Background
- Skin abscess is a common problem
- It is a low acuity problem which requires procedural intervention
- Low acuity has important implications:
  - Potentially can be managed in the ED
  - Low acuity = low priority when triaging emergency theatre cases
  - Not uncommon to wait for the entire day then get postponed to the following day → excessive preop stay
- Lack of guidance → excessive postoperative stay (usually stay overnight after procedure)
- Patients generally recover quickly postop

Evidence of problem
- Audit over 3 months
  - 89 skin abscess patients = ~1 per day
  - LOS
    - 5.6% only performed as day only cases
  - Almost 40% of patients stayed 2 or more days for a skin abscess!

Project is aligned with the NSW State Health Plan Direction 2
- Develop new models of care which decrease practice variation, improve efficiency and quality of care.

Aim Statement
Primary aim:
- Within 6 months, we aim to decrease the length of stay to achieve a day-only stay (or less) rate of 50%

Secondary aim:
- Within same period: increase ED drainage without admission to 10%
- Within same period: reduce did not attend in abscess patients in the Acute Surgery outpatient clinic to zero

Problem identified
- Brain storming sessions identified 4 broad categories of problems with current management:
  1. Unnecessary treatment/investigations
  2. Delayed operating theatre access
  3. Technical issues and resource limitation
  4. Follow-up issues:

Current successes
- Clear management guidelines for surgical team
- Clear workflow for admitting Day only patients
- With appropriate patient information
- Anaesthetic priority for abscess patients
- Clear guidelines for same day discharge and follow-up destination

Changes made
PDSc cycle 1: Standardisation of surgical management
- Establishment of surgical management guidelines
  - Day only admission guidelines
  - Operative guidelines
  - Discharge criteria (may be nurse initiated)
- Surgical registrar education
  ➤ Decreased LOS, increased Day only rate

PDSc cycle 2: Establish Day only workflow
- Day only admission workflow
- Negotiation with anaesthetics regarding prioritisation of low acuity “dischargeable” patients
  ➤ Further improvement of LOS/Day-only performance

PDSc cycle 3: Drainage in ED without admission (in progress)
- Liaise with Emergency Department for a workable workflow.
- Education to ED staff, esp registrar and nurse practitioner
  ➤ Ongoing progress

Prioritisation of solutions:
1. Standardisation of surgical management
2. Establish a day only workflow
3. Drainage of abscesses in ED without admission
4. Establish a follow-up pathway

A flow chart incorporating these solutions is depicted below:

Results

Outcome: Rate of Day Only
Baseline 5.6%
Phase 1 17%
Phase 2 27%

Stretch goal = 50%
Project is still ongoing so further scope for improvement. Stretch goal probably achievable.

Estimated Cost Savings:
By Day Only rate
- 22% increase in Day only in 90 patients (3 months) ➤ $19,800 savings/3m
- By Average LOS baseline vs phase 2
  - Ave LOS = 1.51 vs 1.13 days. 90 patients ➤ $34,200 savings/3m

Plans to sustain change
1. Standardisation – Formalisation of standard management protocol
2. Documentation – EMR form to support decision making
3. Measurement – Continued monitoring
4. Training – Continued training of surgical registrars and ED staff

Plans to spread /share change
- Submitted to the ACI Innovation Exchange
- Enter into LHD Quality Award – 2016
- Present at a Surgical Conference – Aiming for College of Surgeons Annual Scientific Congress 2017 (Planned)

Team members
Guidance Team
A/Prof Gary Morgan
Carmen Hoffman

Project Team
Tony Pang – Acute Surgical Unit Surgeon
Lillian Jenkins – Acute Surgical Unit Surgical Registrar
Sukhwant Khanjuaun – Surgical SRMO
Giles Miller – Anaesthetist
Jason Montgomery – ED Nurse Practitioner
Greg White – ED Physician
Vikki Fenech – Outpatient Department Nurse/Wound Nurse
Michael Panini – Day only ward NUM

Kerry Hitos – Surgical Outcomes Unit

Date: July 2016

A Clinical Practice Improvement Project
Background
Syphilis testing is a mandatory test that is performed at each donation. Standardized testing and reporting algorithms are linked via fixed pathways to specific donor and product outcomes. Results are entered into National Blood Management System (NBMS). This automatically assigns to a donor a status that is difficult to change.

Donors with negative treponemal screening tests are cleared for donation. Samples with a positive screening tests are further evaluated with a local non-treponemal test and referral to an External Reference Laboratory (ERL) for additional tests (legal requirement). The pattern of the results is then classified as negative, positive or inconclusive/typical. Donors with discrepant results between the different tests have further samples collected for clarification. Depending on these results, donors may be temporarily or permanently deferred and referred to their GP for further management. Donors with repeatedly inconclusive results are contacted by Medical Officers (MOs) to obtain a history of any potential risk factors and for counselling.

Repeat testing and the possibility of having syphilis can be distressing to donors and can influence their decision to donate again. Strict pre-donation questionnaire screening criteria reduces the likelihood of donors being infected with STDs so that the majority of reactive syphilis tests are false positive.

Aim Statement
Reduce the number of atypical results by 50% over 6 months
Reduce donor deferrals by 20%
Reduce the number of results requiring review by MOs

Problem identified
Centralisation of ERL testing has resulted in an unexpected spike in inconclusive results.

Until 2014 each state performed screening on site and sent reactive samples to their state ERL. Testing algorithms were not uniform amongst ERLs. Since 2014, all screen positive samples are referred to single ERL. This laboratory uses an algorithm that results in a higher number of inconclusive results. MOs in each State are involved in result interpretation and donor counselling. Current management of donors with atypical results leads to donor deferral and product discard. To address this problem the MO can change the donor’s status to allow for future plasma donation. This process is not standardized and some MOs are uncomfortable with interpreting results.

Results & Actions
- Obtain data to confirm impression of MOs of an increase in atypical results
- Acknowledge that atypical results are challenging to manage and are best discussed with Medical Microbiologist and at Infectious Disease meetings
- Clarification of atypical result patterns
- Selection of pattern(s) that allow plasma donation by donors with recurrent atypical results (BFR status)
- Increase MOs confidence in dealing with atypical syphilis results
- Review of testing process lead to identification of redundant testing of samples for non-clinical plasma. This plasma undergoes pathogen inactivation at CSL and syphilis testing is not mandated by legislation

Still pending
- Change of ERL provider
- Completion of Architect testing project
- Final revision of testing algorithm
- Monitoring statistics and outcomes

Plans to sustain change
1. Standardization of procedures (SOP) for syphilis testing and counselling
2. Documentation of revised SOP as a controlled document
3. Measurement of statistical parameters of process (number of tests, atypical results, BFR donors)
4. Training of all relevant staff on new procedures

Plans to spread /share change
All the introduced and pending changes are nationwide. They should result in organisation wide benefits.

Team members
Guidance Team
Dr A. Keller: National Donor & Product Safety Specialist. Oversight of the project
Ms. S. Ismay: Scientific Director, Manufacturing Division. Co-ordinate and approve pilot study
Dr B. Bell: National Medical Services Manager

Project Team
Dr Z. Perkowska: Medical Microbiologist
Ms T. Powel: Scientific Officer
Dr A. Allen: Medical Officer
Dr C. Seed: Senior Blood Safety Analyst

Infectious Disease Committee
Manufacturing Change Plan Team

Contact details
Zofia Perkowska
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Diagnosis of the problem
Reasons for inconclusive results management problems

Changes made
1. Problematic atypical syphilis results are now discussed at Infectious Diseases committee meetings
2. Most atypical results are discussed with microbiologist
3. RPR testing on site has been withdrawn for regulatory reasons resulting in additional donor deferrals, however it potentially will reduce some of the discrepant results
4. Syphilis testing Standard Operating procedure (SOP) has been updated
5. Evaluation of testing panels of NSW reference laboratories has been completed
6. Potential new ERL and its testing panel has been selected in principle and will be approached shortly
7. Pilot study of syphilis testing on new platform (Abbott Architect) has been design and is awaiting Ethics Committee approval
8. Decision to withdraw syphilis testing on donations for CSL plasma –not legally required
Streamlined Oral Health Pathway for People Living with a Mental Illness

Dr Shilpi Ajwani

Background
The Sydney Local Health District (SLHD) is working to improve access to appropriate health care and achieve better quality of life and health outcomes for people living with severe mental illness across the district. This population has a life expectancy of up to 25 years less than the general population.

The reasons for poor health in this population are complex and include low socio-economic status, poor motivation and diagnostic overshadowing. Major contributors to the mortality include increased relative risks of diabetes, dyslipidemia, hypertension and obesity, along with numerous lifestyle risk factors (smoking, poor diet, sedentary behaviour, etc.). Despite increased health need, people living with mental illness are less likely to receive appropriate care, even when attending clinical services. Poor oral health (OH) is widely recognised as a major health problem in this group, which impacts their general wellbeing and is a key risk factor for cardiovascular disease.

The Living Well, Living Longer (LWLL) Program aims to integrate appropriate health care for people living with mental illness into routine health service provision. As part of the project the Collaborative Centre for Cardiometabolic Health in Psychosis (ccCHiP) and RPA-based cardiometabolic clinics provide multidisciplinary consultation clinical service that involves a matrix of assessments and interventions with a focus on cardiovascular and metabolic risk factors in people with severe mental illness including an OH assessment. However, the pathway to providing appropriate oral care is lacking.

Aim Statement
Improve the quality of OH assessment and referral for participants of LWLL & ccCHiP programs

Stretch goals
1. Reduce missing OH assessment forms
   - by 50% within 6 months and
   - by 100% within 12 months
2. Standardize OH assessment form across all sites within 6 months

Problem identified
To improve the OH pathway for the participants, information recorded at the time of dental screening is most crucial. It was identified that the OH data was missing for many of the participants. In addition, the information provided to the team from OH assessments was insufficient. As a result diagnosis of oral conditions and appropriate dental referral were missing from the letter given to the participant / carer.

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Date: 28 July 2016

A Clinical Practice Improvement Project

References
Background
There is strong (level A) evidence to support reduced fasting for patients requiring anaesthesia¹.

Previous audits indicate that patients are currently fasting for more than double (> 12 hours) the time required to fast for tests and procedures at Royal Prince Alfred Hospital². Qualitative research interviewing patients who a fasting indicates high levels of distress, with dehydration causing great discomfort³. Reducing fasting times is a patient centred initiative, and is also aligned with National Standard 12: Provision of Care and best practice recommendations

Aim
To reduce fasting times for patients waiting for radiological tests and procedures on the gastrointestinal surgical wards at Royal Prince Alfred Hospital to within 20% variance of the fasting times recommended.

Identifying the Team
Key members of the team included the Chief Radiographer and senior radiographers, and Nurse Unit Managers and Clinical Educator Nurses on the identified surgical wards (including NUM of Radiology). Key consultation was undertaken with the Head of Anaesthetics and Radiology, all colorectal and upper gastrointestinal surgeons, food services and the radiology data manager.

Mapping Excessive Fasting

Developing and Piloting a Flip-Chart
This project is currently in the piloting phase to test the usefulness of a flipchart, with the following measures: (i) audits of fasting times (ii) the number of “Fluids – Preoperative Oral Diet” ordered (iii) post pilot discussion sessions with nursing and medical staff (iv) feedback written on the flipchart; and (v) number of cancelations due to inadequate fasting preparation.

Reference
¹Lambert E, Carey S. Practice Guideline Recommendations on Perioperative Fasting – A Systematic Review. Journal of Parenteral and Enteral Nutrition, 2015 published online
Improving the pre-operative recording of patient dental state by anaesthetists

Scott Fortey

Background
Anaesthetists are sued most frequently for dental damage. In 2015, multiple claims to the LHD to repair teeth had been received for amounts of up to $20,000. Unfortunately in these cases, no record of pre-existing dental condition was documented by the anaesthetists, despite being recalled as poor in condition.

It is an expectation of the College of Anaesthetists (ANZCA) and our insurance bodies that anaesthetists document the condition of teeth and discuss the possibility of damage with patients.

In theory:
If we can show the teeth were ‘at risk’ preoperatively AND that the patient was warned of the risk AND that due care was taken to protect the teeth, then the hospital/doctor should not be liable for the repair.

Aim Statement
Within 9 months, increase the compliance rate for completion of dental records on the anaesthesia form to 99% (100% would require executions)

Problem identified
An initial audit (August 2105) for documentation of dental record showed a compliance rate of 64%.

Diagnosis of the problem

Results (cont)
But wait....
- If exclusions were included where anaesthetists were involved....
  - The result for June would have been much worse
  - Shows us that wherever anaesthetists are operating, there should be NO exclusions

Outcome: Did we reach our stretch goal? No but... improvement was made and a dialogue commenced.
From consistently below 80% to consistently above 80%

$ Cost saving?
A search of dental claims from 1/1/15 to 31/3/16 for claims showed:
- Financial Year 14/15: 8 claims
- Financial Year 15/16: 9 claims
Rangeing from $100 to $20 000
Some settled with money from Open Disclosure policy without further claims
Others pending

Plans to sustain change
Continue to improve documentation overall (e.g., peri-operative medication) with the inclusion of the anaesthetists to solve the problem.
Regular audits (RMOs, Registrars) and feedback
A revised anaesthesia record that asks for comment on the state of the patient’s teeth (tick a box and diagram)
Dental Damage Pack

Plans to spread/share change
Report to ANZCA Regional Conference Coogee November 2016
ACI Innovation Exchange

Team members
Guidance team members:
- Ms Belinda Collier; Executive Director Human Resources services CCLHD
- Dr Bruce Sanderson; Executive Director Clinical Governance Unit CCLHD
Project team members:
- Ms Kirsty Moriarty CNS Anaesthesia RN Gosford hospital
- Ms Lisa Sharp CNS Anaesthesia RN Gosford Hospital
- Dr Scott Fortey Head of Department of Anaesthesia CCLHD
Quality Advisor
Mr Ian James CNE Anaesthesia RN Gosford Hospital

Patient / consumer involvement:
Feedback of our patients were asked their opinion on the importance of the health team having correct documentation

Contact Details Scott Fortey, Head of Department Anaesthesia CCLHD
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Date: June 2016

Results
Proportion of Anaesthesia Records with Dental Documentation by Anaesthetists

Data Collection
Roughly one day per month sampled via EMR retrospectively Data collected for dental record completion/assessment and old/new anaesthesia record
4 months prior to first intervention for baseline
Exclusions: endoscopy, ECT,
Changes Made

A Clinical Practice Improvement Project
Decreasing the Rate of Unnecessary Caesarean Sections
(Cutting the Cost of Cutting)

Dr Nigel Roberts

Background
Rising rate of caesarean sections performed within the unit. Anecdotal evidence that a number of these caesarean sections were performed unnecessarily.

National Standard or Strategic Imperative is the project aligned?
NSW Health PD2010_022 Maternity - Towards Normal Birth in NSW


Literature review

Aim Statement
By December 2016, Fewer than 10% of Emergency Caesarean Sections Performed at Manning Hospital will be “Not Necessary”.

Problem identified
4 Key Problem Areas Identified
1. Inaccurate Assessment of Fetal Welfare.
2. Not Performing Fetal Scalp Lactate
3. Not Understanding Adequate Progress in Labour
4. Obstetrician Fatigue.

Changes made
Develop and Institute Protocol
• Adequate time to establish in labour
• Adequate time to progress in labour
• Expectation of secondary assessments to assess fetal wellbeing in setting of abnormal CTG.
• Exclude chorioamnionitis and APH alone as indications for LSCS.

Education
• Normal progress in labour
• Use of fetal scalp lactate

Peers Review and Feedback
Monthly meetings

Minimize Fatigue
• Cease practise of a consultant providing more than 1 week night on call.

Results
Pre-Intervention: Audit of 40 emergency caesarean sections performed from Jan 2014 to October 2015

Post-Intervention: Ongoing audit of all emergency caesarean sections since February 2016 (current to June 30).

Protocols has been requested by other hospitals in the HNELHD. This has been provided.

Team members
Guidance Team
Jodi Neiass: General Manager
Jim Wills: Director of Medical Services
Project Team
Dr Nigel Roberts, Dr Vanessa Tatham, Dr Eliza Griffiths, Robyn Bourke, Lyn Murray, Kelly Minett, Katharine Gillet, Jane Wright, Prof Henry Murray

Consumer
“Susan”

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Date: July 1, 2016
Reducing Seclusion Use in a Child and Adolescent Psychiatric Inpatient Unit

Dr Michael Bowden

Background
- Mental Health care should be provided in the least restrictive environment
- Use of seclusion (isolation in a locked room) is to be used as a last resort for serious aggression or agitation
- High rates of seclusion indicate high levels of patient distress and high risk levels for patients and staff
- Rates of the use of the seclusion room are reported to the MOH regularly
- There was a large increase in the use of seclusion in the acute inpatient unit over a 3-month period, from July to September 2015, > 3 times the previous rate
- The unit had previously reduced the use of seclusion successfully, but this had not been sustained

With which National Standard or Strategic Imperative is the project aligned?
- National Standards 1, 2, 6, 9
- National Standards for MH Services
  - 1.9 Treatment in least restrictive environment
  - 2.2 Reduce and eliminate use of seclusion
  - 7.2 Engagement with carers as partners in delivery of care
- NSW Mental Health Commission

References
Berg J. Aggression and its Management in Adolescent Forensic Psychiatric Care. 2012; Paimosalama Oy: Turku, Finland
NSW Health. Aggression, Seclusion and Restraint in Mental Health Facilities in NSW. 2012; PD2012_035

Aim Statement
To reduce the rate of use of seclusion in the inpatient unit by 75% by June 2016

Problem identified
Seclusion rates had increased from 7.5 episodes per 1,000 bed days in January – June 2015, to 28.4 in July – September 2015
The NSW target is < 6.8
Nursing staff members were distressed, several staff members resigned or reduced their working hours, and rates of sick leave increased

Diagnosis of the problem

Flow Chart Analysis
- Little control over admissions
- Juggling patients to deal with demand from ED
- No MDT care plan in file
- Parents not involved in care plan
- Many casual nursing staff employed, with varied levels of skills in de-escalation techniques

Changes made
Prioritised interventions: ‘easy to implement, high impact’
- Daily intake meeting to discuss new emergency admissions/referrals and clarify goals of admission
- Daily MDT handover meeting to identify individuals ‘at risk’
- Increased availability of Psychiatrist
- Weekly supervision sessions for nursing staff (CNC)
- Weekly supervision sessions for allied health staff (Senior Psychologist and Senior Social Worker)
- All patients to have a MDT care plan on admission
- Parents and child/adolescent to be involved in the care plan development

Results
- Seclusion rates dramatically reduced
  - Stretch Goal reached
    Rate of seclusion reduced to 4.7 episodes per 1,000 bed days in Jan – Mar 2016 (Reduction of 83%)
    Rate reduced to 0.0 in April – May 2016 (Reduction of 100%)

Plans to sustain change
- Rates of seclusion graphically displayed on a daily basis in the ward
- MDT care plans discussed at weekly case review
- Monthly audits of MDT care plans
- Staff training in violence prevention and management at orientation
- Senior staff monitoring of seclusion rates

Plans to spread / share change
ACI Innovation Exchange
Quality Awards
MHCYP CAMHS Benchmarking Forum
MHPC CYMHS Subcommittee

Team members
Guidance Team
Project Sponsor: Brenda Gillard, Network Head Clinical Governance
David Bennett, Clinical Program Chair
Chrisy Ceely, Network Manager Patient Safety
David Dossetor, Network Director C & A Psychiatry
Cassandra Hainsworth, Research Psychologist
Tim Hoffmann, Clinical Services Planner
Andrea Worth, Deputy HOD Psychological Medicine

Project Team
Nichole Andrews, Occupational Therapist
Catherine Cruz, CNC
Emilia Esterman, Paediatric Registrar
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Bruce Garry, RN
Kirsten Gibbs, Carer Advisor
Anna Lester, NUM
Ken Nunn, Psychiatrist
Veena Raghupathy, Psychiatrist

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Date 28 July 2016
Reducing ED Presentations for Children and Young People Presenting with Mental Health Concerns

Megan Chiu

Background

There appears to be a significant number of young people who present to the emergency department (ED) for mental health issues within the Northern Beaches sector. Around 80% of the time, these young people who present to ED are sent home with a safety plan in place and further follow up by the Child Youth Mental Health Service (CYMHS), general practitioner (GP) or a private practitioner.

National Standard or Strategic Imperative is the project aligned?

National Mental Health Standards
- Delivery of care
- Promotion and prevention
- Partnering with consumers

- National Safety and Quality Health Services Standard
- Emergency Target Performance (ETP)

Aim Statement (with stretch goal)
To reduce the number of children and young people presenting to the Emergency Department (ED) with mental health issues by 10%

Problem identified
A number of clients were presenting to ED with mental health issues. Approximately 90% of clients who are seen at ED for mental health issues are sent home with a safety plan and community team follow up. Clients and families have to wait and often are anxious of going through the ED process. The time it takes from triage at ED to assessment can be lengthy and there are numerous processes to go through before the client sees a CYMHS clinician. School counsellors and other services have asked clients and their families if concerned for safety to present to ED.

Results

In the 3 months in 2016, a total number of young people who presented to ED during business hours was 36 compared to 42 at the same time in 2015.

Outcome:
Reduction of children and young people presenting to ED with mental health concerns.

Plans to sustain change
- Current work practices are part of normal procedure within team. Standard agenda item with school counselors
- Plan to incorporate into procedure around priority/crisis appointments
- Continue to track number of priority appts and ED presentations
- Training to be offered in school counselor education program

Plans to spread/share change
- Consider same project and interventions in other areas within CYMHS
- Continue to work with ED in diverting clients when they present to ED for mental health issues not requiring medical attention
- Further education to relevant services around risk assessments (capacity building)
- Ongoing networking with relevant stakeholders

Team members
Guidance Team
Kathi Boorman- NLSHD CYMHS Director
Paul Tyne- NLSHD CYMHS Quality Manager
Deb Stewart – NSLHD- Manager of Clinical Redesign
Project Team (with Consumer & QI Advisor)
Nerida Edwards- PECC NUM Manly
Gary Cooper- Extended Hours Team ED CNC
Joanne Watts- Manly Hospital ED NUM
Toni Roberts- CNC- CYMHS
Amelia Walter- Clinical lead- CYMHS

Contact Details
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A Clinical Practice Improvement Project
Iron Deficiency Anaemia in Preadmission Clinic Patients

**Rationale**
As per the PBM Guidelines, ‘in patients with noncardiac surgery, transfusion has been associated with increased morbidity (particularly infection) and in some studies, mortality’. Although there is an awareness amongst haematologists at Nepean Hospital of instances where blood transfusion has been requested for anaemic iron deficient patients post-operatively, this has not previously been examined systematically.

**Aims**
Assess the frequency of iron deficiency in the Nepean preadmission clinic (PAC) patients. Assess whether intervention would be required to reduce the number of transfusions related to iron deficiency in preoperative patients attending the PAC.

**Problem Identification**
Determine whether a significant number of preoperative patients in the relevant specialties (Gastroenterology, Gynaecology, Orthopaedics) have iron deficiency preoperatively which may render them more susceptible to requiring a RBC transfusion post-operatively.

**Methods**
An audit was undertaken to obtain information on the number of patients who attend the PAC and who may be iron deficient, based on their blood count parameters. Audits were performed manually looking at laboratory records of patients who attended the PAC, as well as by interrogating laboratory records of patients who had attended the PAC in 2015 and 2016.

**Results**
Numerous patient records were found with laboratory data suggestive of iron deficiency (reduced Mean Cell Volume (MCV) and/or anaemia (reduced Haemoglobin)). It became apparent that many of the patients had received MCVs were people with probable thalassaemia traits, and it was a rare occurrence to find persons who were anaemic as a result of iron deficiency only – there were often other complex health problems present. Records were also selected for both PAC attendance as well as presence of transfusion. However when transfusion records of these patients were searched, the occurrence of transfusion did not relate to attendance at the PAC; the transfusion episode may have occurred prior to the attendance or longer after attending the PAC.

The manual search of Orthopaedic patients attending the PAC revealed one patient who had iron deficiency anaemia. This patient’s surgery was postponed for several months, ostensibly for the reason of anaemia.

**Discussion**
From the audit data it seems that the presence of iron deficiency anaemia in the patient cohort attending the PAC is vanishingly small. Although there was a concern for the presence of preoperative iron deficiency anaemia, the processes in place in the PAC appear to be adequate to prevent unnecessary transfusions in patients who have elective surgery or surgical procedures.

The results have been presented to members of the PAC team and have resulted in further discussions regarding best use of PAC team resources and preoperative tests.
Optimising bleeding risk assessment in patients undergoing elective surgery: LET’S PREVENT THE RED

Joanne Joseph, Daniel Behan, Georgia Mills, Gila Lepar, Carlie Tighe, Emma Bean, David Ireland, Francie Noa, Maggie Chiu

Background
• Bleeding in the context of surgery is always a bad outcome – any preventative measures should be adopted
• Several published guidelines recommend that all patients undergoing surgery should have their bleeding history taken and that coagulation testing should not be performed routinely
• There is anecdotal evidence at St Vincent’s Hospital to suggest that this is not happening and as a result, this clinical practice improvement project was designed
• Ethics approval sought – LNR study

National Standard or Strategic Imperative is the project aligned?

Literature review (articles reviewed)

Aim statement with stretch goal
“Within 12 months, ensure that 100% patients attending pre-admission clinic for elective surgery have an appropriate bleeding risk assessment performed”

Problem identified
• ~160 patients attend pre-admission clinic each month for a range of surgical procedures
• Failure to assess bleeding risk is a problem – inappropriate testing performed in patients (costly, inefficient, can result in delayed surgery if results abnormal); normal test results do not necessarily exclude bleeding disorder
• Evidence for this problem – anecdotal, multiple patient stories, laboratory testing data
• Everyone wants to solve this problem

Flow chart

Results of initial audit
• Median patient age: 66 years (range 9 – 87)
• Median number of days between PAC attendance and surgery: 6 days (range 0 – 126)
• 54% seen in PAC ≤ 1 week prior to surgery
• 19% did not complete health questionnaire and of those who did, 6% indicated yes to a bleeding history/tendency
• 11% had documentation that a medical officer had enquired about bleeding history in any way
• Coagulation testing requested in 67% patients, and of these, coagulation tests were abnormal in 14.8%. Response to abnormal coagulation testing was varied and not always acted upon
• 42% patients were taking anti-platelet and or anti-coagulant medication and of these, 29% were told to continue their medications and not to cease pre-operatively
• Overall, poor documentation of bleeding risk assessment and over-reliance on coagulation testing in lieu of history taking

Where to next??
• Increase days between PAC and surgery – already being addressed
• Implement appropriate bleeding history – develop questionnaire that can be used by anaesthetists in PAC
• Reduce inappropriate coagulation testing – leave in place for now but reassess after bleeding questionnaire in use and next audit performed
• Stretch goal not yet achieved but still some time to go!!
• Potential for cost savings – reduce unnecessary tests, prevent delay or cancellation of surgery, and improve patient outcome

Team members

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Date – July 28th 2016
Omission of medication doses occur for variety of reasons and have been reported in publications as a common occurrence. The UK National Patient Safety Agency (NPSA) has reported that up to 20% of medication errors were omitted doses. Australian studies show an omission rate of up to 11% with 86% of omitted medications placing patients at some risk of harm.

Although majority of incidences are insignificant, it is important to recognise that harm can arise from omitted or delayed medication administration especially with time critical medications. Omitted doses of these medications may increase length of stay and cost to the health service.

### Literature Review / References


### Diagnosis of the Problem

**Cause and Effect Diagram**

Brainstorming on the causes of omitted medication administration was conducted by the project team and a cause and effect diagram was produced. It was identified that the main issues were the lack of staff awareness and education.

### Interventions

Interventions were carried out over a period of 4 months:

- **Nursing and Medical staff education**
- **Incorporation of omitted medications in Patient Rounding**
- **Nursing handover with medication charts**

### Results

**A post-intervention audit of 57 patients with a total of 2062 charted doses showed a reduction in dose omissions from 11.1% to 4.8% (n = 99). It also indicated a reduction in time critical medication omission rates from 90% to 30.8%.**

Documentation of reasons for withheld doses improved from 21% to 85%. Pre-intervention, 91% of patients had an omitted dose as oppose to 56% post-intervention.

### Outcomes

- 95.2% of patients in the General Ward were signed for as receiving their medications and/or have clear documented reasons for omitted doses
- Nursing and medical staff are more aware of omitted medication administration and documentation.

### Sustaining the Improvement

- Periodic in-services
- Medical & Nursing Orientation
- Maintaining visual prompts on wards
- Online orientation/education module
- Audit tool for regular sustainable audits
- Medication safety in Patient Rounding

### Sharing the Change

- **ACI Innovation Exchange**
- **The Society of Hospital Pharmacist of Australia Medication Management National Conference**
- **Western NSW LHD Health Awards**

### Project Team

**Guidance team members:**
- Ian Macsway (Chief Pharmacist)
- Mango Gibbons (Deputy DON)

**Project team members:**
- Kelvin Chan (Pharmacist)
- Anna McEniery (Pharmacist)
- Jeniffer Fiore-Chapman (JMO Supervisor)
- Lisa White (NSW)

**Quality Advisor:**
- Susan Ward-Cusack (Clinical Quality)
- Bernardette Fay/Steven Dyer (Patient Safety)

**Consumer involvement:**
- Consumer representative on the Patient Safety Committee (Reporting)

**Contact:**
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- Mobile: 0415 063 550
Background

Bariatric patients are:
- Patients weighing more than 120KG
- Patients with a BMI greater than 35
- Patients weighing more than 120KG
- Patients who size and body shape do not fit standard size equipment and furniture.

Increasing numbers of bariatric patients are presenting to SDMH. Optimal pieces of equipment are not always available for patients to be managed safely with dignity.

Staff who manage these patients with insufficient equipment are at risk of injury.

Unnecessary transfers to other sites for patients who we cannot manage due to their size and weight.

The management of the bariatric patient doesn’t belong to one standard but is associated with a number of the 10 National Standards and lots of policies.


References

Diagnosis of the problem

A BIG issue

Background

Bariatric patients are:
- Patients weighing more than 120KG
- Patients with a BMI greater than 35
- Patients who size and body shape do not fit standard size equipment and furniture.

Increasing numbers of bariatric patients are presenting to SDMH. Optimal pieces of equipment are not always available for patients to be managed safely with dignity.

Staff who manage these patients with insufficient equipment are at risk of injury.

Unnecessary transfers to other sites for patients who we cannot manage due to their size and weight.

The management of the bariatric patient doesn’t belong to one standard but is associated with a number of the 10 National Standards and lots of policies.


References

Results

Too early to ascertain if and when we have reached our stretch goal
However, we have raised the profile of bariatric patients and their transfer and mobility needs in the Shoalhaven.
We have ordered some equipment.
We have created a wish list of additional bariatric equipment.

Bariatric lifting equipment e.g. gantries are on planning list for future build.
We did create a database for current equipment and a SWL for SDMH.
We did label our equipment with the manufacture SWL.

We did do a gap analysis of our Bariatric Patient Management Procedure ISLHD CLIN PROC48 and commence work on a training package.
We did secure a location and wheelchair scales for patient weights.
We did establish a process for alerting staff to bariatric patients via eMR.

Aim Statement Within 6 months 70% of bariatric patients at SDMH have appropriate transfer and mobility aids within 24 hours of admission and 100% within 12 months.

SDMH 2 week Demand Snapshot

13 patients weighed more than 120KG
- 2 patients weighed more than 160KG
- Top patient weight was 174KG
3 had size and shape issues (long and lanky or short and round)
- Equipment gaps identified
- Process gaps identified

Ordered a gantry for ICU following successful trial (engineering specifications)
Ordered new wheelchair scales, bariatric commode, wheelchair beds, bedside chairs
Commenced educating staff on creating bariatric eMR alerts
Marked our equipment as agreed with our Infection control colleagues

Changed the culture of ward/unit ownership of equipment
Secured a commitment that bariatric will be included in future builds
Secured more money for additional bariatric equipment
Secured a 0.1FTE enhancement for a wards men to clean

- We did label our equipment with the manufacture SWL.
- We did do a gap analysis of our Bariatric Patient Management Procedure ISLHD CLIN PROC48 and commence work on a training package.

We did secure a location and wheelchair scales for patient weights.
We did establish a process for alerting staff to bariatric patients via eMR.

Results (continued)

A Clinical Practice Improvement Project

Helen Troy

Contact Details

A BIG issue

Helen Troy

A BIG issue

Helen Troy

A BIG issue

Helen Troy
Anaesthesia is a popular specialty training programme with significant competition amongst doctors to enter the training programme. But at Provisional Fellow (PF) level (their final year of training) there are more jobs than people qualified to take them, largely because many big teaching hospitals employ significantly more PF’s than they can generate through their own training schemes.

In the last 10y, only 7 of the 20 available Provisional Fellow positions at Gosford Hospital have been filled by PF’s. The remainder have been filled by International Medical Graduates or reassigned to more junior training roles, neither of which have the same capacity for high level service provision.

In the hospital year to date (Feb-May 2016), 141 daytime sessions have been covered by PF’s. In the absence of a PF, these sessions would have been covered by a VMO or locum. This equates to $166,325 saved.

Besides high level clinical service provision, PF’s provide a rich source of departmental succession planning, role modelling and mentoring to junior trainees and educational support to the wider hospital.

Survey
Target audience: AT’s, PF’s and New Fellows
Questions covered 4 areas:
- Application process
- Programme offered
- Lifestyle issues
- Future employment

Results:
9%AT, 25%PF, 66% New Fellows
All job information is sourced by ‘word of mouth’
Over 75% rated Independence as 4/5 or 5/5
importance
All other questions had a wide spread of answers with similar numbers at both extremes of the scale

Conclusion:
No employer can appeal to all prospective PF’s as the spread of interests is too wide. So we need to better articulate what we can offer as it will be important to some applicants and we must facilitate independence across all areas of work.

Interventions
- Re-write E-Recruit advert
- Create links from the advert to a “Welcome to CCLHD” video and pictorial flyer (see next)
- Establish educational grant from cost savings
- Formalise process for PF choice of Independent daytime lists
- Increase time on consultant on-call roster
- Increase promotion of CCLHD at registrar level (to increase word-of-mouth advertising)
Inadvertent Peri-operative Hypothermia (IPH) is recognised as a common but unwelcome accompaniment to surgery and anaesthesia.

IPH is associated causally with a number of adverse events, including increased mortality, greater blood loss, wound infections, cardiac events, pressure sores and a longer stay in Recovery and Hospital. It may also cause patient discomfort and dissatisfaction.

During the Peri-operative period, patients are susceptible to heat loss at multiple stages in their journey, but most particularly in the first 60 minutes after the induction of anaesthesia.

The maintenance of Normothermia is the aim for all routine surgery and endoscopy patients in the Peri-operative period. Hypothermia is defined as a patient core temperature of below 36.0 Celsius.

### Problem/Background
Inadvertent Peri-operative Hypothermia (IPH) is recognised as a common but unwelcome accompaniment to surgery and anaesthesia.

### Aim
By June 2016, to reduce the incidence of Inadvertent Peri-operative Hypothermia (IPH) by 20% in elective theatre patients at Blue Mountains ANZAC Memorial Hospital to below 5%.

### The Problem Identified
A Quality Assurance Project in May 2015 revealed a baseline IPH rate of 19.5%, with no significant difference in the Hypothermia incidence between Endoscopy patients and Operative patients. A strong predictor of IPH was found to be a low temperature on admission to the Day Unit.

An initial bundle of 7 interventions aimed at keeping patients warm was formulated in July 2015 to try and reduce the Hypothermia rate, and we re-audited after 3 months, in November 2015.

#### 7 Agreed Interventions
Following on from the April 2015 Audit, a meeting of interested Blue Mountains Theatre Staff in July 2015 considered all these possible solutions and agreed on the following bundle of interventions:
- Ensure patient thermometers are accurate and regularly calibrated (many staff were sceptical that 26% of our theatre patients became Hypothermic).
- Improve the theatre list scheduling: with more realistic operation timings and more appropriate staggered patient arrival times.
- Improve the information sent to theatres, with specific mention of the importance of maintaining a warm operating environment.
- Educate Staff in the importance of recording Temps & avoiding Hypothermia.
- Routinely issue cotton blankets in the Day Unit to waiting patients.
- Purchase and thermometers for use in Day Unit, Anaesthetic, Day, Medical and Theatre areas. Maintain the theatre room temperature at 18-19°C.
- In theatre, encourage more frequent usage of:- Warm Air Blankets (‘Warm Huggers’) for Endoscopy cases, and Cotton blankets for Endoscopy cases.

### Diagnosis of the Problem
Our bundle of 7 interventions after July 2015 had failed to make any impact at all, so clearly many of our earlier assumptions had been incorrect. The Stop The Drop project was created and the Project Team formed. Our initial meeting created Flow Charts and brainstormed 38 potential interventions to combat Inadvertent Peri-operative Hypothermia.

Unexpectedly, the November audit revealed that instead of reducing the incidence of Hypothermia as expected, the IPH rate had now increased to 32% for Operative cases and 40% for Endoscopies.

### Diagnosis of the Problem (cont)
An Ishikawa diagram was created and after multi-voting and weighted voting, a Pareto Chart was constructed of the team’s top eight proposals to reduce Inadvertent Peri-operative Hypothermia. An Impact Matrix Chart was later constructed and helped us to prioritise the proposed interventions.

#### Warming Mattresses and IV Fluid Warmers
We deferred pending further investigation, but the other six interventions were instituted as the brainstorm bundle in what became recurring PDSA cycles.

### Changes made
A repeat audit in Feb 2016 revealed no benefit of the brainstorm bundle, with IPH rates 34% for Operative cases and 43% for Endoscopy cases. In the next PDSA cycles we decided to trial theatre Inditherm Warming Mattresses (IWM) for the Operative cases and Heated Pad EasyWarm Blankets (EWBs) on theatre trolleys for the Endoscopy cases.

#### Team Proposals to minimise peri-operative Hypothermia
- IWM: Operative Mar'16 IPH rate 13% (3 cotton blankets) Endoscopy May '16 IPH rate 61% (3 cotton blankets)
- EWBs: Endoscopy Apr'16 IPH rate 27% (3 cotton blankets) Endoscopy May '16 IPH rate 30% (3 cotton blankets)
- Warming Mattresses and IV Fluid Warmers were deferred pending further investigation, but the other six interventions were instituted as the brainstorm bundle in what became recurring PDSA cycles.

### Results
It is clear that Active Warmers which generate heat rather than passive interventions which just lessen heat loss are the only effective interventions.

The final audit of the project, to prove the effectiveness of both the new interventions was carried out in late June 2016. The EasyWarm Blankets (EWBs) were used on all Endoscopy patients. The EWBs were opened in the Day Unit on admission and kept on the patient throughout. It became recognised that accurate positioning of the EWBs during the Endoscopy was essential. The EWBs were also used on the Operative patients who had an admission temperature of less than 36.3°C. The Inditherm Warming Mattresses (IWM) remained on the operating table and were used for all Operative cases whenever possible. It was realised that the longer duration cases gained benefit from using both IWM and Warm Air Blanket.

Presumably due to extra care, the final IPH rate has been reduced to 12% for the Operative cases and 20% for the Endoscopy cases. Both are still short of our 5% target, but further gains should be secured from these devices becoming established practice, and more may ensue from instituting the routine use of IV fluid warmer devices.

Using the data from all the audit cycles permits us to display pre- and post-data for both interventions.

### Plans to sustain change
We will write a Standard of Care for Peri-operative temperature management which will incorporate the advances made in this project. Ongoing audit & presentation of IPH rate will be undertaken every few months to confirm results are maintained and to allow further fine-tuning. Continuing in-service training will be required to maintain standards and to educate new staff. We will place posters to remind staff to measure patient temperatures regularly and not just to “Keep your Patient Warm” but to “Warm Your Patient.”

### Plans to spread / share change
Presentations to Theatres and Anaesthetic meetings at other hospitals in the LHD.
Submission to the ACI Innovation Exchange. Submission for the NBMLHD Quality Awards.

### Team Members
David Campbell, Louise Mackie, Julie Walker, Rachel Summerill, Cindy O’Brien, Kate Tuckey, Lisa Crosland, Angela Murray

### Contact Details
Dr David Campbell, Theatres BMDAMH, Katoomba davidcampbell95@gmail.com
Background

Wollongong ED
- Emergency Specialist deficits compared with peer hospitals
- High numbers of JMO’s + locums without adequate senior supervision

Shoalhaven ED
- Emergency Specialist deficits compared with peer hospitals
- High numbers of locums without adequate supervision
- No JMO rotation

Shellharbour ED
- No Emergency Specialists
- High numbers of locums without adequate supervision
- No JMO rotation

ISLHD
- High proportion of locums in ED workforce;
  - 22% of TWHED workforce
  - 52% of SDMH
  - 65% of SHHED
- High locum costs across the ISLHD;
  - $8 million 2013-14
- High quality costs across the ISLHD related to insufficient senior supervision;
  - RCA's
  - HCCC complaints
  - Coroners reports
- Executive direction to develop Senior Assessment and Streaming model in all ISLHD ED’s

Aim Statement

To improve medical staffing in ISLHD Emergency departments within 24 months

Stretch Goal for Phase 1 of Project

To improve ISLHD ED Specialist Medical staffing by 25% within 12 months

Problems identified
- Differing opinions on networking
  - insufficient peer comparisons at all ED’s
  - hub vs spoke
  - familiarity vs distance
- Recruitment issues
  - Specialist
  - JMO
  - overreliance on locums
- Rostering issues
  - inconsistent gaps on rosters
  - no on-call JMO cover

Results

<table>
<thead>
<tr>
<th>ISLHD Emergency</th>
<th>July 2015 FTE (Baseline)</th>
<th>July 2016 FTE (Intervention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH Specialist FTE</td>
<td>10.375</td>
<td>12.9</td>
</tr>
<tr>
<td>NH Locum/IMMO FTE</td>
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<td>0</td>
</tr>
<tr>
<td>SH Specialist FTE</td>
<td>0.25</td>
<td>2.25</td>
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<tr>
<td>SH Locum/IMMO FTE</td>
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</tr>
<tr>
<td>SHHED Locum/IMMO FTE</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>15.625</td>
<td>20.15</td>
</tr>
</tbody>
</table>

Outcome

After 12 months the actual FTE of ISLHD Emergency Specialists increased by 28%, therefore surpassing our stretch goal

$ Cost saving
- Costings to demonstrate efficiency to follow
- Decrease in locum / zero hours VMO cover
- Decrease in locum JMO cover

Strategies to Strengthen the Workforce

Phase 1 (ongoing)
- ED specialist recruitment to agreed funded levels

Phase 2
- JMO re-distribution to promote growth up to trainee level;
  - 3FTE to SDMHED
  - HETI accreditation for SHHED & 2FTE
- Roster revamp to minimise locum usage;
  - Internal cover of shifts
  - Working without cover is workload allows

Phase 3
- Registrar accreditation at all sites to allow networked appointments

Plans for Dissemination

- Submitted phase 1 of the CPI project to the ACI Innovation Exchange
- Complete phase 2 (JMO re-distribution)
- Complete phase 3 (Network Recruitment of Emergency Trainees)
- Presentation to CEC / ISLHD Executive

Team members

Project Team
ISLHD Clinical Leadership Group
Dr S Ayers / Dr R Pryor – Director(s) Wollongong ED
Dr Peter Smith – Director Shellharbour ED
Dr Jacqui Irvine – Director Shoalhaven ED
ISLHD Staff Specialist Group
Dr Michael Davis / Shanyn King
- Co-directors ISLHD Critical Care Division
Suzanne Lide / Orinda Jones
- Co-director(s) ISLHD Emergency Medicine

Thomas.Carrigan@health.nsw.gov.au
29/06/2016

A Clinical Practice Improvement Project
NSW Health is extending public dental services to Aboriginal people at La Perouse.

The Aboriginal Medical Service (AMS) Redfern has a four chair dental clinic that has been providing dental care to Aboriginal people continuously since 1975.

In 2011, a two chair Aboriginal Dental Clinic – Dalarinji - was established with additional two chair support from the Community Oral Health Clinic at Sydney Dental Hospital (SDH). These four clinical teams formed the Hub and Spoke Aboriginal Oral Health Project.

In October 2015, South Eastern Sydney Local Health District (SESLHD) opened a two chair Dental Clinic at Sydney Dental Hospital (SDH). These chair support from the Community Oral Health Service including AMS Redfern, SLHD and SESLHD, is committed to improving coordination and integration of services for Aboriginal people.

The Sydney Metropolitan Local Aboriginal Health Partnership, an alliance of health services including AMS Redfern, SLHD and SESLHD, is committed to improving coordination and integration of services for Aboriginal people.

**References**


**Aim Statement**

Within 8 months, to reduce the length of time that patients wait for dental care at AMS Redfern by 30%.

**Problem identified**

Demand for dental treatment has outstripped capacity at AMS Redfern for the past two decades with clients waiting on average nine months for routine dental care.

Waiting times at the SDH Dalarinji dental clinic and the newly established La Perouse Aboriginal dental clinic are significantly shorter.

The three dental clinics service the same population.

**Outcome**

In the absence of comparative data we cannot definitively state that the project has met its goal. The type of change we seek requires a long term, strategic and process-driven approach. It also needs time to be understood and managed in a way that allows the people involved to cope effectively with it.

One important outcome for SESLHD is a marked increase in access to dental services for Aboriginal people since La Perouse Dental Clinic opened.

**Diagnosis of the problem**

[Diagram showing waiting times and demand]

**Changes made**

- Planning meetings were held with key stakeholders and consumers
- Communication channels were enhanced between the three services
- Policies and procedures were shared
- Flow chart and business rules governing patient flow were developed

**Results**

- Pre and post data on waiting times at AMS Redfern could not be accessed due to transitioning to a new information system mid-project.
- Waiting time for general dental care at AMS Redfern remains static at around six months.
- A new partnership with the Poche Centre, USyd has created an exciting opportunity to improve Aboriginal oral health and prevent obesity
- NSW Health is extending public dental eligibility to ALL Aboriginal adults, not just Centrelink card holders

**Plans to sustain change**

1. Continue face to face meetings to discuss issues and solutions
2. Focus on transparency and resource sharing between services
3. Measure changes/improvements in waiting times at AMS once the replacement Information System is well established

**Plans to spread /share change**

1. Plan for a collaborative community promotion at the Koori Knockout
2. Implement the Poche Centre / Centre for Oral Health Strategy/ NBMLHD designed *Dalang Project* and share learnings with Rural NSW AMS pilot sites.
3. Continue to provide employment opportunities for Aboriginal people

**Team members**

Guidance Team: LaVerne Bellar, A/Prof Sameer Bhole, Margaret Broadbent, Maria Jessing

Project Team: Karen Silva, Kim Mafi, Dr Kim Horneman, Kristie-Lee Smith, Mary Raptis, Claire Phelan

Project Sponsor: Dr Greg Stewart

**Contact Details**

Claire Phelan, Director Oral Health SESLHD

Date: 29 June 2016

A Clinical Practice Improvement Project
Background:
The Nursing and Midwifery Directorate within Southern NSW Local Health District identified as a result of participating in incident management reviews that there was a lack of systems and governance around the skills nursing and midwifery staff required for the specific role that they were undertaking and their knowledge of professional responsibilities associated with supervision and delegation.

Aim:
All Nurses and Midwives in SNSWLHD will understand the professional obligations of their registration associated with delegation supervision and escalation and skills required to support the safe and effective delivery of patient care.

Problem Identified:
The analysis of findings from a number of LHD’s root cause analysis’s and clinical reviews within the LHD continually identified skills deficits of nursing and midwifery staff and the failure for nursing and midwifery staff to escalate care of a deteriorating patient whilst working in a team.

Staff were not committed to the skill development required to undertake the role that they were employed to undertake. Position descriptions did not reflect the minimum skill set required to safely undertake the role that they were employed into.

Changes made
• Procedure that articulates the requirements of recruiting Nurses and Midwives within the LHD
• Standardised skill requirements for Nurses and Midwives that are recruited into new positions.
• Support provided to NUM’s and NM in the recruitment of Nurses and Midwives
• Nurses and Midwives are aware of their professional responsibilities associated with Delegation and Supervision.

Results
Cost:
• Time
• Release of staff to participate in training

Consumer satisfaction:
• Nurses and Midwives that feel confident in how they work as a team.

Complications:
• Time required to facilitate the training, given Nursing and Midwifery Staff are the largest group of staff in the LHD.

Plans to sustain change
• The project team will continue meeting to monitor progress
• Process is in place for continued discussion with the NAMO to review processes
• Continued work between Nursing and Midwifery directorate committed to continue program

Plans to spread/share change
• Exec sponsor to spread the improvements to other areas in LHD
• Much of the work undertaken by this group can be easily transferred
• Processes that have changed have positively impacted on the larger LHD.

Team members:
Ms Cherie Puckett, Nurse Manager
Judy Ryall - Director of Nursing and Midwifery – Goulburn
Sue Loader - NUM Medical Goulburn
Andy Wilson – ONE ICU Goulburn
Tracey Simons – ONE ED Goulburn
Anna Tuer – NUM ED Goulburn
Helen Caddey – CNE Goulburn
Peter Leech – NUM ICU Goulburn
Tracey Sampson – NUM Renal Goulburn
William Doubly – CNE Perioperative Goulburn
Deborah Hay – NUM Perioperative Goulburn
Ferry Selio – NUM Surgical Goulburn
Larrisa Manning – NUM Sub Acute Goulburn
Liz Simpson – MUM Goulburn

Contact Details
Cherie Puckett, Nurse Manager Leadership and Development 0417 051 553
Voluntary simplification: Improving the diagnosis of complex disease

Dr Carolyn M Sue, Director of Neurogenetics, Royal North Shore Hospital, University of Sydney

Background
Genetic testing for many inheritable conditions is not often performed in Australia. This is because diagnostic testing is not freely available or accessible and there is limited expertise in the application of such testing. A good exemplar is mitochondrial disease, the most common form of inherited metabolic disease. There are hundreds of gene mutations that cause mitochondrial disease and individuals with causative genetic mutations may have highly variable clinical presentations that may masquerade as other disease states. This phenotypic diversity and lack of diagnostic testing makes the diagnosis of mitochondrial disease difficult.

Patients with mitochondrial disease have protean symptoms and signs. They often see multiple doctors and bounce from one health service to the next in their attempts to obtain an accurate diagnosis. They may undergo multiple tests and sometimes invasive investigations, such as muscle or liver biopsy. Specialised clinics with the necessary expertise are rare and under resourced to meet clinical demand. This means many patients with mitochondrial disease remain undiagnosed or misdiagnosed and fail to access appropriate expertise or diagnostic genetic testing.

Patients with mitochondrial disease and a confirmed genetic diagnosis are best managed with early treatment, informed genetic counselling for family planning and access to effective specialised IVF techniques, such as prenatal genetic diagnosis or mitochondrial donation therapy, and are eligible for disease-specific treatment or clinical trials. For those that do not have a confirmed diagnosis, patients are denied appropriate treatments and may also be administered medications that may be harmful to their disease.

Aim Statement
To improve the diagnosis of mitochondrial disease by using next generation sequencing to increase the number of patients identified with causative genetic mutations by 50% within 12 months

Problem identified
Most patients with complex genetic diseases such as mitochondrial disease take years to establish their diagnosis. This is because the ‘gold standard’ method of diagnosis is by muscle biopsy- an invasive procedure that is not undertaken lightly. Alternatively, genetic testing can be diagnostic, but to date, has been expensive and limited to analysis of only a few causative genes.

Diagnosis of the problem
To determine the reasons why patients suspected to have mitochondrial disease were not undergoing genetic testing, doctors were interviewed to determine the difficulties in diagnosing or even recognising patients with mitochondrial disease. Responses are illustrated in Figure 1.

Changes made
Given that many doctors perceived the diagnosis as beyond their expertise and that there was no simple diagnostic test available to diagnose mitochondrial disease, we set out to simplify the diagnosis. We performed next-generation sequencing to identify genetic mutations in both the mitochondrial DNA (mtDNA) and nuclear DNA, given that mutations in either genome have been reported to cause mitochondrial disease.

Results
We performed genetic sequencing on 200 patients with mitochondrial disease using new next generation sequencing (NGS) protocols. We identified causative genetic mutations in 104 patients in the first analytic review. Using genetic testing that was available before the introduction of NGS, 70/200 patients had causative genetic mutations identified. Using NGS protocols, 70 patients had mtDNA mutations identified and 34 had causative nDNA mutations found. Improvements in the diagnostic process is illustrated in Figure 2.

Results (cont)
We surveyed the patients to determine what benefits they achieved from having their diagnosis confirmed by genetic testing (n=25, see Figure 3).

Figure 1: Parieto chart of perceived difficulties in diagnosing patients with mitochondrial disease.

Figure 3: Reported benefits of genetic diagnosis in mitochondrial disease patients

Outcome: Causative genetic mutations were identified in over 50% of patients with mitochondrial disease within the first 12 months. Further analysis on the NGS data is planned to increase the diagnostic yield further.

Plans to sustain change
1. Participate in a ‘gate-keeping’ process for diagnostic testing (document costs of genetic testing)
2. Clinical staff have commenced training in bioinformatic analysis
3. Collaborating with researchers to improve genotype-phenotype correlation process
4. Engaging medical students in training process

Plans to spread / share change
1. We are undertaking a health economics analysis to determine whether NGS testing is faster and more cost effective to previous methods of diagnosis
2. We will presented our findings at an international conference in November 2016
3. We plan to publish our final genetic analysis in a clinical journal

Team members
Guidance Team
Marcel Dinger
Mark Cowley

Project Team
Ryan Davis
Kishore Kumar
Christina Liang
Kate Ahmad
Fabienne Edema Hildebrand
Karen Crawley (Consumer)

Contact Details
Professor Carolyn Sue, Department of Neurogenetics, Kolling Institute, Royal North Shore Hospital: Email: carolyn.sue@sydney.edu.au

Figure 2: Number of mutations identified in our cohort before and after NGS was performed.

A Clinical Practice Improvement Project
Using Resources Wisely- Improving Quality of Service in the Pre admission Clinic

Background

1) More than 60% of patients who visit preadmission clinic are ASA 1 and 2, of these around 60% patients are for endoscopic procedures.

2) There is no need for these patients to spend a whole day in the clinic to be seen by a doctor, a nurse, get ECG and bloods taken. This is clearly a waste of resource and time taken can be used to see more needy patients.

3) Healthy patients feel that it is unnecessary for them to come to PAC.

4) Loss of revenue from healthy patients coming to PAC ($400-500 per patient)

Who wanted to solve it apart from you?

• HOD of Anaesthetics,
• NUM of PAC, PAC doctor
• Anaesthetic colleagues
• Patients
• Surgeons

The above mentioned issue is clearly a waste of resource according to all of them.

National Standard or Strategic Imperative is the project aligned?

ANZCA Guidelines

The use of written or computer-generated questionnaires, screening assessments, documented telephone consultations by medical or nursing staff as part of a pre-admission process may be used

Aim Statement:

To decrease the number of healthy patients coming through the pre admission clinic for endoscopy procedures by 100% in a year."

Results

Plans to sustain change

Repeat Quarterly PDSA cycle

Audit ASA 1 and ASA 2 patients
Meetings with the team to review the program
Clinical Screener to publish a success story
Describe roles and responsibilities with the new process change
Surgeons expected to fill in the RFA forms in view with reviewing the results
Clinical Screener to screen patients coming to PAC
Awareness on impact to patient care and savings to the hospital

Plans to spread /share change

The project focuses on endoscopy but can be easily extended to other specialities
This project can be highlighted across the departments and hospitals to focus on use of resources wisely and avoid waste or over utilization
Improved PAC services
Small changes- Big savings
Reduces overhead on patients (avoid multiple visits and multiple investigations)
World class patient care
Awareness about the cost and savings. Eg: unwanted investigations.

Team members

Guidance Team
Helen Currow (HOD Anaesthetics)

Project Team
Anaesthetic- Bryne John
NUM of PAC - Veneshka Contreras
PAC doctor- Dane Lohan, Erica Sanderson
Screening Nurse- Belinda Edinborough

Contact Details – Dr Bryne John
Date 29-05-16

A Clinical Practice Improvement Project

Outcome:

Cost savings - $12000/month
Patient Satisfaction
Wise use of resources
Background

1) More than 60% of patients who visit preadmission clinic are ASA 1 and 2, of these around 60% patients are for endoscopic procedures.

2) There is no need for these patients to spend a whole day in the clinic to be seen by a doctor, a nurse, get ECG and bloods taken. This is clearly a waste of resource and time taken can be used to see more needy patients.

3) Healthy patients feel that it is unnecessary for them to come to PAC.

4) Loss of revenue from healthy patients coming to PAC ($400-500 per patient)

Who wanted to solve it apart from you?

- HOD of Anaesthetics,
- NUM of PAC, PAC doctor
- Anaesthetic colleagues
- Patients
- Surgeons

The above mentioned issue is clearly a waste of resource according to all of them.

National Standard or Strategic Imperative is the project aligned?

ANZCA Guidelines

The use of written or computer-generated questionnaires, screening assessments, documented telephone consultations by medical or nursing staff as part of a pre-admission process may be used

Aim Statement:

To decrease the number of healthy patients coming through the preadmission clinic for endoscopy procedures by 100% in a year.

Results (cont)

Outcome:

- Cost savings - > $12000/month
- Patient Satisfaction
- Wise use of resources

Plans to sustain change

Repeat Quarterly PDSA cycle
Audit ASA 1 and ASA 2 patients
Meetings with the team to review the program
Clinical Screener to publish a success story
Describe roles and responsibilities with the new process change
Surgeons expected to fill in the RFA forms in view with reviewing the results
Clinical Screener to screen patients coming to PAC
AWARENESS ON IMPACT TO PATIENT CARE AND SAVINGS TO THE HOSPITAL

Plans to spread / share change

The project focuses on endoscopy but can be easily extended to other specialties
This project can be highlighted across the departments and hospitals to focus on use of resources wisely and avoid waste or over utilization
Improved PAC services
Small changes - Big savings
Reduces overhead on patients (avoid multiple visits and multiple investigations)
World class patient care
Awareness about the cost and savings. Eg: unwanted investigations.

Team members

Guidance Team
Helen Currow (HOD Anaesthetics)

Project Team
Anaesthetist - Bryne John
NUM of PAC - Veneshka Contreras
PAC doctor - Dane Lohan, Erica Sanderson
Screening Nurse - Belinda Edinborough

Contact Details – Dr Bryne John
Date 29-05-16
Background
Syphilis testing is a mandatory test that is performed at each donation. Standardized testing and reporting algorithms are linked via fixed pathways to specific donor and product outcomes. Results are entered into National Blood Management System (NBMS). This automatically assigns to a donor a status that is difficult to change.

Donors with negative treponemal screening tests are cleared for donation. Samples with a positive screening tests are further evaluated with a local non-treponemal test and referral to an External Reference Laboratory (ERL) for additional tests (legal requirement). The pattern of the results is then classified as negative, positive or inconclusive/atypical. Donors with discrepant results between the different tests have further samples collected for clarification. Depending on these results, donors may be temporarily or permanently deferred and referred to their GP for further management. Donors with repeatedly inconclusive results are contacted by Medical Officers (MOs) to obtain a history of any potential risk factors and for counselling.

Repeat testing and the possibility of having syphilis can be distressing to donors and can influence their decision to donate again. Strict pre-donation questionnaire screening criteria reduces the likelihood of donors being infected with STDS so that the majority of reactive syphilis tests are false positive.

Aim Statement
Reduce the number of atypical results by 50% over 6 months
Reduce donor deferrals by 20%
Reduce the number of results requiring review by MOs

Problem identified
Centralisation of ERL testing has resulted in an unexpected spike in inconclusive results.

Until 2014 each state performed screening on site and sent reactive samples to their state ERL. Testing algorithms were not uniform amongst ERLs. Since 2014, all screen positive samples are referred to single ERL. This laboratory uses an algorithm that results in a higher number of inconclusive results. MOs in each State are involved in result interpretation and donor counselling. Current management of donors with atypical results leads to donor deferral and product discard. To address this problem the MO can change the donor’s status to allow for future plasma donation. This process is not standardized and some MOs are uncomfortable with interpreting results.

Changes made
1. Problematic atypical syphilis results are now discussed at Infectious Diseases committee meetings
2. Most atypical results are discussed with microbiologist
3. RPR testing on site has been withdrawn for regulatory reasons resulting in additional donor deferrals, however it potentially will reduce some of the discrepant results
4. Syphilis testing Standard Operating procedure (SOP) has been updated
5. Evaluation of testing panels of NSW reference laboratories has been completed
6. Potential new ERL and its testing panel has been selected in principle and will be approached shortly
7. Pilot study of syphilis testing on new platform (Abbott Architect) has been design and is awaiting Ethics Committee approval
8. Decision to withdraw syphilis testing on donations for CSL plasma – not legally required

Results & Actions
• Obtain data to confirm impression of MOs of an increase in atypical results
• Acknowledge that atypical results are challenging to manage and are best discussed with Medical Microbiologist and at Infectious Disease meetings
• Clarification of atypical result patterns
• Selection of pattern(s) that allow plasma donation by donors with recurrent atypical results (BFR status)
• Increase MOs confidence in dealing with atypical syphilis results
• Review of testing process lead to identification of redundant testing of samples for non clinical plasma. This plasma undergoes pathogen inactivation at CSL and syphilis testing is not mandated by legislation

Still pending
• Change of ERL provider
• Completion of Architect testing project
• Final revision of testing algorithm
• Monitoring statistics and outcomes

Plans to sustain change
1. Standardisation of procedures (SOP) for syphilis testing and counseling
2. Documentation of revised SOP as a controlled document
3. Measurement of statistical parameters of process (number of tests, atypical results, BFR donors)
4. Training of all relevant staff on new procedures

Plans to spread /share change
All the introduced and pending changes are nationwide. They should result in organisation wide benefits.

Team members
Guidance Team
Dr A. Keller: National Donor & Product Safety Specialist. Oversight of the project
Ms S. Ismay: Scientific Director, Manufacturing division. Co-ordinate and approve pilot study
Dr B. Bell: National Medical Services Manager co-ordinate work with Medical Officers

Project Team
Dr Z. Perkowska: Medical Microbiologist
Ms T. Powel: Scientific Officer
Dr A. Allen: Medical Officer
Dr C. Seed: Senior Blood Safety Analyst

Infectious Disease Committee
Manufacturing Change Plan Team

Contact details
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Background
- Late referral to renal services (not just physician review) is associated with:
  - Increased mortality, morbidity, hospital length of stay (~7 days), use of temporary vascular access catheters.
  - Decreased uptake of home dialysis therapies +/- renal supportive care.
- Not all patients receive formal education prior to commencement of dialysis therapies.
- ~20% of patients across Australia present to a nephrologist less than 3 months prior to commencement of dialysis — many of these are known to other doctors prior to this time.
- Beyond the physical and mental risk to the patient, hospital costs are increased in the pre- and post-commencement period, and persist (Home costs $30,000/year less facility + transport).

Aim Statement
To decrease the number of avoidable late-referred patients to dialysis therapies in the Sydney Local Health District by 50% in the next 2 years

National Standard or Strategic Imperative is the project aligned?
- Caring for Australasians with Renal Impairment (CARI) Guidelines
- Use of personalised education

Agency for Clinical Innovation
- Home First Pre-Dialysis Model
- SLHD Redesign Project — to increase uptake of home therapies to 50% in next 4 years, in line with NSW Health targets.

Literature review
- Smart NA et al. Cochrane Database of Systematic Reviews. 6:CD007333, 2014.

Problem identified
That patients are not referred to CKD/Dialysis Education Services in Line with Suggested Guidelines
- Potential Negative Effects for Patients (morbidity and mortality) as Well as Hospital Services (increased use of)

Changes made
- Monthly CKD Meeting
- Attended by Nephrologists, CKD CNCs, Dietician, Social Worker
- Increased use of Renal eMR, and automated reporting
- Monthly reporting of KPIs
- Patient Registration eGFR < 30ml/min
- CKD Education and Support by eGFR 20ml/min
- Pre-Dialysis Education and Planning by eGFR 15ml/min
- Reports
- Departmental
- Individual Nephrologists Own Results Compared to Department
- Advertising
- Direct Contact all Potential Referring Nephrologists in Catchment Area
- Patient / Doctor Flyer

Plans to sustain change
1. Standardisation of Patient Education
2. Documentation within the Renal Database of Patient Flow
3. Measurement of KPIs
4. Training of all Staff in the Services

Results
From 2012-2015, 19.9% of patients were found to be "late-referred", in line with ANZDATA registry results.

Outcome
Apparent improvement, but requires further analysis, especially of acute presenters. Numbers of "missing" patients remains unknown

$ Cost saving
Potential Saving of ~7 extra hospital days per non-permanent access patient

To be shared
Enter into local / LHD Quality Award
Present at a Conference – ANZSN, RSA

Plans to spread /share change
Submitted to the ACl Innovation Exchange
Planned:
- Done:
  Submitted to the ACI Innovation Exchange

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A Clinical Practice Improvement Project
Reducing receptive needle and syringe sharing among needle and syringe program attendees at the Kirketon Road Centre

Dr Phillip Read  Acting Director- Kirketon Road Centre

Background

- Provision of sterile needle and syringes is cost effective evidence-based harm reduction strategy that has averted >25,000 cases of HIV and >90,000 cases of hepatitis C
- 13m needles are distributed each year in NSW
- Almost all people who inject drugs would use a fresh needle given the option
- Despite this, NSP surveys show 16% of attendees report receptive syringe sharing (RSS) within the last month (21% at KRC)
- Hepatitis C incidence among PWID is 5-8% per year, and the main risk factor for this is receptive syringe sharing
- Kirketon Road Centre has responsibility for NSP services in the South Eastern Sydney Local Health District

Alignment with NSW Strategies

New South Wales

- HIV Strategy 2016-20
- Hepatitis C strategy 2014-20
- Hepatitis B strategy 2014-20

All have a reduction of RSS by 25% as a goal

Literature review


Aim Statement

To reduce the proportion of clients reporting receptive needle or syringe sharing (RSS) by 25% by July 2016

Flow diagram

PDSA Cycle 1: Initial data collection poor

Plan
- New method needed
- Act
- Reduce stigma and discrimination program for what to do in prison
- Education about sharing risks

Do
- Work with peers
- New project manager to lead
- New coordinator to manage
- New worker to implement

Study
- Mindfulness training of clients

Act
- Expand opening hours and options
- Increase range of equipment
- Specific groups for women/lounges and Aboriginal clients

Impact matrix

Outcome: Data now reliable, but interventions not yet assessed

Plans to sustain change

- Tablet based RSS data collection
- RSS change interventions planned:
  - Team working with peers to develop new equipment packs
  - Applications in process for new secondary and vending machines
  - MOU developed with NSW Users and AIDS Association to enhance role of peers in organisation and joint workshops started
  - Aboriginal program in development

Plans to spread /share change

Develop application and tablet based RSS collection that would be transferable outside the local setting to other NSW NSPs

Present assessment of impact of interventions at APSAD or Harm Reduction Conference and HARP forum

Project team:

- Dr Phil Read- Project owner
- Dr Greg Stewart, Director Primary and Integrated Health
- Wendy Machin- Clinical services manager- KRC
- Dr John Kearley- Medical Unit Manager- KRC
- Rosie Gilliver- Projects Manager- KRC
- Nick Rich- NSW manager- KRC
- Brett Demkin- NSW worker- KRC South
- Gary Gahan- Harm Reduction Manager- SESLHD
- Fiona Poeder- New South Wales Users and AIDS Association
- Chris Gough- Sydney Medically Supervised Injecting Centre

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Date: July 2016
Utilisation of Blood Film Reports in Management of Inpatients in WSLHD

**Aim Statement**

Within 6 months, 90% of blood film reports for inpatients at Westmead Hospital will be accessed by a member of the clinical team within 72 hours of report being issued.

**Background**

Peripheral blood film (BF) investigation involves visual microscopic examination of blood cells smeared on a slide.

BF is invaluable in the characterisation of various haematological and non-haematological diseases. BF examinations are usually “reflex-ordered” according to a set of rules triggered by an abnormality in the full blood count (FBC) or in response to “flags” produced by an automated instrument. Clinician-initiated requests for a BF are relatively infrequent.

All manual BF reviews are initially performed by laboratory scientists, and their comments are appended to the leukocyte differential count for FBC reports in the LIS under the heading ‘Film Comment’. A proportion of BF with certain abnormal findings are escalated to the specialist haematologist trainees or consultant haematologist for a secondary review. A second comment separate to that by the scientist is then appended to the FBC result under the heading ‘Haem Consultat’. These headings need to be double-clicked to reveal the full comment.

**Problem identified**

BF examination is a well-established and widely performed test. However, clinical utility of BF reviews and utilisation of BF reports is not well researched.

Local anecdotal evidence for underutilisation of BF reports due to lack of test ownership (being reflex-ordered) and awareness.

Survey of clinical staff perceptions in 2009 suggested < 20% of BF reports accessed and seen by clinical teams. However, the majority of respondents found BF reports clinically useful.

Potential consequences of delayed access or failure to access information in BF reports:

- Delayed or incorrect diagnosis
- Unnecessary and/or repeat testing
- Increased length of stay

**Changes made**

Changes to charting to provide visual cues:

- New heading ‘Blood Film Examination’
- New terminology and colour coding according to severity

**Results**

Outcome measurements:

- Staff survey (self-reported access rate and perceived clinical utility)
- Pre-intervention
- Post-intervention (pending)
- Objective measurement of rate of access
- More problematic to perform
- No automated reporting tools in PowerChart

- Retrospective audit of discharge (d/c) summaries (before/after change)
- Proportion of d/c summaries mentioning BF findings
- Any evidence of impact on clinical care

**Plans to sustain & share change**

- Changes to charting implemented across Pathology West
- Policy and procedure documents developed and distributed

**Team members**

**Guidance Team**

Elizabeth Tegg (Director Haematology)
Juliana Iles-Mann (ICT Manager)

**Project Team**

Leonardo Pasalic (project leader)
John Giannoutsos (haematologist)
Elizabeth Tegg (haematologist)
Vio Ule (ICT haematology application specialist)
Susan Oliver (hospital scientist)
Advanced Trainees in Haematology

**Contact Details**

Dr Leonardo Pasalic, FRACP, FRCPA
Haematologist and Haematopathologist
Westmead Hospital | ICPMR, Pathology West
Tel 02 9845 6352 | Mob 042 894 0851

Pasalic, L., Tegg, E., Giannoutsos, I., Oliver, S., Ule, V.
Introduction
Clinical Emergency Response Systems (CERS) refers to a health service/facility’s response to a deteriorating patient within its care.

CERS are developed and tailored to the health service/facility’s needs and resources.

In August 2015, St Vincent’s Hospital Clinical Emergency Response Committee (CERC) raised the concern about the increase in clinical review calls for patients admitted from the Emergency Department to the wards.

In 2015 an RCA at SVH recommended to improve medical communication for patients admitted to the wards.

Aim
This project aims to identify and resolve issues in the patient transfer process leading to improved patient safety and avoid preventable clinical deterioration.

Stretch Goal
Within 1 year, decrease by 20% deterioration in patients transferred from the ED to the wards.

Issues identified
- Improve communication / Medical handover
- Improve Medical cover on wards
- Improve medical notes / implement electronic medical records
- Improve ED overcrowding / Bed block
- Improve time pressure / ETP

Changes made
We chose a specific, measurable, aspirational, realistic, and time measurable solution. A new Medical Handover Policy for admitted patients was prepared and implemented in January 2016.

Results
- Policy compliance reached 90% in July 2016.
- Impact on ward patients clinical deterioration will be evaluated from August 2016.

Sustaining improvement
- The Medical Handover Policy has become standard of practice at SVH.
- The Policy will be reviewed in January 2017. At that time, a new Surgical Handover Policy will be implemented.
- This Policy education is now part of the JMO and Trainee mandatory trainings.

National Standard
- ACEM guideline on clinical handover in the Emergency Department.
- AMA guidance on clinical handover for clinicians.
- CEC IN Safe Hands program.
- NSW Health Clinical Handover.

Team
Project Sponsor / Guidance Team Members
Professor Gordian Fulde. Emergency Medicine Director.
A. Professor Paul Preisz. Emergency Medicine Deputy Director
Dr. Heidi Boss. Director of Clinical Governance.
Dr. Brett Gardiner. Ex Director of Clinical Governance.
Ana Paula Ruiz Ochoa. Consumer (Patient).

Acknowledgements
To the Doctors and Nurses at SVH Emergency Department.
To the Medical Administration Department and Basic Physician Trainees at SVH.
Improving Access and Prompt Admission to John Hunter Emergency Short Stay Unit

Fiona Downes MB ChB FACEM
Staff Specialist

Background
The purpose of an Emergency Short Stay Unit (ESSU) is to facilitate access to Emergency Department beds, reducing ED overcrowding, improve the patient experience and improve ED disposition and planning.

• The advantage of the short stay observation unit is supported in medical literature with
• Short stay patients with chest pain having reduced length of stay compared to inpatient wards
• Improved ED efficiency, with patients requiring prolonged observation being admitted to short stay observation unit rather than staying in ED.
• Improved ambulance off stretcher time and emergency treatment performance (ETP)
• Reduced LOS for target patient groups
• Reduced number of inappropriate discharges, particularly elderly patients at night
• Increased case weight for acute inpatient and ED admission
• Increased case weight for acute inpatient and ED admission
• Maximise efficient utilisation of hospital in the home services post discharge
• Improve liaison with GP

Diagnosis of the problem
The Patient Journey Through ED

Cause and Effect Diagram

Possible Solutions
• Re-inforce and educate new and existing staff on use of ESSU
• Streamline admission process from early on
• Improve rostering practices to ensure consistency of staff
• Prepare a brief for relocation of ESSU to ED

Interventions
- Direct Admission to ESSU
- Early meal times for ESSU Patients
- Consistency of Clinical Handover Times
- Improved Rostering Practices for senior nursing cover

Aim Statement
Within 1 year, 81% of patients admitted to the Emergency Short Stay Unit will do so within 4 hours of their arrival in ED

With which National Standard or Strategic Imperative is the project aligned?
- The National Emergency Access Target

Team members
Guidance Team
- Dr Michael Anscombe, Acting Director of JHH ED
- Mr David Jackson, NUM of JHH ED

Project Team
- Dr Fiona Downes, Emergency Staff Specialist and Project lead
- Mr Michael Fahy, NUM of JHH ESSU and MACU
- Ms Samantha Ness-Wilson, Acting NUM of JHH ESSU and MACU

Patient / consumer involvement
- Patients were closely involved in providing feedback via follow up telephone calls when discharged from the ESSU

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John Hunter Hospital Hunter New England Health
ECLP Cohort 15

Date
29th June 2016

A Clinical Practice Improvement Project

Results
Work in progress
Did not reach stretch goal
BUT some improvements
Increased awareness of ESSU and its role in preventing overcrowding
Discussions now actively around co-locating ESSU with ED

Strategies for Sustaining Improvement (holding the gains)
Regular meetings with key ESSU staff
Reporting of ESSU ETP at departmental M&M as well as Exec Meeting
Having ESSU added to the Electronic Briefing Board

Learnings from CLP/CPI
Too many to list all
- Challenging myself further
- 360 Feedback was invaluable
- Networking with others in CLP and CEC
- Inspired to learn more
Reducing Incidence Of Adult Presentations With Diabetic Ketoacidosis At Nepean Hospital

Associate Professor Emily Hibbert

Background:
Diabetic ketoacidosis (DKA) is a life-threatening complication of Type 1 diabetes mellitus (T1DM), with mortality <5% in experienced centres and significant morbidity (1) (2). Management of DKA is resource intensive. DKA is theoretically preventable. Predictors of DKA are higher average glucose levels measured by HbA1c (3), (4), female sex, ethnic minority group origin (4), psychiatric disorders (5) (6), low blood glucose monitoring frequency (3), gastroparesis and insulin omission (7). In children and adolescents, additional predictors are falling BMI, various markers of social deprivation, major adverse life-events, and clinic non-attendance (8).

Interventions to reduce DKA
In adults self-management education and specific psychological interventions eg CBT significantly lower HbA1c (7), (9). Blood ketone monitoring reduces hospitalization or emergency assessment by about 50% (10). Focus groups with families with youths with T1DM suggest (11) that mobile and online resources, educational DKA refreshers and DKA treatment kits for parents may prevent future episodes of DKA.

National Standard with which project is aligned?
1.8 Adopting processes to support the early identification, early intervention and appropriate management of patients at increased risk of harm.

Literature review:
See ACI website for other references.

Aim Statement:
To reduce the incidence of diabetic ketoacidosis presentations at Nepean Hospital in patients 16 years and over residing in the Nepean Blue Mountains Local Health District by 50% by the end of 2017.

Problem identified
Nepean Hospital has one of the highest incidences of DKA presentations in NSW. There were 111 presentations with DKA in 2013-2014 financial year (FY), the highest in NSW and 79 in 2014-2015 FY, second highest in NSW. The cost of treatment was $670,671 in 2013-2014 and $583,016 in 2014-2015. Fifteen hospitals in NSW in 2013-2014 had over 30 presentations with DKA per year with the remaining 51 having 30 or fewer DKA presentations.

Results
Comparison of number of DKA presentations 2015 and 2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean presentations</th>
<th>HbA1c (% elevation ≥5.5)</th>
<th>HbA1c follow %</th>
<th>% of follow</th>
<th>% of non-attendance</th>
<th>Revenue if adherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>7.2</td>
<td>12.9</td>
<td>0.8 (24/16)</td>
<td>28.9</td>
<td>22%</td>
<td>$4432</td>
</tr>
<tr>
<td>2016</td>
<td>5.9</td>
<td>12.9 (8.75)</td>
<td>3.2</td>
<td>28.9</td>
<td>30%</td>
<td>$4432</td>
</tr>
</tbody>
</table>

Outcome:
- 22% reduction in DKA presentations achieved for first 5 months of 2016 compared with first 5 months of 2015 (p = 0.05)
- Stretch goal not yet reached, but the aim is to reach the goal by the end of 2017.

$ Cost saving
Estimated saving of $171,224 based on based on NBMLHD 2015/2016 price per NWAU of $4432

Plans to sustain change
1. Standardisation – Develop and complete DKA checklist for all patients admitted with DKA, ensuring interventions are being made and contributors are being considered.
2. Documentation – Develop a policy for how we address contributors to DKA in patients who present with DKA.
3. Measurement – Collect rigorous data on adherence to policy and outcomes.
4. Training - Brief allstaff, especially diabetes educators and doctors re the above checklist and policy.

Plans to spread /share change
Done:
Submitted to the ACI Innovation Exchange
Planned:
Enter into NBMLHD Quality Award then external Quality Awards – after project completion end of 2017 or at earliest end of 2015-2016 financial year (if successful) Publish in a Journal – Diabetes and/or quality improvement journals Present at a Conference – ADS 2017/2018

Team members
Guidance Team
Mrs Debbie Wyburn - Director of Clinical Governance
Dr Bernard Champion - Head of Endocrinology Dept.
Project team members:
Patient consumer
Irene Kop - Nurse Practitioner / Diabetes Educator
Rickie Myziska - Diabetes Educator
Dr Kris Park - endocrinologist
Dr Matthew Luttrell/Dr Sharon Yeoh - Advanced Trainees in Endocrinology

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A Clinical Practice Improvement Project
Date 19.6.16
Background
Hospital in the Home (HITH) is an innovation in health care services that seeks to adopt hospital technologies and skills and apply them in a different way, at home.*

Hospital in the Home is a program that cares for patients with selected conditions such as cellulitis, pneumonia, osteomyelitis. It has a very good quality and safety profile.**

The provision of 24 hour supervision, and direct delivery of inpatient care at home is crucial for the success of the program. The main principal that the program is based on relies on delivery of care to patients outside the hospital, and that the hospital comes to the patient and not vice versa.***

In 2013, SWSLHD conducted a review of the Community Health (CH) and Ambulatory Care/HITH services. The review resulted in recommendations to bring CH and HITH closer together as a way to improve integration of care by embracing evidence based practice and engage in the 21st century model of health care delivery with emphasis on hospital avoidance.**** & *****

The integration of care between the community, primary and acute care settings is important in ensuring that care is delivered by the right provider close to home.

Aim Statement
By the end of May 2016 to reduce the total number of HITH patients who have unplanned return to the hospital with return to HITH by halve and to reduce further the rate of both:
1. Unplanned return to the hospital for any reason &
2. Unplanned return to the hospital- patients not returning to HITH

Problem identified
Unplanned return to hospital – patients returning to HITH program rate in SWSLHD was higher than the annual rate reported byACHS for 2014. The rate of HITH patients who had unplanned return to the hospital for any reason was also higher than expected. An upward trend of admissions back to the hospital of our HITH patients was identified.


Results
35/298 (11.06%) Unplanned return to hospital for any reason
21/298 (7.04%) Unplanned return without return to HITH
14/298 (4.60%) Unplanned return with return to HITH

Changes made
Conduct baseline audit
Review the old model- stand alone hospital based HITH
Awareness campaign
Education sessions
Introduction to NSW Health & SWSLHD
HITH policy statements
HITH care pathways to guide decision
HITH care co-ordination
HITH electronic clinical record

Twice weekly Multidisciplinary case conferencing
Daily GP notification of any new HITH patient’s

Conduct medical reviews at the community health centres or attend home visits

Post Practice change January- May 2016

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline</th>
<th>Post Practice change January- May 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unplanned return to hospital with return to HITH</td>
<td>6/140</td>
<td>2/280 (1.25%)</td>
</tr>
<tr>
<td>Unplanned return to hospital without return to HITH</td>
<td>3/140</td>
<td>1/280</td>
</tr>
<tr>
<td>Unplanned return with return to HITH</td>
<td>3/140</td>
<td>1/280</td>
</tr>
</tbody>
</table>

After the changes to the clinical practice were made we were able to demonstrate that the number of HITH patients who returned to the hospital without return to HITH did not change significantly (2/280 vs. 2/280), yet 95% of our patients did not require admission to the hospital and there was a modest reduction of the rate of HITH patients who returned to the hospital for any reason (35/298 vs.29/280) which translates to 6 less HITH patients returning to the hospital.

Guidance Team: A/Prof. Sellappa Prashath, Director of Medical services, Campbelltown & Camden Hospitals, SWSLHD, Executive sponsor
Scott McGrath, Chronic and Complex Care stream manager, SWSLHD
Ronie Fortunato, Head of Department of Physiotherapy, Campbelltown & Camden Hospitals, SWSLHD

Project Team: Tony Havocious, NPH Primary and Community Health, SWSLHD, Rosemary McCall, HITH CNC, Primary and Community Health, SWSLHD
Kathleen Schofield, CNC, Rosemary, Primary and Community Health, SWSLHD
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Jacqui Rojo, CNC, Rosemary Community Health, SWSLHD
Kathleen, NUM, Rosemary Community Health, SWSLHD

Dr. Cihan Yavuzeran, MBS S SL Campbelltown & Camden Hospital
Susan Pickford, NUM/MACS, Campbelltown & Camden Hospital

Contact Details: Dr. Bilyana Konstantinova, Director Macarthur Ambulatory Care Service, Campbelltown & Camden Hospitals, SWSLHD, e-mail: bilyana.konstantinova@sswahs.nsw.gov.au
Date: 28/07/2018