

Protocolising enteral feeding is effective in ensuring that patients receive appropriate and timely nutrition care.

Feeding patients better: Protocolising enteral feeding to improve nutrition care

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INTRODUCTION

- Nutrition support, including enteral nutrition delivered via tube feeding, is an important aspect of patient care
- Protocolisation of enteral feeding can:
 - reduce delays in nutrition support
 - reduce dietitian occasions of service

METHODS

1. Stakeholder engagement and implementation methods used to implement protocolised enteral feeding in the Intensive Care Unit (ICU), and on Neurosurgery, Head and Neck Cancer Surgical, Eating Disorders (medical) and Stroke wards.
2. Hospital-wide clinical audit to explore current use of protocolised enteral feeding and identify other clinical areas that may benefit.

DISCUSSION

- Sustainability of practice change remains a challenge.
- Future challenges anticipated with the upcoming transition to digital hospital.
- Reduced reliance on dietitians to deliver care related to enteral feeding has allowed redirection of clinician time to delivering high value care.

RESULTS



ICU

- Time to commence nutrition support ↓ from 23 to 12 hrs
- Time to reach goal nutrition rate ↓ 39 to 22 hrs



Neurosurgery

- Time to transition to supportive nutrition therapy ↓ from day 1 to 0



Head & Neck Cancer Surgery

- 100% commenced on enteral nutrition within 24 hrs of surgery
- Goal nutrition achieved within 2 days

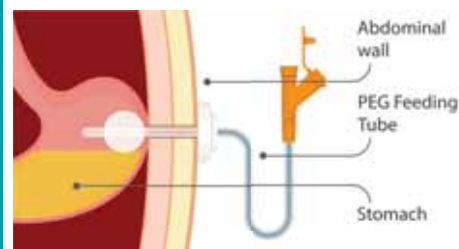
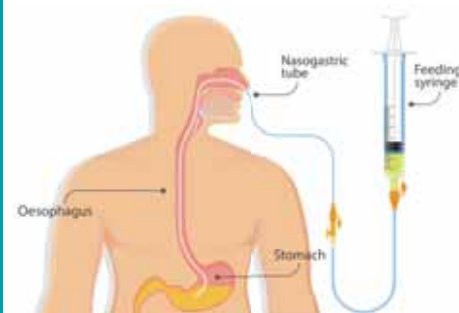


Eating Disorders

- Time to goal nutrition ↓ from 3.2 to 0.9 days
- Good adherence (92%) and improved dietetic efficiency

ADDITIONAL RESULTS

Preliminary audit data indicates that most patients on enteral feeds at the RBWH received protocolised feeding (72%), with an additional 10% of patients being suitable for protocolised feeding. This suggests that the RBWH Nutrition and Dietetics Department has largely been successful in protocolising enteral feeding across clinical areas. This work has released time for clinical dietitians to develop and practice in expanded scope roles, lead research and service improvements, and lead state-wide initiatives such as FEEDS and SIMPLE.



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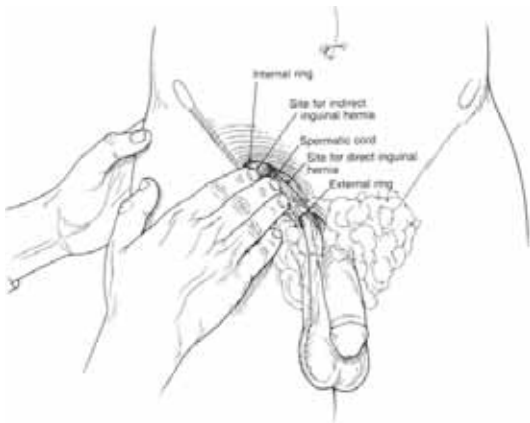
Overuse of Imaging in Clinically Apparent Inguinal Hernias

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¹Rockhampton Base Hospital, Rockhampton, Queensland

Introduction

- An inguinal hernia can be diagnosed with a positive clinical exam and imaging is not necessary, nor is it necessary to plan the ensuing surgery
- In the Rockhampton Base Hospital's general surgery department it has been noticed that a large portion of patients will arrive at their outpatient department with imaging (mostly ultrasound scans) already being performed on patients
- The cost associated with this imaging is roughly \$100 per patient¹ and represents an easy way to save on health expenditure
- Healthpathways has produced a guide on groin hernias for GPs in May 2017 that has recommended against imaging in most circumstances²



Source: <https://www.sportshernia.com/sports-hernia-approach/sports-hernia-examination/>

Objective

- Our objective was to determine the effectiveness of a groin hernia guideline put forth for the Healthpathways clinical information portal for GPs

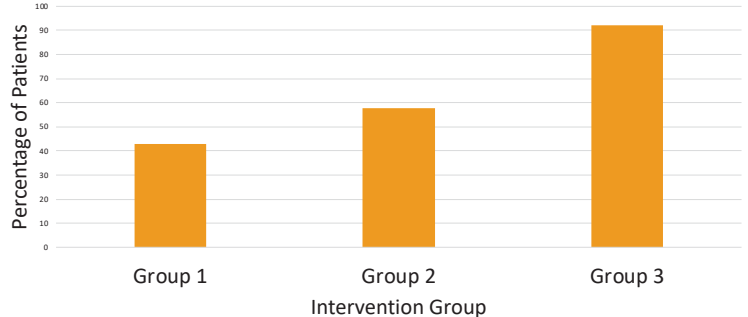
Methods

- We created a retrospective study design that categorized our patients into 3 groups by referral dates
 - Group 1: pre-guideline
 - Group 2: adoption period
 - Group 3: intervention group
- We analysed the number of patients with imaging being done before and after the adoption period, in conjunction with the number of positive clinical exams amongst these patients.

Results

- A total of 116 patients were included in the study
- Of these, 84 had undergone imaging which represented a 72.4% imaging rate across the 3 years worth of patients
- Imaging rates:
 - Group 1: 61%
 - Group 2: 60%
 - Group 3: 92.5%
- This represents an increase of 31.5% in imaging among the main comparative groups
- 110 of the 116 patients had a positive clinical examination by the surgeon
- 45 patients had positive clinical exams from the GP

Patients With Imaging After Positive GP Examination



Challenges

- Imaging rates may have actually been higher amongst all groups
- We did not have access to imaging that had been performed privately if the results had not been attached to the referral by the GP
- We were also not able to ascertain what the GP found on clinical examination in all patients as we only had access to the referral letter written by them

Lessons Learned

- Although recommendations set forth for GPs may have sound guidance, the Healthpathways portal may not be utilized as much as one would expect or like to see
- This ultimately leads us to ask what the best course of action is to be able to reach GPs in a way that will change their practice

Impact on Patient Care

- We feel that patients are being subjected to more investigation than necessary and ultimately wasting funds on unnecessary imaging
- With the price of an ultrasound scan costing approximately \$100 each¹ and 83 unnecessary ultrasound scans being performed, more than \$8,300 has been spent since July 2016 for a population of 250 000 people
- Extrapolating expenditure to the population of Queensland (>5 million)³ would represent \$166,000 in unnecessary spending

Impact on Patient Experience

- Patients are being required to attend more appointments in order to get the imaging that the GP requests. This creates an unnecessary stress to allow for time off of work, school etc.
- Patients who wish to be seen earlier by a surgeon may elect to pay out of pocket to have imaging done at an earlier date thinking that this will help

Conclusions

- Imaging rates for inguinal hernias have seen an increase of 31.5% over 3 years and consequently an unnecessary rise in healthcare expenditure. This comes at the direct cost to the government, insurance providers or the patient themselves depending on their circumstance.

References

- 1: Sieirup, 2019
- 2: General Surgery Team. HealthPathways Central Queensland. <https://cq.healthpathwayscommunity.org/19885.htm>. 2019.
- 3: Queensland Government Statisticians Office. Queensland Population Counter. <https://www.qgso.qld.gov.au/statistics/theme/population/population-estimates/state-territories/qld-population-counter>



Converting Complex Haematology Treatment to Ambulatory Care Improves Patient Experience and Hospital Resources

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 1- Liz Plummer Cancer Centre, Cairns and Hinterland Health Service, Queensland, Australia

Patients with advanced malignancies and on complex multi-day chemotherapy were historically admitted to Cairns Hospital as inpatients for the purposes of administering treatment. Common regimens have patients admitted initially for 5-6 days and kept in hospital during anticipated neutropenic nadir to monitor for infections. These patients could be admitted for up to 3 consecutive weeks for monitoring. Secondly medications given as inpatients are not eligible for PBS reimbursement. By shifting to an outpatient model this has reduced drug expenditure for the HHS.

An initiative from pharmacy utilising smart pump technology via CADD Solis[®] portable pumps allowed patients to be treated as outpatients during the treatment phase. Patients were assessed during neutropenic phase of treatment and admitted when they reached their nadir. This strategy reduced their admission by an average of 10 days.

Cairns Hospital has adopted this new model of care as standard practice with high patient and clinician acceptability. With appropriate governance structures and specific training tools developed, this model has been sustained to provide ongoing budget savings, reduced bed pressures and patient experience.



**OVER 300 HOSPITAL
ADMISSION DAYS AVOIDED**



**\$250,000 OF MEDICATION COSTS OFFSET
BY PBS REIMBURSEMENT**



**HIGH PATIENT SATISFACTION OF
TREATMENT MODALITY**

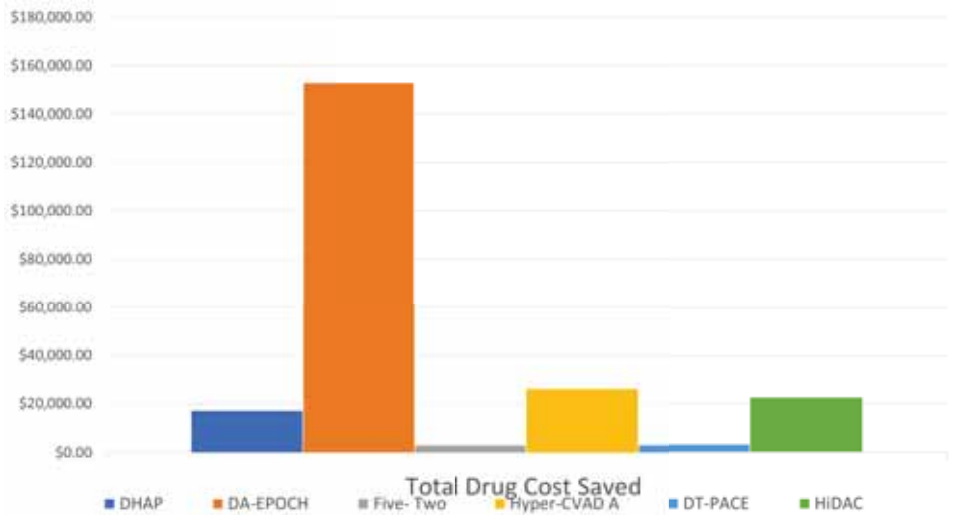
Project Objectives

CADD utilisation project was developed with the following goals;

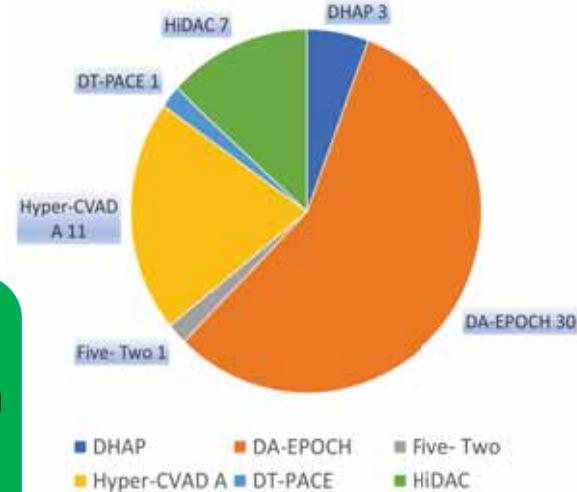
1. Reduce inpatient admissions to allow for improved resource utilisation and allocation to help patient flow and reduce bed pressure.
2. Keep patients in their homes and continue to live "normal" lives
3. Reduce drug expenditure for the HHS

Methods

- Pharmacy designed therapeutic protocols using the Oncology Information Management System (OIMS) to allow for CADD pump administration.
- Stability and compatibilities were investigated and co-ordinated with an external compounder
- Training, resources and procedures were written in the management of CADD pumps, nursing administration and patient education.
- Patient and staff surveys were completed to assess acceptability



Number of treatments converted to outpatient per regimen



Patient Feedback

"You are at home, more relaxed, you are still able to move around and do things"
 "I like the freedom, not required to be an inpatient"
 "For my consolidation round, this was an excellent option"

Results

- Over a 16 month period
- 317 admission days avoided
- \$253,637 of medication costs offset by PBS reimbursement
- Patients and staff expressed high acceptability of treatment modality

Lessons Learnt

- New process for patients remain outpatients without monitoring required
- Compatibility and stability data were limited
- Training requirements of chemotherapy Competent nurses on the ward and day unit



INSPIRE STUDY

Innovative New Strategy for Piperacillin/Tazobactam & Ceftriaxone, Infection Risk and Evaluation Study



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Patricia Kilfoyle
Sharon Young

Infectious Diseases Physician / AMS Director
Antimicrobial Stewardship Pharmacist
Antimicrobial Stewardship Nurse

Introduction :-

Overuse of broad-spectrum, empirical antibiotics such as Piperacillin/Tazobactam and Ceftriaxone in surgical wards is a commonly occurring antimicrobial stewardship issue, with emergence of resistance and complications such as Clostridium difficile more likely. This study will use collaborative, behavioural strategies to implement quality improvement initiatives in surgical wards to reduce use of Piperacillin/Tazobactam and Ceftriaxone, and conversely increase guideline compliant antibiotics. The aim of the project is to reduce total volume consumption of Piperacillin/Tazobactam and Ceftriaxone in surgical wards, subsequently improving guideline compliance and reducing adverse events associated with this overuse such as Clostridium difficile infection and prolonged length of stay from using the intravenous route. We also hypothesize that by reducing large-scale use of these antibiotic agents, we will subsequently reduce the prevalence of 'meropenem-requiring' organisms (such as ESBLs/ESCHAPPMs) in our surgical patients.

Our project will involve a multi-disciplinary cohort of engaged clinicians from general surgery, orthopaedics, patient safety and quality, nursing and allied health streams, as well as a consumer component for the 12-month duration of the study. We hope that by engaging the larger multi-disciplinary team we will improve our chances of success. The study will be implemented and facilitated by the Antimicrobial Stewardship team.

Objective:-

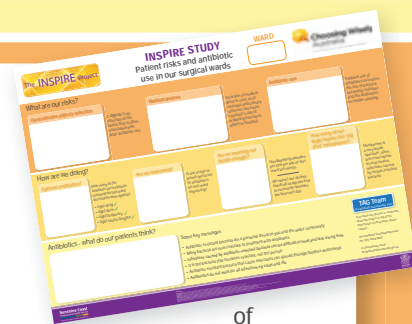
The project addresses the overuse of Piperacillin/Tazobactam and Ceftriaxone as first-line, 'work-horse' agents to treat surgical infections empirically and aims to measure the consequences of changing this established practice.

Challenges:

Changing embedded prescribing habits and introducing a new culture of prescribing in managing common surgical infections will be difficult, hence the collaborative prolonged approach to interventions we plan on taking.

Methods:

Data collection for the duration of the project will be multi-faceted. Momentum for the project will be maintained by production of monthly data scorecards which will be displayed as large AO posters per ward and delivered as cards to clinicians and NUMs. Baseline data assessing use of antibiotics and prevalence 'meropenem-requiring' organisms will be collected. During the 12-month project, an interrupted time series data collection model (ITS) of appropriate antibiotic usage will be employed to monitor change variation and the strength of any interventions implemented. Surgeons will decide during a root-cause analysis session of prescribing their chosen interventions and the AMS team will facilitate the changes. Throughout the study, fortnightly antibiotic consumption data per ward will be collated and tracked to assess total volume usage. The project is supported by a small amount of funding from the Choosing Wisely faculty (Redcap database) and Infectious Diseases directorate (Poster production).



Impact on Patient Care (Clinical perspective):

Patients will receive evidence-based, lower-risk, guideline compliant antibiotics for established indications for the correct duration of therapy. We hypothesize that the risk from infections such as Clostridium difficile and more resistant, problematic ESBL / ESCHAPPM infections will be reduced consequently.

Impact on Patient Care (Consumer perspective):

Our patients will be more informed as to their antibiotic treatment by way of information displayed throughout the wards, and by participating in our rolling consumer surveys and distribution of project-tailored consumer leaflets.

Future Plans:

Should our intervention be successful, we plan to adopt as a 'business as usual' AMS model. We will also plan to utilise the same behavioural change methodology to implement AMS quality improvement initiatives in other directorates in the HHS.



Tele-oncology and related governance to reduce patient travel and reduce variation in practice at Townsville Cancer Centre

Program

- Tele-oncology platform for consultations
- Remote supervision of chemotherapy: Queensland Remote Chemotherapy Supervision (QReCS) model and guide
- Clinical Trials: Australasian Tele-trial Model and National guide

Enablers of Implementation

- Clinical leadership through cancer network
- Clinician and management partnership at HHS levels
- Shared desire to provide care and access closer to home by all North Queensland HHSs
- Investment by statewide telehealth services

Cost of implementation

- Installing of additional videoconferencing equipment
- Employing additional staff for providing and coordinating services
- Project support

Consumer engagement

Consumers were engaged through out the implementation including:

- identifying the problem
- setting up the model
- quality improving of the model
- implementation research

Program Impact

- More rural and regional sites in NQ acquired the capability to administer chemotherapy and biotherapy locally and conduct trials locally
- More patients and their families received care local
- Savings for hospitals on PTSS
- Cost effectiveness demonstrated by evaluations published in MJA and by Deloitte Ltd. (Thaker et al, Cost savings of telemedicine, MJA 2013).
- Adoption of uniform processes across sites due to established governance

Program Scalability

- Tele-chemotherapy has evolved to a state-wide model: QReCS
- Many HHSs in Qld, NSW and WA have adopted as routine business
- Tele-trials is becoming a national model endorsed by most state departments of Health and wider to Canada and New Zealand

Australasian Tele-trial Model



Trial Cluster



Creation of interconnected clinical and trial networks across the country using telehealth

Acknowledgments: COSA Teletrial Consortium, MTP Connect, Eli Lilly, Northern Cluster and Gold Coast cluster staff, Queensland State-wide Cancer Network and Working Group, Queensland Health



Reviewing Medical Oncology clinic activity and models of care to improve the patient experience

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Introduction

Royal Brisbane and Women's Hospital (RBWH) medical oncology clinics have increasing numbers of patients per week due to a combination of:

- increasing population
- increasing treatment options
- increasingly successful treatments which allow for longer survival and care for longer periods of time

Shared care service delivery models combining coordinated, compassionate care between GPs, specialist nurses and hospital specialists may offer opportunities to maintain patient centred, best practice care and facilitate equitable efficient access to acute oncology services.

Objectives

To curate and examine patient clinic attendances to better understand the balance of needs in cancer clinics

- To identify groups of patients currently attending tertiary clinics for which alternative models of care (shared care with GPs) may be appropriate to decrease frequency of attendance at RBWH
- To identify groups of patients who require additional hospital services including palliative care and allied health

Methods

Prospective service evaluation with clinician data collection

Undertaken by medical oncology research fellows incorporated into usual working hours

All RBWH medical oncology clinic appointments over 4 weeks (14 May – 8 June 2018) included

Challenges

Our current clinical and administrative systems do not readily provide the detailed clinical data required to assess patient clinic attendances in this way:

Data collection was a labour intensive process

Some missing data - gathered retrospectively through chart review, which could affect reliability of some results

Results

By completing this service evaluation we were able to characterise for each clinic attendance:

- Cancer diagnosis
- Whether on treatment; type of treatment
- Palliative/curative intent; if known to palliative care
- Clinical trial involvement

Of 1544 clinic appointments, 142 (9%) were for patients with prostate cancer. Almost all men with prostate cancer attending medical oncology clinics are being managed with palliative intent and will be receiving regular subcutaneous injections.

A proportion of this group could benefit from a formalised shared care model incorporating GP review and treatment in the community.

Our findings are likely applicable to other hospital medical oncology clinics given high prevalence of prostate cancer.

Impact on patient care

If a shared care model with GPs was implemented:

Medical oncologist perspective

Patients may be seen less frequently in hospital clinics, improving equity of access for complex or acute services with less overbooking/clinic waiting times.

Consumer perspective

Patients will experience best practice and holistic care, with less transport/parking burden, but with a well established and coordinated model of care with ongoing specialist input.

Conclusions

This service evaluation has identified a group of patients that could benefit from a shared care model between oncology and local general practitioners.

A project is now underway to further look at the development of this model, address stakeholder input (patients and GPs) and explore other groups of patients where this could be implemented.

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Improving specimen collection in the Townsville Hospital Emergency Department

Background

- In 2017 the Townsville Hospital ED had a high incidence of pathology-related errors
- Emergency departments (ED) are notoriously busy, Townsville ED saw 85,000 patients in the 2019 financial year
- Human error can become an issue in simple, uncomplicated tasks and procedures
- Specimen collection errors, including wrong samples in tubes (WSIT), where samples are labelled with incorrect patient labels, impact patient safety and potentially health outcomes with treatment plans based on incorrect pathology results
- ED responded by recruiting a full-time phlebotomist responsible for initiating quality improvement projects, commenced November 2017.



OBJECTIVES

Improve safety and quality of treatment

Improve efficiency of care

Improve the patient experience.



Quality improvement measures

- Dedicated pathology trolleys
 - Stocked with necessary equipment for cannulation and venepuncture
 - Computer, wireless scanner and printer
- Continuous education and feedback highlighting the correct protocol for specimen collection, by the phlebotomist to all new and existing ED staff.

Challenges

- Changing staff behaviour and attitudes towards the correct process for specimen collection
- Rotating staff – new intake of doctors every 3 months and changing nursing staff
- Identifying momentum shifts.

Benefit to patients

- Reducing pain and discomfort from recollections as a result of errors
- Decreased length of stay
- Treatment and care plans based on correct pathology results
- Improved health outcomes.

Conclusion

- Quality improvement measures initiated in ED demonstrated a remarkable decrease in WSITs
- Analysing override reports demonstrated a discernible improvement in following the correct protocol with an increase in scanning of the armband and the specimen labels
- Continual reassessment and education required to ensure momentum is maintained, with the final goal of having zero WSITs in the department.

Results

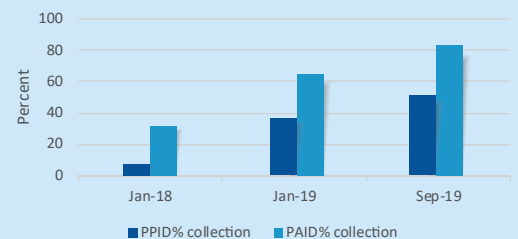


Figure 1. Data was analysed to monitor the percentage of correct collections within the department. In January 2019, PPID was 7% and PAID was 32%, following the implementation of the quality improvement measure these rates increased up 51% PPID collections and 83% PAID collections

NOTE:
PPID (positive patient identification) – scanning the armband
PAID (positive accession identification) – scanning the labels.

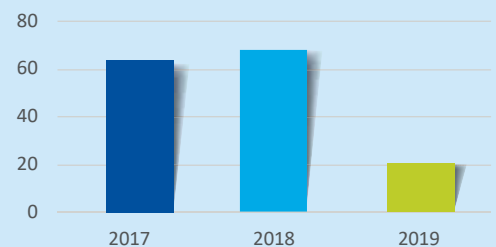


Figure 2. Graph demonstrates the number of WSITs from 2017-2019. There has been a marked decrease in WSITs in 2019 following the quality improvement measures from more than 60 in 2017 and 2018 to 21 in 2019 year to date.

For further information contact:

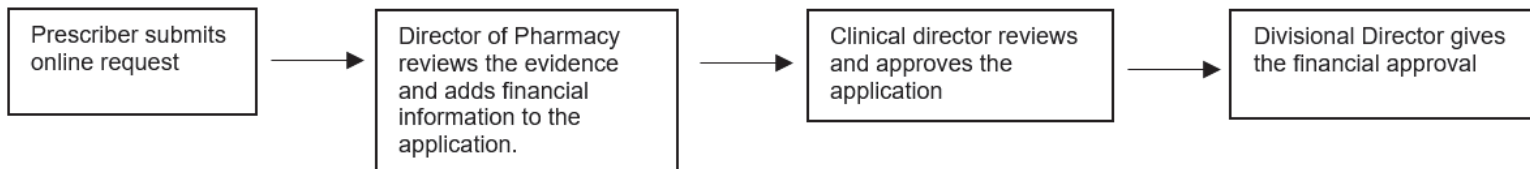
Dr Natalie Ly, ED Deputy Director (07) 4433 1111
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Implementation of an electronic Individual Patient Approval process

Will Tumusiime, DUE Pharmacist, Ipswich Hospital



Background:

Queensland Health clinicians prescribe from a formulary called the List of Approved Medicines (LAM). Variations require Individual Patient Approval (IPA). Queensland Health has delegated responsibility for variations to the Executive Director of Medical Services (EDMS) of each hospital.

Description:

The process at a 300-bed regional hospital traditionally involved an on-spec phone call to the EDMS who would often make a decision about the IPA application with minimal clinical background and without appropriate cost centre delegation. This led to many issues such as:

- Poor compliance with the paper-based system.
- Limited audit trail of requests.
- No easily searchable central storage point for previously approved applications.

Action:

West Moreton utilises cGov a content management system. A module from this vendor was imported from a peer site and implemented to facilitate a change to the IPA application process. This coincided with a change in practice and now the application is first reviewed by a nominated pharmacist with the requisite expertise, then by the clinical director for therapeutic appropriateness and finally by the divisional director who has financial delegation.

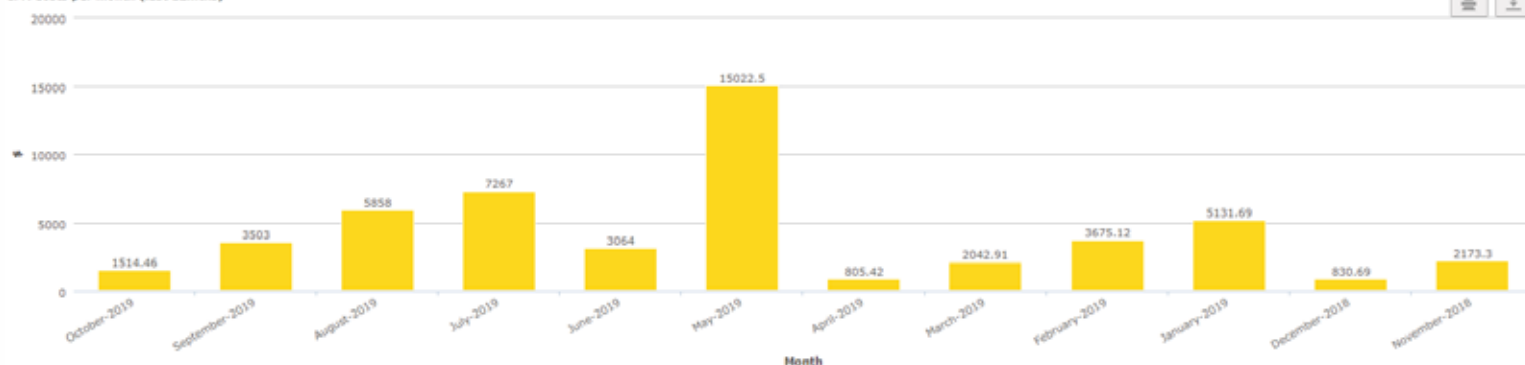
Evaluation:

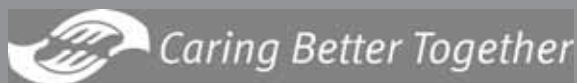
This change led to robust clinical and financial assessment of applications and a reduction in the average monthly cost of new IPA approvals from an average of approximately \$6,800 per month in 2018 to an average of approximately \$4,500 per month since December. The digital system also enabled electronic documentation and traceability of all applications which could be analysed retrospectively for audit purposes and for analysis of trends.

Implication:

Adding appropriate levels of governance to medication approval pathways not only improves appropriate uses of medicines, but it also reduces overall drug expenditure. Electronic applications are effective and well-received methods for facilitating the improvement of clinical governance.

IPA Costs per month (last 12mths)





Medication substitutions

Will Tumusiime, DUE Pharmacist, Ipswich Hospital

Introduction:

Drug use evaluation is a systematic quality improvement activity that aims to improve the quality and cost-effectiveness of medication use.

There is opportunity to decrease drug costs at hospital health services whilst maintaining a high level of patient care.

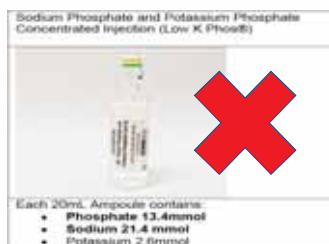
Objective:

The medicine substitution project sought to decrease the unnecessary use of high cost medicines when less expensive alternatives were available.

Method:

The Drug Use Evaluation pharmacist identified several opportunities for medication substitution which would decrease the overall drug budget whilst maintaining a high level of patient care.

- Lignocaine containing lubricating gel was replaced with non-lignocaine containing gel in patients who required urinary catheterisation under general anaesthesia.
- A market surveillance of external compounding suppliers was undertaken. The antibiotic infuser supplier was changed to a less expensive supplier who provided the same products at a lower price point.
- Several product presentations of metamamol were changed to alternative suppliers that provided the same products at a lower price point.
- The local anaesthetic, bupivacaine/adrenaline was replaced with ropivacaine for use as a topical anaesthetic in the operating theatres.
- Lincomycin was replaced with clindamycin as the preferred parenteral lincosamide antibiotic.
- Sodium phosphate and potassium phosphate concentrate "Low k Phos" was replaced with sodium dihydrogen phosphate for the treatment of severe hypophosphatemia.
- Dexmedetomidine "Precedex ready to use" infusions were replaced with generic dexmedetomidine vials for use in intensive care.
- Heparin 5000iu/0.2mL vials were replaced with enoxaparin 40mg syringes for use in venous thromboembolism (VTE) prophylaxis.
- Pegfilgrastim was replaced with lipegfilgrastim for the production and differentiation of neutrophils post chemotherapy.



Results:

The projects were implemented at various stages throughout the year and have achieved the following cost saving results:

- In 12 months, the lubricating gel initiative has saved the hospital \$7,245
 - In 11 months, the lipegfilgrastim initiative has saved the hospital \$30,564
 - In 10 months, the ropivacaine topical anaesthetic initiative has saved the hospital \$46,208
 - In 9 months, the metamamol supplier initiative has saved the hospital \$37,087
 - In 9 months, the antibiotic compounding supplier initiative has saved the hospital \$23,819
 - In 6 months, the clindamycin initiative has saved the hospital \$6000
 - In 6 months, the hypophosphatemia initiative has saved the hospital \$20,045
 - In 2 months, dexmedetomidine initiative has saved the hospital \$13,235
 - In 1 month, the VTE initiative has saved the hospital \$6,247
- The phosphate and clindamycin initiatives led to state-wide formulary changes

Challenges:

Liaising with key stakeholders to educate them on the fiscal benefits of medication substitutions and to demonstrate that the proposed changes were therapeutically equivalent and would not lead to patient harm.

Lessons learnt:

To enact change there needs to be a "forcing function" which limits the availability of the old product whilst making the new product readily available. Without this intervention, prescribing practices rarely change

Consumer engagement:

The consumer of these initiatives was the medical prescriber. All projects required significant stakeholder engagement at the director level and additional consultation was required from the local Medicines Management Committee.

Conclusion:

There are opportunities to decrease the fiscal burden of medicines whilst maintaining a high level of patient care.

METRO NORTH ROBOTIC SURGERY PROGRAM

Metro North Hospital and Health Service (Metro North) is the largest health service in Australia and has one of the most populous catchments. As the population continues to grow and age the need for surgery will continue to increase and as technology advances there will also be ability to undertake more complex surgery. The Royal Brisbane and Women's Hospital (RBWH) had a first robotic surgical system from 2007 to 2017 which was used primarily for urology procedures. In 2017, the system was upgraded which has allowed for growth across other surgical specialities - ENT, gynaecology and general surgery. Metro North developed the Robotic Surgery Plan 2018-21 (the Plan). Metro North recognises the benefits of robotic-assisted surgery to the health system and patients and aims to guide the development of a comprehensive robotic surgery program.

OBJECTIVES

The implementation of the Plan aims to achieve the following outcomes

- expanded application of robotics in surgical specialities based on current and emerging evidence
- improved collaboration with other robotic surgery services, training and research centres
- contribute to robotic surgery evidence base through improved data collection and research
- better surgical outcomes for patients
- better patient experience
- increased workforce knowledge and skills in robotic surgery
- improved job satisfaction.

METHODS

Metro North established a robotic surgery working group and steering committee to guide the implementation of the Plan. These groups have overseen the development of a robotic surgery reference guide which provides practical guidance to join the program and training pathways required for clinical staff who will undertake robotic assisted surgery. A clinical registry was developed to collect data on robotic-assisted and comparable non-robotic surgery including data on patient demographics, surgical event, post-surgical event, diagnostics and patient reported quality of life surveys. An economic evaluation model was also developed to quantify actual costs in a public hospital and inform decision making. The model can adjust parameters for scenario modelling (e.g. episode volume, length of stay and surgical minutes). The SF36V2 patient survey was used to measure patient reported outcomes pre-operatively and various stages post-operatively is offered to all patients.

RESULTS

In the 2018-19 financial year, 175 robotic-assisted procedures were undertaken compared to 277 non-robotic comparable procedures in urology, ENT, colorectal, hepatobiliary, and gynaecology surgery (Figure 1). To date, clinical registry data has shown decreased operating minutes and length of stay in the robotic-assisted procedures (Figures 2 and 3). Of particular note, the following outcomes have been realised for procedures in 2018-19:

- Total hysterectomy – 22 robotic-assisted procedures are on average 25 minutes faster (25%) with an average decreased length of stay of 0.4 days (36%)
- Abdominal rectopexy – 5 robotic-assisted procedures are on average 43 minutes faster (16%) with an average decreased length of stay of 2.9 days (64%)
- Partial nephrectomy – 10 robotic-assisted procedures are on average 127 minutes faster (37%) with an average decreased length of stay of 2.6 days (41%).

Economic modelling suggests these outcomes have resulted in economic benefits to the system. The quantum of economic benefit is increased with higher case complexity (Table 1). Initial review of patient reported outcomes for robotic-assisted surgery suggest both improved physical and mental health following surgery, particularly by 1 year post surgery (Figure 4)

Figure 1. RBWH robotic versus non-robotic surgery procedures 2018-19

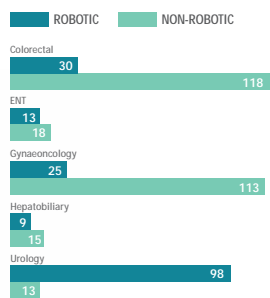


Figure 2. Robotic versus non-robotic operating times by procedure

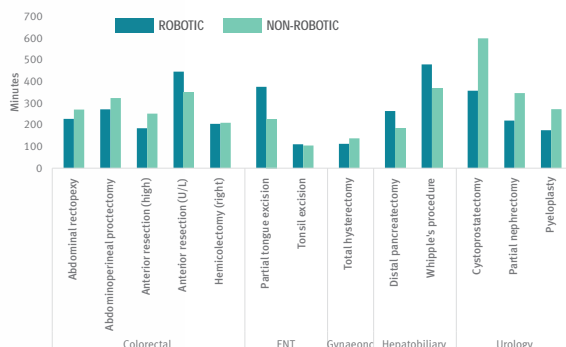


Figure 3. Robotic versus non-robotic length of stay by procedure

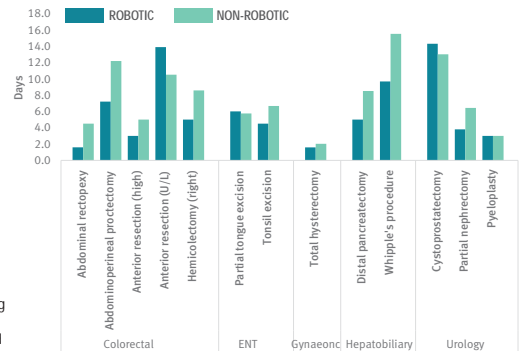
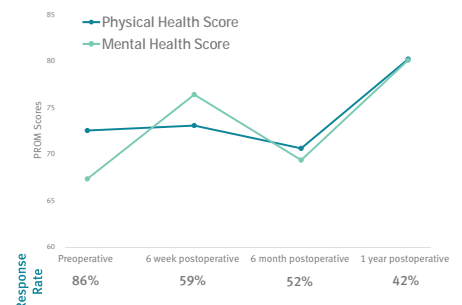


Table 1. Cost variance (selected DRG's)

DRG	Procedure	Robotic		Non-robotic		Robotic comparator Cost difference	
		Revenue \$	Septs	Total Cost \$	Septs		Total Cost \$
DO2A	Exc intra-oral lesion	32,987	4	11,345	2	15,533	-4,188
LO3B	Partial nephrectomy	20,762	12	20,760	1	23,618	-2,857
GO2A	Hemicolectomy	58,182	3	27,666	10	30,462	-2,792
GO1C	Anterior resection	22,686	3	24,434	39	23,179	-1,253
NI2C	Hysterectomy (malignant)	10,971	11	17,615	36	17,327	-288

Figure 4. Average gynaecology PROM scores (from February 2018)



Note: PROM scores are rated from 0-100, 100 being the highest health score.

DISCUSSION

Robotic-assisted surgery has allowed surgeons at the RBWH to undertake a wider range of minimally invasive surgery with increased accuracy to preserve healthy tissue allowing patients to have improved recovery compared with other surgical techniques. Patients undergoing robotic-assisted surgery have experienced shorter hospital stays and quicker return to normal activities. Early indication from patient surveys shows improved health outcomes/quality of life. Despite the existence of a robotic system at the RBWH since 2007 the Metro North robotic surgery program is still in its early stages of development and further realisations from the data are expected as the program continues to grow. Challenges in expansion of the program to date have included increasing utilisation of the robot within an established theatre template, automated data collection and validation of data. The most crucial driver to the programs success has been the importance of collaboration between clinicians, managers, executives and industry to set and implement an achievable goal. The Metro North robotic surgery program has demonstrated positive benefits of robotic surgery within the public sector and has established pathways to expand the application to increase patient access, improve patient experience and outcomes and be fiscally responsible.



Promoting Value-based care in Emergency Departments

PROV-ED is a state-wide project sponsored by Clinical Excellence Queensland and supported by the Queensland Emergency Department Strategic Advisory Panel (QEDSAP). It aims to promote the spread of innovation, by sourcing and scaling piloted value-based care Emergency Department (ED) initiatives with demonstrated outcomes. The PROV-ED team is travelling to facilities across the state to showcase these initiatives and to assist with implementation of those that align with local needs via project support and funding. The Project team is derived from the highly successful ACRE (Accelerated Chest pain Risk Evaluation) Project team and has a wealth of experience in clinical redesign and implementation. PROV-ED is led by Emergency Physicians Prof Louise Cullen from RBWH, and Dr Andrew Hobbins-King from SCUH.

Initiative Sourcing and Selection - A state-wide expression of interest attracted

22 Applications from 12 Facilities across 6 Hospital and Health Services.

Sixteen shortlisted applications were invited to present a three minute pitch to a multidisciplinary panel and audience at a shark-tank like event – the “PROV-ED Pitchfest”. Comprised of representatives from CEQ, QEDSAP and the PROV-ED Project team, the panel, consulted with a consumer representative before selecting six initiatives for wider implementation.



The Six Initiatives relate to the QLD Clinical Senate recommendations:

a) Improving the use of medicines



The Blood Clock, Matilda Schmidt, Nurse Practitioner, RBWH Emergency and Trauma Centre, Metro North HHS

This simple initiative avoids O negative blood wastage in EDs by utilising a timer attached to MEDEVAC blood boxes to alert clinicians when the decision must be made to either infuse, or to return unused blood. This precious resource not only costs around \$430 / unit, but is generously donated by community members. The pilot site reduced annual wastage from 7 to 1 unit, saving \$2,580.



Pre-filled Saline Syringe (PreSS), Tracey Hawkins, Senior Clinical Research Nurse, RBWH Emergency and Trauma Centre, Metro North HHS

The introduction of pre-filled saline syringes specifically designed for flushing vascular access devices aims to extend patency life of Peripheral Intravenous Cannulas (PIVCs) and decrease potential for infection by improving adherence to Aseptic Non-Touch Technique (ANTT) principles. Based on material costings alone, the pilot site saved an estimated \$10,982 annually.

b) Improving the appropriateness of treatments and care pathways



Standardised and Safe Intubation Package (SSIP), Jacob O’Gorman, FACEM Staff Specialist, Gladstone Hospital ED, Central Queensland HHS

This standardised approach to patient intubation aims to increase teamwork and communication whilst reducing clinician cognitive load and empowering nursing staff. Consisting of pre and post-checklists, a drug draw-up guide, and equipment shadow board, SSIP is derived from longstanding practices safely used in the retrieval setting and has been developed in consultation with Lifeflight.



Transforming EDs towards Cultural Safety (TECS), Stefan Kuiper, FACEM Staff Specialist, Cairns Hospital, Cairns and Hinterland HHS

Based on the work of the Cairns Hospital Cultural Safety Working Group (CSWG), TECS provides clear, practical steps specific to EDs for multidisciplinary groups of like-minded clinicians to emulate the efforts of the Cairns CSWG, which has achieved remarkable improvements in the cultural safety of the Cairns ED. The plan is to connect groups to form a state-wide entity to sit under the state-wide ED network (QEDSAP).



Cannulation Reduction in Emergency Department Implementation Toolkit (CREDIT), Tracey Hawkins, Senior Clinical Research Nurse, RBWH Emergency and Trauma Centre, Metro North HHS

CREDIT uses a multimodal educational intervention aimed at reducing insertion of unnecessary PIVCS, by focusing on a simple message for clinicians: “Are you 80% sure that the cannula will be used in your hemodynamically stable patient in the next 24 hours?”. The pilot site achieved a 9.8% reduction in PIVCs inserted and increased the utilisation rate by 13%. Over 12 months, this equates to 6300 fewer cannulations, saving around 1600 staff hours and \$143,000.

c) Improving diagnostic testing



Nurse Initiated X-ray (NIX), Sarah Brokenshire, Nurse Practitioner & Carly Bland, Nurse Educator Logan Hospital ED, Metro South HHS

NIX aims to streamline ED patient care by upskilling nursing staff to initiate specific x-ray investigations. Resources include an online (iLearn) learning package, modifiable work instructions and competency assessments. NIX has been shown to improve time to meaningful treatment and ED Length of Stay (ELOS) for patients and improve both patient and staff satisfaction.

