born at the hospital.

Across the health sector, there has been a reduction in the length of stay (LOS) for vaginal and caesarean deliveries due to upward pressure on hospital budgets and best use of resources. In addition, diagnosis related group (DRG) funding by health fund providers has dramatically influenced the length of stay over the past 10 years.

With the implementation of length of stay for vaginal delivery (usually three nights in hospital) and caesarean sections (usually four nights in hospital) at SJGSH, it was recognised that an opportunity existed to bridge a gap in postnatal outpatient services that could support mothers with breastfeeding discharge in the early postpartum period. The World Health Organisation (WHO) recommends that every facility providing maternity services and care for newborn infants should follow the “Ten Steps to Successful Breastfeeding”. The establishment of the ‘Breastfeeding Circle’ supports the WHO Code Step Number 10—“Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic”.

Prior hospital support services provided either one to one lactation support (fees may apply) or generalised lactation support within a large group setting (20–30 mothers). Although both options are valid and have been highly successful, it was felt that with the reduction in LOS there was a need for a service that could provide early follow-up for mothers who may have discharged home prior to Lactogenesis 2 (“milk coming in”). Such mothers have not yet established breastfeeding which can lead to breastfeeding challenges once they are at home.

Exclusive breastfeeding ensures that infants receive the full benefits of breast milk, including developmental benefits and protection against infection and some chronic diseases. In Australia, it is recommended that infants are exclusively breastfed until six months of age, when solid foods are introduced, and that breastfeeding is continued until at least 12 months of age. While Australia’s breastfeeding initiation rate is currently high at 96%, only 15% of infants are exclusively breastfed to six months. Usually mothers who encounter difficulties with breastfeeding can overcome these with the right support and encouragement (National Health and Medical Research Council).
The Breastfeeding Circle was launched in May 2015 and includes a maximum of six mothers and their babies and is facilitated by a lactation consultant/midwife. The free service is offered three times a week, with each session running for two hours.

The service has been well accepted by staff during its development and implementation stages and has been positively promoted through discharge planning. To date nearly 460 women have been booked into the service. Patient evaluation shows 96.5 per cent of women utilising the Breastfeeding Circle are satisfied with the service.

Innovation in a SAFE Afterhours Team
Royal Perth Bentley Group
Safety After Hours for Everyone (SAFE) Department
Katherine Birkett, Deepan Krishnasivam, Tim Bowles

AIM: Safety for Everyone After Hours (SAFE) team was implemented at Royal Perth Hospital (RPH, a Tertiary 450-bedded Hospital) to create a contemporary out of hours model, focusing on the provision of safe, timely and quality care to patients. By creating a culture of care progression out of hours, rather than the existing ‘reactive’ maintenance model of care, we placed a strong emphasis on better patient outcomes and intolerance of patient harm. This model increases the efficiency of the after-hours workforce by introducing a transparent and equitable distribution of workload that is measured, monitored and redistributed. In addition, by focusing on education, teamwork and staff satisfaction, we aimed to make after hours an educationally and professionally rewarding term as opposed to being a medical term to avoid or survive.

SUMMARY ABSTRACT: Introduction: RPH has a discrepancy in the level of care between in-hours and after-hours teams, which is reflected in the widening of the in and after hours hospital standardized mortality ratio (HSMR), similar to current findings in the international published literature (Ruiz et al. 2015, Sharp et al. 2013, Freemantle et al. 2012, Handel et al. 2012, Barba et al. 2006, Bell & Redelmeier 2001). Literature also suggests that after hours care can be suboptimal with delays to medical reviews, completion of investigations, commencement of treatment (Seward et al. 2003) and poor utilisation and concentration. Early data has suggested an improvement in mortality, with a fall in HSMR coincident with introduction of the model. Feedback from nursing staff has been positive with the easy availability of medical staff leading to development of healthy professional relationships between medical and nursing staff out-of-hours.

Handover is centred on “Patients of Concern” meeting agreed criteria. The SAFE Team proactively reviews all identified patients with closed loop feedback to the Clinical Lead ensuring care is monitored and progressed. The model aims to progress care with a clear process of escalation. There is an emphasis on daily education with support for staff in recognising and reporting deteriorating patients earlier.

Other initiatives introduced simultaneously were ward board meetings, regular RMO ward rounding, completion of “safety checks” on all patients transferring into SAFE clinical areas from other areas of the hospital (such as theatre recovery or the Emergency Department). Regular formal and informal meetings through the shift allow maintenance of team knowledge of workloads and progress of patients of concern. Non urgent tasks are requested at ward level by the nurse, with the time, urgency, patient name, bed number, name of staff member requesting and the nature of the task documented in the task folder. Pagers are now used for escalating care rather than for routine work, allowing for fewer interruptions to work and better concentration.

Early data has suggested an improvement in mortality, with a fall in HSMR coincident with introduction of the model. Feedback has demonstrated success in influencing a cultural shift towards progressing patient care afterhours. There has been an overall reduction in the task response and completion times. Staff satisfaction with the new model is very positive, particularly in relation to ward based RMO’s, increased senior support and reduced response times to requesting patient reviews.

Discussion: After-hours care of patients is an area of medicine that has gained increased attention in the last ten years. There has been a culture of perception of ‘surviving the night’ until the home teams or day teams return the next day. Given the increasing complexity of health problems and activity within tertiary hospitals, this model needed to change to reduce patient harm and implementing an organisational wide innovative model of care has enabled us to influence the culture of after hours care to the benefit of both our patients and staff.

Conclusion: The SAFE model has influenced a significant change in culture within our organisation. Patient care after hours has improved with benefits of reduced mortality, improved timeliness of care provided by a team indicating they have good support and teamwork, improved communications and care planning underpinned by clear escalation pathways and good
Ensuring patient safety and quality care in the appropriate use of blood products and its alternatives at King Edward Memorial Hospital - a trend review from 2010 – 2015.

King Edward Memorial Hospital, Women and Newborn Health Service
Transfusion Medicine/Haematology
Deborah Pinchin, Madeleine Gallagher-Swann, Nicole Staples, Bernard Ingleby, Christine Arnold, Wanda Randall, Andrew Barr

AIM: To demonstrate a trend of blood product use at King Edward Memorial Hospital over time from 2010 to 2015 in adult patients, displayed in a timeline. The timeline will form a basis to map alternative to blood products use and change in the implementation of PBM. We also aim to ensure the safe and appropriate use of blood products and the alternatives to transfusion. The implementation of these initiatives has been a cohesive effort from the multi-disciplinary Hospital Transfusion Team at our institution.

SUMMARY ABSTRACT: As the sole tertiary hospital for women and newborn infants in Western Australia, King Edward Memorial (KEMH) is committed to leading the way in Patient Blood Management across the state and as such has implemented a multifaceted programme aimed at the safe and appropriate use of blood products, which also includes the alternatives to transfusion. In late 2015 a quality improvement activity was undertaken to assess the impact of the programme, showcase our activity and form a baseline to monitor any future changes which may impact on our use of blood products, its alternatives and patient care.

The evidence based Patient Blood Management (PBM) aims to improve patient outcomes by reducing exposure to donor blood products through: optimising the blood volume and red cell mass, minimising blood loss and optimising the patient’s tolerance of anaemia (National Blood Authority 2011, 2012a, 2012b, 2012c, 2015). With a strong commitment to the National Safety and Quality Health Service Standards (NSQHS) and specifically Standard 7: Blood and Blood Products; our approach at KEMH was to integrate and utilise PBM within Transfusion Medicine and ensure the principles of safe and appropriate use of blood products and PBM have become a routine and single standard of care.

With increased demand upon our limited supply of donor blood products within Australia, we have a need to ensure that we maintain a supply of blood for those patients in whom we have no alternative to donor blood. We needed to proactively treat correctable anaemia; avoid wastage of blood, through optimal storage, collection and transfer of products. We were committed to ensure that all alternatives to transfusion were available and used appropriately. We needed to involve patients in discussions about their care, provide informed consent and ensure our healthcare practitioners clearly documented their decisions and treatment relating to transfusion. We have examined our processes around anaemia management and blood transfusion with the multi-disciplinary staff who provide valuable expertise and input in the management of our patients. We introduced a defined process to identify patient history ‘Transfusion History – Assessment of patients who may require blood products at KEMH’ in addition to the implementation of a dedicated programme in managing patients who specifically decline blood ‘Engaging women in their plan of care’.

We were proud to be invited as speakers and present 4 sessions at the National Blood Symposium in Brisbane 2015 in collaboration with the Australian Commission on Safety and Quality in Healthcare and Queensland Government on our innovative practice improvements (see Appendix 1).

At the same time we were also nominated for the following national awards:

- Award for excellence in implementing a PBM programme
- Award for excellence in the governance of blood and blood products
- Award for excellence in a public/private healthcare collaboration
- Award for excellence in implementing NSQHS Standard 7 – Blood and Blood products

We received 2 of the 5 national awards presented in Brisbane in recognition of these innovations. Our awards were in the excellence in the governance of blood and blood products category and for excellence in implementing NSQHS Standard 7 – Blood and Blood products. KEMH was the only hospital within Australia to be presented with two awards.

Our multidisciplinary, collaborative and proactive approach allowed us to take multiple small steps in driving the change forward. Building upon the principles and philosophy of the Transfusion Medicine Unit, a strong programme of education relating to the safe and appropriate use of blood products has been in place for medical, nursing and midwifery staff since 2005. A dedicated Infusion Unit was opened in 2010, where a small number of iron deficient women were administered intravenous iron. This service has grown to around 75 infusions per month; yet we still follow the safe principles of appropriate use as we do with donor blood.

In late 2013 a Clinical Nurse Consultant (CNC PBM) was appointed with specific responsibilities for PBM and we have continued to drive change forward, supported by a robust programme of education for staff internal and external to KEMH. Our reduction in blood product use appears sustained as we develop a more proactive approach to identifying and treating preventable anaemia (particularly in pregnancy). Uncorrected anaemia in pregnancy is associated with increased maternal mortality, increased risk of premature delivery and increased susceptibility to infections, poor work capacity and performance. In the infant, it is associated with increased risk of iron deficiency anaemia and impaired mental development. Thus our aim is to improve maternal and child health outcomes in both the short and the long term.

The use of blood products at KEMH in adults is often associated within the scenario of massive haemorrhage, in this situation the transfusion is frequently lifesaving. The blood products are guided by strict protocols and collaboration between the clinical and Haematology teams, minimal amounts are transfused and therapy is guided by laboratory testing.

Goverance of PBM and Transfusion Medicine is organized through the Hospital Transfusion Committee; which has full oversight of our comprehensive transfusion and PBM quality improvement system, with direct reporting to the organisations executive and clinical governance committees. The Transfusion Coordinator and CNC PBM are highly visible, proactive and operationally drive the organisations strategic objectives forward. Our success is based upon a commitment to consistent, collaborative teamwork, supported by a programme of multidisciplinary education which empowers all groups of staff.
and provides a strong evidence base, enhanced by highly accessible and visible Transfusion Protocols (Appendix 2).

From reflective learning to action: Reducing medication-related problem with an innovative, interdisciplinary, site-specific targeted education model
Women and Newborn Health Service
King Edward Memorial Hospital - Department of Pharmacy, Department of Safety, Quality and Performance, Medication Safety Review Group, Department of Postgraduate Medical Education, Antimicrobial Stewardship
Stephanie Teoh, Tamara Lebedevs, Nabeelah Mukadam, Amy Fitzgerald, Caroline Kerr, Patrick Yapp, Michael Petrovski

AIM: Our initiatives aimed to address and reduce medication incidents with targeted, designation-specific and site-specific education and learning using retrospective clinical incidents and pharmacists’ intervention data. The primary objective was to obtain an in-depth understanding of the pharmacists’ clinical interventions and a thorough evaluation of the potential impact of these interventions in preventing Medication-Related Problems (MRP). An additional objective was to investigate all reported clinical incidents by analysing the trends of medication incidents to uncover common types of errors and any trends within our specialist women and newborn health service. Lastly, we explored how multifaceted strategies and reflective targeted education and learning could provide a continuous feedback loop to staff on common medication-related problems with the goal of preventing future incidents.

SUMMARY ABSTRACT: Pharmacist Clinical Interventions: Pharmacist interventions are explained as “any professional activity by the pharmacist directed towards improving the quality use of medicines and resulting in a recommendation for a change in the patient’s medication therapy, means of administration or medication-taking behaviour” (SHPA 2013).

A retrospective study involving data analysis of all interventions documented by pharmacists was performed (tween Jan 2005-Dec 2014. All clinical interventions documented were evaluated to primarily identify common medications involved within each specialty area (neonatology, obstetrics and gynaecology), and to assess the risks of the Medication Related Problems (MRPs) likely to have been prevented; as well as to obtain institution specific MRPs for future staff education.

Data analysis of pharmacist interventions also revealed trends that allowed planning of continuous improvement activities that would positively impact patients’ health outcomes. The recorded interventions were collated according to ward, medication involved, description of the intervention, and the risk classification. The compiled results were presented to all clinical staff as a self-directed learning presentation as well as ward area in-service sessions. Staff were invited to provide satisfaction feedback on the collated results and presentations.

Medication Incident Reporting: The reporting of clinical incidents is managed and monitored by the hospital risk management coordinator via the state-wide Clinical Incident Management System (CIMS). Trends of all incidents are analysed and strategies to prevent future incidents are discussed and put in place. We performed an in-depth analysis of all medication incidents every two months for 12-months with a thorough discussion on the trends of incidents, common types of incidents and ways to improve medication management to prevent future incidents.

All medication incidents are subsequently presented at the following hospital committee meetings: Drug and Therapeutics Committee, Medication Safety Review Group, Antimicrobial Stewardship Group, Neonatal Coordinating Group, Patient Identification Committee, and the Pharmacy clinical meeting to disseminate the investigation and outcome of the error and the strategies to prevent future occurrences.

The in-depth investigation and analysis of medication incidents has led to many positive outcomes. Strategies put in place to reduce medication incidents include: changes to some clinical practice processes and guideline review and education, for example, a review of the Dosing Guideline to avoid confusing dosing regimens; avoiding look-a-like drugs by changing medication packaging with the manufacturer, ‘The Reporting of Medication Incidents’ and ‘Near Misses’.

At the resident medical officers’ orientation, medication-related problems including prescribing errors that are common, relevant or have had a significant potential for harm, are presented using real-life examples to junior doctors, followed by an open discussion of the incidents. A self-directed learning package developed and delivered by a resident medical officer and a clinical pharmacist on medication-related problems is also available with additional education sessions carried out through the department of Postgraduate Medical Education (PGME) for existing medical employees. The number of incidents reported after the introduction of these education initiatives reduced significantly over the next 6 months (see figure 11).

Other methods of disseminating the information on medication-related problems in the hospital include a Pharmacy Newsletter, ward in-service sessions and notice board displays highlighting the number of incidents in specific ward areas compared to the incident occurrence organisation-wide.

Targeted Education: We projected that our speciality-specific targeted education may have a greater impact on reducing prescribing errors and improving staff satisfaction by utilising this multifaceted interdisciplinary approach. Pharmacists have traditionally provided medication education based largely on generic prescribing errors, rather than institution or specialty specific examples. The organisation implemented this range of strategies to enable and encourage targeted, reflective learning to staff members using real-life examples to address medication incidents with the goal of preventing future medication incidents.

The speciality-specific education sessions are very well received by the staff members in the hospital. A satisfaction survey conducted in September 2015 demonstrated that in general staff from various health professionals enjoyed the self-directed learning package and benefited from the site specific medication clinical incident data.

Conclusion: These studies demonstrated that hospital pharmacists contribute to the reduction of Medication-Related Problems including some potentially fatal adverse medicine events. The analysis of medication clinical incidents promotes reflective learning and helps to identify institutional and speciality-specific medication related problems. A continued innovative strategy by multidisciplinary team members is required to augment and reinforce the safe use of medicines.

Pharmacists are well equipped to identify common, recurring prescribing errors and design educational sessions to target these. By designing education sessions integrating pharmacist knowledge with the needs and expectations of clinical staff, we have provided a more effective prescriber education programme. The flow on effect of targeted, specific, integrative education is a focus on continuous improvement and methods to effectively improve patient safety by reducing the harm caused by medication errors. Subsequently, hospital medication
incidents continue to be analysed post education interventions for up to date trends in reported medication incidents.

Our interdisciplinary education model demonstrates many benefits including high satisfaction rates. We propose utilising this interdisciplinary, targeted approach as a tool to address site-specific issues with this model being potentially adaptable across a range of settings and professions.

Sustaining Improvement in the Management of the Endoscopy Waitlist
Osborne Park Hospital
Ambulatory Service
Anne MacDonald, Clare Matthews, Michael Levitt, Hool Ee, Dev Sengarasingam

AIM: To reduce the risk to patients on the Endoscopy Waitlist at Osborne Park Hospital

SUMMARY ABSTRACT: Background: Osborne Park Hospital (OPH) is a secondary Hospital in Perth's northern suburbs which undertakes low to medium risk obstetrics, rehabilitation and aged care, elective surgery and gastrointestinal endoscopy. The majority of endoscopy procedures performed at OPH are generated by referrals from General Practitioners directly to OPH.

Traditionally patients referred to OPH for endoscopies were triaged according to the elective surgery waitlist categories of Category 1: to be performed <30 days, Category 2: <90 days and Category 3: <365 days. As of 12 January 2014, there were 3,512 patients listed on the OPH Endoscopy waiting list; 2,489 (71%) were over boundary, i.e. patients waiting longer than the recommended wait times per Category.

In early 2014, a Project Officer was appointed at OPH to evaluate and help resolve this protracted waiting list. An audit of the waiting list was conducted by mail. By the time the Project Officer had completed this work, in Dec 2014, there were still more than 3100 cases on the waitlist with 78% of cases over boundary.

With an average of 7 endoscopy lists per week, between 5-7 cases per list, large numbers of referrals and disappointing attendance rates due to late cancellations and failures to attend on the day, it was apparent that a large number of these patients would likely wait years to have their endoscopy at OPH. The OPH clinical leaders became more and more concerned for patient safety.

The OPH approach, built on the “Plan, Do, Study, Act” cycle, utilised valuable lessons learned from the work of the Project Officer. In contrast to the audit phase, OPH self-initiated the development of a multi-faceted project to ensure a consumer-focused, stakeholder-driven project that has subsequently produced sustainable improvements.

Method: A multi-disciplinary OPH team, led by the Surgical Services’ Clinical Nurse Manager and supported by the Medical Head of Service identified the multi-faceted quality improvement strategies for implementation in order to tackle the referral, triage and clerical problems.

1. Extended audit of the Waitlist to identify and eliminate cases on the Waitlist that had already been performed elsewhere or were no longer required.
2. The rules for the removal of patients for repeated non-attendance were applied in accordance with the Health Department of Western Australia (HDWA) Operational Directive 0618/15 (Elective Surgery Access and Waiting List Management Policy)
3. The triage categories were reviewed and updated to better reflect the level of OPH’s clinical services, level of patient risk and clinical best practice.
4. A new referral process for General Practitioners (GPs) was developed and implemented so that only referrals that complied with a strict “evidence base” were accepted.
5. Updated, proactive clerical processes were implemented to minimise non-attendance and to ensure the optimal utilisation of the Endoscopy lists, including telephone confirmation in advance of intention to attend.

Results: The tables below reflect the impact of the quality improvement strategies on the patients’ Waitlist as well as on the DNA (Did Not Arrive) rate.

<table>
<thead>
<tr>
<th>Category 1: &lt;30 days</th>
<th>Category 2: &lt;90 days</th>
<th>Category 3: &lt;365 days</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 2014</td>
<td>June 2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>126</td>
<td>103</td>
<td></td>
<td>1327</td>
</tr>
<tr>
<td>1657</td>
<td>100</td>
<td></td>
<td>2657</td>
</tr>
<tr>
<td>1344</td>
<td>480</td>
<td></td>
<td>1824</td>
</tr>
<tr>
<td>3127</td>
<td>683</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Over Boundary Cases</th>
<th>Dec 2014</th>
<th>June 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1 and Category 2</td>
<td>1506</td>
<td>203 201</td>
</tr>
<tr>
<td>Category 3</td>
<td>943</td>
<td>480 224</td>
</tr>
<tr>
<td>Total</td>
<td>2449</td>
<td>683 425</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>As at 26 June 2016 Over Boundary patients</th>
<th>Booked</th>
<th>Unbooked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1 (previously Category 1, plus Category 2)</td>
<td>215 192</td>
<td>9</td>
</tr>
<tr>
<td>Category 2 (previously Category 3)</td>
<td>10 35</td>
<td>189</td>
</tr>
<tr>
<td>% DNA (Did Not Arrive)</td>
<td>Dec 2014</td>
<td>June 2016</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>21.5%</td>
<td>5%</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion: The results confirm an effective referral, triage and clerical system that is sustainable. The success of the project confirms the need for patient (consumer) and stakeholder group involvement. Buy-in from Endoscopists and the referring GPs (accessed via the Hospital Liaison GP) was pivotal to the sustained success of this project.

OPH has always focused on prioritising the Category 1 patients and historically there has not been a significant problem related to these patients. By 18 July 2016, it is confidently anticipated that there will be no over boundary Category 2 patients and by 15 August, there will be no over boundary Category 3 patients.

Because of the elimination of over boundary cases at OPH, it is planned for Sir Charles Gairdner Hospital to increase referrals of their Endoscopy patients to OPH, to reduce their waitlist and over boundary cases.

"WISER" (We Innovate, Service Excel Regularly) Movement in a Cluster of 7 Hospitals
New Territories East Cluster (NTEC), Hong Kong
NTEC Quality & Safety Division
Hing Yu So, Babbitt Woun, Mandy Tsang, Joan Man, Hon Ming Cheung, Chi Tim Hung

AIM: To engineer a culture in which clinicians are engaged and empowered to work together as multidisciplinary teams and regularly improve their work flow in a patient-focused manner using a scientific approach through the WISER ("We Innovate, Service Excel Regularly.") movement.
In 2013 identified one important strategy: engagement of clinicians in patient safety and quality improvement. We decided through subsequent deliberations that this would be achieved more effectively through participation in improvement projects (Timmel et al. 2010). We also realized the importance to empower staff through training: there are many scientifically proven tools and methods in the field of systems engineering such as lean management, six-sigma, human factors engineering which can be very useful in healthcare. The NTEC Quality and Safety Division decided to start a movement we named WISER (We Innovate, Service Excel Regularly) and the WISER Taskforce was established in May 2014 to drive the movement. The Taskforce consisted of 18 members from various disciplines of all 7 hospitals based on their relevant experience and passion. We identified 2 approaches to enable domain knowledge in healthcare to meet knowledge in systems engineering: 1. Provide training in systems engineering to our staff; 2. Provide opportunities for experts in systems engineering to work together with our staff. For the first approach the Taskforce decided to start the movement through training in “Lean Management” using external consultant service. While “lean” is not the only area we want our staff to learn, these courses are rather well established already and participants are guided to think in terms of values from the client’s point of view. The latter is particularly important to promote patient-centredness. We also decided to focus on clinical microsystems because that would be most relevant from the perspective of frontline clinicians. In 3 separate phases over 2 years, we included teams from all clinical departments and selected non-clinical departments to participate in the training. We insisted that the participants come as a multidisciplinary team consisting of at least one doctor if they come from clinical departments. Any training consists of not only classroom teaching but participation in a project to be coached by the consultant. With the support of our Cluster Chief Executive (CCE) and cluster management, funding was supported to train 180 colleagues in 46 teams. 46 projects were completed and a summary of those is contained in Appendix 1. All projects focused on clinically relevant areas and involved some form of innovation in the process involved. We have evaluated the training program using the Kirkpatrick Model (Kirkpatrick & Kirkpatrick 2009): stage 1 – evaluation of satisfaction is done and the scores are high (Appendix 2); stage 2 – all participants passed a knowledge test; stage 3 – we monitor adoption of WISER approach in quality improvement through our electronic “iCQI” platform through which quality improvement projects of all departments are uploaded; stage 4 – all projects submitted so far did focus on clinically relevant topics and resulted in improvement (Appendix 1). We also sponsored 6 staff to be qualified in 6-sigma black-belt. The Taskforce also implemented other actions to drive the movement. We hosted a Kickoff Ceremony in Dec 2014 in which we invited another cluster of hospitals and systems engineers to share relevant works and experience. WISER was the theme in 3 CCE Forums which is hosted by the Cluster Chief Executive every 2 months. A logo and slogan competition campaign was held and our official logo was established to facilitate promotion. 3 WISER Forums were held in which participants reported on their project. WISER is also going to be the theme in our coming Annual NTEC Quality and Safety Forum. We also built a webpage in our intranet to facilitate sharing of the projects and other information. We have evaluated what we have done and have a plan to move forward. 1. The Taskforce will be merged with the existing Document Control Subcommittee into the WISER Subcommittee. This will make it a standing structure to continue to drive the movement. Also, there is a need to change the perception of staff that documents are “homework” rather than a script of their process which needs to be improved continuously using the WISER approach. 2. We are going to run our own courses. Apart from the 6 black-belts, one staff attended training in curriculum design using 4-components instruction design. The coming courses would use examples in healthcare instead of other industries to make it more relevant and easier for staff to understand, designed using modern education principles: information must be coupled with demonstration, problem-centered application and integration (Merril 2013). The existing electronic learning platform (eLearn) will be used to provide on-line information for “flipped classroom”. We can also gradually add in other elements of systems engineering. 3. We are starting to target more complicated projects through cooperation with systems engineers to work with our staff in improvement. The WISER Taskforce engaged academics from local universities in joint projects. Just to share some examples: we have partnered with a human factors engineer and applied usability test to improve safety in infusion pump as well as in root cause analysis. Also, we partnered with experts in operations research to improve workflow in the sterile supplies unit. These projects not only resulted in improvement of workflows involved but also heightened awareness of staff on potentials of those expertise in healthcare. 4. We introduce a recognition system identifying 4 levels of achievement: Bronze, Silver, Gold and Rainbow. WISER level will be promoted through implementing certain number of WISER project with positive result. For example, staff can achieve Silver WISER level if two WISER projects were implemented. Staffs will be awarded with different colors of ‘WISER’ badge in the Annual Quality and Safety Forum. 5. We will continue to monitor the adoption of WISER methodology using the “iCQI” platform and see if we are moving in the right direction.

**Success at Joondalup Health Campus through the introduction of an innovative Patient Blood Management Program**

**Joondalup Health Campus**

**Quality Department**

**Diana McCubbin**

**AIM:** To introduce a robust Blood Management System to all four of the Ramsay Western Australian hospitals that has been embraced by clinicians and other members of the workforce to promote the safe, appropriate, efficient and effective use of blood and blood products that is constantly evaluated to identify opportunities for improvement.

**SUMMARY ABSTRACT:** Angie is employed as the Patient Blood Management (PBM) Clinical Nurse Consultant (CNC) at the 645-bed Joondalup Health Campus (JHC) in the Clinical Governance Unit and provides a consultancy service to Glenroy Private Hospital (110 beds) and Attadale Private Hospital (38 beds).

To maintain her clinical skills, she also continues to work as a clinical nurse consultant in the after-hours team twice a fortnight at JHC, which involves being the senior clinical nurse on duty and attending all the Medical Emergency Team (MET) calls.

This is very valuable as it gives Angie a window into the current operating practices within the hospital.

In her role as PBM CNC she is involved in all the three pillars of patient blood management: optimizing the patient’s blood levels well before surgery and medical intervention; preventing loss of blood throughout the patient’s treatment including promoting and embedding rotational Thromboelastometry (ROTEM) into practice to manage critical bleeding including obstetric haemorrhage; promotes Transfusion safety and alternative treatments to optimize recovery post operatively. (Australian and New Zealand Society of Blood Transfusion, 2015; National Blood Authority, 2011).
Angie has led the blood management service at JHC to become one of the best private PBMs in the country. The Blood Transfusion Plan developed by Angie at JHC has been recognised by different surveyors as one of the best in the country and is now recommended for use in all Ramsay Hospitals.

Angie who was the first Blood Management Consultant to be appointed in the private sector in WA, has always been very involved in change management and has been able to successfully influence and engage doctors and nurses.

In addition Angie was a finalist at the 2016 Western Australia Nursing and Midwifery Awards in the Excellence in Leadership category and is currently the HESTA Nurse of the Year 2016 for her achievements in the introduction of an innovative Blood Management Program see Appendix.

**Effecting change: Integrating consumer / clinician feedback**

**Royal Brisbane & Women’s Hospital**

Departments of Intensive Care Services & Speech Pathology

Karyn Heineger, Sonia Baker, Nanette Paxman, DR Robert Boots, Lynell Bassett

**AIM:** A multidisciplinary Tracheostomy Management Team (TMT) at the RBWH was implemented in February 2015 as an Intensive Care Outreach Service to provide expert consultation to support the ward management of patients with a tracheostomy (excluding those under the direct care of the ENT service).

**SUMMARY ABSTRACT:** During the TMT project phase (Feb 15 - June 2015) consumers and clinicians were identified as key stakeholders, to inform service implementation, development of procedural resources and educational frameworks and to drive organisational change processes. Progress since then:

Consumer & Clinician Engagement: Face to face interviews with consumers utilizing a novel consumer engagement tool, and multidisciplinary staff surveys were undertaken. Consumer and clinician feedback was then analysed and aligned to the Picker Institute Domains of Patient Centred Care with common domains impacting patient care identified:

- clinical practice,
- information, communication and education,
- transition and continuity of care,
- Emotional support and alleviation of fear and anxiety was an overwhelming theme identified by consumers only.

Feedback from consumers and clinicians has been formally provided to key stakeholders and provision of feedback to consumers is in progress.

2. Quality Improvement initiatives: Consumer and clinician feedback was the driver for a number of quality improvement activities. e.g.

- New clinical handover & patient transitioning processes from ICU to the wards
- A sustainable system providing wards access to new tracheostomy emergency kits
- Standardisation of tracheostomy care plans & tracheostomy dressings
- Development of patient/carer resources
- Development of a patient experience DVD

3. Procedural Development: Consumer and clinician feedback has been embedded into the development of the RBWH Tracheostomy Management Procedure. Incorporating consumer feedback and patient centred care principles into this technical procedural document is an innovative approach which will drive a continuously improving consumer-centred culture for tracheostomy management within the organisation.

4. Educational Frameworks & Resource development: An Interdisciplinary Tracheostomy Staff Training Working Group has been established under the governance of the RBWH Workforce Education Development Committee to progress the development of an interdisciplinary staff training framework and resources.

This working group is actively integrating patient & clinician feedback into the training program and resource development.

**Implementation of Patient Controlled Epidural Analgesia (PCEA) in Labouring Women**

St John of God Subiaco Hospital

Department of Anaesthesia and Pain Medicine

Jill Kelly, Nolan Mcdonell, Yvonne Buller

**AIM:** The aim of this project was to implement and evaluate an innovative, evidence based, change in obstetric practice, optimizing pain management during labour and improving obstetric outcomes and maternal satisfaction.

**SUMMARY ABSTRACT:** Pain during labour and delivery is often very unpleasant and stressful for patients. Epidural analgesia was introduced more than forty years ago as a mode of analgesic delivery during labour, however discussion continues on the effects of this mode of delivery on obstetric outcomes. Previous literature on the topic suggests that “less than optimal outcomes may be linked to the epidural administration of opioids and local anaesthetics and the impact of these medications on the number of clinical interventions required for delivery, including the need for instrumental delivery or caesarean section”(Marijic et al, 2013). Historically, minimal consumption of local anaesthetic in labour is advocated to provide a safe and effective outcome and greater maternal satisfaction.

(Halpen and Carvalho, 2009) found “PCEA to be a safe and effective mode of epidural analgesic delivery for labouring women suggesting that maternal satisfaction of labour and delivery is also an important obstetric measure, this factor thought to be strongly influenced by the effective control of pain and the effects of analgesia on delivery”.

PCEA was introduced into clinical practice at St John of God Subiaco Hospital in October 2014. This mode of delivery of epidural during labour was as an alternative to the then current practice of midwifery administration of intermittent manual top ups of local anaesthetic medications and or intramuscular opioid administration.

The hospital undertook an audit during the period August 2014 - May 2015. This audit aimed to evaluate and compare data between the administration of a continuous infusion of Bupivacaine 0.0625% with Fentanyl 2.5 mcg at a rate of 5ml /hr and availability of bolus doses of 10 ml of this infusate every 20 minutes, via volumetric infusion pump and intermittent manual filter top up doses of local anaesthetic administered by midwifery caregivers.

The audit found that PCEA is an effective and satisfactory method of providing optimal analgesia during labour, requiring less overall amount of local anaesthetic to be administered, reduced potential for motor block and decreased incidence of the need for clinical intervention for delivery. Overall maternal satisfaction was also increased following delivery of epidural therapy by the PCEA mode.
Prehospital Thrombolysis - Despite the Distances: Improving Healthcare in Regional & Rural Areas.
Hunter New England Health
John Hunter Hospital: Cardiology Department
Professor Andrew Boyle, Professor Peter Fletcher, Trent Williams, Lindsay Savage, Arshad Khan, Rohan Bhagwandeep

AIM: To improve timely access for medical assessment & diagnosis for patients experiencing a myocardial infarction (heart attack) who live in rural and remote settings, with the intent to commence early reperfusion interventions to increase better clinical outcomes. To achieve this outcome a collaborative partnership was established between Senior Medical & Nursing Clinicians, NSW Ambulance Paramedics, HNE Cardiac Stream, Hunter Medical Research Institute (HMRI) and Health Managers across metropolitan, rural and remote health services. The program has established a systematic process developed using evidence based treatment of reperfusion interventions to enable myocardial infarction to be initially treated in the back of an ambulance for patients living in rural and remote settings. This project delivers a reperfusion model that is benchmarked nationally and with outstanding clinical outcomes.

SUMMARY ABSTRACT: Extensive research indicated Prehospital Thrombolysis (PHT) followed by early transfer to a Primary Percutaneous Coronary Intervention (PPCI) is a safe and effective method of treating myocardial infarction with better clinical outcomes. Historically, patient’s treatment of myocardial infarction (MI) could only be commenced once the patient arrived in hospital. This process was problematic for patients living in rural and remote areas as their treatment due to distance and access to specialised medical assessment may cause significant delay, which had a devastating impact on clinical outcomes. This program has improved access to medical assessment, diagnosis and reperfusion treatment for patients experiencing a MI regardless of if they live in a rural or metropolitan area.

The program also had a significant research component which examined the major statistical endpoints that ensured the process was best practice for assessment, diagnosis and treatment of MI for patients in rural and remote areas. The analysis of our research indicates the methods of treating MI using Prehospital Thrombolysis and Primary Percutaneous Coronary Intervention is comparable to any system both nationally and internationally.

Integration of care across the patient continuum
Logan Hospital
Department of Respiratory Medicine
Khoa Tran, Michele Hellen, Veenu Mubarak, Tim Ryder, Alissa Knight, Brett Windeatt, Sharna Wilkinson, Allison Murdoch

AIM: To reduce fragmentation of care for patients with chronic respiratory diseases, by integrating care across the continuum. This was achieved with a multidisciplinary health care team working across the continuum of inpatient, outpatient, and community care.

SUMMARY ABSTRACT: Patients with chronic respiratory diseases have a high disease burden and are high consumers of health care resources. Their health care is frequently highly fragmented as they receive health care in various settings primary care, inpatient hospital care, outpatient hospital ambulatory care, and in the community. Traditionally their care (especially nursing and allied health care) will be provided by different treating teams in the inpatient, outpatient and community settings. This relies on adequate communication and handover between clinical teams as the patient transitions across these settings in their continuum of care.

Our aim is to reduce the fragmentation of this care by providing health care across the continuum of inpatient, outpatient, and community care. The Integrated Respiratory Service provides integrated health care across all these settings, reducing errors in communication and handover.
A. AIM

The aim of the Good Start to Life project is to co-design with Maori and Pacific Islander consumers in Queensland a culturally-tailored maternal and newborn health strategy to promote appropriate maternal nutrition, healthy weight gain in pregnancy and recommended infant nutrition guidelines.

B. SUMMARY ABSTRACT

The Good Start Program is a Children’s Health Queensland Hospital and Health Service Initiative which aims to improve the health and wellbeing of Maori and Pacific Islander children and families in Queensland. The program targets seven of the largest Maori and Pacific Islander communities – Maori, Samoan, Tongan, Cook Islander, Fijian, Fiji Indian, and Papua New Guinean.

Maori and Pacific Islander adults in Queensland experience significantly higher rates of chronic disease and overweight/obesity compared to the rest of the Queensland population (Queensland Health 2010 & Queensland Health 2012). The trend is also seen in Maori and Pacific Islander children in Queensland (Queensland Health 2010 & Queensland Health 2012). Health and wellbeing from the antenatal period through the first 3 years of life is now well understood to lay the foundations for long-term health outcomes (Children’s Health Queensland Hospital and Health Services 2015). Addressing childhood obesity during the perinatal period and throughout infancy has been found to contribute to reducing the prevalence of chronic disease and obesity (Children’s Health Queensland Hospital and Health Services 2015).

In 2015, Metro South Hospital and Health Services identified a high prevalence of gestational diabetes mellitus in Maori and Pacific Islander women with rates more than double the state-wide average (16% vs. 7.6%) (Queensland Health 2015). Maori and Pacific Islander mothers birthing at Logan Hospital exhibit overweight/obesity at a rate of 66%, compared to 46% in the non-Maori and Pacific Islander population (Queensland Health 2015). Similar inequities are apparent at Redland and Cairns Hospitals (Queensland Health 2015). The lack of culturally appropriate antenatal and child health care services/resources, low levels of health literacy and a strong cultural reluctance to seek support presents challenges in addressing these key health issues and ultimately childhood obesity within the Maori and Pacific Islander community (Queensland Health 2011).

In order to appropriately address maternal and childhood health inequalities in the community, the Good Start Program established a consumer engagement strategy and subsequently created the Good Start to Life project. Good Start to Life is an important preventative health strategy that supports Maori and Pacific Islander women to gain a healthy amount of weight during pregnancy, breastfeed and adopt recommended infant nutrition guidelines.

It was vital for the Good Start program team to involve Maori and Pacific Islander health consumers in co-designing the project. Different engagement approaches have been used in the form of forums, steering committee, consumer review groups and consumer participants groups. Each method required different time investment, education background, literacy level or personal involvement. This strategy has provided the opportunity for all health consumers to be part of the project in a flexible and accommodating manner. 95 health consumers have been directly involved in the development of the Good Start to Life project having dedicated a total of 133 hours in the form of consultation or co-designing activities.

The initial stage of the Good Start to Life project has been completed with the creation of a series of educational booklets and posters that prioritised key areas identified as contributing to childhood
obesity in MPI children (Appendix 1 and 2). Through local community networks, face-to-face consultations with health consumers within the targeted demographic were conducted to review and/or be photographed for the resources. The cultural expertise and parenting experience of these consumers was vital in providing valuable recommendations in regards to culturally appropriate language, literacy level, content suitability, and photographs utilised. Knowledge and expertise from clinical and public health professionals was also sought from a number of dieticians and senior community nutritionists who had experience in working with culturally and linguistically diverse community groups. Their knowledge around current best practice guidelines in regards to breastfeeding, infant feeding as well as nutrition and physical activity, ensured that the resources contained the most up-to-date information.

Research indicates that Maori and Pacific Islander communities have poor health literacy levels which impact their ability to understand and comprehend information and subsequently affects the accessibility and use of a health resource is reduced (Queensland Health 2011). Health consumers were consulted and played a key role in adapting the literacy level of the Good Start to Life resources. Using an electronic readability indicator, the Readability Test Tool, resources was assessed according to writing style, sentence construction and vocabulary requirements (Children’s Health Queensland Hospital and Health Service 2015). The average literacy demand or grade literacy level requirement of the Good Start to Life resources was established as highly recommended with at Grade 4 literacy level.

Health consumer engagement has been paramount in creating the Good Start to Life project which provides user-friendly, consumer driven, culturally appropriate, low literacy resources to improve the knowledge, skills and confidence around maternal and infant nutrition. This project contributes to addressing the rates of childhood obesity in a vulnerable population group.

C. REPORT

APPLICATION OF ACHS PRINCIPLES

1. Consumer Focus
As presented in the diagram below, the development of the Good Start to Life project was structured in such a way that it had to be co-designed for and by Maori and Pacific Islander health consumers. The consumer engagement process was designed to ensure health consumers felt valued and respected. Role and responsibilities were articulated to each consumer and consent was gained. The Good Start Program continuously records consumer engagement in a register with dates, time, engagement activities and outcomes. The register is shared with all health consumers in a transparent manner to ensure they understand how their contributions have been incorporated into the project. In order to thank consumers for their invaluable contribution and foster future consumer activities, a culturally tailored personal letter was provided to each consumer (Appendix 3).

In the Good Start to Life project, health consumers have been involved at two different levels.

Consultation
Queensland Health Survey in 2007/2008: This consultation has identified that health literacy is found to be very poor among all Pacific Islander communities with low knowledge about health and health services. The low levels of knowledge about health and services are largely related to poor system navigation skills in the community. Pacific Islander communities are disengaged from the mainstream service sector and are reluctant to seek help. They identify themselves as generally reserved, shy and ashamed to seek assistance from services and this is one of the primary factors in communication barriers, lack of uptake on preventive health and self-management. This consumer feedback has been incorporated into the design of the Good Start to Life by building cross-cultural capacity of health services and supporting consumers to seek help. The literacy level, cultural appropriateness and language used in the Good Start to Life resources have been adapted following the recommendations from this survey.

Maternal and Newborn Health Forum in 2016: The Good Start program supported Metro South Hospital and Health Services to organise a health consumer forum with the aim of developing an assessment on the needs of maternal and newborn services for Maori and Pacific Islander families in Queensland (Appendix 4). The data collected is currently being analysed and will feed into Good Start to Life strategic directions.

Co-designing
Good Start Program Steering Committee: The monthly steering committee is a high level strategic meeting comprising of Children’s Health...
Queensland directors, preventative health experts and health consumers. Five health consumers from differing Maori and Pacific Islander cultural backgrounds are actively involved in the committee. The meetings are utilised to decide on strategic directions, planning, implementation and evaluation of the Good Start to Life project. The meetings are set up as a true co-design process with health consumer input and contributions considered equal to any other committee member. An induction for consumers is provided before their first meeting and more time is always allocated after each meeting should they need additional information.

**Good Start to Life health consumer working group:** Local Maori and Pacific Islander mothers and fathers of young children (0–4 years of age) were engaged through connections within community networks to review and/or be featured in Good Start to Life resources. Telephone calls and emails were utilised to arrange meetings and consultations with consumers. With strong knowledge of culturally appropriate practices by the multicultural workforce, it was necessary to ensure consultations (particularly initial consultations) were made face-to-face, in a location easily accessible and selected by the consumer. To ensure feedback was applicable, consumers were briefed about the project prior to initially viewing the resources to ensure they had a better understanding about the scope of the project. Consumers were encouraged to provide feedback as well as recommendations for the resources in regards to cultural appropriateness, literacy level, and content and imagery suitability. Initial and follow-up consultations with consumers were conducted. Each consultation was approximately two-hours to ensure adequate time was allocated to read the resources and provide feedback. As all initial consultations were conducted face-to-face, it was important to be considerate of the consumer’s time invested in providing feedback. Therefore a follow-up consultation was offered face-to-face, via email or telephone communication. Overall, a total of approximately 20 hours was consumed with community members to obtain feedback and valuable recommendations.

**Good Start to Life health consumer participants:** Due to the cultural sensitivity around maternal and infant health, locally based photographers from the Maori and Pacific Islander community were actively sought to recruit Maori and Pacific Islander consumers from the targeted demographic that were willing to be photographed and featured in the resource. It can be noted here that recruited consumers for all areas of the resources, honestly and accurately reflected the area or topic in which they were utilised throughout the resources. In total, 44 consumers of various Maori and Pacific Islander cultural backgrounds (Maori, Samoan, Tongan, Cook Islander, Papua New Guinean, Fijian and Fiji Indian) were photographed. A total of approximately 105 consumer engagement hours was logged during the photography shooting process resulting in a total of 991 edited photos.

### 2. Effective Leadership

In 2008-09 the Queensland Government prioritised Pacific Islander populations as a whole-of-government priority group as a way to start addressing their relative social disadvantage. Queensland Health's response to this prioritisation was to conduct an assessment to understand health needs and priorities so that an effective response can be developed. 191 health consumers were consulted through this process. One of the main recommendations resulting from this assessment was to allocate a Maori and Pacific Islander...
multicultural health workforce that could understand and address cultural and linguistic barriers.

Children’s Health Queensland Hospital and Health Service acted on health consumers recommendations through the creation of the Good Start Program in 2011. The program is now a state wide specialised service that employs health professionals and health workers from Maori and Pacific Islander cultural background.

The Good Start to Life project commenced as result of a needs assessment which identified that no current model of care existed for Maori and Pacific Islander maternal health in Australia. The commencement of this project established the Good Start Program as the leading department in maternal and infant nutrition for Maori and Pacific Islanders in Queensland.

Developing the first maternal and infant nutrition resources for Maori and Pacific Islander families in Australia required an innovative and creative approach. A community based, health consumer focused approach ensured that national standards and best practice guidelines were reflected in the resources in a culturally appropriate and effective manner. The development phase of the Good Start to Life resources motivated the workforce to undertake professional development and encouraged them to contribute to the project. These key factors fostered health consumers, community and workforce ownership and the resulting resources were unique in their content and design.

3. Continuous Improvement

A cyclic continuous improvement methodology (Appendix 5) was utilised in the development of the Good Start to Life resources. In 2015, Children Health Queensland systematically reviewed maternal and infant nutrition resources available in Australia and identified numerous consumer resources (government and non-government) and found that 0% of consumer resources are highly recommended, 23% partially recommended and 77% were not recommended (Children’s Health Queensland Hospital and Health Service 2015). Additionally, the review highlighted the gap in culturally appropriate perinatal consumer resources with zero resources specifically targeting the Maori and Pacific Islander priority population group (Children’s Health Queensland Hospital and Health Service 2015). Based on the findings of the review, the Aboriginal and Torres Strait Islander resource Growing Strong: Feeding You and Your Baby was recognised by both health professionals and consumers as providing valuable information in a culturally appropriate format.

Combining evidence from the review, best practice guidelines, evaluation outcomes and cultural expertise, Growing Strong: Feeding You and Your Baby provided a foundation for the development of the Good Start to Life resources for Maori and Pacific Islander families. Applying that research to draft the initial version of the resources was the first step in the improvement strategy. Multiple working groups were then established to analyse the resources including:

- Nutrition working group: health practitioners from clinical and preventative health settings
- Community working group: members of the Maori and Pacific Islander community in Queensland (primarily from the target demographic)
- International organisations: members of international public health organisations working with Maori and Pacific Islander communities.

Feedback and recommendations were actively sought from each of the review teams for every aspect of the resources including the content, cultural appropriateness, photography/imagery, graphic design and literacy level. After feedback from each review group was collected the recommendations were collated, evaluated and the draft resources were altered. This process occurred numerous times on a cyclic basis to ensure the resources were continually improved. To maintain continuous improvement, the resources will be evaluated utilising a similar improvement cycle at 2 years post dissemination. This will facilitate ongoing improvement of the resources in the future.

Utilising this strategy fostered inclusive communication from all of the stakeholder groups, enabled stakeholders to make recommendations at every stage of the development and allowed feedback to be incorporated and then re-evaluated. Having working groups from multiple stakeholders also ensured that the resources included content in accordance with national health and nutrition guidelines, be utilised by health professionals in multiple settings, be well understood by consumers and ensured they were culturally appropriate.

Employing the cyclic quality improvement methodology reflects best practice in development of health education resources and resulted in health consumer, health practitioner and public health organisation satisfaction. The staff involved in the
project actively and continuously strove to improve the resources in order to produce high quality health education resources that ultimately work toward improving the health and wellbeing of Maori and Pacific Islander families.

4. Evidence of Outcomes
The literacy level of health resources is a fundamental consideration in the development of a culturally appropriate health education resource. By utilising a partnership between health professionals and health consumers, both technical and cultural expertise was gained resulting in a resource that delivers relevant and necessary content in the appropriate language and literacy level. The literacy demand of the resource was assessed using an electronic readability indicator which encompasses various factors such as writing style, sentence construction and vocabulary requirements of the consumers. Overall, the Good Start to Life resources resulted in a Flesch-Kincaid Grade Level of 4.5 making them a highly recommended resource. This demonstrates the resources are suitable for the target population and highlights the commitment of the Good Start Program in ensuring health consumers are priority.

Health consumers engaged with the Good Start to Life project reported great outcomes with a high level of satisfaction in the way their feedback and recommendations have been incorporated. Consumers also acknowledged the dedication of the Good Start team to take time to listen, understand and utilise the voice of Maori and Pacific Islander health consumers in a culturally appropriate way.

Overall, the project demonstrated excellent consumer engagement outcomes with a total of 95 health consumers involved, 133 hours of engagement and a consistent participation of consumers in monthly meetings noting that none of health consumers have been remunerated.

5. Striving for Best Practice
The Good Start to Life project is founded upon evidence from a combination of literature, current research and clinical practice guidelines, national and international cultural expertise and consumer experience. It has been culturally tailored to the targeted demographic of a vulnerable population group to ensure maximum uptake and improvement of current health issues. Additionally, it has incorporated modern technology in conjunction with cultural knowledge to use a modern visual design format as well as photographs instead of illustrations to create ownership and maximise engagement with consumers.

More importantly, the Good Start to Life project is evidence that ownership of responsibility can result in excellence in performance outcomes. Establishing health consumer, clinical, public health and international working groups generates an effective, accurate and culturally appropriate resource to assist in working towards addressing the needs of a vulnerable population group. The Good Start Program strives to be innovative, flexible and inclusive in its development and communication with consumer and health professional working groups is ongoing.

What distinguishes the Good Start Program apart from other health programs is the recruitment and training of health workers from each of the seven target communities to consult, develop and deliver culturally-tailored initiatives and resources. The Good Start Program demonstrates the pride of the multicultural health workforce in delivering quality service for its consumers, but also Children’s Health Queensland Hospital and Health Services constant drive for greater commitment to best practices.

INNOVATION IN PRACTICE AND PROCESS
The systemic involvement of health consumers in the planning, design and development of the Good Start to Life project is an innovative practice for hospital and health services. Transparency, respect and support of consumers are key factors contributing to the success of this practice.

The establishment of structured engagement processes including induction, engagement register, feedback forms, specific support and acknowledgement have proven to be both innovative and effective. A team culture where by partnering with consumers is considered part of everyday business has been established within the Good Start Program demonstrating innovation and excellence in everyday practices and processes. The success of this approach is even greater considering that the Maori and Pacific Islander community in Queensland is traditionally difficult to engage.

APPLICABILITY TO OTHER SETTINGS
The Good Start to Life project successfully engaged with health consumers and this strategy has the potential to be utilised across a wide range of health services. Consumer engagement is an important aspect of the National Safety and Quality Health Services Standards and so the learnings from this project are applicable to any medical services...
seeking to develop a culture of partnership with consumers.

F. REFERENCES

Children’s Health Queensland Hospital and Health Service 2015, Maternal and Infant Nutrition Resource Review, State of Queensland (Queensland Health), Brisbane.


Queensland Health 2011, Queensland Health response to Pacific Islander and Māori health needs assessment, State of Queensland (Queensland Health), Brisbane.


Queensland Health 2015, Queensland Perinatal Data Collection, State of Queensland (Queensland Health), Brisbane.
Appendix 1: Good Start to Life Resources – Booklets

The Good Start to Life booklets support health consumers build their knowledge, skills and confidence around optimal maternal and infant nutrition.
Appendix 2: Good Start to Life Resources – Posters

The Good Start to Life posters support health consumers build their knowledge, skills and confidence around optimal maternal and infant nutrition.
Appendix 3: Health Consumer Thankyou Letters
Thankyou letters designed to acknowledge and express gratitude to health consumer participants and working group to maintain consumer ownership for the resources and to foster future participation from the Maori and Pacific Islander community.

Date

Name of recipient
Address
Suburb State Postcode

Dear ,

On behalf of the Good Start program and the Child and Youth Community Health Services Children’s Health Queensland, I am writing to thank you and your family for taking the time to be involved in the Good Start to Life project.

The success of our project is a reflection of your support and commitment in working towards helping the Maori and Pacific Islander community improve their health and wellbeing. Because of your support we have been able to complete the four Good Start to Life booklets and three supporting posters and are now working on developing education sessions for Maori and Pacific Islander families.

Your enthusiasm in helping the Good Start program is sincerely appreciated. You dedicated your time, welcomed us into your home and shared with us your cultural insight, for which we are truly grateful. It is only with the assistance of community members such as yourself that we can work towards helping Maori and Pacific Islander children, mothers, families and families.

Thank you, mało ‘eupito, vahenaka yakelevu, whakewhe te katoe, fa’afelia te leva, chanyawad, tenkyu tumas, metaniu maata to you and your family.

Yours sincerely,

Divisional Director
Child and Youth Community Health Service
Children’s Health Queensland Hospital and Health Service

Children’s Health Queensland
Appendix 4: Maternal and Newborn Health Forum 2016
Development of a maternal and newborn health needs assessment of Maori and Pacific Islander health consumers.

Maori & Pasifika Health
Women & Newborn

Where:
Hope Centre International
440 Kingston Rd,
Slacks Creek

When:
Monday 18th April, 2016

Time:
9:30am – 12:30pm

We would like to invite local Maori and Pasifika families to join us for hui, talanoa and lunch. Metro South Health would like to talanoa with you about your pregnancy and childbirth health care and experiences in Queensland and how we can better serve you. We welcome your input and really appreciate your help in making what we do for the Maori and Pasifika families better.

Please RSVP by Monday 4th April for catering purposes to:

- Thomas Lilley 0429 649 028  thomas.lilley@health.qld.gov.au
- Andrea Cruickshank 0407 604 649  andrea.cruickshank@health.qld.gov.au

The Australian Council on Healthcare Standards
19th Annual ACHS Quality Improvement Awards 2016
Appendix 5: Cyclic Continuous Improvement Methodology
The continuous improvement methodology utilised in the development of the Good Start to Life resources.

**Category: Non-Clinical Service Delivery**

**PLAN**
Needs assessment and review of existing maternal and infant nutrition resources

**DO**
Create a draft series of culturally tailored resources promoting optimal maternal and infant nutrition to Maori and Pacific Islander families

**REVIEW**
Review draft resources with health consumer working group

**ACT**
Alter resources utilising evaluation of feedback and recommendations from health consumers

**EVALUATE**
Evaluate feedback and recommendations from health consumer group with the assistance of best practice guidelines
St Vincents Public Hospital Sydney Environmental Services Darlinghurst Campus, St Vincent’s Public Hospital level 9 Xavier South BMT ward, level 7 and 8 Xavier North and South.

St Vincents Hospital Sydney Clean, Reliable, Trustworthy, Proven, Sustained Excellence in Patient & Resident Care – The Environmental Cleaning Review & NSW Blood & Bone Marrow Transplant Cleaning Project

Rob Gordon, Emily Heinnen, Joanna Uribe, Kirsten Bruchhauser, Kylie Naudi, Michelle Wilson, Giulietta Pontivivo, Brett Gardiner

A. AIM
In 2014, the St Vincent’s Hospital Sydney (SVHS) Environmental Services Department introduced a new model of cleaning to the Blood and Bone Marrow Transplant (BMT) unit with the aim of improving cleaning practices, patient safety by reducing Healthcare Associated Infections (HAIs) and patient experiences of the unit.

Following an Environmental Cleaning Review, the project involved trialling new environmental cleaning practices and initiatives such as introducing cleaning matrix’s to clearly define roles and responsibilities, frequencies of cleaning based on risk rating and elements of the room, auditor training for cleaners and supervisors using the BMT audit tool, with strong customer services focus.

Following the implementation in the BMT ward, the model was introduced to other clinical units in the hospital, with external audits and benchmarking used to measure progress in improving Environmental Cleaning Standards, education and training tools for clearly defined responsibilities, improved customer and patient feedback on both cleaning and services standards and improvements in HAIs within the wards.

By implementing sustainable, evidence-based and validated systems, the SVHS Environment Service Department have demonstrated the importance of good environmental cleaning, and its contribution to decreasing HAIs, improving patient satisfaction, safety, and as well as providing a visual lift to units for patients, guests and staff.

B. SUMMARY ABSTRACT
In recent years, healthcare facilities and governing bodies have acknowledged that improvements in environmental surface cleaning and disinfection are required to assist in reducing the rates of Healthcare Associated Infections (HAIs) (Jansen & Murphy 2009). Good environmental and infection control practices should consist of essential elements such as careful cleaning and disinfection of surfaces and touch points, use of correct and effective equipment, ensuring cleaning is carried out at correct day and time, and ongoing audit validation of cleaning programs. Multiple studies have shown that manual cleaning and disinfection of surfaces in hospitals without clearly defined processes, roles and responsibilities is suboptimal (Aldeyab et al. 2009; Dancer et al. 2009). In many facilities, only 40 to 50% of surfaces that should be cleaned are wiped by housekeepers (Boyce 2016). In addition, observational methods combined with use of adenosine triphosphate bioluminescence measuring devices (ATP meters), and ultraviolet (UV) light and gel dot testing points studies have shown that individual housekeeper performance varies unless there is a structured cleaning approach and validated auditing process. (Leas BF, Sullivan N, Han JH, Pegues DA, Kaczmarek JL, Umscheid CA 2015).

At St Vincent’s Hospital Sydney (SVHS) these issues were first examined in 2012 by a multi-disciplinary working party who reviewed the cleaning standards within the hospital. At this time, cleaning services were shared between Ward Services Assistants and Environmental Services and this model proved to have significant short comings. The Environmental Services Department performed all cleaning in occupied rooms, corridors & pan rooms whilst Ward Service Assistants performed the cleaning of patient discharge rooms, central shared areas, sterile stock rooms, kitchenettes, and patient care equipment at the same time as other patient centred duties such as patient transfers, blood product transport and medical record collections. Following an internal review, it was recommended that all cleaning be undertaken by Environmental Services staff.

In August 2013 the Agency for Clinical Innovation (ACI), The Clinical Excellence Commission (CEC) and Bone Marrow Transplant (BMT) Network also commenced a project to improve cleaning standards in BMT units across New South Wales. SVHS joined the project and an initial audit of all 15 BMT units demonstrated suboptimal cleaning
standards, with no unit reaching the Acceptable Quality Level (AQL) of cleaning. SVHS decided to re-visit the 2012/2013 Cleaning Review to address the increased risk of BMT patients contracting HAIs from sub-standard housekeeping and cleaning.

In February 2014, the Campus Environmental Services Manager, Infection Prevention and Staff Health Services Manager and Executive Sponsors re-evaluated the Cleaning Review and the BMT audit results. As a result, it was decided that Environmental Services would trial a new model of cleaning on the BMT ward Xavier 9 South (X9S) at St Vincent’s Hospital.

The aim of the project was to trial new environmental cleaning practices and initiatives, with the goal of improving patient safety and experiences. These new initiatives included:

- Establishment of a baseline level of environmental cleanliness;
- Identification of methods used to clean units (frequency and process), resourcing, training and education of Environmental Services personnel;
- Matching cleaning start times with ward demands for discharges and patient movements. (All shifts previously started at 6am through to 230pm, leaving no coverage for late discharges or patient moves and transfers);
- Verification of daily work, accountability, monitoring and follow-up with all departments;
- Improvement of relationships within the ward which has been separated in the past between cleaning, patients and nursing that required re-establishment;
- Pilot and validation of an environmental cleaning audit tool against established standards (Victorian Standards in combination with the NSW risk ratings);
- Communication of quality improvements in environmental cleaning standards in BMT / haematology units as an area of extreme risk to all stakeholders.

The new cleaning services model involved restructuring the way cleaning was carried out and audited. The key principles of the model was that it had to be easy to implement sustain, and where possible, cost effective to the organisation. A new cleaning matrix was developed with clearly defined roles and responsibilities, frequency of cleaning and maintenance. A new Cleaning and Hygiene HACCP (Hazard Analysis and Critical Control Point) manual was also developed (adopted from food industry) with supporting policies procedures and safe work practices to ensure staff and patient safety. Additionally, a checklist and sign off book was developed for environmental staff, designed to engage both clinical and non-clinical ward staff and empower a sense of ownership with the Environmental Services Coordinators.

The final stage of the planning for the new cleaning model involved key stakeholders from clinical and non-clinical groups involved allocation of time to conduct audits and review the results. Prior to implementation of the new model all cleaning staff, coordinators and managers were externally trained as accredited auditors using the BMT standards.

Quarterly external independent audits continued using the BMT tool, with significant results of an increased 29% on the first audit at 94%. Note these audits are separate from the BMT program and purely an external audit for the hospitals internal verification.

With the ongoing success of the BMT wards cleanings standards from the point of introduction, it was agreed that in July of 2014 the trial would continue to levels 8 Xavier North and South (8XN/8XS) and Level 7 Xavier North and South (7XN & 7XS). The same success was apparent on both levels with the average external audit score maintained well above the AQL.
### Increasing Advance Care Planning through community engagement
ACT Health
Advance Care Planning Team, Healthcare Improvement Division  
*Emma Awizen, Heather McKay, Christine Bowman, Darlene Cox, Anne Knobel, Joy Cocker, Lyn Hunt*

Innovation Working Group – Developing a culture and the practice of innovation across the organisation
South Western Sydney Local Health District  
Clinical Innovation and Business Unit  
*Josephine Chow, Peter Sainsbury, Sue Colley, David Kelly, Marie Tritsaris*

### Upgrading Carbon Cylinders as chlorine water filters for Renal patients from single tank to twin tanks
SLHD  
Biomedical Engineering Department/Renal team  
*Samira Magsudlu, Kesh Chand*

### Prevent Alcohol and Risk Related Trauma in Youth (P.A.R.T.Y) Program
Liverpool Hospital  
Trauma Department  
*Nevenka Francis, Valerie Malka, Scott Damours*

### Volunteer Program
Toronto Private Hospital  
Clinical Review Committee  
*Anne MacLeod, Anna Campbell, Vicki Webber*

### A two phase qualitative study to better understand the patient experience of Chronic Kidney disease (CKD) and dietary change to facilitate change in dietetic services at Liverpool Hospital
Liverpool Hospital  
Dietetics Department  
*Robynne Cooke, Stephanie Notaras, May Mak, Natalie Wilson*

### External flammable store (EFS)-Addressing all requirements
Prince of Wales Hospital  
SEALS and Engineering Department  
*Caroline Hughes, Daniel Trazzera*

### A Transdisciplinary Approach To Brain Injury Rehabilitation
Community and Aged Care Services – Greater Newcastle Sector Hunter New England Local Health District  
Hunter Brain Injury Service  
*Christopher Catchpole*

### St Vincents Hospital Sydney Clean, Reliable, Trustworthy, Proven, Sustained Excellence in Patient & Resident Care The Environmental Cleaning Review & NSW Blood & Bone Marrow Transplant Cleaning Project
St Vincents Public Hospital Sydney  
Environmental Services Darlinghurst Campus, St Vincent’s Public Hospital level 9 Xavier South BMT ward, level 7 and 8 Xavier North and South.  
*Rob Gordon, Emily Heininen, Joanna Uribe, Kirsten Bruchhauser, Kylie Naudi, Michelle Wilson, Giulietta Pontivivo, Brett Gardiner*

### A helping hand - Simple system for best practice and better patient outcomes - Development of CACS-GNS Audits and Compliance Monitoring Program
Community and Aged Care Services – Greater Newcastle Sector (CACS-GNS) - Hunter New England Local Health District  
Practice Support Unit  
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Category: Non-Clinical Service Delivery

Abstracts

Increasing Advance Care Planning through community engagement
ACT Health
Advance Care Planning Team, Healthcare Improvement Division

Emma Awizen, Heather McKay, Christine Bowman, Darlene Cox, Anne Knobel, Joy Cocker, Lyn Hunt

AIM: The aim of the ACT Health Respecting Patient Choices® (RPC) program is to raise community awareness about advance care planning (ACP) and to increase the uptake of ACP documents in the ACT. The RPC® program has recently funded a collaborative pilot project with HealthCare Consumers Association of ACT® to increase awareness and uptake of ACP in difficult to reach populations.

SUMMARY ABSTRACT: The aim of the ACT Health Respecting Patient Choices® (RPC) program is to raise community awareness about advance care planning (ACP) and to increase the uptake of ACP documents in the ACT. This is achieved through the four key areas of their work: Education, Community Awareness, Consumer Consultations and Audits.

In 2013 a gap was identified in that some groups within the community had a low uptake of advance care plans. The RPC Program agreed to fund and collaborate with an Non-Government Organisation (NGO) to examine and address this gap. The pilot project was undertaken with HealthCare Consumers Association of the ACT (HCCA) to increase the awareness of advance care planning in the ACT community and develop resources focused on the needs of groups traditional overlooked in this area. The work undertaken by HCCA focuses on Culturally and Linguistically Diverse (CALD) communities, Aboriginal and Torres Strait Islander peoples and financially and socially disadvantaged groups.

These resources have been developed and tested on various populations with very positive feedback, this includes a plain english guide, developed in consultation with a community based disability program and the translation of this, as well as PowerPoint presentations, in Spanish, Hindi and Chinese.

Another novel approach to engaging with these communities has been the Community Ambassador Program. It was acknowledged that creating linkages and building capacity within these communities was a key driver for uptake of the ACP. The first Community ambassador program has been run in early 2016 with 8 participants. This aims to build the knowledge and skills of community leaders to start the conversation within their networks. The first group of Community Ambassadors come from predominately pastoral care backgrounds, as they are considered community leaders.

All deaths at Canberra Hospital are audited to determine if the patient had an advance care plan at the time of death, if the patient’s values and wishes were respected and if the ACP was completed prior to the final admission. The activity of the program is also monitored to determine increase in awareness and uptake of ACP in the community.

There has been substantial demonstrated uptake in ACP in the ACT as a result of the collaborative efforts targeting community organisations:

- 65% increase in the number of documents through the ACP program in July 2015 to April 2016 (n=306) compared to same period in 2014-15 (n=185)
- 46% increase in the total consults with clients increased in July 2015-April 2016 (n=227) compared to the same period in 2014-15 (n=156)
- 27% of adult patients who died in hospital had an ACP in place (July 2015 to April 2016)
- 99% of patient who died with an ACP in place had their wishes respected (July 2015 to April 2016)
- 82% of patients who died had their ACP completed prior their last admission (July 2015 to April 2016), this compares to only 5% in 2006
- 75% of current inpatients had the ACP Printed and in the clinical record (Jul 2015 - May 2016)

In the ACT an ongoing multifaceted approach including: media; face to face conversations; health professional and community education has and is proving successful in increasing awareness and uptake of advance care planning.

Innovation Working Group – Developing a culture and the practice of innovation across the organisation

South Western Sydney Local Health District
Clinical Innovation and Business Unit

Josephine Chow, Peter Sainsbury, Sue Colley, David Kelly, Marie Tritisaris

AIM: The South Western Sydney Local Health District (SWSLHD) Innovation Working Group was established to develop an organisational culture and practice that supports and encourages innovation across SWSLHD. The overall aim is to facilitate the generation of new ideas, which result in the implementation of innovative projects which benefits patients, staff and improves the health of the South Western Sydney community. This initiative was inspired by the NSW Ministry of Health which in 2013 hosted an Innovation Symposium to encourage Local Health Districts to promote innovation within their organisations. The Innovation Working Group is SWSLHD’s response to this and since that time there has been ongoing commitment to innovation with a number of successful project outcomes in 2014, 2015 and 2016.

SUMMARY ABSTRACT: New South Wales Local Health Districts (LHD) identified the need for new ideas collection, development, support and delivery of outcomes. In 2013, the NSW Ministry of Health hosted an Innovation Symposium to encourage LHDs to promote innovation within their organisations. Several core factors were identified which had limited the development and dissemination of innovations within the LHD. These include:

- No structure for ideas generation and follow up
- Quality Committees and Executive Committees have to field innovative ideas then progress
- No linkages between District services
- Specific Innovation funding not identified or identified in the budget
- Limited support structures for the sustainability of innovative projects outside of operational priorities
- No coordination to measure successful outcomes
- Ideas that were supported may not be used in other parts of the organisation and therefore created lost opportunities
SUMMARY ABSTRACT: The Biomedical Renal Technicians commenced the project of upgrading the 22L single tanks to 13L twin tanks for all SLHD patients under their care (metropolitan) in April 2016, a recommendation from the Australian Water Guidelines Standards (Dialysis Water Pre-treatment: A Set of Guidelines 2008, p. 17). A project that will facilitate a range of benefits presently and in the future including radically diminishing the breakthrough of chlorine.

The new setup comprises of two 13L carbon tanks [Figure 1], (each weight 15kg and D 450mmXH 3mm) called worker and lag tanks replacing the old set up which comprised of only one 22L tank [Figure 2] (each weight 30kg and D 1200mmXH 200mm).

Prevent Alcohol and Risk Related Trauma in Youth (P.A.R.T.Y) Program
Liverpool Hospital
Trauma Department
Nevenka Francis, Valerie Malka, Scott Damours

AIM: The Prevent Alcohol and Risk Related Trauma in Youth (P.A.R.T.Y) program is an in hospital based education initiative focussed at providing students with information so they will be able to recognise potential injury producing situations, make prevention oriented choices and adopt behaviours that minimise risk. The program aims to turn factual information into vivid reality to empower the students to make informed choices to reduce risk taking behaviour and its potential consequences. At the same time the program aims to build strong integrated relationships with community agencies such as NSW schools, NSW Ambulance Service, NSW Police Service and NSW hospitals.

The long term aim is to reduce the incidence of trauma related injury, death and disability in teenagers and young adults.

SUMMARY ABSTRACT: Road crashes remain the biggest killer of young people between 15-29 years of age around the world. More than 1,000 young people lose their lives on the world’s roads every day (1). Road traffic crashes not only have a high cost in terms of lives, but also financially. The global monetary cost of road traffic injuries is estimated at more than US$500 billion each year or 1.5-3% of each country’s Gross National Product (GNP). This reflects the costs of medical treatment, rehabilitation, loss of productivity (fewer days at work), legal costs, and much more (2). Young males under the age of 25 years are almost three times as likely to be killed as females of this age (1). Males are more inclined to participate in risk-taking and sensation seeking behaviour, often as a result of overestimating their own abilities.

From recent data (2010 - 2012) approximately half of all major trauma admissions in Australia were road transport related (52.4%), and as a result were treated at a designated trauma centre(3). Nationally the age group with the highest incidence of injury was 15 - 24 years (3), and males accounted for 73% of all injured patients (3) admitted to a designated trauma centre. This data is consistent with international statistics. Recent work on the cost of trauma and injury indicates patients life time cost per incident case of traumatic brain injury (TBI) is estimated to be $2.5 million and $4.8 million for moderate TBI and severe TBI respectively, in Australia(4). Those patients with a spinal cord injury (SCI) cost more. The lifetime cost per incident case of SCI is estimated to be $5.0 million per case of paraplegia and $9.5 million per case of quadriplegia, across Australia (4).

The Liverpool Trauma Registry captures data on all patients admitted as a result of injury. During the period of 2010 - 2012 there were a total of 1896 trauma admissions that were admitted as a direct result of road transport related injury. Those aged 15 – 24 years accounted for 42.4% of admissions, and males
accounted for 29.2% of those admitted. This is consistent with international data showing that males are usually over represented in injury data. A study of costing conducted at Liverpool Hospital indicated road related injuries in one financial year were estimated to be in excess of $4.8million. (5).

Australia continues to have a high road toll. As a direct result economically disadvantaged families are often impacted by medical costs and indirect costs such as lost wages that result from these injuries. Injuries are a major cause of the burden of disease amongst young people, accounting for an estimated 18% of the overall burden of disease in Australia (7). The 2011 Young Australians Health and Well Being Report found considerable proportions aged 12 – 24 were drinking alcohol at risky or high risk levels for short term harm (30%) and long term harm (12%) as well as using illicit substances (19%) (7). As a result nearly four in ten (38%) young people are victims of alcohol and drug related violence. The causes of death among young Australians are different from the population overall, reflecting the strong influence of that stage of life on risk of death from risk taking behaviours (7).

Health promotion and disease prevention is arguably the most effective way to improve the health of our community. The P.A.R.T.Y program is a dynamic and interactive injury prevention programme specifically designed for the “at risk” 15 – 19 years age group. The programme originated in Canada in 1986 with the aim of educating youth on the reality of trauma and the impact this has on not only the patient but also family, friends and the community, both short and long term. The success of this programme was published in the Journal of Trauma in March 2011 which showed the benefits of the programme in reducing alcohol related traffic offences, traffic infringements and repeat offences. We would hope to have an impact at the local level, similar to successful P.A.R.T.Y programme implementations in other jurisdictions. Outlining the consequences of the individual’s choices allows students to think about risk taking behaviours and the potential impact those behaviours may have on them or their family.

**Volunteer Program**
**Toronto Private Hospital**
**Clinical Review Committee**
**Anne MacLeod, Anna Campbell, Vicki Webber**

**Aim:** The aim of the Toronto Private Hospital volunteer program is to provide the highest possible care and comfort for Toronto Private Hospital medical, palliative and rehabilitation patients, by supplementing the activities of the regular staff. Volunteers maximise the health care experience by assisting with patient orientation, providing company to patients and assisting patients with meals.

**SUMMARY ABSTRACT:** Toronto Private Hospital is an 85 bed hospital operated by Healthecare, on the shores of Toronto, Lake Macquarie, New South Wales. Toronto Private Hospital provides acute medical, rehabilitation, day rehabilitation, palliative care and mental health services including day mental health. As per the hospitals patient management information system, WebPAS, 53% of medical, palliative and rehabilitation patients are aged 75 years or older with a total of 74% aged over 55 years. The average length of patient stay is 19 days. The majority of hospital admissions come from within the city of Lake Macquarie which covers an area of 648 square kilometers and is adjacent to the city of Newcastle. A small proportion of hospital admissions come from the Central Coast and Hunter Valley areas. The area demographic is prominently Anglo-Saxon.

Volunteers were recruited following a media release in the local newspaper and via the hospital website. The article explained the benefit of volunteers, not only to the patient but also to the volunteer themselves.

The volunteer program commenced as a pilot program in February 2016 with 20 volunteers undertaking a one (1) day training program. Training included privacy and confidentiality, work health and safety including manual handling, infection control principles and hand hygiene, assisting patients with meals, hospital emergency procedures, hospital orientation and providing company to patients.

Toronto Private Hospital volunteers receive free specialised service training relevant to their needs, a criminal record check, and volunteer uniform, access to the employee assistance and early intervention programs, identification badge, morning and afternoon tea, awards and recognition for service and are invited to attend hospital celebration events.

For the purpose of this report the patient is considered the consumer.

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**A two phase qualitative study to better understand the patient experience of Chronic Kidney disease (CKD) and dietary change to facilitate change in dietetic services at Liverpool Hospital**

**Liverpool Hospital Dietetics Department**
**Robynne Cooke, Stephanie Notaras, May Mak, Natalie Wilson**

**Aim:** To explore patients’ experiences with dietary changes for Chronic Kidney Disease (CKD) Stage 4 and diabetes and how dietetic services can be improved to enhance compliance and the patient experience.

**SUMMARY ABSTRACT:** Background: Dietary changes recommended for CKD Stage 4 and diabetes are perhaps the hardest to follow given the multitude of food and fluid restrictions needed to reduce the rate of progression to kidney failure. Non-compliance is commonplace with lack of motivation described as the key contributor. Limited literature is available on patients’ experiences with dietary changes and potential strategies to overcome this. Dietitians struggle to motivate and empower patients who are experiencing difficulty in incorporating eating behaviour changes. Lack of motivation and psychological barriers are the main challenges for an effective dietitian-patient interaction. Despite communication being the key part of dietetics practice, communication and nutrition counselling skills training is often felt to be inadequate leaving Dietitians unsure of how to motivate patients struggling to change their eating behaviours.

Aim: To explore patient experiences with the dietary changes recommended for Chronic Kidney Disease (CKD) Stage 4 and Diabetes and how Dietetic services can be improved to enhance compliance and the patient experience.

**Methods:** A two-phase study was undertaken at Liverpool Hospital within the Dietetics Department. The first phase involved qualitative interview methodology. Five participants from a pre-dialysis clinic (CKD Stage 4) were recruited using a purposive sampling method and interviewed using a semi-structured interview style. The participants were invited to express their experiences with CKD Stage 4 and dietary changes. In particular, their motivators and barriers to dietary change and their perspectives on strategies that the renal dietetic service may implement to assist them with overcoming compliance issues. Audio recordings were transcribed verbatim. Data was
analysed using an inductive thematic analysis from a constructivist perspective to understand the patient experience and its meaning. The second phase of the study involved the development of communication and nutrition counselling competency standards for Dietitians. This involved the creation of an education program on communication and nutrition counselling techniques. A focus group interview with Dietitians (n = 12) along with pre and post education program questionnaires were used to evaluate the program. 17/19 Dietitians completed the questionnaire.

Results: In phase one of the study four themes were identified. The first theme was grief and loss from changes in lifestyle in order to follow the recommendations for CKD Stage 4 and diabetes. The second theme was avoidance of dialysis as the profound motivator for change. The third theme was the difficulty of change due to pre-established eating behaviours and intense confusion around conflicting recommendations to manage CKD and diabetes. The fourth theme was that Dietitians’ communication and nutrition counselling skills were perceived by these patients to influence their confidence to change.

In phase two of the study, all of the Dietitians rated the level of communication and nutrition counselling training received at university as less than adequate. Dietitians’ reported that patients’ lack of motivation to change their eating behaviours was an issue in the nutrition management of their medical conditions 66% of the time. 4/17 Dietitians (who completed the program) self-rated their communication and nutrition counselling skills as adequate or close to adequate initially. Following the program, this increased to 10/17 Dietitians. Of the 17 Dietitians 47% reported a self-rated improvement in their skills and 41% reported a self-rated maintenance. The most useful aspect of the program identified was the relevance to improving their dietetic practice in both inpatient and outpatient settings. The Dietitians also found enjoyment in learning new questioning techniques to better communicate with patients and facilitate better patient care for dietary change. All Dietitians reported using a larger variety of communication and behaviour change strategies on completion of the program.

Conclusions: A greater understanding by Dietitians of patients’ experiences with CKD (and other chronic medical conditions) and dietary change is needed to better address barriers to dietary changes and facilitate more helpful and simple interventions to meet clinical targets. The development of a Dietitian-specific communication and nutrition counselling program was to equip clinicians in supporting patients to improve compliance. Whilst many researchers have identified the need for increased training in communication and nutrition counselling for Dietitians with facilitating behaviour change for patients, none have attempted to address this. This project has addressed this need at a workplace level for staff. Communication skills to enhance patient-clinician interactions are of benefit to all health professionals to promote patient satisfaction and possibly compliance. Because of the uniqueness and success of the program, planning is now being undertaken to roll out the education program to hospitals within the South Western Sydney Local Health District (SWLHDH) in collaboration with HETI to create an e-learning component for ongoing sustainability, with the goal of rolling the program out state-wide.

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**External flammable store (EFS)-Addressing all requirements**

Prince of Wales Hospital
SEALS and Engineering Department

Caroline Hughes, Daniel Trazzera

**AIM:** The aim of this project was to evaluate the implementation of an external flammable store (EFS) to reduce the overall risk to the Randwick Hospital Campus. In doing so ensuring the risk of fire and explosion to the Prince of Wales Campus Centre patient care building was considerably reduced whilst complying with fire safety and Building Code of Australia legislation.

**SUMMARY ABSTRACT:** The POWH is a 537 beds tertiary referral public hospital situated within the Randwick Campus in Sydney, NSW. Within campus we have the Royal Hospital for Women, The Sydney Children Hospital, The POW Private Hospital and POW Mental Health. SEALS are located on level 4 of the POW Campus Centre.

The storage of flammable liquids, decanting, and potential spillage was found to be a major risk of accidental fire and explosion for SEALS and the Prince of Wales Hospital in 2009. Appendix 1 shows how 250 L containers of flammable liquids were stored in cabinets often together with other incompatible chemicals which were found to be stored side by side in the Haematology and Genetics room in level 4 SEALS Pathology. If a fire started in this room it would have quickly burn out of control as there were plastics and cardboard boxes within one meter of the flammable liquids. Similarly in SEALS Pathology, flammable cabinets were stored in areas such as store rooms which were not purpose built for chemical storage. In addition all flammable liquid waste was left outside the flammable cabinets waiting to be collected by a contractor, near combustible cardboard boxes and plastics which provided a great source of fuel in the event of a fire. The waste collection was scheduled weekly but this not always occurred. Furthermore, the lifts used to transport flammables from SEALS were the same lift used by patients and visitors during business hours. This situation did not conform to Australian& New Zealand Standards 2234.10:2004, despite availability of spill kits and Fire Attack Fire Fighting Equipment (CO2 fire extinguishers) to put out a fire if this eventuated. If a fire was to ignite in Level 4 SEALS Campus centre due to the large volume of flammable liquids it posed a high risk to the hospital.

Phase 1 of this project aimed to reduce the risk of fire to the hospital, reducing the risk of explosion and reducing the risk of fire spreading to in patient care areas.

Appendix 2 shows the external flammable store (EFS) implemented in 2011 in consultation with Fire Rescue NSW (FRNSW) and New South Wales Police. The idea of moving the flammable outside the care environment to an external flammable store is a thoroughly innovative control not previously used in healthcare settings in New South Wales.

In 2015 phase 2 of the project, we reviewed our solution against the Building Code of Australia to ensure the EFS complied with the newly revised standards. This project has had full participation from FRNSW, POW & SSEH Fire Manager, Executive at Prince of Wales Hospital and SEALS Work Health & Safety Manager in consultation with SEALS Executive and the Engineering department.

The project team identified a number of policies, regulations, standards that provided the regulatory framework the EFS solution needed to comply to:

- Safe Work Australia Handling and Storage of Hazardous Substances and Dangerous Goods.
A number of key stakeholders were identified and invited to participate in a working party. The aim of the working party was to identify if there were any process gaps between existing processes to manage the EFS and recently revised regulations. The review highlighted eight key areas needing intervention and strategies were put in place to address each of these:

1) Reinforcing the security of the EFS-To reduce and restrict access to the storage facility a fence was erected with a restricted keyed padlock on the gate.

2) Improving the lighting- Lighting has just been updated in consultation with FRNSW to deter any unauthorised persons

3) Inadequate Signage- Additional signage has been installed around the fencing “No Stopping” to prevent any contractor or visitor vehicles parking near the EFS. Hazard Line marking has also been painted on the road at a distance of 3 metres around the EFS

4) Additional fire equipment- Additional 9kg ABE Extinguishers (Dry Chemical Powder) in lockable fire cabinets have been installed 4 metres from the EFS to comply with the Building Code of Australia.

Additional fire signage has been installed to quickly identify the type of First Attack Fire Fighting Equipment.

5) Process for monitoring the usage of spill kits- The spill kit that has been installed within the compound of the container is sealed with an easily breakable seal and is checked on a monthly basis.

6) External fencing maintenance- A review of the external fencing has taken place due to damage that was discovered on one of the main fence posts by an unknown vehicle, it was discovered that the fencing had been bent. The risk to the EFS was reviewed and additional concrete filled bollards 4 in total need to be installed around the perimeter of the fence. A contractor has been engaged to install the bollards by July 2016.

7) Currency of material safety information for staff- The Safety Data Sheets are updated and reviewed on a regular basis by SEALS WH&A Manager, the SDS are located in the SDS box located on the fence for easy access by FRNSW.

8) Staff training needs- An external training organisation has been engaged to design a training programme around the use of chemical and spill kit absorption pads for the EFS. Four training sessions have been booked to commence in July 2017 for 40 SEAL staff members that use the EFS.

Following implementation of interventions an external review by Fire Building Compliance Specialist was conducted on 21st September 2015. The outcome of the review was favourable and all changes made satisfied all mandatory requirements demonstrating our solution to reduce the risk of volatile chemicals stored in proximity of patient care environment satisfactorily aligns with the newly revised standards.

A Transdisciplinary Approach To Brain Injury Rehabilitation
Community and Aged Care Services – Greater Newcastle Sector Hunter New England Local Health District
Hunter Brain Injury Service
Christopher Catchpole
Aim: This project’s aim was to address unwanted clinical duplication within the Occupational Therapy team at the Hunter Brain Injury Service, by defining unwanted clinical duplication, identifying areas of clinical overlap, defining roles and responsibilities and by creating shared responsibilities. The project’s aim statement was – “within 6 months, decrease unwanted duplication of clinical assessment (associated with Occupational Therapy), to zero”.

Summary abstract: Transdisciplinary practice is not widely used in specialised services, however it has the potential to increase efficiency through reducing duplication and fragmentation of care.

This project was initiated in response to staff and patient feedback during ‘rounding’ where concerns were raised over clinical duplication. A review of the Hunter Brain Injury Service model of care highlighted key areas where unwanted duplication was occurring and this was confirmed by clinical audit.

Implementation of the transdisciplinary approach has resulted in higher-value healthcare through increased efficiency that reduces unwanted duplication and increases clinician scope of practice.

This transdisciplinary approach could be used by any multidisciplinary team. The learnings and tools have been shared with the NSW Brain Injury Rehabilitation Directorate and with community teams within the Greater Newcastle Sector.

St Vincents Hospital Sydney Clean, Reliable, Trustworthy, Proven, Sustained Excellence in Patient & Resident Care The Environmental Cleaning Review & NSW Blood & Bone Marrow Transplant Cleaning Project
St Vincents Public Hospital Sydney
Environmental Services Darlinghurst Campus, St Vincent’s Public Hospital level 9 Xavier South BMT ward, level 7 and 8 Xavier North and South.
Rob Gordon, Emily Heininen, Joanna Uribe, Kirsten Bruchhauser, Kylie Naudi, Michelle Wilson, Giulietta Pontivivo, Brett Gardiner
Aim: In 2014, the St Vincent’s Hospital Sydney (SVHS) Environmental Services Department introduced a new model of cleaning to the Blood and Bone Marrow Transplant (BMT) unit with the aim of improving cleaning practices, patient safety by reducing Healthcare Associated Infections (HAIs) and patient experiences of the unit.

Following an Environmental Cleaning Review, the project involved trialling new environmental cleaning practices and initiatives such as introducing cleaning matrix’s to clearly define roles and responsibilities, frequencies of cleaning based on risk rating and elements of the room, auditor training for cleaners and supervisors using the BMT audit tool, with strong customer services focus.
Following the implementation in the BMT ward, the model was introduced to other clinical units in the hospital, with external audits and benchmarking used to measure progress in improving Environmental Cleaning Standards, education and training tools for clearly defined responsibilities, improved customer and patient feedback on both cleaning and services standards and improvements in HAIs within the wards.

By implementing sustainable, evidence-based and validated systems, the SVHS Environment Service Department have demonstrated the importance of good environmental cleaning, and its contribution to decreasing HAIs, improving patient satisfaction, safety, and as well as providing a visual lift to units for patients, guests and staff.

**SUMMARY ABSTRACT:** In recent years, healthcare facilities and governing bodies have acknowledged that improvements in environmental surface cleaning and disinfection are required to assist in reducing the rates of Healthcare Associated Infections (HAIs) (Jansen & Murphy 2009). Good environmental and infection control practices should consist of essential elements such as careful cleaning and disinfection of surfaces and touch points, use of correct and effective equipment, ensuring cleaning is carried out at correct day and time, and ongoing audit validation of cleaning programs. Multiple studies have shown that manual cleaning and disinfection of surfaces in hospitals without clearly defined processes, roles and responsibilities is suboptimal (Aldeyab et al. 2009; Dancer et al. 2009). In many facilities, only 40 to 50 % of surfaces that should be cleaned are wiped by housekeepers (Boyce 2016). In addition, observational methods combined with use of adenosine triphosphate bioluminescence measuring devices (ATP meters), and ultraviolet (UV) light and gel dot testing points studies have shown that individual housekeeper performance varies unless there is a structured cleaning approach and validated auditing process. (Leas BF, Sullivan N, Han JH, Pegues DA, Kaczmarek JL, Umscheid CA 2015).

At St Vincent’s Hospital Sydney (SVHS) these issues were first examined in 2012 by a multi-disciplinary working party who reviewed the cleaning standards within the hospital. At this time, cleaning services were shared between Ward Services Assistants and Environmental Services and this model proved to have significant short comings. The Environmental Services Department performed all cleaning in occupied rooms, corridors & pan rooms whilst Ward Service Assistants performed the cleaning of patient discharge rooms, central shared areas, sterile stock rooms, kitchenettes, and patient care equipment at the same time as other patient centred duties such as patient transfers, blood product transport and medical record collections. Following an internal review, it was recommended that all cleaning be undertaken by Environmental Services staff.

In August 2013 the Agency for Clinical Innovation (ACI), The Clinical Excellence Commission (CEC) and Bone Marrow Transplant (BMT) Network also commenced a project to improve cleaning standards in BMT units across New South Wales. SVHS joined the project and an initial audit of all 15 BMT units demonstrated suboptimal cleaning standards, with no unit reaching the Acceptable Quality Level (AQL) of cleaning. SVHS decided to re-visit the 2012/2013 Cleaning Review to address the increased risk of BMT patients contracting HAIs from sub-standard housekeeping and cleaning.

In February 2014, the Campus Environmental Services Manager, Infection Prevention and Staff Health Services Manager and Executive Sponsors re-evaluated the Cleaning Review and the BMT audit results. As a result, it was decided that Environmental Services would trial a new model of cleaning on the BMT ward Xavier 9 South (XS9) at St Vincent’s Hospital.

The aim of the project was to trial new environmental cleaning practices and initiatives, with the goal of improving patient safety and experiences. These new initiatives included:

- Establishment of a baseline level of environmental cleanliness;
- Identification of methods used to clean units (frequency and process), resourcing, training and education of Environmental Services personnel;
- Matching cleaning start times with ward demands for discharges and patient movements. (All shifts previously started at 6am through to 230pm, leaving no coverage for late discharges or patient moves and transfers);
- Verification of daily work, accountability, monitoring and follow-up with all departments;
- Improvement of relationships within the ward which has been separated in the past between cleaning, patients and nursing that required re-establishment;
- Pilot and validation of an environmental cleaning audit tool against established standards (Victorian Standards in combination with the NSW risk ratings);
- Communication of quality improvements in environmental cleaning standards in BMT / haematology units as an area of extreme risk to all stakeholders.

The new cleaning services model involved restructuring the way cleaning was carried out and audited. The key principles of the model was that it had to be easy to implement sustain, and where possible, cost effective to the organisation. A new cleaning matrix was developed with clearly defined roles and responsibilities, frequency of cleaning and maintenance. A new Cleaning and Hygiene HACCP (Hazard Analysis and Critical Control Point) manual was also developed (adopted from food industry) with supporting policies procedures and safe work practices to ensure staff and patient safety. Additionally, a checklist and sign off book was developed for environmental staff, designed to engage both clinical and non-clinical ward staff and empower a sense of ownership with the Environmental Services Coordinators.

The final stage of the planning for the new cleaning model involved key stakeholders from clinical and non-clinical groups involved allocation of time to conduct audits and review the results. Prior to implementation of the new model all cleaning staff, coordinators and managers were externally trained as accredited auditors using the BMT standards. Quarterly external independent audits continued using the BMT tool, with significant results of an increased 29% on the first audit at 94%. Note these audits are separate from the BMT program and purely an external audit for the hospitals internal verification.

With the ongoing success of the BMT wards cleanings standards from the point of introduction, it was agreed that in July of 2014 the trial would continue to levels 8 Xavier North and South (8XN/8XS) and Level 7 Xavier North and South (7XN & 7XS). The same success was apparent on both levels with the average external audit score maintained well above the AQL.
A helping hand - Simple system for best practice and better patient outcomes - Development of CACS-GNS Audits and Compliance Monitoring Program

Community and Aged Care Services – Greater Newcastle Sector (CACS-GNS) - Hunter New England Local Health District Practice Support Unit.

S Andi Pramono, Therese Gleeson, Jennene Brenac, Stephani Herbert

AIM: The aim of the project was to establish an integrated one stop system to assist Community and Aged Care Services – Greater Newcastle Sector (CACS-GNS) in attending clinical audits and other compliance to ensure health care is provided with best practice for best outcomes. The goal is that by the end of 2015 at least 80% of audits required are attended by CACS-GNS services.

SUMMARY ABSTRACT: Background: There are various clinical audits required by directives, policies, procedures, protocols and guidelines as well as National Safety and Quality in Healthcare Standards (National Standards) to ensure that care provided complies with best practice. CACS-GNS Executive emphasised that it is crucial for CACS-GNS Services to attend the required audits to ensure best practice and to identify opportunities for improvement. However, due to the variety of services provided across CACS-GNS services, it was difficult for service managers to identify which audits to attend, which tools to use, where to get the audit tools, how often they have to attend audit and what to do with the results. When the project was initiated there was no auditing system available that met CACS-GNS needs.

Method: The method used in this project is inclusiveness. All levels of the organisation were included in the development process and improving the system. It started with the initiative from CACS-GNS Executive which aims to assist CACS-GNS Services and to listen to their feedback and needs. Staff were respected and included by providing ideas, expressing their needs and providing feedback to improve the system. Consumers were consulted in the process through demonstration and explanation of the system and its purpose during CACS-GNS Consumer Advisory Committee meeting.

The project was initiated with direction from CACS-GNS Executive. Plans were developed and implemented by the working group. Monitoring and evaluation were attended to identify opportunity for improvements by collecting data and gathering feedback from relevant stakeholders. Feedback and evaluation results were actioned to improve the system.

Outcomes: The system created easiness for attending audits, and consequently has significantly increased the percentage of required audits being attended by CACS_GNS services from below 30% in 2013 into 94% in 2014 and 97% in 2015. Compliance in attending audits has increased staff awareness of best practice and leads to more reflective practice to provide care. It should indirectly reduce errors, incidents and complaints. The results of healthcare outcomes across CACS-GNS reflect lower numbers of incidents, complaints and positive 2015 CACS-GNS Patient Satisfaction Survey feedback.

Sustainability: CACS-GNS Audit and Compliance program is a one stop integrated system, easy to use utilising Microsoft Excel program. The program did not incur extra cost. A few administration officers have been allocated to assist with maintaining the system by entering the audit result data and monitoring outstanding audits and to send reminders. No special skills are needed to continue using the system. The system has been expanded to include the Work Health and Safety (WHS) compliance. It has been a great success in saving cost and time for CACS-GNS. Until a better State-wide or Hunter New England Local Health District (HNELHD) wide system is released, CACS-GNS will continue utilising this system to monitor our clinical audits and WHS compliance.

Conclusion: CACS-GNS Audit and Compliance Program has significantly assisted services in attending audits and WHS compliance since the implementation. Service managers and auditors (users) have expressed their gratitude with the simplicity and the positive impact of the system for them. The percentage of required clinical audits and WHS compliance being attended by CACS-GNS services has increased significantly since the implementation of the system. Health care outcomes show that the system in the long term increases staff awareness of best practice and better understanding to do things right when delivering care. This awareness and understanding provides positive impact in reducing errors, incidents and complaints.

From this project we have learnt that it does not have to be complicated or expensive to improve processes. A helping hand - simple system utilising Microsoft Excel workbook has provided CACS-GNS great improvement to ensure best practice in health care delivery.

Designing, Implementing and Evaluating a Best Practice Peer Work Program for Older People in a Public Mental Health Setting.

Central Coast Local Health District Specialist Mental Health Services for Older People

Raichel Green, Dominiek Coates, Patrick Livermore

AIM: To design, implement and evaluate a best practice Peer Work Program for Older People in a Public Mental Health Setting.

SUMMARY ABSTRACT: Background: In December 2015 Central Coast Specialist Mental Health Services for Older People (CCSMHSP) received a grant to design, implement and develop an older person’s peer worker program for consumers and carers of the SMHSOP service. The Australian National Framework for Recovery Orientated Mental Health Services describes peer work as a core strategy in promoting recovery for people with a lived experience of mental illness. A peer worker in the mental health setting is defined as a person with a lived experience of mental illness who offers help, based on understanding, respect and mutual empowerment, to people in similar situations. Historically consumers and carers of CCSMHSP have had no access to peer workers with consumer consultants employed within mental health focusing on adult services only (which generally excludes older people). To the best of our knowledge, the peer work model this project seeks to develop will be the first to meet the specific recovery needs of older people who experience mental illness.

Methodology: Using an action research design, the primary outcome of this evaluation is to gain insight into the effectiveness of the model from the perspective of stakeholders, in particular peer workers themselves, consumers, carers and...
clinicians. A secondary outcome of this project pertains to the experience of health systems change and what the barriers and facilitators of change are and how they can be managed and overcome. In line with action research, the evaluation occurs alongside the development of the model, to ensure the model implementation is informed by evaluation findings. To capture the experience of stakeholders, a range of methods are used, in particular: focus groups and individual interviews with the peer workers; consumer surveys to capture their experience of the peer workers; focus groups with the steering committee; field notes; and examination of project documentation and emerging literature.

Results: Preliminary findings indicate that some of the barriers to implementing peer work models in mental health settings identified in the literature are less prominent for the older peer group population. It is well established that implementing peer work models in public mental health services can be challenging and be faced with resistance from clinical staff as well as uncertainty from peer workers as they develop into their peer work roles. For the current project, peer workers settled into their roles comfortably and coped well with the role ambiguity inherent to new projects. This is conceptualized as in part due to their age and maturity. To mitigate common staff barriers and ensure the model was embraced by clinical staff, efforts were made to actively engage staff in the development of the model, and provide appropriate training around the purpose of peer work.

Conclusion: At this stage we are eight months into the one year project and preliminary findings indicate that peer work provides a valuable contribution to the recovery of older people.

**Good Start to Life – Co-designing optimal maternal and infant nutrition resources for and by Maori and Pacific Islanders families living in Queensland**

Children’s Health Queensland Hospital and Health Service

Good Start Program, Child and Youth Community Health Service

Sebastien Brignano, Losa Seller, Kirstine Kira

**AIM:** The aim of the Good Start to Life project is to co-design with Maori and Pacific Islander consumers in Queensland a culturally-tailored maternal and newborn health strategy to promote appropriate maternal nutrition, healthy weight gain in pregnancy and recommended infant nutrition guidelines.

**SUMMARY ABSTRACT:** The Good Start Program is a Children’s Health Queensland Hospital and Health Service Initiative which aims to improve the health and wellbeing of Maori and Pacific Islander children and families in Queensland. The program targets seven of the largest Maori and Pacific Islander communities – Maori, Samoan, Tongan, Cook Islander, Fijian, Fiji Indian, and Papua New Guinean.

Maori and Pacific Islander adults in Queensland experience significantly higher rates of chronic disease and overweight/obesity compared to the rest of the Queensland population (Queensland Health 2010 & Queensland Health 2012). The trend is also seen in Maori and Pacific Islander children in Queensland (Queensland Health 2010 & Queensland Health 2012). Health and wellbeing from the antenatal period through the first 3 years of life is now well understood to lay the foundations for long-term health outcomes (Children’s Health Queensland Hospital and Health Services 2015). Addressing childhood obesity during the perinatal period and throughout infancy has been found to contribute to reducing the prevalence of chronic disease and obesity (Children’s Health Queensland Hospital and Health Services 2015).

In 2015, Metro South Hospital and Health Services identified a high prevalence of gestational diabetes mellitus in Maori and Pacific Islander women with rates more than double the state-wide average (16% vs. 7.6%) (Queensland Health 2015). Maori and Pacific Islander mothers birthing at Logan Hospital exhibit overweight/obesity at a rate of 66%, compared to 46% in the non-Maori and Pacific Islander population (Queensland Health 2015). Similar inequities are apparent at Redland and Cairns Hospitals (Queensland Health 2015). The lack of culturally appropriate antenatal and child health care services/resources, low levels of health literacy and a strong cultural reluctance to seek support presents challenges in addressing these key health issues and ultimately childhood obesity within the Maori and Pacific Islander community (Queensland Health 2011).

In order to appropriately address maternal and childhood health inequalities in the community, the Good Start Program established a consumer engagement strategy and subsequently created the Good Start to Life project. Good Start to Life is an important preventative health strategy that supports Maori and Pacific Islander women to gain a healthy amount of weight during pregnancy, breastfeed and adopt recommended infant nutrition guidelines.

It was vital for the Good Start program team to involve Maori and Pacific Islander health consumers in co-designing the project. Different engagement approaches have been used in the form of forums, steering committee, consumer review groups and consumer participants groups. Each method required different time investment, education background, literacy level or personal involvement. This strategy has provided the opportunity for all health consumers to be part of the project in a flexible and accommodating manner. 95 health consumers have been directly involved in the development of the Good Start to Life project having dedicated a total of 133 hours in the form of consultation or co-designing activities.

The initial stage of the Good Start to Life project has been completed with the creation of a series of educational booklets and posters that prioritised key areas identified as contributing to childhood obesity in MPI children (Appendix 1 and 2). Through local community networks, face-to-face consultations with health consumers within the targeted demographic were conducted to review and/or be photographed for the resources. The cultural expertise and parenting experience of these consumers was vital in providing valuable recommendations in regards to culturally appropriate language, literacy level, content suitability, and photographs utilised. Knowledge and expertise from clinical and public health professionals was also sought from a number of dieticians and senior community nutritionists who had experience in working with culturally and linguistically diverse community groups. Their knowledge around current best practice guidelines in regards to breastfeeding, infant feeding as well as nutrition and physical activity, ensured that the resources contained the most up-to-date information.

Research indicates that Maori and Pacific Islander communities have poor health literacy levels which impact their ability to understand and comprehend information and subsequently affects the accessibility and use of a health resource is reduced (Queensland Health 2011). Health consumers were consulted and played a key role in adapting the literacy level of the Good Start to Life resources. Using an electronic readability indicator, the Readability Test Tool, resources was assessed according to writing style, sentence construction and vocabulary requirements (Children’s Health Queensland Hospital and Health Service 2015). The average literacy demand or grade literacy level requirement of the Good Start to Life resources was...
Empowering clinicians: The implementation of a Clinical Audit Skills Development Program in Metro South Hospital and Health Service

Kylie Sellwood, Lauren Canfell, Kim Gehrke

AIM: The aim of the Clinical Audit Skills Development Program was to design and implement an audit and evaluation education program that would provide clinicians with the knowledge, skills and confidence to measure, and improve patient and service processes and outcomes in their own clinical areas. The program has been designed to meet the needs of multi-disciplinary clinicians participating in clinical audit, and is part of a wider goal to embed a culture of Measurement and Performance Improvement to our frontline clinicians.

SUMMARY ABSTRACT: The Clinical Services Excellence Team (CSET) partners with clinical services in the delivery of clinical innovation and excellence by providing support and expertise in clinical measurement, building internal knowledge and capacity in measurement and evaluation sciences, and facilitating informed organisational decision making through the provision of robust and reliable data. CSET are responsible for overseeing that the audit components of the National Safety and Quality Health Service Standards (The Standards) are met throughout the Metro South Health & Hospital Service (Metro South).

Since the introduction of The Standards in 2012, there has been an unprecedented focus on measurement and patient outcome improvement through audit, with the primary aim being to protect the public from harm and improve the quality of care provided (Australian Commission on Safety and Quality in Health Care 2012). The Standards require a significant number of mandatory audits in order to meet the requirements of accreditation and ensure patient safety. The nature and frequency of the audits pushed an audit focus into the clinical care settings, placing an increased demand for clinical staff to collect, analyse and report on data clinical audit findings.

When reviewing the literature, it is suggested that while there is an expectation for clinical staff to participate in clinical audit post registration, there is no requirement for clinical audit to be included as part of the curriculum for pre-registration nursing and allied health professionals. While medical students are provided with undergraduate clinical audit theory, and are expected to undertake regular clinical audit as part of their training, most of their activity does not lead to the desired outcome of service improvement (Garg et al. 2012).

What has been identified in the context of data collection for The Standards is that while frontline clinicians follow instructions to undertake the required audits, there was a lack of understanding as to the methodology, relevance or consequence of the information they were collecting. There was also a perceived lack of ownership of the data or the process (Johnstone et al 2000). Despite these issues it became evident that there was an eagerness for clinicians to understand for themselves the audit process and outcomes and the ‘needs and expectations of their patients’.

In addition to audit requirements, frontline clinical staff were also being inundated with new data and information they had not previously been exposed to as data transparency became the new norm. While CSET were already providing ad hoc assistance to clinicians regarding audit, evaluation and interpretation of data, there came an exceptional number of requests for this assistance, with the primary aim being to improve the care they provided to their patients. It was in this context that a formal Clinical Audit Skills Development Program was offered to our front line clinicians.

In early 2015, a trial education program was implemented at one of the six Metro South sites, with the aim being to determine the level of interest and knowledge on clinical audit, and to gauge support and engagement from facility management in relation to releasing their staff to attend the program sessions. Based on the outcome of the trial and a review of national and international clinical audit education programs the ‘Clinical Audit Skills Development Program’ (The Program) was developed for delivery throughout Metro South. The 3 hour program includes a short review of clinical audit theory, practical clinical audit methodology, ‘Develop Your Own Audit’ and ‘Understanding Audit Data’.

The current program has been provided to staff from nursing and allied health disciplines with feedback referring to the knowledge gained and the willingness to place theory into action in the clinical units. While the program has been scheduled for individuals to attend from any Metro South facility throughout the year, there have been multiple requests for additional training for whole teams. Of great significance is that through applying the knowledge and skills garnered from The Program and through the assistance of CSET, 90% of participants have reported being able to make positive changes to patient outcomes.

Considering the positive feedback and success of The Program plans are in place to further develop a 45 minute medical model that will expand on the training provided at a University level.

Enterprise Content Management System

Spendelove Private Hospital

‘A facility-wide, integrated human resource, accreditation, quality improvement, risk management, education & training compliance system’ Administration (Information Technology Support)

Ashley Rouke, Glenda Farmer, Dionne Litto

AIM: The aim of the Enterprise Content Management System (ECMS) was to introduce an innovative hospital-wide, integrated human resource, accreditation, quality improvement, risk management, training and education compliance system using technology to support safety and quality improvement.

SUMMARY ABSTRACT: Collaborative Development. Spendelove Private Hospital (SPH) and SmartHealthcare collaborated via a joint venture to develop and implement an ECMS. SmartHealthcare has proven experience, professionalism and expertise in safety and quality systems in the healthcare sector. SPH worked over an 18-month period (with a full time development officer) to identify the needs, develop the plans to...
meet them, and then to commission the platform for application.

The ECMS (named ‘SmartHealthcare’) is a data management system that masters data with proven validation, quality assurance and transformative connectivity. It is flexible and accessible through cloud-based computing as a hosted solution or on SPH’s internal network. The ECMS replaces SPH’s primary safety and quality solutions, which were manually integrated and provides a standalone management system for both the facility and staff alike.

This approach has resulted in a tailored solution which is both effective and efficient in its application. SmartHealthcare’s development team partnered with SPH to ensure that the resulting solution was robust, relevant and that it delivered improved service quality across SPH’s care continuum.

SmartHealthcare provides strategic, tactical, and analytical information solutions within SPH.

Simply, SmartHealthcare has unified communication and collaboration connecting our team with organisational information.

Data Centre: SmartHealthcare is a comprehensive data centre, safety and quality management and reporting solution designed specifically for hospital application. SmartHealthcare simplifies and consolidates all information related to SPH’s operations and reports up-to-date information. It is a complete solution implemented to capture and retain data integral to SPH’s operations.

With the goal of limiting the number of in-house technological solutions and centralising all data retention, the synergies to develop SmartHealthcare were notable and imperative to properly connect an increasing workforce. SPH has essentially become an architect of its operation by building a data centre solution across its facility. SPH now manages its internal network completely through SmartHealthcare, which has quickly become the backbone of SPH’s operations. Other than day-to-day accounting activities, billing and coding, all of SPH’s procedural activities are facilitated and coordinated through SmartHealthcare.

Managing Facility Data: SmartHealthcare provides a flexible, comprehensive entity data management tool without parallel. It was specifically designed for SPH following Rehabilitation Medicine Australia’s first Periodic Review in July 2014. SmartHealthcare establishes and maintains stringent data quality standards for SPH. Data collection is given ID numbers that are linked across the platform to limit duplication of data and to facilitate automated collation and uniformity. Designed specifically by a doctor having an acute interest in quality and safety patient care, this management and change control tool provides fine control for maintaining accurate records.

SmartHealthcare incorporates third-party data from other healthcare associations but validates that data against existing records so that SPH can be confident in the integrity of the data and maximise its application.

SPH view that there is no substitute for being able to handle data quickly and accurately. SmartHealthcare manages production data from all sources and across all channels including the executive, staff (Administrative, Clinical, Domestic) and consumers (inpatients and outpatients).

SmartHealthcare as an ECM facilitates and automates the import, validation, resolution, and allocation of data through pre-defined modules while employing healthcare specific rules and definitions.

Key advantages include:
- extracting information needed by SPH’s Executive in order to make accurate and timely decisions
- viewing production summaries via dashboards and production profiles
- actively pulling data which may be obsolete or archived (e.g., Policies and Procedures)
- close scrutinisation of data, drilling into data sets defined by SPH.
- Reporting and Analysing

SmartHealthcare provides a platform to ensure that incoming data is validated and then associated with existing data. The system allows data to be readily available in detailed form – as dashboard summaries, as traditional reports and as exports (in various data formats). The analytic tool integrates with third party utilities (i.e., ACHS and NSQHS Standards) to cross-reference reporting capabilities to individual standards. Additionally, the reporting capabilities of automated email-sending provides a medium to ensure that all designations within SPH are apprised and informed.

In summary, SmartHealthcare is a turnkey data reporting and ECMS which collects and delivers information that enables communication between SPH and its team more meaningfully and timely. In addition to the contact and activity management tools, SmartHealthcare provides SPH’s Executive with current, reliable and verified data at all times. Its seamless integration across all stakeholders (employee designations, consultants and contractors) enables it to align personnel with information. It equips SPH with the precise tools for point of hand evidence production for accreditation (whether its a Periodic Review, Self Assessment or Organisation Wide Survey).

Accessibility: SmartHealthcare is a solution accessible 24/7 as it is hosted ‘in-the-cloud’ and accessed through individual team member profiles.

It is a mobile solution giving SPH’s team access to all data, as they need it, simply and conveniently from wherever they are. Access permissions restrict sensitive information to SPH’s Managers and Executive. SmartHealthcare has a Desktop, Tablet and Smartphone interface which ensures convenient application wherever, or whoever is accessing the platform. Careful to use the right process and procedures, the system processes SPH’s internal resources while giving all staff offsite access to the information they need – keeping data private and confidential.

Moreover, with bidirectional messaging and data flow, enables SPH to deliver information sharing and communication that exceeds any human resources portal currently being offered in the healthcare sector.

Integration with NSQHS and EQuiP Standards: SmartHealthcare embodies a perfectly seamless integration tool to update with changes in safety and quality standards. The platform has been developed to link back to a wide variety of third-party organisations and applications. This includes National Standards in the healthcare sector as well as statutory amendments in Legislation, Regulations or Guidelines.

Facility-wide connectivity: SmartHealthcare has been developed with the end-user in mind. It successfully transfers all necessary information to all levels of staff optimising the power of the solution.

Organisation-wide connectivity is vital to SPH’s successful daily operations. SmartHealthcare connects SPH’s compliance networks in real time across the facility no matter where that party may be accessing the information. Communications can be directed to specific designations, departments or facility.
The community nature of the interface brings real-time connectivity. It aids with improvement activation and allows SPH’s team to track quality improvement initiatives. The platform is aiding the Executive’s overarching goal of SPH’s team accepting responsibility and ownership of their workplace.

Future Direction: Looking ahead, SPH’s vision is to integrate SmartHealthcare to coordinate patient providers and services including doctors’ visitation, diagnostic tests, patient records, medication/observation charts, monitoring devices, clinical handover, staff rostering, etc. A SmartHealthcare Application (for iOS and Android) will assist user facilitation and operation.

Development of SmartHealthcare has enabled SPH to move away from single systems to a unified, collaborative single platform.

It is the mechanism for keeping pace with an ever complex and evolving healthcare sector.

Effective Provision of Pre-Admission Information to Patients by e-mail
North West Private Hospital Administration

Emily Lone, Andrea Batt

AIM: The aim is to develop, implement and evaluate a functional systematic process which will see that all patients with a pending hospital admission receive the necessary correspondence. The aim is to communicate this information in a timely and efficient manner via electronic mail. By reviewing the potential use of an electronic mailing system and the access of this among the population of the local catchment area and the facility’s patients, this project works towards building a strong relationship with the consumers from first point of contact by improving the information communicated between both parties.

SUMMARY ABSTRACT: Pre-admission is a vital component of a patients care while in hospital, and in most cases is also the first point of contact and partnership between the facility and the patient. This process confirms important admission details related to the admission, as well as establishes financial accountability. Information and communication are two very important dimensions of patient centered care. The Australian Commission on Safety & Quality in Health Care state that ‘patient centered care is health care that is respectful of, and responsive to, the preferences, needs and values of patients and consumers’.

The need for a Quality Improvement (QI) initiative was raised by the hospital administration department in February 2016 after it was identified that private patients with upcoming admissions were consistently not receiving their admission information. On average twenty (20) patients a week were not receiving their information. Private patients include patients who are covered by private health insurance, workers compensation claims, self insured, a patient from the department of veteran affairs (DVA) and/or a Motor Accident Insurance Board (MAIB) claim. This is ordinarily delivered to all patients by regular post to the mailing address provided by the patient. In a lot of cases, this was relating to patients who were booked for surgery only two or three days away, and had not yet received important information about the admission process. The decision to change the information delivery process was developed through a review of relatable literature, and planning through a multidisciplinary team. With a continued goal to improve patient experience and care processes, the Quality Improvement initiative identified causation, various communication options and patient accessibility to these. Local population factors were taken into account while respecting the needs of all patients/consumers.

Research into causation showed that nationally recognised postal service Australia Post, has been in the firing line in recent times through various media outlets for their inefficiency in providing an acceptable service for regular mail delivery. This is reportedly due to an increase in the parcel delivery service. Recently published in an online news article, the decline in traditional letter volumes (and reported $220 million loss) has forced the company to not only increase the price of regular postage stamps from 70 cents to $1, but to push out delivery times by a further 2 days (Chung, 2016). This extension in length of delivery time is considered one reason patients are not receiving their information in sufficient time.

While there is no argument that technology is vastly shaping the future of healthcare, it is to be noted that not all health care consumers have a firm grasp, or in a lot of cases, access to the basics of todays’ technological world. Data obtained from the Australian Bureau of Statistics (ABS 2011), reveals the population of the facility’s immediate local government area as a mix of low to medium socio-economic levels, with a median age of 42.5 years of age. This same data also claims that Tasmania has the oldest median age of all states and territories in Australia. This is important to acknowledge when considering the use of e-mail as point of contact and information delivery, as email may not be the most appropriate vessel for communication if consumers cannot or do not access it.

In 2009 an investigation was conducted by the Australian Communications and Media Authority (2009), based on the use of digital media and communications by senior citizens. It documented that ‘older Australians (aged 65 years and over) are less connected, light users of the internet, and use the internet for different purposes than younger age groups’. It does conclude however, that certain types of internet activities reveal very similar levels of use for younger and older Australians. These specific activities include accessing email (87% age 14+/ 86% age 65+), and banking and paying bills. Internet activities accessed more by Australians 65 years and older than younger adults include travel information and health and medical information.

The process of emailing admission information to patients who provide an email address with their contact information was deemed a suitable alternative to general mailing. Over a period of 2 months (March – April 2016) all patients who provided us with an email address were emailed the appropriate information and those that did not supply an email address were posted the information as normal, by regular mail. For patients that were booked for admission within four days, a phone call was made to verbally discuss the admission information, and arrangements were made over the phone to provide the patient with either a hard or electronic copy of the same. All administration staff were advised of the project plan and pending change in process, however it was made the sole responsibility of the pre-admitting clerk with the assistance of the administrative team leader to address.

The value of the project was measured primarily from patient and staff feedback (who were involved in the process), with several valuable and positive outcomes achieved. 61.5% of private patients admitted during this period were emailed their admission information. 100% positive feedback was gained from patients who were emailed their information and who were followed up. This same positive feedback was evident from all administrative staff involved.

Overall, the project has provided a practical and effective strategy which has markedly reduced the incidence of patients
not receiving their much needed admission information. This project has since been embedded into the routine practice that is the admission process. Emailing this information has provided a service that is instant, friendly to the environment, free, and time efficient. Staff have found that a lot of time is saved from printing, collating, and preparing paperwork for posting. This is time better spent focusing on the patients one to one when they present to the facility.

Better Practice Program for Mercy Health Home and Community Care division

Mercy Health
Mercy Health Home and Community Care
Jane Korneyko, Amanda Bowe

AIM: Substantial state and national industry change, a shift to consumer driven services, stakeholder feedback and internal administrative burden created a need for a whole-of-division reform. The Better Practice Program (BPP) is a project that entailed a redesign of all Mercy Health Home and Community Care (MH HCC) business processes and documentation including Protocols, Policies, Procedures and all supporting documentation such as forms, assessments, registers, templates and others. Processes and documents reviewed, redeveloped and created aimed to simplify, standardise and renew the way the division operates and supports both our staff and consumers.

SUMMARY ABSTRACT: MH HCC is a division of the greater Mercy Health network employing over 7,000 people who provide acute and subacute hospital care, aged care, mental health programs, specialist women’s and babies’ health, early parenting education and support, palliative care, home and community care, and health worker training and development. The MH HCC division operates in 8 regions of Australia, employs 430 employees, and provides in excess of 22,000 service hours and 10,000 visits each month to our consumers.

The BPP commenced with the establishment of a Working Party in charge of planning, designing and implementing the project. The first task of the Working Party involved scoping the entirety of the BPP including a review of current and future practice and documentation. The result of this exercise was a three page document explaining the process of BPP document creation and the scope of BPP documentation including all Protocols, Policies, Procedures and Supporting Documentation along with their relevant owners. Please refer to Appendix. BPP documentation was broken up into Core Process Streams which related to the steps in the consumer journey of Service Enquiry and Request, Registration, Assessment and Planning, Rostering, Service Delivery, Reassessment and Discharge, and Support Process Streams that encompassed Administration, Learning and Development, Quality, Human Resources and Finance. Ongoing fortnightly meetings with the Working Party were established to ensure thorough discussion of multi-departmental or multi-role processes and decision making surrounding change in practice and business redesign. A deadline was established to ensure the Core Process Streams (those relevant to the consumer journey) were completed in time for a trial commencement date.

Once Core Process Stream were completed, a Regional Office was identified as a pilot site for the trial of finalised documents and revised business processes for a period of 3 months. Feedback and improvements were documented and actioned to ensure the launch of new documentation to the remainder of the division was clear and supportive. An evaluation survey conducted at the completion of the pilot at the trial site showed high satisfaction rates with new documentation and revised business processes, as well as the administration of the pilot project.

Post trial, a roll out across the division commenced. The roll out entailed a staggered approach of firstly releasing new digital forms that did not require practice changes aside from the use of the new documents. A release of policies, procedures along with those forms requiring practice changes followed and introduced the new MH HCC Intranet. The new Intranet provided staff with four new pages of information including:

- Our Team - Regional and Support Office organisational charts and contact information
- Story, Programs and Services - Information on funding programs, provision of services by region and history of MH HCC
- Document Library - All BPP documents
- Staff information - Newsletters, memos, resources, training material, divisional strategic documentation etc.

New Protocols, Policies, Procedures and Supporting Documentation that required a change in practice were accompanied by a Practice Change Memo to all staff. Documentation was released in the business process streams with grace periods provided for implementation.

Prior to the roll out and throughout implementation, information sessions were held at Regional Offices as well as through video conferencing focusing on a list of topics as well as feedback from staff. Direct Care staff who are mobile received Staff Newsletters explain the BPP and relevant changes that impact the front line. Consumers were notified of changes affecting them via a Consumer Newsletter sent quarterly.

As part of the new Intranet, an online Feedback function was developed that allowed staff to quickly record concerns, questions and any other feedback relating to the BPP. Feedback received was logged in an Issues Log that was discussed at each Working Party meeting, actioned and communicated back to the staff member as well as to the wider group. Weekly BPP updates were set up to notify all staff of changes, updates and new processes released. Updates on the project were provided at various committees throughout the division as well as external to division committees, updates and newsletters.

There are a number of benefits resulting from the work of the BPP, including:

- Reduction of forms;
- Reduction and streamlining of initial paperwork/information for new consumers;
- Electronic versions of all forms with online signing ability;
- Removal of duplication throughout forms - question only gets asked once;
- Consumer driven processes rather than business driven;
- Standardisation between Regions;
- Reduction of administrative burden;
- Clarity of staff responsibility;
- Linkages between forms and the Client Management System;
- Improved and standardised consumer information (minimum data set); and
- Increased consumers, staff and external providers satisfaction with the support and responsiveness experienced through the consumer journey and other.

However, the BPP requires ongoing maintenance. Industry change, feedback, tweaking of business processes, implementation of new technology and other factors will continue to impact on the division and thus its operation. A number of improvements and initiatives are already afoot in the division and preparation is underway to document the changes as required. Some of these improvements include:

The Australian Council on Healthcare Standards
19th Annual ACHS Quality Improvement Awards 2016
- Electronic forms built in the current Client Management System to automate linkages between forms and client data
- Electronic learning calendar with booking functionality
- Implementation of Riskman (Incident Management System) mobile allowing remote staff to easily log incidents and feedback
- Client Management System changes and updates
- Redevelop MH HCC Website to be more competitive and provide information in a more effective manner.

Phase 2 of the BPP project will include the use of LEAN methodology principles to once again test the consumer journey through Value Stream Mapping with staff members. This process will identify further improvements and allow further feedback and buy in from staff. A consumer survey will be released also at the end of 2016 to gauge satisfaction with new processes and ease of use on MH HCC systems. Mercy Health’s Consumer Advisory Committee will be relied upon for consumer feedback of redesigned process resulting from this process.

BPP project management principles will continue to apply throughout any updates to the BPP.

3-E Model to Develop Capacity, Capability and Culture in Improvement
Fiona Stanley Hospital Safety, Quality and Risk; Medical Education

Catherine Li, Greg Sweetman

AIM: Engaging, enhancing and embedding clinical audit and quality improvement (QI) activities into everyday practice to foster a culture of continual learning where services and clinical care are actively monitored and measured to drive continuous improvement and enhance patient care.

SUMMARY ABSTRACT: BACKGROUND: Fiona Stanley Hospital (FSH) is the largest tertiary hospital with 783 beds in Perth, Western Australia (WA). It was fully commissioned through phased openings in February 2015. The hospital has four main clinical service streams with over 40 medical specialties, including services transferred from another two tertiary hospitals in Perth as a result of service integration. The hospital has over 5,700 employees sourced from many health networks. It is within the hospital’s vision to deliver the highest quality of care and embrace opportunities to learn and improve.

ABSTRACT: Achieving and sustaining quality and performance improvement in complex health care environments is challenging (Needleman et al. 2016). Many health care organizations have sought to create internal performance improvement capabilities as a tactic to enable system sustainability (McGrath et al. 2015). One potentially powerful and widely used method of QI is to establish the extent to which clinical practice complies with identified review criteria. The degree of compliance, or lack of it, highlights areas where improvements can be made. This is the basis of clinical audit (Hearnshe w et al. 2003). However, clinical audit is not without barriers. The main barriers can be classified under five main headings. These are lack of resources, lack of expertise or advice in project design and analysis, problems between groups and group members, lack of an overall plan for audit, and organizational impediments (Johnston et al. 2000).

QI commonly lack underlying theory linking a change to its intended outcome, which inhibits the ability to demonstrate causality and hinders widespread uptake (Davies et al. 2010; Shohjania et al. 2005; Foy et al. 2011). Evaluations of QI education sessions and review of submissions on the quality management system revealed that lack of understanding the QI principles, experience and skills is a major impediment. Lack of time is a common reason for uncompleted or delayed activities.

FSH as a brand new tertiary hospital presents a unique opportunity to establish the QI governance structure and processes that would work for the clinicians and departments, integrated with structured education and training programs to develop organization wide capacity and capability in improvement whereby clinical audit is embedded into everyday practice. This paradigm will contribute to a positive organizational culture of continual learning where there will be common understanding of QI principles and methodologies by organization members, which influence how staff perceive, think and act. QI is a culture or philosophy that seeks continuous improvement of the whole system, through normal daily activity (New Zealand Ministry of Health, 2002).

A strategic 3-E (Engaging, Enhancing, and Embedding) model was designed for this purpose. This model acknowledges the learning curve that staff need to go through and the evolving process required to embed clinical audit improvement into everyday practice. The long term objective of the model is to have organization wide understanding of the PDSA model and awareness of the Theory of Profound Knowledge (system, variation, knowledge, psychology) by Dr. W. Edwards Deming (W Edwards Deming Institute) so that staff gradually learn and be confident in taking a system approach for all improvement work with a patient focus. Figure 1 outlines the key elements of the model.

Through the implementation of an electronic quality management system called Governance, Evidence, Knowledge and Outcome (GEKO), governance structure and processes for QI were designed with the vision to engage with staff’s intrinsic motivations to enable autonomous and empower ownership, with the philosophy of ever-improving quality of all aspects of patient care and the underlying systems and processes.

A continuous improvement pathway was successfully established 4 months post hospital commissioning. Over 890 (approx.16% workforce) multidisciplinary and multi-professional staff received training and support for QI in 12 months post hospital commissioning. Over 535 quality proposals were received on GEKO. Participation was multidisciplinary and multi-professional. Submissions by profession: nursing and midwifery 46% (246), medical 33% (177), allied health 9% (48), pharmacy 5% (27), and non-clinical staff 7% (37). Average number of new submissions per month is 42, demonstrating active monitoring of clinical practice and multidisciplinary involvement in QI. Review of submissions demonstrates the application of a rapid cycle approach to develop, test, modify and refine improvements and enhanced clinical care.
A. AIM
To reduce the risk to patients on the Endoscopy Waitlist at Osborne Park Hospital

B. SUMMARY ABSTRACT
Background
Osborne Park Hospital (OPH) is a secondary Hospital in Perth’s northern suburbs which undertakes low to medium risk obstetrics, rehabilitation and aged care, elective surgery and gastrointestinal endoscopy. The majority of endoscopy procedures performed at OPH are generated by referrals from General Practitioners directly to OPH.

Traditionally patients referred to OPH for endoscopies were triaged according to the elective surgery waitlist categories of Category 1: to be performed <30 days, Category 2: <90 days and Category 3: <365 days. As of 12 January 2014, there were 3,512 patients listed on the OPH Endoscopy waiting list; 2,489 (71%) were over boundary, i.e. patients waiting longer than the recommended wait times per Category.

In early 2014, a Project Officer was appointed at OPH to evaluate and help resolve this protracted waiting list. An audit of the waiting list was conducted by mail. By the time the Project Officer had completed this work, in Dec 2014, there were still more than 3100 cases on the waitlist with 78% of cases over boundary.

With an average of 7 endoscopy lists per week, between 5-7 cases per list, large numbers of referrals and disappointing attendance rates due to late cancellations and failures to attend on the day, it was apparent that a large number of these patients would likely wait years to have their endoscopy at OPH. The OPH clinical leaders became more and more concerned for patient safety.

The OPH approach, built on the “Plan, Do, Study, Act” cycle, utilised valuable lessons learned from the work of the Project Officer. In contrast to the audit phase, OPH self-initiated the development of a multi-faceted project to ensure a consumer-focused, stakeholder-driven project that has subsequently produced sustainable improvements.

Method
A multi-disciplinary OPH team, led by the Surgical Services’ Clinical Nurse Manager and supported by the Medical Head of Service identified the multi-faceted quality improvement strategies for implementation in order to tackle the referral, triage and clerical problems.

1. Extended audit of the Waitlist to identify and eliminate cases on the Waitlist that had already been performed elsewhere or were no longer required.
2. The rules for the removal of patients for repeated non-attendance were applied in accordance with the Health Department of Western Australia (HDWA) Operational Directive 0618/15 (Elective Surgery Access and Waiting List Management Policy)
3. The triage categories were reviewed and updated to better reflect the level of OPH’s clinical services, level of patient risk and clinical best practice.
4. A new referral process for General Practitioners (GPs) was developed and implemented so that only referrals that complied with a strict “evidence base” were accepted.
5. Updated, proactive clerical processes were implemented to minimise non-attendance and to ensure the optimal utilisation of the Endoscopy lists, including telephone confirmation in advance of intention to attend.

Results
The tables below reflect the impact of the quality improvement strategies on the patients’ Waitlist as well as on the DNA (Did Not Arrive) rate.

<table>
<thead>
<tr>
<th>Category</th>
<th>Dec 2014</th>
<th>June 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1: &lt;30 days</td>
<td>126</td>
<td>103</td>
</tr>
<tr>
<td>Category 2: &lt;90 days</td>
<td>1657</td>
<td>100</td>
</tr>
<tr>
<td>Category 3: &lt;365 days</td>
<td>1344</td>
<td>480</td>
</tr>
<tr>
<td>Total</td>
<td>3127</td>
<td>683</td>
</tr>
</tbody>
</table>
The graph below confirms the reduction of unbooked over boundary patients on the OPH Waitlist.

Conclusion
The results confirm an effective referral, triage and clerical system that is sustainable. The success of the project confirms the need for patient (consumer) and stakeholder group involvement. Buy-in from Endoscopists and the referring GPs (accessed via the Hospital Liaison GP) was pivotal to the sustained success of this project.

OPH has always focused on prioritising the Category 1 patients and historically there has not been a significant problem related to these patients. By 18 July 2016, it is confidently anticipated that there will be no over boundary Category 2 patients and by 15 August, there will be no over boundary Category 3 patients.

Because of the elimination of over boundary cases at OPH, it is planned for Sir Charles Gairdner Hospital to increase referrals of their Endoscopy patients to OPH, to reduce their waitlist and over boundary cases.
C. REPORT
APPLICATION OF ACHS PRINCIPLES

1. Consumer Focus
Despite disruptions to the OPH Surgical Services on-site because of the construction of new operating theatres (October 2012 – March 2014) as well as staffing restrictions in line with system-wide budgetary constraints, it was an overriding concern for patient safety and acknowledgement of the importance of preventative healthcare measures that provided the momentum for the OPH led Waitlist project after 2014.

The risks to patients that were addressed included:

- Patients not being assigned the correct urgency/triage Category.
- Patients on the Waitlist not being followed up regularly to assess any change in urgency.

Throughout the project, a patient-centred approach was used.

Every query, negative feedback and complaint received from patients in relation to the Waitlist was personally dealt with immediately by the Clinical Nurse Manager (CNM) who led the Project, or by the Clinical Nurses in the Endoscopy and Day Procedure Unit. An answering machine was used so that patients could leave messages after hours. During the entire project and up until the date of this submission, there have been no related queries or feedback that have escalated into formal complaints. This is testimony to the patient-centred care approach used by the staff.

In order to address the DNA (Did Not Arrive) patients, a follow-up process was implemented and monitored closely, with reminder telephone calls to patients prior to their scheduled procedure; patients were gently informed of the policy of two patient cancellations followed by discharge from the waiting list.

Patients who had been on the Waitlist longest were given priority and their referrals were reviewed and followed up. Two Clinical Nurses were allocated on average 4-8 hours per week (in total) to telephone patients on the Waitlist to ascertain:

- If the procedure was still required.
- If the procedure had been done elsewhere.
- Whether there had been any significant change in medical acuity or BMI (Body Mass Index) resulting in ineligibility for OPH and necessitating transfer to a tertiary centre.
- Whether they would be available at short notice for their endoscopy.

If the patient was not contactable their Next of Kin or General Practitioner was contacted to obtain updated contact details, or in the case of the GP, confirmation that the procedure was still required.

If the patient was not contactable, a letter was sent to the patient to explain and inform them of their Waitlist status. In accordance with the Health Department of Western Australia (HDWA) Operational Directive 0619/15 (Elective Surgery Access and Waiting List Management Policy) and the patients’ right to be informed and consulted, patients and their referring GP were informed in writing if they were removed from the Waitlist following their second failure to attend. The letter included the date of removal from the waitlist, the reason for removal as well as details of a contact person for enquiries.

The extended Wait List Audit identified 380 patients who were not contactable by telephone and to whom letters were sent. Of these 380, 265 were subsequently removed from the waiting list; in all, a total of 900 patients were removed from the Waitlist. Reasons for the removal of patients from the Waitlist included:

- Procedure had already been completed elsewhere, sometimes as a private patient or sometimes the patient had been waitlisted at more than one hospital initially.
- No longer wished to have procedure, usually because no longer symptomatic.
- Patient no longer lived within the catchment area or nearby.

A major issue the audit identified is that patients do not generally understand the consequences of not attending appointments. Their non-attendance resulted in marked under-utilisation of endoscopy resource and effectively delayed other patients from receiving their endoscopy in a more timely fashion.

The OPH Community Advisory Council (CAC) reviewed and provided feedback to all updated letters to the patients in order to ensure that the information and explanations were appropriately “user friendly”.

2. Effective Leadership
The effectiveness of using existing OPH clinical leaders rather than using a contracted Project Manager underlined the importance of on-site leadership, with buy-in from the staff.

Endoscopy Management Group
This multi-disciplinary group, led by the Surgical Services Medical Head and the Clinical Nurse Manager CNM with medical and nursing clinicians and clerical representatives developed a clear roll-out plan with associated deadlines. Regular meetings were held to monitor progress and ensure that the process was running effectively and to address any difficulties that arose.
The Endoscopy Management Group finalised:
1. The design of a new GP referral form and GP referral guidelines (including rollout plan and website uploads)
2. Education material for GPs regarding the new system.
3. A novel triage system based upon the need for endoscopy or not. Because patients referred to OPH for endoscopies are mainly low to medium risk, a clinical decision was made to extend the Category 1 timeframe from 30 days to 60 days and to remove the Category 2 timeframe completely. This decision was made based on clinical evidence that patient prognoses would not be compromised. Category 2 was eliminated as it was a large stagnant group of low risk cases without clear directives. The updated Categories are as follows:

Category 1 – requires endoscopy as a matter of priority – within 60 days. Endoscopists were encouraged to indicate in writing if they identified elements of the referral that indicated “red flag” status necessitating very early examination e.g. mass on CT scan.

Category 3 – requires staged endoscopy – within 12 months. This applies to those cases such as polyp and inflammatory bowel disease follow-up. Endoscopists were encouraged to indicate on the referral precisely when they believe that the endoscopy should be undertaken so that a suitable date is allocated well in advance. Wherever possible, these dates are determined by guidelines.

Return to GP – cases where the symptoms are indeterminate or of brief duration or where the likelihood of significant pathology is negligible. In these cases, the patients and their GPs are advised that a clinical review rather than an endoscopy is the appropriate step. These patients are not assigned any formal Category and are not included on a Waitlist. Previously, they would have been assigned category 2 or 3 and would have remained on the Waitlist in excess of 12 months. Using this triage system, these patients should have a clinical review by their GP in 6-12 weeks and be re-referred if their symptoms persist.

4. Education of Endoscopists on the new triage system (including the criteria for returning referrals to the GP).
5. Rules on how long we will keep a referral at OPH (this being 365 days; patients requiring procedures in 2 – 3 years on the basis of guidelines are to be re-referred by GP at that time).
6. Instructions for clerks on booking patients and confirming lists (emphasizing the importance of telephone confirmation rather than relying upon written communication).

7. Creation of appropriately worded letters to go to GPs and patients.
8. Rules for those patients who did not respond to letters and calls (including rules for contacting patient’s GPs).

Endoscopy Team
The team consisted of three clerks (booking, admitting and discharge) their Manager, the Endoscopy Clinical Nurse and the CNM as chair. A brief meeting (10 minutes) is held every Tuesday to a specific agenda at which each attendee knows what they need to report. This meeting remains critical to the success of the project.

1. Meeting agenda displayed (this agenda evolved over time)
2. A leader board was written to track progress and for staff to see their achievements
3. Target booking plan set up
4. Waitlist reports of all Category 1 patients not yet booked and past dates assessed
5. Waitlist reports of the longest waitlist for category 2 and 3 also reviewed
6. Reports on number of referrals waitlisted, staged, Category, wrong form, low risk; more info was submitted and recorded so as to assess the compliance in using the new form

Staff involved in the audit were all briefed on using a uniform method of contacting, liaising, documenting and addressing patient concerns and enquiries. Weekly briefing meetings were held to address issues which may arise i.e. patients overseas, awaiting surgery, etc.

GPs were sent individual letters to introduce the new referral form and guidelines, multiple GP newsletter articles were written to draw attention to the new process. GPs in the local area were invited to attend a meeting to discuss the changes and an education event was organised.

3. Continuous Improvement
The initial endoscopy waitlist audit that was closed in December 2014 prompted the use of the “Plan Do Study Act” cycle. Many of the improvements designed and implemented by the OPH Project Team emanated from studying the outcomes of the initial audit project and selecting more appropriate and targeted, consumer-focused, stakeholder-involved actions. Some examples are provided below.

New Referral Process
A review of the quality of the referral information received from GPs highlighted the need for more detailed, comprehensive information from the GP in
order to enable the OPH Gastroenterologists to more effectively triage the patient. The Head of Gastroenterology, Medical Co-Director, Hospital Liaison GP, the Surgical CNM and the Head of Health Information Management Services (HIMS) collaborated to produce a new format referral form in order to obtain the required clinical information from GPs.

New Referral Form and Guidelines
The new referral form was developed by an IT company so that it was compatible with the software employed by the six most frequent GP software systems. The new referral form, together with referral guidelines were introduced to the GPs through a mail out to each individual GP and through advertising in GP newsletters. From January 2016 the new referral form was rendered mandatory and, if any other referral forms were used, they were returned to the GP. The new referral form and guidelines were made available on the OPH website already familiar to GPs.

Letter to GP acknowledging Receipt of Referral
An acknowledgement letter to the GP to confirm receipt of the referral was developed and implemented. Patients not accepted onto the Waitlist due to not meeting the referral guidelines received a letter as did the referring GP requesting that the patient be reviewed clinically in 6-12 weeks, with instructions to re-refer the patient if the clinical situation had changed.

Increase in Capacity for Endoscopies
Theatre allocation for endoscopies was increased and additional lists made available.

Endoscopy lists were increased from an average of 7 lists per week with an average of 5-7 cases per list in December 2014, to the current level of 10 -12 lists per week, with an average of 6-8 cases per list.

Each endoscopy list is allocated a specific number of points that are calculated based on 1 point for a gastroscopy and 2 points for a colonoscopy. After the intervention it was possible to increase the number of points per list from 12 points to 14 points. The increase in volume was carefully considered in order to maintain procedural quality.

4. Evidence of Outcomes
a. The waitlist audit removed approximately 900 patients who no longer required the procedure but the number of patients on the Waitlist has declined steadily as reflected in the graph below.

b. The number of patients waiting for an endoscopy has been reduced significantly, despite a continuous steady rate of referrals received from GPs.

c. The number of low risk patient referrals returned to the GP for clinical review has declined over time as reflected in the graph below.

d. The number of referrals using the old referral form continues to decrease.

e. Monitoring of complaints from GPs regarding the new system has resulted in fewer than 5 complaints all of which were addressed individually with information on how to download

![Waitlist Totals Jan 15 - Jun 16](image_url)
f. A survey of GPs regarding the acceptability of the new referral form and new triage method was performed. 102 surveys were distributed by fax after a telephone call to the Practice Manager to recruit their assistance in having the survey completed.

RESULTS: 31 surveys were returned, representing a response rate of 30%. 73% found it easy to use. Those that had difficulty with the form made comments around the fact that there are multiple referral forms for endoscopy around Perth and how much better it would be to have them as a single form, and to have it be able to be electronically submitted. Some complained about the number of questions to be answered, and found it too long to complete.

Ten GPs (38%) had experienced having a referral returned with a request to review the patient after 6-12 weeks. Six of these found this irritating, and made them “angry”. Several GPs still thought that patients with irritable bowel syndrome or non-urgent problems should be placed on an endoscopy waiting list.

In the General Comments section 50% of GPs made comments that they were very happy with the system. One suggested a central referral system of triaging to the shortest waitlist.

CONCLUSIONS: It is encouraging that the majority of GPs found the new form easy to use. Several GPs suggested that a universal referral form for all endoscopy sites would be of help, as well as electronic delivery of the form and central referral service triaging to the shortest waitlist. The WA Gastroenterology Advisory Group is currently preparing...
to do just this with a universal referral form to be sent to the Central Referral System and to be deployed for the whole of WA Health.

Some GPs would like all patients to be put on a waiting list even for non-urgent, low yield cases; there are current national reviews to ensure appropriate and responsible use of endoscopy and many other investigations.

In order to assist the local GPs in adjusting to the new methods a further education event is planned. (Refer to Appendix 5)

g. **Assisting with the SCGH waitlist**

This project has enabled OPH to assist the SCGH Wait List over-boundary Category 1 patients by increasing the throughput of patients and effectively creating increased capacity at OPH. This has resulted in an additional 10 -15 referrals per week since 24 August 2015. The ongoing reduction in the OPH endoscopy waitlist during this time period underlines the increased efficiency and throughput that the Project’s processes have enabled. OPH will start receiving additional SCGH referrals (aiming for 40 – 50 per week) from 27 June 2016.

5. **Striving for Best Practice**

**Updated Bowel Preparation Information to Patients**

The letter to the patients containing bowel preparation as well as procedural information was updated to ensure clearer information and instructions for patients. This will improve preparation quality and support Endoscopists in achieving best practice procedural results.

**Best Practice Guidelines for GPs**

Patients referred to OPH for endoscopies are not largely “open access”, i.e. not clinically assessed by an Endoscopist prior to their procedure and there is a strong reliance on the GP to provide necessary referral information. Furthermore, all patients’ public sector endoscopy and histology findings are available on an electronic database, which is valuable for accurate cross-checking to ensure that prioritisation is based on accurate information. This overcomes inaccuracies in referral information and also patients changing GPs over time.

Best Practice Guidelines for GPs were therefore critical for improving the OPH Waitlist System.

The triage principles centre around using evidence-based recommendations and guidelines with some general overarching points:

- Symptoms, signs or investigations suggesting a gastrointestinal cancer receive the highest priority.
- An endoscopic examination in the preceding 3-5 years makes the current presence of cancer highly unlikely, even when presentations are due to alarm symptoms e.g. rectal bleeding, dysphagia.
- Colonoscopy yield from previous Osborne Park Hospital audits showed that cancer was found in <2%, almost always in cases with significant alarm features (persistent bleeding, iron deficiency anaemia, faecal occult blood test (FOBT) positive).
- Upper GI cancers are rare and almost exclusively found in >50 yrs. with significant alarm features (dysphagia, iron deficiency anaemia, early satiety AND weight loss)
- Follow-up intervals adhered to national recommendations e.g. Barrett surveillance, colonic surveillance for polyps, post-cancer resection and family history of bowel cancer. However, earlier...
review was facilitated for specific reasons e.g., inadequate polypectomy, poor bowel preparation.

GPs are requested to review “rejected” cases in 6 -12 weeks to assess for symptom persistence, to decide if procedures are truly necessary and if they believe that the findings at endoscopy will change management. This is important given the low likelihood of significant pathology in these cases.

INNOVATION IN PRACTICE AND PROCESS

Referral Guidelines for Endoscopy
Evidence-based guidelines regarding the appropriate cases to refer for endoscopy were developed, circulated to GPs and placed on the OPH website. (Refer to Appendix 4)

New Referral Form for GPs
The new OPH endoscopy referral form is being used effectively and has given the Health Department of Western Australia impetus to implement a mandatory standardised referral form.

Triage process changes
The three options for triage at OPH were changed to:

Category 1 – requires endoscopy as a matter of priority – within 60 days. As a result of this triage, these patients will be given a date for their endoscopy. Endoscopists are to indicate in writing if they identify elements of the referral that indicate “red flag” status so that the earliest possible appointment date can be provided.

Category 3 – requires staged endoscopy – within 12 months. This applies to those cases such as polyp follow-up which require a date but with no urgency. Endoscopists are to indicate on the referral precisely when they believe that the endoscopy should be undertaken so that a suitable date can be assigned well in advance.

Return to GP – these are the cases where the symptoms are indeterminate of brief duration or have a low risk of serious pathology. If this “category” is selected, these patients and their GPs will be advised that a clinical review rather than endoscopy is the appropriate step. They will not be assigned any formal Category and will not be added to any waiting list. Previously, they would have been assigned category 2 or 3 and would have languished on the waiting list for well in excess of 12 months. This process will prompt a clinical review in 6-12 weeks and then re-referral if the symptoms have been persisting.

Gastroenterology triage process was adjusted
When the Category 1 criteria were met, the patient would be designated appropriate for endoscopy within 60 days. When the referral was for polyp surveillance, a procedural date was advised. When the referral did not meet the minimum standard for needing an endoscopy the referral was returned to the GP requesting a clinical review in 6-12 weeks and re-referral if appropriate.

Rules regarding wait list management enforced
All patients who failed to attend an appointment were telephoned by a clinical nurse to determine reason and to rebook if possible. If a patient failed to attend twice, the patient was removed from the list and the GP and patient were informed. Weekly meetings between the CNM and the Administrative Clerks ensured that the staff were supported, their efforts acknowledged and their progress reinforced.

Endoscopy list organisation
A point system to more effectively allocate theatre time to Endoscopists was fully implemented. An increased number of cases were booked per list and an increased level of vigilance was applied to the lists to ensure the lists were fully utilised.

APPLICABILITY TO OTHER SETTINGS

- Audit of prolonged wait lists has a dramatic impact on the numbers of cases waiting and therefore will impact upon the measures required to tackle a wait list.
- Consistent clerical processes with clear rules, close senior (CNM) supervision and regular feedback and acknowledgement represents a significant component of the success of this project and serves as a model for other services and projects where clerical processes are intimately involved.
- OPH has consulted with the Health Department on the roll out of this form. The form is currently being adapted to be used as the sole State-wide referral form for public open access endoscopy.
- Adherence to clinical guidelines for endoscopy is advantageous to all units with negligible risk of missed pathology.
- Adoption of the triage method as detailed above has patient safety at its core; it eliminates the problem of the deteriorating patient left languishing on a very prolonged wait list and improves access and equity by ensuring appropriate resource allocation.
- The identification of multiple contributing factors to the waitlist problem – referral, triage, booking and communication with stakeholders – and the preparedness to address all elements in seeking a solution is reflected in the dramatic and consistent success of this exercise.
- The reason that this process has had such success rests not only with the new process but also on very strong consistent leadership from the OPH Medical Co-Director, Surgical Clinical Nurse Manager, Hospital Liaison GP and Head of Endoscopy. It should
not be underestimated how important this energetic, congruent approach is.

• The Western Australian Department of Health is aware of this new process and the success of this initiative has given the WA Health the impetus to try and utilise a more standardised approach to referrals.

F. REFERENCES


National Institute for Health and Care Excellence (NICE) UK
Suspected cancer: recognition and referral
NICE guidelines [NG12], published date: June 2015 https://www.nice.org.uk/guidance/NG12/chapter/1-Recommendations-organised-by-site-of-cancer#lower-gastrointestinal-tract-cancers

Repeat colonoscopy has a low yield even in symptomatic patients.


G. APPENDIX

Appendix 1 Letter to Patient Regarding Preparation and Procedure Information
Appendix 2 New Endoscopy Referral Form
Appendix 3 OPH Endoscopy Guideline for GPs
Appendix 4 Surveillance for Bowel Cancer Screening Guidelines
Appendix 5a GP Survey Report
Appendix 5b GP Survey Tool
Appendix 5c GP Survey Results
Appendix 1: Letter to Patient Regarding Preparation and Procedure Information

Letter to Patient regarding Preparation and Procedure Information (content only)

You have been referred for a Colonoscopy and Gastroscopy. Your procedure is scheduled for an afternoon appointment.

Date:

Time:

Place: Endoscopy Suite, Day Procedure Unit, Ground Floor, B Block, Osborne Park Hospital, Osborne Place, Stirling

You will be contacted by Osborne Park Hospital (OPH) up to two weeks prior to your procedure date to confirm your appointment date and time.

Contact OPH as soon as possible on 9346 8490 if you are unable to attend.

If OPH are unable to contact/confirm your appointment date and time with you, your appointment will be allocated to another patient.

Please read ALL of the following Procedure Information herein carefully, and bring this with you to the Hospital on the day.

Please complete the Patient Health Questionnaire and return in the prepaid envelope.

Complete the following paper work and return to Osborne Park Hospital in the Reply Paid Envelope provided:
Ambulatory Admission Information (front sheet only)
Elective Surgery Private patient Option
Patient Health Questionnaire

As you are having this procedure under sedation, please ensure you have someone to collect you from the Hospital and stay with you at home overnight. Failure to do so will result in your procedure being cancelled.

Yours sincerely

Endoscopy Service
Osborne Park Hospital
Colonoscopy Preparation Using Picoprep
Afternoon Appointment

Please read these instructions carefully and contact your GP if you have any queries about the procedure.

Please leave valuables and jewellery at home on the day of the procedure.

BOWEL PREPARATION

Please follow these instructions carefully to ensure that your bowel is perfectly clear for the procedure. Failure to do so could result in an incomplete examination and the need to repeat the procedure.

Two sachets Sodium Picosulfate (e.g. Picoprep, Picolax, Picosalax) and 3 Bisacodyl tablets can be purchased from your local chemist without a prescription.

Please contact your GP if you have known kidney disease, electrolyte abnormalities or congestive cardiac failure as this preparation type may not be suitable for you.

FOUR DAYS BEFORE YOUR APPOINTMENT

Until you have had your procedure stop eating food with seeds or pips, e.g. multigrain bread, muesli, etc. or fruit and vegetable with husks/skins, e.g. tomatoes, sweetcorn, etc.

TWO DAYS BEFORE YOUR APPOINTMENT

You may have breakfast, lunch and dinner today.

Keep to small serves and only the following food can be eaten:

- Rice Bubbles or Cornflakes, moistened with skim milk
- White bread or plain crackers, without added fibre
- Boiled chicken (no skin) or steamed fish
- Boiled eggs
- Rice, spaghetti or noodles without sauce
- Salt and pepper

Drink as much clear fluid as possible for both days of your preparation as this will assist with cleaning your bowel.

Have a glass of any of the following every hour:

- Water
- Black tea or coffee
- Apply juice
- Bonox
- Cool drink
- Soda water
- Tonic water
- Cordial (not green, blue or red)
Colonoscopy Preparation Using Picoprep (Cont'd)
Afternoon Appointment

THE DAY BEFORE YOUR APPOINTMENT

Today you can only ingest clear fluids. Ensure that you drink a glass of clear fluid (as described on the previous page) every hour. Barley sugar sweets may be taken, if desired. No food is to be consumed today.

9AM   Take the three Bisacodyl tablets
Taking these tablets will result in several bowel motions after 4 - 6 hours and you may experience transient lower abdominal cramping.

6PM   Take one sachet of Sodium Picosulfate (Picoprep)
1. Dissolve the entire contents of one sachet of Picoprep in a glass (250mL) of cold water.
2. Drink the contents of the glass over 1-2 minutes followed by a further 3 glasses (250ml) of water over the next hour.
3. Continue to drink at least one glass of clear fluid per hour.
You will start to have frequent bowel movements soon after taking the preparation and you may experience transient lower abdominal cramping. Discomfort around the anus can be reduced by applying Vaseline to the area.

THE DAY OF YOUR APPOINTMENT

9AM   Take one sachet of Picoprep
Even if bowel motions appear clear it is still necessary to take the second sachet (following the same instructions above) and a further 3 glasses (250ml) of water.

You must not have anything further to drink after 1030AM

Diabetic Patients:
• Monitor your blood sugar level closely.
• DO NOT take your medication but bring it to Hospital.
• Insulin may need to be adjusted before the procedure, please discuss with your GP or Specialist Doctor for advice.

Blood Pressure Medication:
• Take blood pressure medication at usual time with a sip of water.

Report to Osborne Park Hospital at your appointed time. You will be ready to go home about five hours later.

Bring:
• Relevant X-rays
• Medicare card
• Information of relevant past medical history and current medications.

Arrange for a responsible adult to accompany you home and remain with you overnight.
Consent Information and Frequently Asked Questions

Your Responsibility:
You may be aware that the waitlists in public hospitals for procedures such as colonoscopy and gastroscopy are considerable. At Osborne Park Hospital, we are making continued efforts to improve our efficiency and reduce the waiting times for these appointments. You can help us achieve our objectives by reading and following the instructions below carefully.

If you are unable or do not wish to attend your scheduled appointment, please ring us immediately on 9346 8490. This enables us to contact the next person on the waitlist.

What is an open access endoscopy procedure?
Open access endoscopy is where the referring doctor, usually a GP, discusses the procedure, risks of the procedure, risks specific to you, sedation, and the risks of not having the procedure. You do not usually see the hospital doctor who is performing the procedure prior to admission.

Therefore, it is very important that you read and understand all the patient information before having the procedure. Please contact your GP if you wish to discuss any matters before deciding whether to have the procedure.

Colonoscopy

What is a colonoscopy?
A colonoscopy is where the doctor uses an instrument called a colonoscope to look at the inside lining of your large bowel. This is done to see if there are any growths, polyps, cancers or disease in your bowel.

A colonoscope is a long, thin flexible tube with a small camera and light attached. It allows the doctor to see the pictures of the inside of your bowel on a video screen. The scope bends, so the doctor can move it around the curves of your colon. The scope also blows air in your bowel so the doctor can see better. As a result, you might feel some pressure, bloating or cramping during the procedure.

This instrument can also be used to remove or burn polyps and/or take biopsies (small pieces of body tissue for examination and testing). A colon polyp is a growth that forms on the lining of the colon. Although most colon polyps are harmless, some become cancerous over time.

This procedure starts from your back passage (anus) and goes round to the right side of your bowel (caecum). You will lie on your side or back while your doctor slowly passes the colonoscope along your large bowel to look at your bowel lining. The lining will be looked at again as the colonoscope is taken out.

You should allow five hours for waiting, preparation and recovery. The procedure itself usually takes between 15 and 60 minutes.

This procedure will require a sedation anaesthetic.
## Consent Information and Frequently Asked Questions

**Will there be any discomfort? Is any anaesthetic needed?**
The procedure can be uncomfortable and to make the procedure more comfortable a sedative injection or a light anaesthetic will be given.
Before all endoscopy procedures begin, an intravenous access is put into a vein in your hand or forearm. This is where the sedation is injected.

**What is sedation?**
Sedation is the use of drugs to give you a ‘sleepy’ feeling. It makes you feel very relaxed during a procedure that may otherwise be unpleasant or painful.
You may remember some or little about what has occurred during the procedure.

**What are the risks of this specific procedure?**
There are risks and complications with this procedure. They include but are not limited to the following common, uncommon and rare risks and complications.

**Common risks and complications include:**
- Mild pain and discomfort in the abdomen for one to five days after procedure. This usually settles with walking and moving around to get rid of the trapped air.
- Nausea and vomiting.
- Faintness or dizziness, especially when you start to move around.
- Headache
- Pain, redness or bruising at the sedation injection site (usually in the hand or arm).
- Muscle aches and pains.
- Allergy to medications given at time of the procedure.

**Uncommon risks and complications include:**
- Approximately 1 in 1,000 may develop a hole (perforation) to the bowel causing leakage of bowel contents into the abdomen. Surgery may be needed to repair the hole.
- Less than 1 in 100 will experience a significant bleed from the bowel where a polyp was removed. Further endoscopy, a blood transfusion or an operation may be necessary.
- Not being able to see the entire bowel. This can happen if your bowel is not completely clean or the colonoscope could not be passed to the end of your large bowel.
- There is a chance of missed polyps, growths or bowel disease.
- Complications of sedation are uncommon but may include difficulty breathing or abnormal heart rhythm.
Consent Information and Frequently Asked Questions

Your responsibilities before having this procedure
You are less at risk of problems if you do the following:

- **Bring** all your prescribed drugs, those drugs you buy over the counter, herbal remedies and supplements and show your nurse what you are taking. Tell your nurse about any allergies or side effects you may have.
- **Do not** drink any alcohol and stop recreational drugs at least 24 hours before the procedure. If you have a drug habit, tell your nurse.
- Aspirin can be continued.
- Diabetic medication is not to be taken on the day of the procedure but bring it to the hospital with you. If you are taking insulin, contact your GP for advice for adjusting the dose. Monitor your blood sugar levels closely.
- **If you take** Warfarin, Persantin, Clopidogrel (Plavix or Iscover), Asasantin, Dabigatran (Pradaxa) or any other drug that is used to thin your blood, please contact your GP to see if you need to stop taking it before the procedure as it may affect your blood clotting. **Do not stop taking it without asking a doctor.**
- **Tell your nurse if you have:**
  - Had heart valve replacement surgery
  - Received previous advice about taking antibiotics before a dental treatment or a surgical procedure. If so, you may also need antibiotics before the endoscopy.
- Iron tablets must be stopped seven days before your procedure.
- Bulking agents (e.g. Metamucil, Benefibre), Loperamine (e.g. Imodium) or Codeine must be stopped four days before your procedure.

Medical Conditions
Contact your GP immediately, to discuss any risks to your health from completing this regime if:

- You have had a **heart attack**, **severe angina**, **severe asthma** or a **stroke** in the last six months.
- **Kidney failure** or **electrolyte abnormalities**.
- A bleeding disorder such as **thrombocytopaenia** or **haemophilia**.

Preparation for the procedure
The colon must be completely clean for the procedure to be accurate and complete. Follow your instructions carefully, otherwise you may need to have the test again.

Please follow the bowel preparation guidelines provided.

What if the doctor finds something wrong?
Your doctor may take a biopsy (a very small piece of the bowel lining) to be examined at Pathology.

Biopsies are frequently taken, even in cases where cancer is not thought to be the problem. They are used to identify many conditions. It is not uncommon for your doctor to find a polyp/s. If a polyp is found, it may be removed in a process called a polypectomy. Samples of the bowel that are removed are sent for pathology testing.
## Consent Information and Frequently Asked Questions

**What if I don’t have the procedure?**
Your symptoms may become worse and the doctor will not be able to give you the correct treatment, as they won’t know the cause of your problems.

**Are there any other tests that I could have instead?**
There are a number of tests that can be done to examine the bowel, such as a:
- Flexible sigmoidoscopy, however this will only examine the left colon.
- CT Colonography, which is a CT scan which examines the colon.
A colonoscopy may still be required if something abnormal is found.
Your GP should have discussed these options already with you.

**What can I expect after this procedure?**
You will remain in the recovery area for about two hours until the effect of the sedation wears off.

Your nurse will tell you when you can eat and drink, and you will be given something to eat and drink before you leave.

You might still have some cramping pain or bloating because of the air entering the bowel during the procedure. This should go away when you pass wind. Moving around helps this.

You will be told what was found during the examination. You will be provided with a written report which will include your follow up arrangements. Follow up is usually with your GP. Should you have any questions, please contact your GP.

**What are the safety issues?**
Sedation will affect your judgement for about 24 hours. For your own safety and in some cases legally:
- Do not drive any type of car, bike or other vehicle. You must be taken home by a responsible adult.
- Do not operate machinery including a stove or oven.
- Do not make important decisions or sign a legal document.
- Do not drink alcohol, take other mind-altering substances or smoke. They may react with the sedation drugs.
- Do have an adult with you on the night after your procedure.

**Notify your nearest Emergency Department straight away if you have:**
- Severe ongoing abdominal pain
- Black tarry motions (faeces) or bleeding from the back passage (more than half a cup of blood)
- A fever
- Redness, tenderness, or swelling where you had the injection for sedation for more than 48 hours (either in the hand or arm).

Please take your procedure report with you if you are attending the Emergency Department.
**Consent Information and Frequently Asked Questions**

**Gastroscopy**

**Note:** Your stomach must be empty for the procedure to be safe and thorough, so you will not be able to eat or drink anything for at least three hours before the procedure.

**What is an open access upper gastrointestinal endoscopy?**

An upper gastrointestinal (GI) endoscopy is where the doctor uses an instrument called an endoscope to look at the inside lining of your oesophagus (food pipe), stomach and duodenum (the first part of the small intestine). This is done to look for reasons why you may have swallowing problems, nausea, vomiting, reflux, bleeding, indigestion, abdominal or chest pain.

An endoscope is a long, thin flexible tube with a small camera and light attached which allows the doctor to see pictures of the inside of your gut on a video screen. The scope bends, so that the doctor can move it around the curves of your gut. The scope also blows air into your stomach; this expands the folds of the tissue in your stomach so that the doctor sees the stomach lining better. As a result, you might feel some pressure, bloating or cramping during the procedure.

This instrument can also be used to remove or burn growths or to take tissue biopsies.

To perform the procedure, you lie on your left side and the doctor will pass the endoscope into your mouth and down your oesophagus, stomach and duodenum. Your doctor will examine the lining again as the endoscope is taken out.

The endoscope does not cause problems with your breathing.

You should plan on five hours for waiting, preparation and recovery. The procedure itself usually takes anywhere from 10 – 15 minutes. If the doctor sees anything unusual or wants to test for bacteria in the stomach, they may need to take a biopsy (small piece of tissue) for testing at Pathology.

**What are the risks of this specific procedure with sedation?**

There are risks and complications with this procedure. They include, but are not limited to the following:

*Common risks and complications include:*

- Nausea and vomiting.
- Faintness or dizziness, especially when you start to move around.
- Headache.
- Pain, redness or bruising at the sedation injection site (usually in hand or arm).
- Muscle aches and pains.

Allergy to medications given at the time of the procedure.
### Consent Information and Frequently Asked Questions

#### Uncommon risks and complications include:
- About 1 in 1,000 will experience bleeding from the oesophagus, stomach or duodenum where a lesion or polyp has been removed. This is usually minor and can be usually stopped with the endoscope.
- Rarely, surgery is needed to stop bleeding.
- Heart and lung problems such as heart attack or vomit in the lungs causing pneumonia.
- Damage to your teeth or jaw due to the presence of instruments in your mouth.
- An existing medical condition that you may have could get worse.
- Emergency treatment may be necessary.

#### Rare risks and complications include:
- Missed polyps or growths.
- About 1 in 5,000 will accidentally get a perforation (hole) in the oesophagus, stomach or duodenum. This can cause a leak of stomach contents into the abdomen. If a hole is made, you will be admitted to hospital for further treatment which may include surgery.
- Your procedure may not be able to be finished due to problems inside your body, or because of technical problems.
- Bacteraemia (infection of the blood). This will need antibiotics.
- Death as a result of complications to this procedure is rare.

#### Notify your nearest Emergency Department straight away if you have:
- Severe ongoing abdominal pain.
- Trouble swallowing.
- A fever.
- Sharp chest or throat pain.
- Redness, tenderness or swelling for more than 48 hours where you had the injection or sedation (either hand or arm).

If you attend the Emergency Department, take your procedure report with you.

#### Notes to talk to your doctor about:

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Appendix 2: New Endoscopy Referral Form (content only)

Endoscopy Service Referral
Osborne Park Hospital Fax No: 9346 8171

Referrals to the Endoscopy Service will be triaged on the basis of clinical need.

Note: Osborne Park Hospital Endoscopy Service attends to low-risk, day-case diagnostic procedures performed under the Ambulatory Surgery Initiative. Inclusion criteria are available at http://www.oph.health.wa.gov.au/Clinicians/Services.html and include:

Age < 75 years
Weight under 120kg or BMI <40

Patient must be eligible for Medicare rebate
Please specify the Specialist to which you wish to refer your patient
☐ Any of the Specialists listed below
☐ Dr Muna Salama ☐ Dr Leon Adams ☐ Dr Charlie Viiala ☐ Dr Ian Yusoff ☐ Dr Claire Harma
☐ Dr Michael Wallace ☐ Dr Dev Segarajasingam ☐ Dr Hooi Ee ☐ Dr Michael Tan ☐ Dr Niroshan Muwanwelita
☐ Dr Andrew Finlawson ☐ Dr Brijohny Smith

Surname: ___________________________ First name: ___________________________ Sex: M / F
Date of birth: ________ / ________ / ________
Address: ________________________________________________________________________
Postcode: _______________ (Mobile) ___________________________ (Home) ___________________________ Medicare number: ___________________________ (Work) ___________________________ Email:

Interpreter required: Y / N If yes, which language? ___________________________

Is the person of Aboriginal or Torres Strait Islander origin? ☐ No ☐ Yes, Aboriginal ☐ Yes, Torres Strat Procedure required:
☐ Upper GI endoscopy ☐ Lower GI endoscopy ☐ Upper and lower GI endoscopy
(if both procedures are required please complete all sections of the

Height: ___________________________
Weight: ___________________________ BMI: ___________________________

NB: Patient is not suitable for OPH if weight over 120 kg or BMI > 40

Medication list:
☐ Upper GI endoscopy / Gastroscopy (Please complete all details)
Symptoms present for: ☐ <6 weeks ☐ >6 weeks ☐ >6 months
☐ Bleeding: ☐ Haematemesis / malaena ☐ Iron deficient anaemia (attach FBC / Fe studies)
☐ Pain: ☐ Dyspepsia ☐ Reflux
☐ Loss of weight: _______________ kg ☐ Abnormal imaging (attach report) ☐ Dysphagia / Pain on swallowing
☐ Atypical chest pain ☐ Nausea / vomiting / loss of appetite
☐ Barrett’s screening ☐ Small bowel biopsy – coeliac disease diagnosis
Other clinical details:

☐ Lower GI endoscopy (Please complete all details)
☐ Colonoscopy ☐ Flexible sigmoidoscopy

Symptoms present for: ☐ <6 weeks ☐ >6 weeks ☐ >6 months
☐ PR bleeding: ☐ FOBT positive ☐ NBCSP ☐ Iron deficient anaemia (attach FBC/Fe studies)
☐ Altered bowel habit: ☐ Diarrhoea ☐ Constipation
☐ Loss of weight: ____________________ kg
☐ Abnormal imaging (attach report)
☐ Surveillance ☐ Previous Ca bowel ☐ Previous polyps (attach histology of previous polyps)
☐ Family history of Colorectal Cancer ☐ Yes ☐ No

Number of 1st degree relatives: ________________________________________________
Age: ______________________
Number of 2nd degree relatives: ______________________________________________
Age: ______________________

Other (provide details):

Anticoagulation / Anti-platelet therapy

☐ None
☐ Aspirin
☐ Clopidogrel ☐ YES ☐ NO
☐ Warfarin ☐ YES ☐ NO
☐ Dabigatran/Rivaroxaban ☐ YES ☐ NO
☐ Other: Please name:

Comorbidities

☐ None
☐ Cardiac ☐ Respiratory
☐ Renal ☐ Diabetes: ☐ Type 1 ☐ Type 2
☐ Hepatitis B/C, HIV
☐ Previous difficulties with anaesthetic / sedation: (please describe)
☐ Other:

Details/Extra information to include dates of previous procedures: (attach reports)
N.B: Patients with a known large polyp require referral to SCGH (attach report)
Appendix 3 OPH Endoscopy Guideline for GPs (content only)

### OPH Endoscopy Guidelines for GPs (content only)

#### Guidelines for Endoscopy or Colonoscopy Referral by GPs

**Who Needs Endoscopy?**
High demand for endoscopy services has resulted in prolonged waiting times. Therefore it is crucial to identify those patients that require more urgent procedures.

The following are guidelines to help you identify patients who have a higher likelihood of significant organic pathology and, to help reduce the number of unnecessary endoscopy referrals.

**General Risk Factors for Serious Pathology:**
1. Symptoms that have persisted for 6 or more weeks
2. Patients >60 years of age (and especially >70 years of age)
3. Progressive weight loss and anorexia
4. Fe deficiency anaemia (especially if >60 years of age)

**Specific Risk Factors:**

*a) Colonoscopy*
1. Change in bowel habit with alarm symptoms at any age (weight loss, severe pain, anaemia, palpable mass)
2. Patient >40yr reporting rectal bleeding with a change in bowel habit towards looser or increased frequency of stools for 6 weeks or more
3. Patient > 60yr with rectal bleeding for >6 weeks and no change in bowel habit or anal symptoms
4. Change in bowel habit > 6 weeks without alarm symptoms in patient aged >60yr
5. Positive FOBT result (including NBCSP participants)
6. Unexplained iron deficiency anaemia in men or non-menstruating women
7. Abnormal CT/Barium imaging (suspected cancer/ large polyp >2cm)
8. Active inflammatory bowel disease or diarrhoea where endoscopy is indicated to progress management
b) *Upper GI Endoscopy*

1. Chronic GI bleeding
2. Unexplained recent onset persistent dyspepsia in patients aged >55yr (In patients aged less than 55 years, endoscopic investigation of dyspepsia is not necessary in the absence of alarm symptoms- weight loss, severe pain, anaemia, palpable mass)
3. Dysphagia (interference with the swallowing mechanism that occurs within 5 seconds of having commenced the swallowing process)
4. Unexplained upper abdominal pain and weight loss (>10%) or iron deficiency anaemia
5. Upper abdominal mass
6. Persistent vomiting and weight loss
7. Unexplained weight loss or iron deficiency anaemia
8. Obstructive jaundice (an urgent abdominal USS may be considered)
9. Epigastric mass

**Recommended Investigations Prior to Referral:**

- Full Blood Count and iron studies (including Ferritin) in patients with upper and lower GI symptoms will assist in triaging their care.
- A digital rectal examination is essential for any patient with lower bowel symptoms to help exclude a rectal/anal malignancy.
- Stool MC&S in patients with chronic diarrhoea.

Where there is clear-cut concern about the presence of serious GI pathology on the basis of these sorts of symptoms, *especially in high risk patient groups*, referral for endoscopy is appropriate and OPH will place high priority on attending to them. The risk factors should be clearly stated on the referral to help triage.

However, where there is reasonable clinical uncertainty, *especially in lower risk patient groups and in those whose symptoms are of short duration*, “it is reasonable to use a period of ‘treat, watch and wait’ as a method of management”* before referring.

In these circumstances, arranging for a clinical review in your rooms in 6 - 8 weeks is the more appropriate first step. If clinical concern remains after this review, referral for endoscopy is then appropriate.

*as per the NICE guidelines ([http://www.nice.org.uk/guidance/cg27/chapter/1-guidance#/upper-gastrointestinal-cancer](http://www.nice.org.uk/guidance/cg27/chapter/1-guidance#/upper-gastrointestinal-cancer))
Appendix 4: Surveillance for Bowel Cancer Screening Guidelines

Surveillance for Bowel Cancer Screening Guidelines

1. **Average risk**
   No close family history of bowel cancer.
   
   **Screening recommendation**: FOB testing alternate years from age 50.

2. **Slightly above average risk**
   One first degree relative diagnosed age >55.
   
   **Screening recommendation**: Same as for the average-risk population. Currently no indication for colonoscopy unless alarm symptoms present. Alternate year FOB testing from age 50.

3. **Moderately increased risk**
   First degree relative diagnosed age <55.
   Or two first degree; or one first degree and one second degree relative(s) on the same side of the family with bowel cancer diagnosed at any age.
   
   **Screening recommendation**: Refer for colonoscopy at five yearly intervals starting at age 50, or 10 years younger than the age of the earliest diagnosis of Colorectal Cancer in the family, whichever comes first.

4. **High risk (50% or higher risk of cancer)**
   Hereditary Non Polyposis Colorectal Cancer (HNPCC) family members, Familial Adenomatous Polyposis.
   
   Suspicion of a high-risk syndrome should be raised when two or more close relatives are affected; Colorectal Cancer has been diagnosed at an early age (the earlier the age, the higher the degree of suspicion); or certain syndrome –specific characteristics are present.
   
   **Screening recommendation**: Will probably require colonoscopy annually beginning at age 25 or 10 years younger than earliest age of diagnosis of Colorectal Cancer.
   
   Will require genetic assessment.
   
   Please refer patient to a specialist centre for surveillance decisions.

*NH&MRG Guidelines for colonoscopy 2005
Digestive Health Network Colonoscopy services model of care 2007*
Appendix 5a: GP Survey Report

GP Survey Report

BACKGROUND
In 2015 a multifaceted approach was instituted at Osborne Park Hospital in order to improve patient access to gastroenterology endoscopy. This included auditing of the very long wait list, the design and institution of a new endoscopy referral form for GPs and development of guidelines for GP referral. In addition, GP referrals that did not comply with the guidelines for endoscopic investigation were returned to the GP with a letter to the GP and patient suggesting a clinical review in 6-12 weeks.
A survey was administered to gauge the response of GPs to these changes.

METHOD
A survey was faxed to 102 GPs who had referred patients to OPH for endoscopy in the preceding 6 months (see Appendix 5b).
A nurse telephoned the practice manager at each of the practices to recruit their assistance in having the survey completed.
31 surveys were returned. A response rate of 30%.

RESULTS (see Appendix 5c)
17 GPs recalled receiving the information regarding the new process (55%)
45% had experience of using the new referral form
Of those that had experience of using the form, 73% found it easy to use. Those that had difficulty with the form made comments around the fact that there are multiple referral forms for endoscopy around Perth and how much better it would be to have them as a single form, and to have it be able to be electronically submitted. Some complained about the number of questions to be answered, and found it too long to complete
10 GPs (38%) had had a referral returned with a request to review the patient after 6-12 weeks.
6 of these found this irritating, and made them “angry”, several still thought that patients with irritable bowel syndrome or non urgent problems should be placed on a waiting list.
In the general comments section 50% of the GPs that made comments, were very happy with the system. One suggested a Central Referral System (CRS) of triaging to the shortest waitlist site.

CONCLUSIONS
It is encouraging that the majority of GPs found the new form easy to use.
Several GPs suggested that a universal referral form for all endoscopy sites would be of help, as well as electronic delivery of the form and CRS triaging to the shortest waitlist. The WA Gastroenterology Advisory Group is currently preparing to do just this with a universal referral form to be sent to CRS.
There were comments suggesting that the GPs would like all patients to be put on a waiting list even if that is very long for non-urgent problems. This may demonstrate that more education is required to inform GPs of the best use of this investigation.
Two months into this project, local GPs were invited to attend an information seminar on the new referral methods.
There was a low turnout to this event, but those GPs that attended seemed satisfied and better informed.
In order to assist the local GPs in adjusting to the new methods a further education event is planned.
Appendix 5b: GP Survey Tool

GP Survey Tool

GP Survey - New referral Process for Endoscopy at OPH

In order to tackle the enormous wait list of over 3000 patients waiting for endoscopy at OPH a project was commenced in Jan 2015. This project involved:
- Development of a new referral form to provide improved data to allow more accurate patient triage;
- Endoscopy Guidelines published on the Hospital website;
- All referrals not fitting the guidelines for endoscopy were returned to the GP for the patient to have a clinical review in 6-12 weeks, instead of being placed on a very long wait list.

As a consequence of this project and other interventions, the waitlist is now under 1000 and the chances of patients that require endoscopy getting it in a timely manner are markedly improved.

SURVEY

We are interested in improving this model of care. Please can you complete this short survey as your opinion is important to us?

1. Do you recall being sent information regarding this new process?
   - Yes  
   - No

2. Have you had experience of using the new referral form?
   - Yes
   - No
   
   If so did you find it easy to use?
   - Yes
   - No

Are there any improvements that could be made?

3. Have you had experience of having a referral returned with a request for clinical review?
   - Yes
   - No
   
   If so how did you feel about it?

4. Do you have any suggestions regarding how to improve this process?

5. Any further comments on how we can improve the referral process
### Appendix 5c: GP Survey Results

#### GP Endoscopy Survey

**Raw Results and Comments**

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<th>NO</th>
</tr>
</thead>
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<td>6. Do you recall being sent information regarding this new process?</td>
<td>17</td>
<td>14</td>
</tr>
<tr>
<td>7. a. Have you had experience of using the new referral form?</td>
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<td>6</td>
</tr>
<tr>
<td>b. If so did you find it easy to use?</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>c. Of those who had experience of form - easy to use?</td>
<td>19/26</td>
<td>6/26</td>
</tr>
<tr>
<td>8. Have you had experience of having a referral returned with a request for clinical review?</td>
<td>10</td>
<td>18</td>
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#### Comments:

**Are there any improvements that could be made to the referral form?**

- Get rid of it
- The referral form has too many set questions, I would rather just write out reason for referral
- Please synchronise with other ASI providers – i.e. use the same form, currently different templates for each
- Best practice form very ‘bity’ and repetitive to complete, lots of tick boxes. Maybe a split form better
- Could you facilitate waitlisting for non-urgent referrals e.g. IBS screening, if patients are listed at OPH why do they still get letters from SCGH
- Takes too long
- Specialists to refer to choice box is a little cryptic
- Patient demographics will not filter into the referral form
- New form a bit tedious compared to previous form
- In best practice a larger area for medication list
- No happy with it
- The referral form is too busy visually
How did you feel about having a referral returned?

- didn’t like
- It was returned asking for histology results for a colonoscopy done at OPH, OPH should check their records of past scope histology
- Irritating
- Very angry, the reason the waiting list is now 800 and not 3000 is because no one is referring because of your process.
- Get rid of it
- Gate keeper
- I think it is OK but wait listing for non-urgent referrals i.e. no iron deficiency is still too long
- Could perhaps streamline non urgent criteria by adding irritable bowel symptoms to form
- Please triage and place patients on the waiting list instead, GPs refer patients that need further investigations. Do not treat our referrals as being indiscriminate or not being necessary
- I think you do an amazing job in a difficult/demanding situation
- If I feel the patient definitely needs a scope I will refer elsewhere
- Fair enough
- It should be read and not sent back inappropriately, I’d checked the criteria and the patient did fit. A new appointment was required and it delayed care
- Happy to see patient to review symptoms if clinically appropriate and no red flags

Any further comments on how we can improve the referral process

- Go back to the old way
- Great program.
- Please enable submission of referral by MD exchange, triage to the shortest waitlist location
- Need MD template uniform for all ASI providers
- Most patients very pleased with OPH endoscopy
- Seems pretty straightforward
- Patients always bothering us as to why the wait is so long
• Currently seems OK
• Fine if it improves access
• It was upsetting to have the referrals returned when they were not on the correct form as we had difficulty setting up the new forms
• Need a better referral form that is easier to use (had trouble with demographics entering onto form automatically)
• I had a lot of letters about old referrals asking “do they still need to be on list” some had only been referred 3-4 months earlier and others were recalls recommended by OPH endoscopy- this was frustrating
• Run more endoscopy clinics or liaise with radiology re CT colonography
• State specific reasoning for GP review
• It would be great to have a point of contact with whom to discuss referrals- would possibly reduce the number of inappropriate referrals
Prince of Wales Hospital
Emergency Department

ED Navigator: impact and evaluation of ED performance of an extended service model
Wayne Varndell, Elizabeth Ryan

A. AIM
The aim of this trial was to evaluate the impact of an extended Nurse Navigator model of care on patient flow in a metropolitan ED.

B. SUMMARY ABSTRACT
Emergency care is complex, with patients' physiological tolerances and degrees of incapacitation highly variable between each case and necessitating differing levels of ED resources. As the number of patients presenting to ED exceed departmental operational capacity (College of Emergency Nursing Australasia 2016), undifferentiated patients waiting assessment and intervention are delayed for extended periods of time. Further, as inpatient capacity is reached, admitted patients in ED become blocked; a situation which exacerbates ED overcrowding (Richardson 2002). ED overcrowding and access block are an international issue, and are associated with increases in patient morbidity and mortality, and increases in staff stress (Fatovich, Nagree & Sprivulis 2005; Richardson & Mountain 2009; Richardson 2006). One key reason for the development of ED overcrowding is poor patient flow and communication, specifically, the flow of admitted patients in ED and inpatient team (medical and nursing) communication (Varndell et al. 2016).

Historically, ED models of care have been forward facing, with the focus on early assessment and discharging of patients (NSW Ministry of Health 2012). Few models of care have focused on optimising admitted patient flow and inpatient team communication. One such model of care that has been implemented at Prince of Wales ED is the ED Nurse Navigator. The role of the ED Navigator is to enhance the patient’s journey through the department in a timely and safe manner, by utilising departmental resources optimally, improving team collaboration and enhancing patient flow (Emergency Care Institute 2013).

Originally implemented as an 8 hours a day, 5 days a week service (group 1), the aim of this project was to evaluate the impact of expanding the ED Nurse Navigator model of care to 16 hours per day, 7 seven days a week (group 2). This quality improvement project was conducted between August 3rd and October 4th. The ED Nurse Navigator role was staffed by senior emergency nurses familiar with the Department and inpatient teams. The nurse navigator provided clinical leadership to nursing, medical and allied health staff to enhance the patient’s journey through the ED. Through this role and familiarity with the way the ED works operationally, nurse navigators guided and supported staff in delivering appropriate patient care. Additionally, nurse navigators actively identified potential admissions or direct admissions and coordinated the transfer of the patient to the ward in a timely manner. Working collaboratively with the patient, relatives, inpatient teams and ward nurses further identified areas for future change while improving communication and understanding resulted in improved patient flow.

By expanding the ED Nurse Navigator model of care, usage and associated costs ($24,039) of the ambulance release team decreased, improved patient flow (Transfer of Care 81.9% vs. 94.1%; p=.041), increased Emergency Treatment Performance (EPT) achievement (21% vs. 47%; p=.03), decreased patient length of stay (admitted, 6.7h vs. 6.1h; p=.06 and discharged, 3h vs. 2.5h; p=.057), and shortened decision to admit times (2.9h vs. 1.2h; p=029). As a result of the improved departmental and organisational performance associated with expanding the ED Nurse Navigator model of care, the recommendation to indefinitely sustain the expanded service was approved.

REFERENCES
Emergency Department - Overcrowding and Access Block.pdf.


### Category: Healthcare Measurement

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Category: Healthcare Measurement

Abstracts

Reducing hospital length of stay while improving functional outcomes for patients admitted to the rehabilitation unit at Calvary Hospital in the ACT
Calvary Public Hospital Bruce
Aged Care and Rehabilitation Unit
Jennifer Azurin, Caroline Forgher

AIM: (1) Reduce hospital length of stay for patients admitted to the Aged Care and Rehabilitation Unit at Calvary Public Hospital Bruce by at least two days each year until public sector benchmark comparison is met; and (2) Improve patient functional outcomes from admission to discharge from the Aged Care and Rehabilitation Unit to a level better than the public sector benchmark comparison.

SUMMARY ABSTRACT: From approximately 140 public hospital rehabilitation facilities in Australia, the Department of Health & Ageing identified 12 facilities who were performing poorly on length of stay (LOS) and/or functional outcomes as measured by the Functional Independence Measure (FIM). Calvary Public Hospital Bruce (CPHB) in the ACT was one of those facilities who performed poorly with both hospital LOS and functional outcomes compared to other public sector facilities.

A joint quality improvement (QI) project was initiated in 2012 between staff at CPHB and the Australasian Rehabilitation Outcomes Centre (AROC), which continued independently by CPHB over the latter three years. The project involved a broad range of stakeholders, including management staff, medical officers, nurses, allied health staff (from physiotherapy, occupational therapy, social work, psychology, dietetics, speech pathology and pharmacy) and administrative staff/ward clerks of the Aged Care and Rehabilitation Unit. The project team worked in genuine collaboration to identify reasons why patient LOS in the rehabilitation unit and their functional outcomes were poor compared to other facilities. Various improvement strategies were subsequently implemented.

Staff instigated more consistent rehabilitation processes. The rehabilitation journey and expectations were explained to new patients; nursing staff focused on guiding patients with their daily activities rather than doing tasks for them; continence pads and bed pans were discouraged if patients were continent in order to encourage mobility to the toilet; no monkey bars were provided unless determined by the physiotherapist or occupational therapist; patients were served meals in the dining room rather than their bedroom; and they attended exercise classes from the first day of their rehabilitation admission, with class times recorded in every room and the multidisciplinary team encouraging participation. FIM training and credentialing was also instigated to facilitate more reliable recording of patient functional scores. The date of discharge was established early for every patient and discussed in case conferences. More effective discharge planning was instigated by optimising referrals to community services when available.

For all rehabilitation impairments, data provided to AROC from 2009 to 2015 revealed a significant reduction in hospital LOS from 33.1 days in 2012 when the project started, to 30.0 days in 2013 and 27.2 days in 2014 (Appendix 1). The LOS in 2015 had increased to 29.6 days, and explanations can be provided for this. At CPHB, the average age of patients admitted for rehabilitation over 2015 is 78 years, compared to 74 years in facilities across Australia. Patients of the CPHB rehabilitation unit have been in hospital longer (ie. on other wards), with an average of 24.3 days compared with 12.0 days in other hospitals. 35% of CPHB patients have start delays in the rehabilitation facility compared with 9% in other facilities, and this can be attributed to insufficient rehabilitation beds. The delays may result in further deconditioning of patients. Patients at CPHB are waiting an average of 3.1 days from the time they are deemed appropriate for rehabilitation to the time they commence rehabilitation, compared with 0.4 days in other Australian facilities (AROC All Impairments Report, Calvary Public Hospital ACT, Jan 2015 – Dec 2015, p.4).

The change in functional scores from admission to discharge indicate a significant and ongoing improvement, with a steeper line of improvement since the project commenced in 2012, to a level well above the public sector benchmark comparison. These improvements apply to all impairments grouped together, as well as separate diagnostic groups, including the three most common patient presentations - strokes, orthopaedic fractures and patients admitted for re-conditioning (Appendix 2). The project illustrated the importance and efficacy of applying a “back to basics” approach, utilising QI methodology, multidisciplinary team input, collaborative partnerships, effective rehabilitation processes, and evidence-based practice in clinical care to meet organisational and patient outcomes to a level that surpasses expectations.

Statistical Thinking and Methods: Deming’s System of Profound Knowledge = Science of Improvement.
Northern Sydney Local Health District
Clinical Governance Unit
Helen Ganley, Janine Carragher, Angie Pang, Victoria Walton

AIM: (1) Increase the capacity of consumers, clinicians and managers to successfully implement the Science of Improvement based on Deming’s System of Profound Knowledge; (2) Stakeholders understand variation and how to react to it appropriately, thus preventing tampering (action when not warranted) and molehills growing into mountains (not taking action when it is warranted); (3) Statistical thinking and methods are appropriately applied to clinical data (individual patient and aggregate) and management data.

Success is demonstrated by improved results, external approval and adoption.

SUMMARY ABSTRACT: In 1903, HG Wells wrote that “Statistical thinking will one day be as necessary a qualification for efficient citizenship as the ability to read and write” (Wells 1903). Yet he made no suggestion as to how to achieve this.

More recently, from 1987 to 1991, Donald Berwick was Co-Principal Investigator for the National Demonstration Project on Quality Improvement in Healthcare (Berwick 1990). 21 healthcare organisations participated in a study of the applicability of industrial quality science methods in healthcare. 21 companies supported these healthcare organisations including AT&T, Corning, Ford, Hewlett-Packard, IBM and Xerox. Support included free consulting, materials, access to training courses and reviews. Fifteen healthcare organisations made significant progress; many showed substantial results. The National Demonstration Project evolved into the Institute for Healthcare Improvement which is the most prolific and appropriate sponsors of the Science of Improvement.

We describe how one large healthcare organisation developed a Statistical Thinking and Methods Program (STAmp™). The tools
of choice relate to statistical process control techniques, the cornerstone of the Science of Improvement. Statistical process control was developed by Juran and Shewhart then popularised by Deming as part of his System of Profound Knowledge.

Many organisations have common problems including:
• A culture of not understanding variation;
• Seeing trends where there are none;
• Blaming or giving credit to others for things over which they have little or no control;
• Not able to:
  o fully understand past performance;
  o predict the (near) future;
  o evaluate the significance of change;
• Guilty of torturing data until it confesses, due to:
  o ignoring processes;
  o misunderstanding variability;
  o common traps associated with averages, ranking, trends and poorly presented percentages.

We introduced STaMP™ at Royal North Shore Hospital then deployed it within the District; it continues to grow and evolve as quality improvement research determines better methods of implementing Improvement Science. This application will briefly describe the components of STaMP™ that form the basis of the program and how it has been deployed. We describe exciting and innovative strategies implemented and successes over the past two years.

Whist this award category is focussed on measurement of a particular aspect of clinical management, we demonstrate multiple projects to which STaMP™ has been applied and its impact.

Statistical thinking is a philosophy of learning and action based on the following fundamental principles:
• All work occurs in a system of interconnected processes;
• Variation exists in all processes;
• Understanding and reducing variation are the keys to success.

STaMP™ utilises and teaches Ishikawa’s 7 Basic Tools of Quality management (Tague 2005) which are:
1. Cause-and-effect diagrams: Identifies many possible causes for an effect or problem and sorts ideas into useful categories;
2. Run charts: Study how a process changes over time – less robust than a control chart;
3. Histograms: The most commonly used graph for showing frequency distributions, or how often each different value in a set of data occurs. Used with other analyses, it can produce a process capability index used to compare results over time or with others;
4. Pareto charts: A ranked bar graph displaying the significant factors;
5. Scatter diagrams: Graphs pairs of numerical data, one variable on each axis, to look for relationships.
6. Stratification: Separates data gathered from a variety of sources so that patterns can be identified;
7. Control charts: These are the most ubiquitous tool used in STaMP™ as they are the simplest tool to appropriately display variation over time.

Within the Plan-Do-Study-Act cycle, the seven tools are used to:
• Plan: Determine the extent of the problem; used to set the aim;
• Do: Focus on the parts of the system that are exhibiting common or special cause variation (each needs a different response);
• Study: Determine if the intervention was successful and by how much;
• Act: Determine if the aim was achieved or another Plan-Do-Study-Act cycle is needed; identify sustainability.

We describe how the seven tools have been used in various projects and establish their ability to demonstrate insight which is needed for appropriate and effective decision-making.

A STaMP™ Facilitator was initially appointed full time, now part-time, to develop learning modules and deliver presentations and Minitab® statistical software workshops. This has changed over time with much more individual mentoring and team consultations.

Early, iterative evaluations were conducted of stakeholder satisfaction with the program. Now it is embedded, evaluations monitor the uptake of the program and success of projects using statistical process control. The tools assist in problem identification and diagnosis, measuring the impact of solutions and demonstrate sustainability. STaMP™ has over the years been utilised in projects that have won state, national and international awards, including:
• STaMP™: NSW Health Award for Innovation in Informed Decision Making;
• Organisational Reporting Website: NSWHealth award commendation;
• Results Reporting project: Australian Hospital Association award for Innovation in Quality and Safety;
• Length of Stay project: Best poster award at ISQua conference, Jerusalem;
• Australia and New Zealand ED Airway Registry project: NSW Health Award;
• Ruby Red Sox project (falls prevention – St. Vincents Private): best poster award at ISQua conference, Hong Kong;
• Caesarean Section project: NSWHealth Award finalist.

There have been multiple oral and poster presentations both locally and internationally. Many publications include information on STaMP™ and how patient care has been improved by clinical teams.

STaMP™ has been taught to NSWHealth staff and their Redesign Course and many NSW health organisations.

The STaMP™ Facilitator is on the faculty of the Australian Council of Healthcare Standards Improvement Academy which was commissioned in March 2016. She teaches in the Quality Improvement Lead Program with a one-day workshop on statistical thinking and methods. This accounts for 13% of the course, testimony to its importance in Improvement Science.

In 2016, Berwick wrote that “Four decades into the quality movement, few in health care have studied the work of Deming, can recognise a process control chart, or have mastered the power of tests (Plan-Do-Study-Act cycles) as tools for substantial improvement (Berwick 2016). Northern Sydney Local Health District is an exception to this and freely offers our expertise and experience to other healthcare organisations.
Let’s Wed and See – Promoting Optimisation of Antimicrobials via the Marriage of GuidanceMS and the eMMS Prescribing System

Prince of Wales Hospital
Pharmacy
Julie Mansy, Lucy Lin, Ross Vergios, Joanne Rimington

AIM: From the results of previous Antibiotic Stewardship and GuidanceMS utilisation audits, it was identified at an organisational level that certain clinical areas uptake of this decision support and approval tool was at minimal levels. A decision was made to closely collaborate with the electronic Medication Management System (eMMS) team to embed Guidance MS within the electronic Medication (eMEDS) system throughout the hospital to enable the interface between the two systems to enhance greater usage of GuidanceMS by prescribers and thus streamline clinical practice workflow and promote greater optimisation of antimicrobial therapy.

SUMMARY ABSTRACT: The Antimicrobial Stewardship (AMS) committee at the Prince of Wales hospital (POWH) was established in July 2011. In 2012, a formal AMS Program was developed to improve patient outcomes through judicial optimization of antimicrobial use. Within the AMS program, GuidanceMS, an electronic decision support and approval tool, is utilized to allow effective monitoring of antimicrobial usage by the AMS team.

In line with POWH’s antimicrobial policy, an approval number is required from GuidanceMS before prescribing restricted antimicrobials on the written National Inpatient Medication Chart (NIMC). Whilst this would have ideally occurred in all cases, doctors were still able to prescribe restricted antimicrobials without obtaining the necessary automated approval number, which meant nurses were still able to administer these medications to the patients. Pharmacists would trigger an alert on GuidanceMS if these medications were prescribed without approval during their daily clinical review of the NIMC. This notified the AMS team to follow up and encourage the prescriber to complete the approval process. If the patient’s medications were not reviewed by a pharmacist however and the patient was also not seen by the Infectious Disease physician during their admission, the approval process in these cases and hence, judicious use of antimicrobials may have been compromised.

Poor compliance with GuidanceMS was often claimed to be due to time constraints, lack of awareness of the system and local AMS policy and minimal policy enforcement across the hospital by senior clinicians other than Infectious Diseases.

In 2014, the AMS team began negotiations with the electronic Medication Management System (eMMS) team to collaborate on a way to integrate the GuidanceMS tool within eMMS as one interface, with the aim of increasing uptake of GuidanceMS and streamlining the prescribing process. The GuidanceMS tool in eMMS is triggered once the prescriber chooses a restricted antibiotic and mandates that the doctor obtains an approval number from Guidance MS at the point of prescribing. This requires them to actively consider whether that particular antimicrobial is suitable for the indication they are using and provides guidelines and information on the correct dose and duration of therapy.

During preparation for the rollout of eMMS across the hospital, issues and concerns from different clinical areas of the hospital were raised regarding GuidanceMS and these were subsequently addressed by the AMS and eMMS teams. Training sessions conducted alongside the eMMS team were organized for doctors to promote the use of GuidanceMS within the electronic prescribing workflow and logins were organized for all prescribers. The AMS team maintained a highly visible profile in the hospital during eMMS rollout to promote rational antimicrobial prescribing through GuidanceMS. The Antimicrobial Stewardship and Knowledge (ASK) team provided guidelines that were adapted for electronic prescribing of antimicrobials. As the Emergency Department at POWH had demonstrated minimal uptake of the GuidanceMS tool evidenced through previous audits, despite being at the forefront of initiating antimicrobial therapy for many patients, the subsequent recruitment of ED consultants as clinical champions to advocate and promote the use of GuidanceMS was a powerful way to ensure the culture of antimicrobial awareness was maintained throughout ED.

A snapshot study was carried out in the Emergency Department to determine clinician usage of GuidanceMS prior to and post implementation of eMMS to determine whether the integration of two systems in a single interface altered the number of approvals generated. This highlighted the need for further surveillance to ensure maximal use of GuidanceMS and concordance with Therapeutic guidelines and hospital guidelines.

User satisfaction surveys conducted by the AMS team will provide ongoing feedback to the AMS committee regarding GuidanceMS program effectiveness now it has been integrated within eMMS. This will allow ongoing improvements to be made while eMMS is continually upgraded and address issues of changing practice which may cause limitations with the program. Regular audits such as the National Antimicrobial Prescribing Survey (NAPS) and reports generated via eMMS will allow monitoring of GuidanceMS use to determine whether these initiatives instituted by the AMS team have been successful on an ongoing basis or whether other methods need to be additionally utilized in order to improve the overall provision of AMS at POWH.

GuidanceMS is not a program restricted solely for AMS. It has benefits in consolidating clinical guidelines, algorithms and patient care pathways regarding antimicrobials to allow monitoring of patient outcomes and optimise their judicious use. The GuidanceMS tool also has the potential, now it is integrated into eMMS, to be further extended to other clinical areas for monitoring and prescribing of high risk medications such as anticoagulants, insulin and narcotics.

GuidanceMS has been indispensable in monitoring restricted antimicrobials by the AMS team at POWH. Though there was limited uptake initially, the innovative approach of integrating GuidanceMS into eMMS has improved total number of approvals generated as evidenced in audits conducted post implementation. The success of this integration has attracted attention from other clinical areas with a view to adopting and adapting the system to monitor their specific patient cohort and clinical outcomes and also from other Local Health Districts currently using or rolling out eMMS in their hospital sites.
**ED Navigator: impact and evaluation of ED performance of an extended service model**

*Prince of Wales Hospital*

*Emergency Department*

*Wayne Varndell, Elizabeth Ryan*

**AIM:** The aim of this trial was to evaluate the impact of an extended Nurse Navigator model of care on patient flow in a metropolitan ED.

**SUMMARY ABSTRACT:** Emergency care is complex, with patients’ physiological tolerances and degrees of incapacitation highly variable between each case and necessitating differing levels of ED resources. As the number of patients presenting to ED exceed departmental operational capacity (College of Emergency Nursing Australasia 2016), undifferentiated patients waiting assessment and intervention are delayed for extended periods of time. Further, as inpatient capacity is reached, admitted patients in ED become blocked; a situation which exacerbates ED crowding (Richardson 2002). ED overcrowding and access block are an international issue, and are associated with increases in patient morbidity and mortality, and increases in staff stress (Fatovich, Nagree & Sprivilus 2005; Richardson & Mountain 2009; Richardson 2006). One key reason for the development of ED overcrowding is poor patient flow and communication, specifically, the flow of admitted patients in ED and inpatient team (medical and nursing) communication (Varndell et al. 2016).

Historically, ED models of care have been forward facing, with the focus on early assessment and discharging of patients (NSW Ministry of Health 2012). Few models of care have focused on optimising admitted patient flow and inpatient team communication. One such model of care that has been implemented at Prince of Wales ED is the ED Nurse Navigator. The role of the ED Navigator is to enhance the patient’s journey through the department in a timely and safe manner, by utilising departmental resources optimally, improving team collaboration and enhancing patient flow (Emergency Care Institute 2013).

Originally implemented as an 8 hours a day, 5 days a week service (group 1), the aim of this project was to evaluate the impact of expanding the ED Nurse Navigator model of care to 16 hours per day, 7 seven days a week (group 2). This quality improvement project was conducted between August 3rd and October 4th. The ED Nurse Navigator role was staffed by senior emergency nurses familiar with the Department and inpatient teams. The nurse navigator provided clinical leadership to nursing, medical and allied health staff to enhance the patient’s journey through the ED. Through this role and familiarity with the way the ED works operationally, nurse navigators guided and supported staff in delivering appropriate patient care. Additionally, nurse navigators actively identified potential admissions or direct admissions and coordinated the transfer of the patient to the ward in a timely manner. Working collaboratively with the patient, relatives, inpatient teams and ward nurses further identified areas for future change while improving communication and understanding resulted in improved patient flow.

By expanding the ED Nurse Navigator model of care, usage and associated costs ($24,039) of the ambulance release team decreased, improved patient flow (Transfer of Care 81.9% vs. 94.1%; p=0.041), increased Emergency Treatment Performance (EPT) achievement (21% vs. 47%; p=0.03), decreased patient length of stay (admitted, 6.7h vs. 6.1h; p=0.06 and discharged, 3h vs. 2.5h; p=0.057), and shortened decision to admit times (2.9h vs. 1.2h; p=0.029). As a result of the improved departmental and organisational performance associated with expanding the ED Nurse Navigator model of care, the recommendation to indefinitely sustain the expanded service was approved.

**A multidisciplinary Clinical Documentation Improvement Program resulting in improved patient safety and enhanced clinical engagement.**

*St Vincent’s Private Hospital Sydney*

*Clinical Documentation Improvement Team*

*Nicole Draper, amantha Ryan, Matthew Dwyer*

**AIM:** St Vincent’s Private Hospital Sydney has established a clinical documentation improvement (CDI) program to: enhance clinical engagement through greater communication and information sharing amongst different clinical and non-clinical teams. The CDI program contributes to patient outcomes by providing richer, more complete and timely information to identify those at risk of potential complications, improve discharge planning and reduce hospital readmissions

**SUMMARY ABSTRACT:** In hospitals proper and accurate clinical documentation has always been important, but in today’s shifting healthcare landscape, it has become even more of a strategic imperative than ever before. Documentation is critical for patient care, not only because it validates the care that was provided, but also because it shares key data with subsequent caregivers. As such, clinical documentation improvement programs are important to any facility that recognises the necessity of complete and accurate patient documentation to aid in the enhancement of patient care (Rosenbaum 2014).

Our hospital has a broad and complex case mix, however this is not always entirely well demonstrated due to insufficient documentation, which may impact on patient safety and clinical outcomes as the complexity of our patients maybe lost through insufficient documentation. A key aspect of accurately describing patient complexity depends on the specificity of the language used in clinical documentation. International evidence from the United States shows hospitals with sufficient resources to engage clinical documentation improvement specialists are able to improve the case mix index (Mendez, Harrington et al. 2014).

The importance of accurate clinical documentation has always been recognised as crucial for meeting the expected quality, safety, legal and ethical standards associated with health care (Spelberg, Harrington et al. 2013).

Strong evidence shows incomplete or poor documentation can negatively impact on patient safety and outcomes. One study (James 2013) undertaken in the United States reviewed medical records and reported incomplete documentation may have led to up to 40% higher in hospital death rates. Such findings show a clear correlation between accurate clinical documentation and improved patient outcomes.

The clinical documentation program at St Vincent’s Private Hospital Sydney addresses each of the 10 standards from the Australian Commission of Safety and Quality in Healthcare.
An Electronic Tool for the Management of Safety and Quality Data ‘Reporting Ward to Board’.

Royal Brisbane and Women’s Hospital

Safety and Quality Unit, Royal Brisbane and Women’s Hospital

Stephen West, Gayle Frohloff, Anne Morton, Daniel Prentice, Karen Kasper

AIM: The aim of the RBWH Safety and Quality Unit in developing a Data Management System was to enhance the culture of safety and quality within the facility. The Oracle™ database provides an easily accessible platform where quality indicators are stored and visible in real time to all levels of staff from ward to board. This promotes a culture where staff are aware of the results of care delivery and through the PDSA quality cycle, a culture of continuous improvement is embedded in the organization.

The Oracle™ database is a single source of truth: a centrally accessible data repository with scalability and security, replacing multiple disparate data sources. It provides an electronic solution with the ability to respond to the business needs: provides a one stop shop for all users, and improves collaboration between hospitals within Metro North Hospital and Health Service.

SUMMARY ABSTRACT: In 2012, the RBWH Safety and Quality Unit (SQU) decided to address the difficulties it was experiencing in managing, collecting and reporting of data using the tools available through the common office environment such as MS Excel and MS Access. Inefficient data management and reporting processes were impacting on the ability to provide information to clinical staff and executives in a timely manner. The aim was to move from working historically with paper based reports (resulting in delays to service improvement) to a dynamic electronic solution where data, reports and results were available to the clinical staff immediately upon data entry.

The SQU solution to data management was to establish a central data storage which would enable multiple users to input and access Safety and Quality (SQ) data. Following a review of available technologies and products, the Oracle Application Express database was chosen using criteria such as cost, ease of use, functionality, hosting and support, scalability, and capacity to meet the current and future requirements.

The system was initially developed for use at RBWH with the first application available in May 2013. It is now used across all facilities within the Metro North Hospital and Health Service (MNHHS). The SQU Oracle™ platform currently hosts 21 individual services (in use at RBWH) with 11 of these used across the MNHHS. This provides assurance to Executive and to the MNHHS Board that there are robust systems in place to monitor compliance with patient safety indicators. Examples of some of these applications include:

- Executive Management Dashboards which provide a mechanism for reporting to Governance Committees, Metro North Committee and to the MNHHS Board.
- Clinical Weekly Audit – used by ward staff to enter data from audits against quality indicators and demonstrating compliance against National Standards at ward level. Results are monitored at Ward, Service Line, and Safety and Quality Committee levels.
- Controlled Drug Audits – Compliance with legislative requirements is monitored to ward level and reported through ward and Service Line governance.
- Consumer Engagement Activity Register – provides oversight of initiatives that have been undertaken across the organisation with consumer involvement and consultation.

- Patient Experience Survey – results from survey are available to ward level and provide reports to provide direction in implementing strategies to improve the patient experience.
- Key Improvement Register – central register for staff to record improvement activities and the outcomes from them.
- Nurse Credentialing Register – a central area to record nurses / midwives who have been credentialed across the HHS.
- Policy, Procedures and Pathways Register – an application used from Service Line to Board to actively manage the review of policies and procedures across the HHS.

From Individual wards through to Executive Management and HHS Board level, users can enter and review clinical audit results, KPI initiatives, organisational surveys, key improvements.

Each component has a consistent look and feel and functionality, which creates a ‘user friendly’ environment. A desktop icon which is loaded onto the desktop of every PC in Metro North, provides staff access to the Oracle™ applications with over 1800 registered users with approximately 70 new users each month utilising the various components within Oracle™. Users registration is based on designated roles such as, administrator, editor and viewer to ensure audit, control and security of the system.

Reducing time to antibiotics in suspected sepsis

John Fawkner Private Hospital

Emergency Department

Rohan Laging

AIM: To measure the time to, and appropriateness of, antibiotics in patients with suspected sepsis and reduce this in line with best practice by instituting two simple interventions.

SUMMARY ABSTRACT: Background: sepsis and septic shock are common in our Emergency Department (ED) with one to two presentations per week. The mortality from sepsis and septic shock may be as high as 20%.

The early administration of antibiotics after identification of sepsis is a cornerstone of therapy, and is associated with improved clinical outcomes. Indeed, delay of antibiotic administration beyond 60 minutes in cases of septic shock is likely results in patient harm. The Therapeutic Guidelines Australia (2014) recommends that “for the greatest survival benefit, give antibiotics as early as possible and always within one hour of emergency department presentation”.

Triage nurses play a key role in the recognition of potential sepsis, the patient’s triage category and therefore the priority and urgency of subsequent medical assessment.

Setting: a 10 bed Private ED in metropolitan Melbourne, with an approximate annual attendance of 9000.

Aim: This Quality Improvement project sought to characterize the pre-existing antibiotic practice in cases of likely sepsis by measuring time to antibiotics and their appropriateness, then introduce simple interventions to bring about a positive change in line with best practice.

More specifically, the goal was to decrease the median time to antibiotic administration in suspected sepsis to 60 minutes or less using antibiotics deemed appropriate in all cases.
Design and Method:

- **Data acquisition**
  - Case identification by webPAS code for period 01/01/15-07/07/15 (n=52)
  - Case confirmation by satisfaction of SIRS (Systemic Inflammatory Response Syndrome) Criteria (ACCP and SCCM) and proven or suspected infection
  - Case file review with the following entered into spread-sheet: Time of arrival, Time to antibiotics, appropriate antibiotic choice.
    - “Appropriateness” based on Therapeutic Guidelines Australia and personal clinical assessment based on patient presentation and file, including previous culture results and sensitivities.
  - Post intervention, the same data points were acquired for the period 05/10/15-3/15 (n= 50).
    - In addition to this, correct triage was recorded (based on absence or presence of SIRS), correct charting of antibiotics on the STAT (as opposed to daily) section of the drug chart and which nursing and medical staff were responsible for the errors in the above.
  - Furthermore, a convenience sample of Category 3 patients with sepsis as a DRG were examined for “over triaging” of patients not meeting SIRS criteria. Such patients were included in the time to antibiotics data as intention-to-treat.

- **Intervention**
  - “Up triaging” and early nursing led antibiotic order acquisition
    - Categorising all patients with suspected sepsis to AT5 (Australasian Triage Scale) Category 2 (See Appendix A)
    - Nursing education about SIRS criteria focussed on Associate Nurse Unit Managers (ANUM) and those undertaking triage.
    - Visual cue at triage desk listing SIRS criteria.
    - “Up triaging” those patients with SIRS criteria and suspected infection to AT5 Category 2.
    - Early notification of ED Doctor to obtain pathology request and antibiotic order.
  - Requesting all doctors use the STAT section for all ED antibiotic orders.
    - Educated via email.
    - Visual cue in doctor’s write-up area. (See Appendix B)

Results: 95% of patient files were obtained and reviewed prior to the intervention phase. The pre-existing median time to antibiotic administration was 115 minutes, with a mean of 132 minutes. The antibiotics were deemed appropriate in 94% of cases.

75% of patient files were obtained and reviewed in the targeted groups in the post-intervention phase. The median time to antibiotic administration had reduced to 60 minutes, with a mean of 72 minutes. The antibiotics were deemed appropriate in 100% of cases. Triage category was correct (based on the intervention guideline) in 86% of cases, and the STAT order section of the drug chart was only used 19% of the time.

Discussion: This Quality Improvement project led to a marked reduction in time to antibiotics in cases of suspected sepsis using two simple interventions:

1) Identification of SIRS criteria at triage with up-scaling of ATS code and nursing led impetus to collect pathology samples and obtain an antibiotic order; and

2) Using the STAT order section for all antibiotics prescribed in the ED.

This occurred despite poor compliance with the 2nd intervention. An education program is underway to address this.

There is some evidence to suggest that time to antibiotics in non-severe sepsis, that is, in sepsis without evidence of shock, may be less important than previously inferred. The Initiat-Ed Trial showed no correlation between mortality and observed delays to antibiotic initiation in the Emergency Department, but secondary outcomes suggested benefit in those with severe sepsis. In their study population of a large, urban tertiary referral centre, the median time to antibiotic administration was 210 minutes.

Another important finding was the favourable association between antibiotic prescriptions on the “Stat” order section of the drug chart and time to antibiotic administration. This informed the 2nd intervention above.

It is likely these interventions are generalizable to other Emergency Departments, both of differing scales and settings.

Limitations: Missing data may have biased the results. The files for 5% in the pre-intervention group and 25% in the post-intervention group were either unavailable or incomplete. The large fraction of missing data in the post-intervention group may reflect the early timeframe during which the audit was conducted relative to their presentation; the patients were more likely to be current inpatients or attending an outpatient appointment following their admission and therefore their file was actively engaged and elsewhere. Intuitively, this would not bias the results in either direction towards or away from a 60 minute median antibiotic time, however.

Conclusion: A significant improvement in time to antibiotics in suspected sepsis was achieved in our ED while retaining a high level of antibiotic appropriateness. This Quality Improvement project is applicable to other departments and settings.

**Sustaining Improvement in the management of the Endoscopy Waitlist**

Osborne Park Hospital
Ambulatory Service
Anne MacDonald, Clare Matthews, Michael Levitt, Hooi Ee, Dev Segarajasingam

AIM: To reduce the risk to patients on the Endoscopy Waitlist at Osborne Park Hospital

**SUMMARY ABSTRACT**: Background: Osborne Park Hospital (OPH) is a secondary Hospital in Perth’s northern suburbs which undertakes low to medium risk obstetrics, rehabilitation and aged care, elective surgery and gastrointestinal endoscopy. The majority of endoscopy procedures performed at OPH are generated by referrals from General Practitioners directly to OPH.

Traditionally patients referred to OPH for endoscopies were triaged according to the elective surgery waitlist categories of Category 1: to be performed <30 days, Category 2: <90 days and Category 3: <365 days. As of 12 January 2014, there were 3,512 patients listed on the OPH Endoscopy waiting list; 2,489 (71%) were over boundary, i.e. patients waiting longer than the recommended wait times per Category.

In early 2014, a Project Officer was appointed at OPH to evaluate and help resolve this protracted waiting list. An audit of the
SUMMARY ABSTRACT: “Not everything that can be counted counts, and not everything that counts can be counted says the famous Physicist Albert Einstein, highlighting the importance of having the right data at the right time for making decisions. While data is important, the right data is essential. It’s becoming easier to feel overwhelmed by the increasing amounts of data being collected. Understanding what’s important to the business (you need clear business goals) helps analysts to evaluate what data counts or should be counted. Albert Einstein’s implication was right when he said we can’t always track what we want to count, but that doesn’t stop us from constantly exploring new ways to get the data we need.

Hospitals in nature are blessed with abundance of data in multiple forms. Be it a prescription written by a consultant, patient’s medical records, or bill details; data is captured everywhere making data consolidation and information generation a daunting task. As available data becomes more complex and extensive, weaving it into a visualization that invites engagement, understanding and decision-making is a bigger challenge, with a bigger opportunity for payoff. Thus having the right information at the right time is imperative for effective hospital management.

Given this backdrop Hemas Hospitals Pvt Ltd in April 2015 ventured on journey to consolidate all its data capturing points, convert it into meaningful information, display it visually in a more attractive form and use it for better hospital management leading to improved patient care and patient safety. The project was organized using four major components as follows;

Balanced Scorecard and KPIs – All department wise Key Performance Indicators (KPIs) were captured and put it into a Balanced Score Card (BSC) format covering all four perspectives in BSC namely financial, customer, processes and learning and growth.

Business Intelligence – all the data captured were converted to meaningful information and displayed it in dash board for effective decision making and thereby taking informed decisions to better serve customers.

Standard Operating Procedures (SOPs) - SOPs were introduced to streamline the critical clinical and non-clinical processes to improve customer experience.

Strategic Cost Management- An integrated costing and pricing system within Hemas Hospital chains was established. This provided a sustainable competitive advantage and edge for the company over its rival hospitals through proper product pricing, enhanced price quoting whole improving bottom line performance.

Reaching the Pinnacle of Hospital Management through Business Intelligence (BI), Balanced Scorecard, KPIs, SOPs and Strategic Cost Management-The Hemas Hospitals Story
Hemas Hospitals Pvt Ltd
Finance Department
Portia Jayamaha, Chandima Cooray, Hiran Perera, Dinupa Peiris, Niroshan Ashokumar, Supun Fernando, Ishantha Tennekoon
Chathuranga Sampath, Sangiah Saravanacanth

AIM: Hospitals are in nature a very complex operation with different types of individuals playing diverse roles which requires standardisation and process optimisation. Further hospitals generates data in multiple forms during the care giving process where data consolidation and visualisation becomes a greater challenge. These data will also be important in effective performance management and better understand the cost structure. Given this backdrop Hemas Hospitals ventured on a journey to be more innovative in managing its operations with the use of Business Intelligence (BI), Balanced Scorecard and KPIs, SOPs and Strategic Cost Management.

The Implementation and Evaluation of Universal Decolonisation in an Australian Quaternary Intensive Care Unit
Royal Adelaide Hospital
Intensive Care Unit
Jodie Dawkins

AIM: To implement and evaluate universal decolonisation for Consumers in an Australian quaternary Intensive Care Unit (ICU) in an effort to reduce healthcare associated infections (HCAI), specifically blood stream infections (BSI) and methicillin resistant staphylococcus aureus (MRSA) acquisitions (colonisations and infections).

SUMMARY ABSTRACT: The Royal Adelaide Hospital ICU admits medical, surgical, cardiothoracic, trauma, neurosurgical, spinal
injury and burn injured Consumers with over 3500 admissions per year across 32 ICU and 10 flexible ICU/Step Down Unit (SDU) beds. Prior to 2014, the ICU was experiencing stagnating healthcare associated BSI rates and in 2012 an increase was detected in healthcare associated multi-resistant organism (MRO) acquisition rates despite the implementation of various quality improvement initiatives (see Table 1).

A decision was made to implement universal decolonisation commencing in September 2014. All intensive care Consumers were washed with 2% chlorhexidine gluconate impregnated disposable washcloths for the duration of their ICU stay, coupled with the application of 2% mupirocin intranasal antibiotic ointment twice daily for the first 5 days. Staphylococcus aureus decolonisation is used to reduce transmission and prevent disease in carriers. Both methicillin-susceptible and methicillin resistant strains of S.aureus, account for more healthcare associated infections (HAIs) than any other pathogen. Universal decolonisation is a strategy that targets a patient population that is susceptible to infections from S.aureus and other pathogens, such as intensive care Consumers who often have multiple invasive devices and/or lower immunity. The project included practice change from traditional chlorhexidine soap and water patient washes to primary use of the chlorhexidine washcloths. Routine screening procedures for MRSA and Vancomycin-resistant enterococci (VRE) remained the same (admission and weekly screening). The project outcome data was evaluated one year after implementation.

Twelve months post implementation, universal decolonisation was shown to be effective in reducing healthcare associated acquisition and infection rates (see Table 2). This equated to the prevention of 12 BSIs, 3 MRO infections and 19 MRO acquisitions. Figure 1 shows the numbers of healthcare associated (HCA) BSI and MRO acquisitions at the RAH for the past seven years.