Gold Coast Health

Research Week Conference

20 - 21 November 2019

ABSTRACT BOOK

WELCOME To the Gold Coast Health Research Week Conference

We are proud to welcome you to the third year of this event, which is fast emerging as a key platform for health and medical research on the Gold Coast.

The event showcases the high quality and clinically relevant research happening in our region, and is organised in close collaboration with Griffith and Bond Universities.

The goals of the conference are threefold:

1. To encourage and strengthen collaboration; both within different disciplines and areas of the health service, and with our university and commercial partners;

2. To showcase the outcomes of research and highlight its role in effecting positive change, and;

3. To grow and support Gold Coast Health's emerging research presence.

We have a packed two days of events and presentations for our delegates, each aligning with our new 2019-2022 Research Strategy. These include a panel on consumer engagement in health research, a keynote on wasteful research practices, and an evening session on changes in the research regulatory system.

We are also proud to present over 50 full and lightning talks from our researchers. This year, we are also encouraging the engagement of the public with our research, by placing our posters in the main hospital foyer.

Thank you for your support of our research and we hope you enjoy the conference.

Dr Caitlin Brandenburg
Chair, Research Week Committee
Advanced Research Development Officer
Gold Coast Health

Many thanks to the 2019 Gold Coast Health Research Week Committee

Dr Paulina Stehlik (Deputy Chair)
Dr Katya May
Dr Kelly Weir
Mrs Elizabeth Wake
Dr Ya-Ling Huang
Dr Jamie Ranse
Dr Leonie Clancy
Dr Rachel Wenke
Dr Julie Wong
Ms Jan Wayland

Contents

Developed by:

Queensland Government

Gold Coast Health
Building a healthier community

With support from:

BOND UNIVERSITY

Griffith UNIVERSITY

GOLD COAST HOSPITAL FOUNDATION

Conference Program

Wednesday 20th November

9.30- 9.45am
Large Lecture Theatre

Opening

Welcome and Official Opening

Chair: Dr Jeremy Wellwood- Executive Director, Clinical Governance, Education and Research, Gold Coast Health

Dr Wellwood will open the conference by reviewing key achievements for Gold Coast Health research this year, including the new 2019-2022 Research Strategy.

9.45- 11am
Large Lecture Theatre

Panel

Panel Session– Engaging Consumers in Health Research

Chair: Dr Kelly Weir- Allied Health Research Fellow, Gold Coast Health and Griffith University

Consumer engagement can be viewed as decision making 'with' or 'by' consumers, rather than 'to', 'about' or 'for' them (Ocloo and Matthews 2016). Involvement of consumers as members of a research team, rather than participants in the research, is not new, but there is an increasing understanding of the value of this approach. Engaging consumers in health research is a high priority action in Gold Coast Health's 2019-2022 Research Strategy. As our health service strives to improve our research engagement, this panel discussion serves as an investigation into the challenges and benefits, as well as practical advice. The panel convenes health researchers who have worked with consumer researchers, and consumers who have participated in research teams, to share their experiences.

Panel:

Ms Margaret Shapiro

Dr Rhea Liang

A/Prof Laurie Grealish

Ms Noela Baglot

A/Prof Magnolia Cardona

11- 11.30am

Morning Tea *(Provided by Gold Coast Hospital Foundation)*

GOLD COAST HOSPITAL FOUNDATION

11.30am- 1pm
Large Lecture Theatre

Themed session 1

Emergency Care

Chair: Dr Shane George- Staff Specialist, Emergency Medicine and Paediatric Critical Care, Gold Coast Health

Has your septic patient had enough? Unbound Ceftriaxone pharmacokinetics in adult hospitalised patients with sepsis.
Mr Aaron Heffernan - PhD Candidate/Medical Student, School of Medicine, Griffith University

The Australasian Resuscitation In Sepsis Evaluation: FLUid or Vasopressors In Emergency Department Sepsis, a multi-centre observational study (ARISE FLUIDS study).
Dr Katya May- Nurse Researcher, Emergency Department, Gold Coast Health

Training in ultrasound-guided vascular access: Is it effective?
Dr Amy Archer-Jones - Registrar, Emergency Department, Gold Coast Health

Patients presenting with mental health conditions to the Emergency Department: Why so long a wait?
Prof Julia Crilly - Professor of Emergency Care, Gold Coast Health and Griffith University

Outline for a randomised control trial testing a brief, embedded intervention to reduce stress for Emergency doctors.
Ms Dianne Hong Ngoc Le - Medical Student, Griffith University

Predictors of hospital admission for children via the emergency departments in Australia and Sweden: An observational cross-sectional study.
Prof Julia Crilly - Professor of Emergency Care, Gold Coast Health and Griffith University

1- 1.30pm

Lunch (Exhibition) – *(Provided by Griffith University Clinical Trials Unit and Menzies Health Institute Queensland)*

1.30- 2.45 pm
Large Lecture Theatre

Critical Care and Trauma

Themed session 2

Chair: Prof Martin Wullschleger - Director of Trauma Services & Clinical Director of Surgical, Anaesthetics and Procedural Services, Gold Coast Health

Reducing central line associated blood stream infections in a tertiary intensive care service: A knowledge translation study.
Dr Frances Lin - Senior Visiting Research Fellow and Senior Lecturer, Gold Coast Health and Griffith University
Ms Niki Murphy - Clinical Nurse Consultant, ICU, Gold Coast Health

Preferences of family members for participation in the delivery of evidence-based care in the ICU: A qualitative study.
Ms Julie Barker - Clinical Nurse, Gold Coast Health

Correlation of ROTEM® amplitudes at five minutes (A5) with ROTEM® amplitudes at ten minutes (A10) in patients undergoing Cardiac surgery.
Dr Kerin Walters - Clinical Nurse, ICU, Gold Coast Health

Protein energy intake of critically ill trauma patients throughout their recovery trajectory.
Mrs Elizabeth Wake - Trauma Research Coordinator, Gold Coast Health and Griffith University

Caregiver resilience in patients with severe traumatic injuries.
Dr Kathy Heathcote - Lecturer, School of Medicine, Griffith University
Ms Kate Dale - Nurse Practitioner Trauma, Gold Coast Health

Themed Session 3

2.45- 3.30pm
Large Lecture Theatre

End of Life Care

Chair: Dr Nicola Morgan - Staff Specialist, Palliative Care, Gold Coast Health

Acceptability and feasibility of using a risk checklist to promote advance care planning in QLD and NSW general practices.
A/Prof Magnolia Cardona - A/Prof Health Systems Research and Translation, Gold Coast Health and Bond University

End-of-life care for older adults presenting to the emergency department: A scoping review study.
Dr Ya-Ling Huang - Research Nurse, Gold Coast Health

Acceptability testing, challenges and future directions of a decision support prototype for shared decision making near the end of life.
A/Prof Magnolia Cardona - A/Prof Health Systems Research and Translation, Gold Coast Health and Bond University

Exploration of clinicians' perspectives of using a bereavement risk screening tool in a Palliative Care setting: A qualitative study.
Ms Emily Plunkett - Social Worker, Palliative Care Service, Gold Coast Health

3.30- 4pm

Afternoon Tea *(Provided by BEEHIVE brain and environmental enrichment research lab)*

4- 5.15pm
Large Lecture Theatre

Lightning Talks

Chair: Dr Paulina Stehlik - Senior Research Fellow, Evidence Based Practice Professorial Unit, Gold Coast Health and Bond University

Lightning Talks Session 1

01 **Characteristics and service utilisation of new patients attending a Sexual Health Service during the Gold Coast Commonwealth Games 2018.**
Ms Karen Biggs - Nurse Practitioner Sexual Health, Gold Coast Health

02 **PEP in the era of PrEP: A comparison of PEP use in South-East Queensland since the widespread introduction of PrEP.**
Ms Karen Biggs - Nurse Practitioner Sexual Health, Gold Coast Health

03 **Enhanced surveillance of Chlamydia and Gonorrhoea infections diagnosed in the Gold Coast during the period of the Commonwealth Games 2018.**
Ms Maureen Todkill - Acting Clinical Nurse Consultant, Gold Coast Health

04 **Exploring miRNA pathogenicity biomarkers for Non-Hodgkin's Lymphoma and Immunodeficiency and the utility of gene editing.**
Mrs Esther Elliott - MPhil Candidate, QUT

05 **A retrospective audit of paediatric intravenous cannula insertion at the Gold Coast University Hospital Emergency Department.**
Mr Clayton Lam - Medical Student, Gold Coast Health and Griffith University

06 **An operational definition for end-of-life: Implementing a validated framework for researchers and care providers.**
Mr Peter Fawzy - Medical Student, Bond University

Thursday 21 November

10- 10.30am **Morning Tea**

Themed Session 4

10.30- 11.15am
Large Lecture Theatre

Research and Learning

Chair: Dr Greta Ridley - Director, Office for Research, Governance and Development, Gold Coast Health

Research engagement of our Doctors: How is Gold Coast Health performing?
Dr Caitlin Brandenburg - Advanced Research Development Officer, Gold Coast Health

Clinicians' strategies for enriching learning through practice.
Ms Joanne Hilder - Research Officer, Allied Health, Gold Coast Health

Are research training requirements for Australian specialist trainees appropriate?
Dr Paulina Stehlik - Senior Research Fellow, Gold Coast Health and Bond University

How to complete a full systematic review in 2 weeks: Processes, facilitators and barriers.
Mr Justin Clark - Senior Research Information Specialist, Bond University

Themed Session 5

11.15- 11.45 am
Large Lecture Theatre

Mixed Abstract Presentations

Chair: Dr Katya May - Nurse Researcher, Emergency Department, Gold Coast Health

Randomised controlled trial of early capsule endoscopy versus colonoscopy following negative gastroscopy in acute gastro-intestinal bleeding.
Dr Szymon Ostrowski - Gastroenterology Advanced Trainee, Gold Coast Health

Viral oncogene silencing and innate immune activation – A novel approach for treating Human Papilloma Virus-Positive Oropharyngeal Cancers.
Dr Adi Idris - Research Fellow, Griffith University

An overview of Opioid discharge prescriptions for medical patients at Gold Coast University Hospital.
Miss Gemma Franks - Senior Pharmacist, Gold Coast Health

11.45- 12.15pm **Lunch (Exhibition)** *(Provided by Bond University, Faculty of Health Sciences and Medicine)*

BOND UNIVERSITY

12.15- 1pm

Keynote Medical Grand Rounds

Improving the value, relevance, and efficiency of health research

Since Glasziou and Chalmers' seminal 2004 paper estimated that 85% of medical research is avoidably wasted, the topic of research waste has garnered increasing attention. With over $100 billion spent on medical research annually, it is vital that all clinicians and researchers are aware of the causes of research waste, including research that asks the wrong research questions, is poorly designed, has inaccessible results, or biased reporting. This keynote presentation brings together two internationally recognised experts to provide an update and insight into improving the value of health research and avoiding wasteful practices.

Prof Paul Glasziou
Paul Glasziou is the Director of the Institute for Evidence Based Healthcare, Bond University, and is an international leader in the field of research waste. He is a leader within the Reward Alliance, investigating research waste and promoting better prioritisation, design, conduct, regulation, management and reporting of health research.

Prof Adrian Barnett
Prof Adrian Barnett is a researcher at the School of Public Health and Social Work, Queensland University of Technology, and the current president of the Statistical Society of Australia. His current academic focus is on meta-research (research about research) and improving the quality and value of health research.

1.15- 2pm
Large Lecture Theatre

Themed Session 6

Nursing Interventions

Chair: Prof Anita Bamford-Wade - Professor of Nursing and Midwifery, Gold Coast Health

Partnership during chronic illness - understanding nurse navigator and consumer experiences.
Dr Elisabeth Coyne - Senior Lecturer, Griffith University

Falls prevention for older people with cognitive impairment.
A/Prof Laurie Grealish - A/Professor Conjoint, Gold Coast Health and Griffith University

Promoting lifestyle change in midlife adults using narrative stories and virtual coaching: Results of the GroWell for Health feasibility study.
Dr Amanda McGuire - Lecturer, Griffith University

2- 2.30pm
Large Lecture Theatre

Themed Session 7

Women's and Family Health

Chair: Prof Kathleen Baird - Director of Midwifery and Nursing Education, Gold Coast Health

Peripartum urinary incontinence: Prevalence, severity and risk factors. Is there a role for primary prevention?
Mrs Valerie Slavin - Midwife/ PhD candidate, Gold Coast Health and Griffith University

Effectiveness of caseload Midwifery care in promoting maternal physical, mental and social health during pregnancy and birth.
Mrs Valerie Slavin - Midwife/ PhD candidate, Gold Coast Health and Griffith University

Breaking the Silence: Exploring staff detection and responses to Domestic and Family Violence in clinical practice.
Mrs Grace Branjerdporn - Domestic and Family Violence Research Manager, Gold Coast Health

2.30- 3pm — **Afternoon Tea**

Themed Session 8

3- 3.45 pm
Large Lecture Theatre

Allied Health

Chair: Ms Sara Burrett - Executive Director, Allied Health Services

Re-referral rates are low and do not differ between patients in the traditional medical specialist-first and dietitian-first model of care.
Ms Rumbidzai Mutsekwa - Advanced Gastroenterology Dietitian, Gold Coast Health and Griffith University

Predictors of outcome to the uplift program for people with persistent back pain: A prospective cohort study – a preliminary analysis
Ms Hayley Thomson - Senior Physiotherapist, Neurosurgical Screening Clinic, Gold Coast Health

Feasibility of using the mNUTRIC nutritional risk screening tool to identify nutritionally at-risk patients in an Australian ICU.
Ms Lisa Mahoney - Dietitian, Gold Coast Health

3.45- 4.15 pm
Large Lecture Theatre

Awards Presentation and Official Close

Chair: Dr Jeremy Wellwood, Executive Director, Clinical Governance, Education and Research, Gold Coast Health

Dr Wellwood will announce the Conference Award winners, including:

- Best Presentation
- Best Emerging Researcher Presentation
- Best Lightning Talk
- Best Poster
- People's Choice Poster

4.15- 5pm — **Light Dinner / Refreshments**

Keynote

5- 5.45 pm

The Changing Regulatory Landscape – Your Responsibilities

The Australian Commission on Safety and Quality in Health Care produced a report in 2017 which identified a strong link between investigator-initiated clinical trials and improvements to quality and safety of healthcare in Australia. One of the key recommendations therefore to come out of that report was to establish a comprehensive strategy to further develop investigator-initiated clinical trials in Australia. Of course, that strategy includes more structured and cohesive regulation of clinical trials across the healthcare landscape.

This presentation will discuss the current regulatory requirements for investigator-initiated clinical trials and highlight how these may be impacted by the changing regulatory landscape as Australia seeks to further develop this important contribution to the improvement of healthcare

Kristi Geddes- Senior Associate, Minter Ellison
Kristi is an experienced commercial and regulatory lawyer, with a focus on health, life sciences and specifically medical research. She has qualifications in law, health and science and frequently provides advice and training to clients on legal issues surrounding clinical trials.
Kristi has in house experience gained within a Medical Research Institute and is currently a member of the Royal Brisbane and Women's Hospital Human Research Ethics Committee.

Posters

Posters will be displayed across the road in the main hospital foyer this year, to engage patients and clinical staff in our research. All lightning talks will have a poster, the below are abstracts which are poster-only.

Themed Session Abstracts

Wednesday 20 November
Themed Session 1
Emergency Care

Has your septic patient had enough? Unbound ceftriaxone pharmacokinetics in adult hospitalised patients with sepsis

Aaron Heffernan (1), Rebecca Curran (2), Kerina Denny (3), Jason Roberts (4), Jeffrey Lipman (4)

(1) School of Medicine, Griffith University; (2) Department of Pharmacy, Gold Coast University Hospital; (3) Department of Emergency Medicine, Gold Coast University Hospital; (4) Department of Intensive Care Medicine, Royal Brisbane and Women's Hospital

Background: To determine whether the unbound (drug available for antibacterial effect) trough ceftriaxone concentration exceeds 1 mg/L throughout the dosing interval in ≥90% of patients with sepsis receiving a 1 g once-daily dose. Achieving a trough ceftriaxone concentration ≥1 mg/L is likely to improve microbiological eradication and thus patient outcomes.

Methods: This is a prospective single-centre pharmacokinetic study involving adult patients admitted to a medical ward with sepsis receiving ceftriaxone 1 g once-daily. A single unbound plasma ceftriaxone concentration was obtained from each patient within the first dosing interval. Population pharmacokinetic analyses were performed using Pmetrics. Monte Carlo simulations using the derived model to predict the unbound ceftriaxone concentration at different doses and creatinine clearance values (n=1000) were performed.

Results: Fifty patients were recruited with a mean age of 69 years (standard deviation [SD] 15.64) and a mean calculated creatinine clearance of 70.49 (SD 40.87) mL/min. A one-compartment pharmacokinetic model incorporating calculated creatinine clearance best described the data (population-predicted R2 46.3%; individual-predicted R2 99.1%). Simulations demonstrate that a 1 g once-daily dose achieved the target trough concentration (1 mg/L) in ≥90% of patients with a creatinine clearance ≤40 mL/min. To achieve the same target for patients with a creatinine clearance ≥60 mL/min, a dose of 1 g administered every 12 hours may be necessary.

Conclusion: Ceftriaxone administered 1 g once-daily to patients without impaired renal function (creatinine clearance ≥60 mL/min) is insufficient to achieve the minimum recommended exposure that may be associated with improved clinical outcomes.

The Australasian Resuscitation In Sepsis Evaluation: FLUid or Vasopressors In Emergency Department Sepsis, a multi-centre observational study (ARISE FLUIDS study)

Gerben Keijzers (1,2,3), Stephen PJ Macdonald (4,5), Andrew A Udy (6,7), Glenn Arendts (8), Michael Bailey (6,9), Rinaldo Bellomo (10,11), Gabriel E Blecher (12,13), Jonathon Burcham (4,5), Anthony Delaney (6,14,15,16), Andrew R Coggins (17), Daniel M Fatovich (4,5), John F Fraser (18,19,20), Amanda Harley (1,21), Peter Jones (22,23) Fran Kinnear (18,24), Katya May (1), Sandra Peake(6,25,26), David McD Taylor (27,28), Julian Williams(18,29), and Patricia Williams (6,25,26), ARISE FLUIDS Study Group†

(1) Department of Emergency Medicine, Gold Coast University Hospital, Gold Coast; (2) School of Medicine, Bond University,Gold Coast; (3) School of Medicine, Griffith University; (4) Centre for Clinical Research in Emergency Medicine, Harry Perkins Institute of Medical Research, Perth; (5) Emergency Department, Royal Perth Hospital, The University of Western Australia, Perth; (6) Australian and New Zealand Intensive Care Research Centre,School of Public Health and Preventive Medicine, Monash University, Melbourne; (7) Department of Intensive Care and Hyperbaric Medicine, The Alfred, Melbourne; (8) School of Medicine, The University of Western Australia, Perth; (9) Department of Medicine and Radiology, The University of Melbourne, Melbourne; (10) Department of Intensive Care, Austin Hospital, Melbourne; (11) School of Medicine, The University of Melbourne, Melbourne; (12) Emergency Department, Monash Medical Centre, Monash Health, Melbourne; (13) Monash Emergency ResearchCollaborative, School of Clinical Sciences at Monash Health, Monash University, Melbourne; (14) Malcolm

Fisher Department of Intensive Care Medicine, Royal North Shore Hospital, Sydney; (15) Northern Clinical School, Sydney Medical School,The University of Sydney, Sydney; (16) Division of Critical Care and Trauma, The George Institute for Global Health,The University of New South Wales, Sydney; (17) Emergency Medicine and Trauma, Westmead Hospital, Sydney; (18) Faculty of Medicine, The University of Queensland, Brisbane; (19) Critical Care Research Group, The Prince Charles Hospital, Brisbane; (20) Intensive Care Unit, St Andrew's War Memorial Hospital, Brisbane; (21) Critical Care Management Team, Queensland Children's Hospital, Brisbane; (22) Department of Surgery, The University of Auckland, Auckland; (23) Adult Emergency Department, Auckland City Hospital, Auckland; (24) Emergency and Children's Services, The Prince Charles Hospital, Brisbane; (25) Department of Intensive Care Medicine,The Queen Elizabeth Hospital, Adelaide; (26) Faculty of Health and Medical Sciences, School of Medicine, Adelaide University, Adelaide; (27) Emergency Medicine Research, Austin Hospital, Melbourne; (28) Departmentof Medicine, The University of Melbourne, Melbourne, and (29) Emergency and Trauma Centre, Royal Brisbane and Women's Hospital, Brisbane

Background: There is uncertainty about the optimal intravenous (IV) fluid volume and timing of vasopressor commencement in the resuscitation of patients with sepsis and hypotension. To describe current ED resuscitation practices in Australia and New Zealand, specifically; 1) volume of IV fluid administered 2) frequency and timing of vasopressor use during the first 24hrs of hospitalisation.

Methods: ARISE FLUIDS was a prospective, multicentre observational study conducted in 71 hospitals in Australia and New Zealand between September 2018 and January 2019. Consecutive adults presenting to ED with suspected sepsis and hypotension (SBP<100mmHg) despite at least 1000ml fluid resuscitation were eligible for inclusion during a 30-day period at each site. Data included baseline demographics, clinical and laboratory variables, IV fluid volume administered and vasopressor use at eligibility, 6- and 24 hours, time to antimicrobial administration, intensive care admission, organ support and in-hospital mortality.

Results: 591 participants were included, with mean age 62.4(SD19) and 49% were female. Mean APACHE II score was 15.2 (SD6.6) and median SBP at eligibility was 94 mmHg [IQR87-100]. Median time to intravenous antimicrobials was 77 min [IQR42-148]. Overall mortality was 6.2% (95%CI:4.4-8.5%). A vasopressor infusion was commenced in the ED in 134 (22.7%), with a median of 2000mLof fluid given prior starting vasopressors. These findings were similar for patients who presented with a SBP<90mmHg and/or a lactate>2mmol/L.

Conclusion: This study provides insight into current haemodynamic resuscitation practices in patients with sepsis and hypotension in Australia and New Zealand.

Funding Source: Emergency Medicine Foundation

Training in ultrasound-guided vascular access: Is it effective?

Amy Archer-Jones (1), Stuart Watkins (1), Amy Sweeny (1,2)

(1) Gold Coast Hospital and Health Service Emergency Department; (2) School of Medicine, Griffith University

Background: Around one in eight adults are considered difficult to cannulate, and endure multiple attempts at cannulation prior to success. Cannulation is considered a painful event, and around 40-50 adults are cannulated daily at GCUH . Ultrasound-guided cannulation provides a means to identify suitable veins and improves first attempt success rates. A training program run by GCUH Emergency Department (ED) aims to increase ultrasound-guided cannulation.

Methods: This study evaluates the training program through a) measurement of participant uptake of ultrasound-guided cannulation and b) prospectively collected department-wide metrics on number of attempts to cannulate and ultrasound use. Five training sessions consisting of four sessions of 90 minutes each occurred in 2017. Confidence with the procedure was scored by attendees on a 5-point Likert scale. Data on over 500 cannulations done in ED was captured prior tothe training program and in January-February, 2018.

Results: Most (70.1%) of the 195 clinician participants had never used ultrasound to cannulate previously. Of participants, 113 (58%) responded to follow-up questionnaires; 43% of these reported using ultrasound to cannulate in the month after training. Participants' post-training confidence score increased from 1.6 to 1.8 (p<.01). Department-wide statistics demonstrated no change in the proportion of patients undergoing three or more attempts at cannulation (9.0% – 9.5%), or average attempted cannulations per patient (1.4, 1.4). However, ultrasound use increased from 0.7% to 6.0% post-program (p<.001).

Conclusion: A training program in ultrasound-guided cannulation increased the use of ultrasound in ED, but did not change the number of attempts endured by patients.

Funding Source: Emergency Medicine Foundation

Patients presenting with mental health conditions to the emergency department: Why so long a wait?

Amy Sweeny (1,2), Gerben Keijzers (1,2,3), John O'Dwyer (4), Chris Stapelberg (3,5), Julia Crilly (1,2)

(1) Department of Emergency Medicine, Gold Coast Health; (2) Menzies Health Institute, Griffith University; (3) Faculty of Health Sciences and Medicine, Bond University; (4) The Australian e-Health Research Centre. Health and Biosecurity Commonwealth Scientific and Industrial Research Organisation (CSIRO); (5) Mental Health and Specialist Services, Gold Coast Health

Background: People presenting with a mental health disorder (MHD) wait longer in the emergency department (ED) compared to those presenting for other reasons, potentially placing vulnerable people at further risk for deterioration. Reasons why this occurs are poorly researched in Australia.

Methods: Linked ambulance, emergency, pathology, imaging and admission data were analysed for ED presentations diagnosed with a MHD at Gold Coast University Hospital Admissions and discharges for presentations diagnosed with a MHD were considered separately; a long ED LOS was defined as the 90th percentile of ED LOS. Multivariable generalised linear models were built to identify predictors of a long ED LOS for patient presentations diagnosed with a MHD.

Results: The sample comprised 3.8% of all 88,677 ED presentations for people over 5 years old; 34.2% (n=1,163) were admitted and 65.8% (n=2,242) were discharged. For admissions, significant predictors of a long ED LOS were investigations (pathology or imaging tests), a triage score of 1 or 2, arrival out-of-hours and arrival by ambulance. For discharges, significant predictors of a long ED LOS were investigations (pathology or imaging tests) and arrival out-of-hours (18:00 - 05:59), arrival by ambulance and increasing age.

Conclusion: Factors predictive of a long ED LOS for patients presenting to the ED diagnosed with a MHD varied based on their disposition. Strategies to reduce long ED LOS may thus consider modifiable aspects, including the need for certain investigations, and non-modifiable aspects, including the need for further access to after-hours mental health services in hospital and in the community.

Funding Source: Emergency Medicine Foundation

Outline for a Randomised Control Trial testing a brief, embedded intervention to reduce stress for emergency doctors

Dianne Hong Ng Oc Le (1), Terra Sudarmana (1), Sanjushee Murali (1), Khilan Shukla(1), Zoe Steiner(1), Joe Chua (1), Chris Stapelberg (2,3), Amy Sweeny (1,4), Shahina Braganza (4)

(1) School of Medicine, Griffith University; (2) Faculty of Health Sciences and Medicine, Bond University; (3) Mental Health and Specialty Services, Gold Coast Health; (4) Emergency Department, Gold Coast Health

Background: Emergency doctors face challenging situations every day. Sress and burnout are significant problems, with personal and professional impact. Mindfulness-based interventions have become increasingly popular and improve some people's wellbeing. However, most studies use psychological measures such as the Maslach Burnout Inventory, which do not correlate well with physiological measures of stress. Our study aims to measure both physiological and

psychometric measures whilst testing the feasibility and effectiveness of a wellness intervention that doctors could embed into their busy schedules.

Methods: Our study is based at two hospitals; one in Gold Coast, Australia and the other in London, Ontario, Canada. Emergency doctors will be randomised to 'no intervention' or a wellness intervention incorporating a simple brief practice: square breathing. In addition to validated psychometric tools, biometric and physiological measures will be taken via a Firstbeat 2 electrode system to measure Heart Rate Variability (HRV) over 24 hours (a range of time domain and frequency domain metrics will be calculated), another wearable to monitor sleep quality, and salivary cortisol. Both groups will log their daily activity, and data compared using validated analysis methods.

Results: We hypothesise that the intervention group will have significant improvements in physiological measures of well-being, regardless of changes in psychometric scores. We expect that the intervention will be feasible and sustainable.

Conclusion: To date, there is poor correlation between the psychological and physiological measures of stress in a given context. Our study will test the effectiveness of an embedded workplace intervention, using both measures.

Predictors of hospital admission for children via the emergency departments in Australia and Sweden: An observational cross-sectional study

Julia Crilly (1,2), Amy Sweeny (1,2), Åsa Muntlin Athlin (3), Norm Good (4), David Green (1,2), Lorelle Maylon (5), Luke Christofis (6), Malcolm Higgins (7), AnnSofie Källberg (8), Sara Olsson (9), Åsa Myrelid (10), Therese Djärv (9), Katarina Göransson (9)

(1) Emergency Department, Gold Coast Health; (2) Menzies Health Institute, Griffith University; (3) Uppsala University, Uppsala, Sweden; (4) CSIRO, Herston QLD; (5) Royal Brisbane and Womens' Hospital, Brisbane; (6) Lyell McEwin Hospital, Adelaide; (7) Childrens and Womens Hospital, Adelaide; (8) Falun Hospital, Falun, Sweden; (9) Karolinska University Hospital and Karoliska Institut, Stockholm, Sweden; (10) University Children's Hospital, Uppsala, Sweden

Background: To describe the profile and identify predictors of hospital admission for children who present to emergency departments (EDs) in Australia and Sweden.

Methods: A multi-site observational cross-sectional study using routinely collected data pertaining to ED presentations made by children <18 years of age between July 1, 2011 and October 31, 2012. Univariate and multivariate analysis was undertaken to determine predictors of hospital admission

Results: Of the 151,643 ED presentations made to the five EDs during the study period, 22% resulted in hospital admission. Admission rate varied by site; children's EDs had higher admission rates (26% and 23%) than the mixed (adult and children's) EDs (13%, 17%, 18%). Factors most predictive of hospital admission for children, after controlling for triage category, included hospital type (children's only) aOR (95 CI): 2.3 (2.2-2.4), arrival by ambulance aOR (95%CI): 2.8 (2.7-2.9), referral from primary health aOR (95% CI) 1.5 (1.4-1.6) and presentation with a respiratory or gastrointestinal condition aOR (95%CI) 2.6 (2.5-2.8) and 1.5 (1.4-1.6), respectively). Predictors were similar when each site was considered separately.

Conclusion: A large volume of ED attendances and subsequent admissions are from children. Although the characteristics of children varied by site, factors predictive of hospital admission were mostly similar. The awareness of these factors predicting the need for hospital admission can support future machine learning algorithms and clinical decision making.

Wednesday 20 November
Themed Session 2
Critical Care and Trauma

Reducing central line associated blood stream infections in a tertiary intensive care service: A knowledge translation study

Frances Lin (1), Niki Murphy (2), Rosemary Willis (2), Angelly Martinez (2), Yang Lyu (3), Andrea Marshall (1,2)

(1) School of Nursing and Midwifery, Menzies Health Institute Queensland, Griffith University; (2) Gold Coast University Hospital; (3) Chaoyang Hospital, Beijing, China

Background: Central venous catheters (CVCs) are frequently inserted in critically ill patients. Due to its invasiveness, central line associated blood stream infections (CLABSI) can occur. Although a decrease in the incidence of CLABSI has been observed in recent years, it continues to be a significant iatrogenic complication. This study was aimed to reduce CLABSI rate in the Intensive Care Unit (ICU) of an Australian tertiary hospital.

Methods: This is a mixed method three-phase integrated knowledge translation study. In phase 1, CVC insertion and management practices were audited, and focus group and individual interviews conducted. Barriers and facilitators to adhering to evidence-based recommendations were identified. In phase 2, partnering with the clinicians working in the unit, interventions were co-designed and implemented to address the barriers. In phase 3, the effectiveness of the implementation was conducted.

Results: Total of 1358 patients were included in the 12 months before implementation, and 1282 patients in the 12 months after implementation commenced. There were no statistical differences between the two groups in age, gender, APACHE II and III scores. The CLABSI rates decreased from 1.28/1000 line days (before) to 0.94/1000 line days (after), however, this was not statistically significant. Staff adherence to evidence-based recommendations in CVC insertion and management improved over time.

Conclusion: Involving clinicians in the intervention design and implementation process contributed to practice improvements. Simple and clear evidence-based recommendations in the ICU's practice policy, staff education, and ongoing audit and feedback were perceived as effective in reinforcing evidence-based practice.

Funding Source: Australian College of Critical Care Nurses research grant 2016

Preferences of family members for participation in the delivery of evidence-based care in the ICU: A qualitative study

Andrea Marshall (1,2), Georgia Tobiano (1), Julie Barker (1) , Shelley Roberts (1,2) , Wendy Chaboyer (2), David Pearson (1), Angelly Martinez (1), Daren Heyland (3)

(1) Gold Coast Health; (2) Griffith University; (3) Queens University

Background: Person centred care has become central to the core goals of better health, better quality of care and lower costs but is difficult to implement in the context of critical illness. Partnering with families is an effective strategy for improving health outcomes and experiences for both patients and families yet little is known about family preferences for partnering with health professionals in delivering evidence-based care.

Methods: Using a semi- structured interview guide, qualitative interviews were conducted with 10 family participants of critically ill patients.

Results: Families' preferences for participation varied across a continuum from passive to active participation in communication and physical care activities. Spouses were more likely than siblings or children to prefer participating in physical care activities; siblings and children preferred participating in communication. Engaging in patient care activities was viewed more favourably once the patient was stable. Families commented that additional knowledge and skill, as well as support from health professionals, was required for them to feel comfortable participating in clinical care during critical illness. Uncertainty, anxiety, and stress experienced in the early stages of critical illness was a barrier to family participation.

Conclusion: Family engagement in the care of a critically ill loved one has positive benefits for both the patient and the family.

Funding Source: The Gold Coast Health Collaborative Research Grants Scheme 2017

Correlation of ROTEM® amplitudes at five minutes (A5) with ROTEM® amplitudes at ten minutes (A10) in patients undergoing cardiac surgery

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Provenzano (3), Lauren Gurney (4), Matthew Hedge (4)

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Background: There is growing evidence that the use of rotational thromboelastometry (ROTEM®) in cardiac surgery reduces blood product transfusion. ROTEM® clot amplitude at ten minutes (A10) is commonly used as an early surrogate for maximum clot firmness (MCF) which allows for rapid results and early initiation of therapy. Even earlier results at five minutes (A5) may be as clinically useful as the A10 to guide blood product administration in cardiac surgical patients. This carries the potential benefits of reducing blood product transfusion and the associated mortality and morbidity, as well as conserving a limited resource and reducing health care expenditure.

Methods: This study was a prospective observational cohort study of 150 consecutive cardiac surgical patients at the Gold Coast University Hospital during 2015-2016. ROTEM® analysis was performed at six set time points:

1. Pre-cardiac surgery
2. During surgery, on cardiopulmonary bypass (CBP)
3. Post CPB and administration of protamine
4. On admission to the intensive care unit (ICU) post-operatively
5. Day one post-operatively
6. Day four post-operatively.

Further testing was guided by physician judgement.

Results: A total of 2019 ROTEM® tests were analysed using a Spearman's rank correlation coefficient. The A5 and A10 results were linear and strongly correlated at all time points in the perioperative period. EXTEM r= >0.988 – 0.993 and FIBTEM r= >0.980 – 0.991.

Conclusion: ROTEM® EXTEM and FIBTEM A5 strongly correlates with the A10. Using the A5 instead of A10 could potentially result in earlier targeted management of coagulopathy and reduced overall transfusion.

Funding Source: Data collection, test reagents and equipment were part-funded by a grant to Dr Jessica Taylor from the Gold Coast Hospital Foundation 2014

Protein energy intake of critically ill trauma patients throughout their recovery trajectory

Elizabeth Wake (1,2), Martin Wullschleger (1, 2), Shelley Roberts (1,2), Sharnie Fyffe (2), Jackie Kydd (2), Susannah Lauer (2), Julie Wong (1), Andrea Marshall (1,2)

(1) Gold Coast Health; (2) Griffith University

Background: Trauma is a leading cause of morbidity and mortality among hospitalised patients. Nutritional adequacy is challenging in trauma owing to injury and prolonged hospital stay. This study was designed to describe nutritional adequacy among critically injured patients to inform strategies to improve the nutritional intake.

Methods: A prospective, single centre, observational study was undertaken in critically injured adult patients admitted to the ICU. Quantitative data collection included patient demographics, energy and protein intakes.

Results: Seventy-nine patients with a mean age of 53 years (IQR 34.5-66.5) were enrolled. The median APACHE II score was 12 (IQR 7.5-15.5); 59% (n=47) had an Injury Severity Score of >15 and 47% required mechanical ventilation. Hospital length of stay was 10.8 (IQR 7.2-17.2) days. Enteral nutrition (EN) via the gastric route was the choice of nutrition for 28% (n=22) of patients; (54% n=12) had EN commenced on day one. Half received adequate energy and protein for at least one day whilst in the ICU; nutritional adequacy was achieved on or after day 4 for 1/3 of patients. Median energy and protein delivered from EN each day was 5302kJ (IQR 2450-7653) and 50.1g (IQR 24.1-77.6) respectively. Energy delivery from EN was adequate on a greater number of patient days (n=55, 38%) in comparison to protein delivery (n=41, 29%).

Conclusion: Despite early delivery of EN, a protein and energy deficit occurred during ICU admission. Strategies to optimise nutrition intake are required to enhance nutritional intake and support recovery.

Caregiver resilience in patients with severe traumatic injuries

Katharine Heathcote (1), Jing Sun (1), Zachary Horn (1), Philippa Gardiner (1), Rebecca Haigh (2), Elizabeth Wake (2), Martin Wullschleger (1,2)

(1) School of Medicine, Griffith University; (2) Trauma Service, Gold Coast University Hospital

Background: Informal caregivers are integral to the rehabilitation of severely injured patients yet are at risk for poor health. Caregiver resilience could be protective however longitudinal evidence is sparse. This study investigated the predictive importance of caregiver resilience with caregiver and trauma patient outcomes.

Methods: A prospective pilot study of caregivers and severe trauma patients was conducted at the GCUH during 2018, with follow up in the community three months after patient discharge. Data were collected on personal resilience, pre-injury health, support networks, socio-demographic and patient factors. Outcomes were caregiver burden and quality of life measured respectively, by the CaregiverStrain Index and the Short Form 12 Health Survey.

Results: Fifty-three (77%) patient/carer dyads participated. The median ISS was 19 (IQR 8). Before commencing care, more than half the caregiver sample was socioeconomically disadvantaged, with mental health function 5 points lower than the population average. Statistically significant ($p<0.05$) reductions from baseline were found at follow up for caregivers' resilience, mental health function, physical activity level and community support. Caregivers' use of health services was significantly increased from baseline. Multiple regression analyses found that caregiver resilience was protective of caregiver burden ($p=0.018$), and associated with higher levels of physical function in patients ($p=0.003$).

Conclusion: Caregivers of severe trauma patients could be at risk for poor health, however resilience appears to be protective for poor patient and caregiver outcomes Early detection and clinical management of vulnerable caregivers in terms of their resilience, social support networks and physical health could prevent poor patient and caregiver outcomes

Funding Source: Kathy Heathcote was funded by the Australian Governments' Research Training Program Scholarship.

Wednesday 20 November
Themed Session 3
End of Life Care

Acceptability and feasibility of using a risk checklist to promote advance care planning in QLD and NSW general practices

Ebony Lewis (1), Abela Mahimbo (1), Christine Linhart (1), Margaret Williamson (1), Mark Morgan (2), Mark Jones (3), John Hall (1), Magnolia Cardona (3,4)

(1) The University of New South Wales; (2) Faculty of Health Sciences and Medicine, Bond University; (3) Institute for Evidence-Based Healthcare, Bond University; (4) Gold Coast Health

Background: Initiation of discussions on patient's end of life (EOL) care preferences are often delayed by clinicians due to prognostic uncertainty. We aimed to 1) enhance clinician confidence by identifying objective risk flags for 'near EOL'; and 2) understand the barriers and facilitators to the use of a risk checklist in routine care.

Methods: Our team developed a checklist with risk factors for 12-month death based on analysis of MedicineInsight GP sentinel data from 160,897 patients aged 75+ years across Australian States/Territories. Subsequent in-depth interviews of 15 GPs from QLD and NSW investigated their views on the use of the checklist in their older patients to flag the need for end of life discussions. Thematic analysis identified main issues for risk assessment and barriers for implementation of the checklist for advance care planning.

Results: GPs identified uncertainty of knowledge of time to death, ineffective communication skills, time demands, low community health literacy, family's expectations and cultural taboo as barriers to EOL discussions. In principle support for implementation of a risk checklist was high, but some scepticism was apparent about whether

time constraints would hamper intentions to review management plans or update advance health directives. Integration as part of the 75+ assessment was seen as a useful strategy.

Conclusion: The use of a checklist to flag older people at risk of death is a welcome addition in general practice to encourage earlier EOL conversations, but remuneration is required to secure quality time for these discussions. Validation of the checklist in a prospective study is recommended.

Funding Source: Work supported by a 2018-2019 grant from the HCF Research Foundation [#172099].

End-of-life care for older adults presenting to the emergency department: A scoping review study

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Background: By 2050, the world's population aged ≥ 60 is expected to grow to 2 billion. Older adults with serious chronic conditions often present to the emergency department (ED) with trajectories of dying. This review aimed to provide a comprehensive understanding of available evidence regarding end-of-life (EOL) care provided to older adults in the ED.

Methods: This review was guided by Joanna Briggs Institute scoping review framework. Four databases and Google Scholar were searched for English articles published between 2007 and 2018 with a combination of terms. The evidence level was assessed using NHMRC level of evidence.

Results: Fourteen studies were included with the NHMRC level of evidence ranged from II to IV. Most older adults at the EOL were female, triaged in semi-urgent or urgent category, with advanced cancer, cardiac, respiratory and dementia diseases. Pain and shortness of breath were common symptoms reported. Multiple EOL measures exist regarding predicted mortality, functional status assessment, comorbidities, symptom distress, palliative care needs, quality of life and caregiver's stress. Reported outcomes of intervention programs included lower admission rates, shorter ED length of stay, increased palliative care referral and consultations, and decreased Medicare costs.

Conclusion: This review provides an overview of EOL care for older adults presenting to the ED. Many tools exist to guide decision making for EOL care in the ED, however, there is limited evidence regarding if and how EOL policy and guidelines were followed or used in clinical practice. Future research and clinical practice that utilise evidenced-based policies and guidelines is recommended.

Acceptability testing, challenges and future directions of a decision support prototype for shared decision making near the end of life

Magnolia Cardona (1,2), Ebony Lewis (3), Hatem Alkhouri (4), Joshua Head (5), Janice Tan (3), Genevieve Lp (3), Nikita Bathla (3), Ruth Kusnadi (3), Paulina Stehlik (1,2), Lorraine Bublitz (1), Shirley Rangel (1), Dawn Soltau (1), Lovely Bautista (1), Toni Simpson (1), Nigel Lovell (5).

(1) Gold Coast Health; (2) Bond University; (3) UNSW School of Public Health and Community Medicine; (4) Agency for Clinical Innovation, NSW Health; (5) UNSW Graduate School of Biomedical Engineering

Background: Treatment decision-making for older patients near the end of life does not often involve personal values or numeric prognostic information. We developed a prototype web-based decision support tool to fill these gaps. Nurses and Master's candidates identified the evidence of treatment harms and benefits for COPD, CKD and dementia. This study aimed to evaluate the acceptability,usability and areas of improvement of our prototype.

Methods: Eleven clinicians and three patients participated a cognitive walkthrough of the COPD, CKD and Patient Values modules. After briefing about the prototype features participating clinicians were immediately given the opportunity to test its usability. An observer/researcher asked pre-specified questions about content clarity, logical flow,

user-friendliness, and acceptability for routine care. Views, technical problems and suggestions for improvement were documented in a standard form.

Results: Feedback suggested that nurses were more satisfied with the tool including the patient values module as good innovation. Doctors described the guided discussion on evidence-based prognosis and treatment harms and benefits as too exhaustive, lengthy and complex and likely impractical for routine practice. Three international clinical research groups are interested in participating in a multi-centre trial to test the decision tool's effectiveness in increasing the prevalence of advance health directives.

Conclusion: Achieving balance between too much information and not enough evidence is challenging. Nurse-led models of shared decision-making service may represent the solution to the time constraints of doctors. Consultation on strategies to embed longer discussions leading to empowered patients and clinicians in shared decision-making in routine care is warranted.

Funding Source: Work funded by the NSW Agency for Clinical Innovation and a UNSW Research Infrastructure grant.

Exploration of clinicians' perspectives of using a bereavement risk screening tool in a palliative care setting: A qualitative study

Lois Lawler (1), Emily Plunkett (1), Lise Johns (2), Christy Noble (3,4,5), Rachel Wenke (5,6)

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Background: To minimise the adverse outcomes of prolonged complex bereavement, health professionals need effective risk screening tools to identify those at risk. However, existing tools can be challenging to implement in the clinical setting. This qualitative study aimed to explore clinicians' perspectives and experiences of using the Bereavement Risk Index (BRI) screening tool, including identifying barriers and enablers regarding its use and what they perceived as important domains in bereavement risk screening.

Methods: Data was collected through semi-structured - group and individual -interviews and deductively analysed using the Theoretical Domains Framework. Eleven participants employed in one regional palliative care service were interviewed.

Results: The results revealed three key implications – 1) A risk screening tool is highly beneficial however, contextual factors will limit its implementation. For example shorter lengths of stay in palliative care inpatient settings impacts on the time available to assess factors which influence bereavement risk. This may be addressed through assessment of bereavement needs earlier in the illness trajectory.

2) Clinician confidence in the tool and perception of the tools' comprehensiveness are significant factors in its use. For examplethe BRI included only 3 of 11 items considered important by clinicians.

3) Feedback is needed as to whether clinicians' assessment of bereavement risk remains accurate and valid in the longer term. These results suggest the importance of feedback to clinicians about the longitudinal accuracy of those identified as more at risk.

Conclusion: The BRI was perceived to be easy to use and facilitated monitoring of bereavement risk, however staffing resources, clinician confidence in the tool's ability to accurately identify at risk people and perception of the tool's comprehensiveness may influence its implementation in some clinical settings. Multiple drivers impacting shorter lengths of stay and other contextual practicalities in palliative care settings affect the implementation of risk screening tools. This points to the need for earlier risk screening by clinicians in the continuum of care.

While the BRI was noted as only one part of the risk assessment process in this palliative care setting, by systematically exploring barriers and enablers to its use, the study highlights the value of seeking clinician feedback about the use of a bereavement risk screening tool in practice.

Funding Source: Allied Health Research Grant

Thursday 21 November
Themed Session 4
Research and Learning

Research engagement of our Doctors: How is Gold Coast Health performing?

Caitlin Brandenburg (1), Christy Noble (1,2), Anthony Barrett (1), Rachel Wenke (1,2), Ian Hughes (1), Jeremy Wellwood (1), Sharon Mickan (3).

(1) Gold Coast Health; (2) Griffith University; (3) Bond University

Background: Research is a key strategic enabler of Gold Coast Health's vision to be a centre of excellence for world class healthcare. However, anecdotally, doctors at GCH of all specialties and all levels of experience have frequently expressed concern that clinical pressures limit their engagement in research. We aimed to measure the research engagement of GCH doctors, and the specific barriers and facilitators to this. This study forms the 'Identify and define the problems and needs gap' phase of a larger Knowledge Translation study which will aim to improve our doctors' research opportunities and engagement.

Methods: A cross sectional survey was used to measure the research engagement of medically-qualified Gold Coast Health staff. This included all levels, from intern to consultant, and all specialities that require a medical degree, but excluded medical students. The validated Research Culture and Capacity survey was used, which looks at level of research engagement, and barriers and facilitators to engagement, at an organisation, team, and individual level. Goal sample size was 10% of all GCH doctors (N=124).

Results: Recruitment is still ongoing. Early findings show a clear pattern of doctors wanting to engage in research but lacking time, funding, leadership support or infrastructure to engage. Results will be summarised using descriptive statistics. Qualitative responses will be coded using qualitative content analysis.

Conclusion: This survey study will form a baseline for a larger program of work seeking to co-design evidence-based interventions to improve the engagement of GCH doctors in research.

Clinicians' strategies for enriching learning through practice

Christy Noble (1,2,3), Rola Ajjawi (4), Stephen Billett (2), Joanne Hilder (1), Andrew Teodorczuk (2)

(1) Gold Coast Health; (2) Griffith University; (3) University of Queensland; (4) Deakin University

Background: Balancing patient care whilst developing junior medical trainees in acute healthcare settings is notoriously challenging for clinicians. Healthcare organisations often support this through offering protected learning time and continuing professional development activities. Clinical settings offer rich learning opportunities yet realising this learning potential is not always apparent.

Aim: Explore strategies used by experienced clinicians, from different specialities, to enrichtrainee learning through practice whilst balancing patient care responsibilities.

Methods: Nineteen senior clinicians, from emergency medicine (n=8), medicine (n= 6) and surgery (n=5), were interviewed. We analysed the data using thematic framework analysis as informed by workplace learning theory.

Results: Clinicians described enriching learning by identifying and responding to opportunities provided by their particular practice requirements, yet reported similar pedagogic practices e.g. questioning, guided learning. However, different clinical specialities described different ways of responding to these opportunities with emergency medicine being shift focussed whilst medicine enacted them across a trainee's term. Supervisors reported accommodating their own and trainees' preferences and readiness, which shaped the selection of opportunities for learning. This informs the practice curriculum and pedagogies.

Conclusion: Clinicians used a range of strategies to enrich trainees' learning through practice, shaped by circumstances and

speciality requirements (e.g. rotations, patient imperatives, trainee readiness). This showed that supporting learning through practice iscontext-dependent and reliant on interactions amongst trainees, patients and supervisors to co-produce effective learning outcomes. Supporting trainee learning through practice is a complex, dynamic and differentiated process, and supporting it is shaped by situational factors, not standard strategies.

Funding Source: Gold Coast Health and Gold Coast Hospital Foundation Large Research Grant Scheme (RGS2017-LG0002)

Are research training requirements for Australian specialist trainees appropriate?

Paulina Stehlik (1,2), Peter Fawzy (3), Isaac Narouz (3), Caitlin Brandenburg (2), Christy Noble (2,4,5), David Henry (1,2), Paul Glasziou (1)

(1) Institute for Evidence-Based Healthcare, Bond University; (2) Gold Coast Health; (3) Faculty of Health Science and Medicine, Bond University; (4) School of Medicine, Griffith University; (5) School of Pharmacy, University of Queensland

Background: Patients do better in research-intense environments. The importance of research is reflected in the medical trainee program accreditation requirements.

However, the nature of college-mandated research development, including scholarly projects, has not been systematically explored. We aimed to examine the research development curricula of Australian medical colleges and the stages of research engagement

Methods: We mapped the curricula of Australian medical colleges and their subspecialties, reviewing all publicly accessible information from college websites, including curricula, handbooks, and assessment-related documents.

Research-related activities were coded as learning outcomes, learning activities, or assessments; and by research stage (using, participating in, or leading research). We coded learning and assessment activities by type (formal research training, thesis, publication, etc.), whether it was mandatory and/or repeated, linked to a scholarly project, and the project supervisor's research experience.

Results: 55 of 58 Australian colleges and sub-specialty divisions had a scholarly project requirement; but only 11 required formal research training and only two colleges required a research-experienced project supervisor.

Colleges emphasised leading research in their learning objectives and assessments, but not learning activities. Less emphasis was placed on using research, and almost no emphasis on participation. Overall, most learning and assessment activities related to completion of a scholarly project.

Conclusion: It is concerning that colleges place emphasis on leading research and research deliverables, but not research training and supervision by suitably qualified staff.

Colleges may be indirectly contributing to the growing reproducibility crisis and wastage in medical research but are also well positioned to improve research quality and reduce waste.

How to complete a full systematic review in 2 weeks: Processes, facilitators and barriers

Justin Clark (1), Paul Glasziou (1), Chris Del Mar (1), Alexandra Bannach-Brown (1), Paulina Stehlik (2), Anna Mae Scott (1)

(1) Institute for Evidence-Based Healthcare, Bond University; (2) Evidence-Based Practice Professorial Unit, Institute for Evidence-Based Healthcare, Bond University and Gold Coast Health

Background: Systematic reviews (SR) are time- and resource-intensive, requiring approximately one year from protocol registration to submission. This study describes the process, facilitators and barriers to completing a SR in 2 weeks.

Methods: Our SR investigated the impact of increased fluids, on urinary tract infection (UTI) recurrence. The SR was conducted by experienced systematic reviewers with complementary skills (two researcher clinicians, information specialist, epidemiologist), using Systematic Review Automation (SRA) tools, and protected time for

the SR. The outcomes were: time to complete the SR and individual SR tasks, facilitators and barriers to progress, and peer reviewer feedback on the manuscript.

Results: The SR was completed in 61 person-hours (9 workdays; 12 calendar days). A published manuscript required 71 person-hours. Individual SR tasks ranged from 16 person-minutes (deduplication of search results) to 461 person-minutes (data extraction). The least time-consuming SR tasks were: obtaining full-texts, searches, citation analysis, data synthesis and de-duplication. The most time-consuming tasks were: data extraction, writeup, abstract screening, full-text screening, and risk of bias. Facilitators and barriers mapped onto the following domains: knowledge; skills; memory, attention and decision process; environmental context and resources; and technology and infrastructure. Two sets of peer reviewer feedback were received on the manuscript: the first included 34 comments requesting changes, 17 changes were made; the second requested 13 changes, and 8 were made.

Conclusion: A small, experienced team of systematic reviewers, using SRA tools with protected time to focus solely on the SR, can complete a moderately-sized SR in 2 weeks.

Thursday 21 November
Themed Session 5
Mixed Abstract Presentations

Randomised controlled trial of early capsule endoscopy versus colonoscopy following negative gastroscopy in acute gastro-intestinal bleeding

Szymon Ostrowski (1), Anthony Whitfield (1), Tegan Stevenson (1), Amelia Denniss (1), Sneha John (1)

(1) Gold Coast University Hospital

Background: A proportion of patients with suspected acute upper gastro-intestinal bleed (UGIB) have a negative initial gastroscopy. The aim of this study is to investigate whether capsule endoscopy is superior to colonoscopy as a second investigation in patients with suspected UGIB but negative initial gastroscopy.

Methods: This is an ongoing single centre randomised control trial. All patients admitted to our hospital with suspected UGIB but negative gastroscopy were considered for the study. They were randomised to either capsule endoscopy or colonoscopy as the second investigation. If the test was not diagnostic, the patient underwent the other investigation or other interventions as clinically required. Our primary outcome was the diagnostic yield of each modality. Secondary outcomes were length of stay, transfusion requirements and number of diagnostic tests required.

Results: 20 patients have been randomised to date. 11 patients received capsule endoscopy and nine patients received colonoscopy as the second investigation. Diagnostic yield was 91% in the capsule endoscopy arm and 22% in the colonoscopy arm. There was no significant difference between the two cohorts regarding transfusion requirement, length of stay or number of other investigations required.

Conclusion: Preliminary data from our study suggests capsule endoscopy has a significantly higher diagnostic yield than colonoscopy in patients with suspected UGIB and negative gastroscopy. This is expected to decrease overall morbidity and mortality, particularly in the elderly and those with co-morbidities in whom capsule endoscopy is well tolerated. To our knowledge, this is the first randomised controlled trial in this context.

Viral oncogene silencing and innate immune activation – A novel approach for treating human papilloma virus-positive oropharyngeal cancers

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(1) Menzies Health Institute Queensland, School of Medical Science, Griffith University

Background: Human papilloma virus (HPV) is the leading culprit in oropharyngeal squamous cell carcinomas (OPSCC), with an incidence that has surpassed that of cervical cancer, another HPV-driven cancer. HPV-driven cancers are regarded as ‘oncogene addicted’ owing to its survival to the HPV oncogene, E7, also a notorious evader of the immune system. Here, we propose a novel therapeutic approach for HPV positive oropharyngeal cancers by genetically disrupting E6/7 and

using immune activators to induce further cancer tumour killing.

Methods: We used CRISPR technology to edit HPV oncogenes in a range of HPV 16 positive head and neck cancer cell lines and measured cell death using the MTT assay. In innate immune activation assays, CRISPR gene editing is combined with the use of innate immune agonist that binds STING, a component of the viral DNA-sensing cGAS-STING machinery which activates a pro-typical anti-viral type I interferon (IFN) response. IFN responses were measured by real time PCR analysis.

Results: We show that major HPV oncogenes, E6/7, are essential for the survival of HPV16-positive head and neck cancer cells. HPV 16E7 positive, but not HPV 16E7 negative cells respond poorly to cGAS-STING activation stimulus. CRIPSR editing of E7 alleviated this blockade thereby relieving the anti-viral IFN signalling pathway.

Conclusion: In future in vivo experiments involving patent-derived tumours, we hypothesise that targeting E6/7 would lead to OPSCC tumour regression and that adjuvant STING activation induces favourable innate immune-mediated tumour clearance. This approach may find merit in preventing progression of premalignant OPSCCs to invasive forms.

An overview of Opioid discharge prescriptions for medical patients at Gold Coast University Hospital

Gemma Franks (1), Wing Yee Hui (2)

(1) Pharmacy Department, Gold Coast Health; (2) School of Pharmacy, University of Queensland

Background: Recent evidence has shown that hospital discharge prescriptions for opioids may be a starting point for inappropriate opioid use in patients. While existing studies have primarily focused on opioid prescriptions for the surgical patient, little is known about opioid prescriptions for medical patients.The aim of this study was to give an overview of current prescribing practices for opioids for discharge in medical patients at Gold Coast University Hospital (GCUH).

Methods: This was a retrospective study; patients discharged from GCUH in February 2019 with an opioid prescription were identified using the enterprise-wide Liaison Medication System (eLMS). Patient demographics, analgesics used during the inpatient admission, analgesics prescribed on discharge and the presence of an opioid de-escalation and/or pain management plan were recorded.

Results: Endone (66.7%) is the most commonly prescribed opioid for medical inpatients and on discharge, followed by Targin (27.4%). The average discharge prescription quantity of Endone was 15.8 tablets. There was no correlation found between opioid administration 24 hours prior to discharge and the amount of opioids prescribed at discharge. Paracetamol was prescribed, in addition to the opioid(s), to the majority of patients in hospital (88.1%) and on discharge (94.1%). A limited number of patients were given a detailed opioid de-escalation plan (6%) or a pain management plan (8%).

Conclusion: The study identified problems with over-prescribing opioids at discharge, inappropriate use of sustained-release opioids, inadequate use of NSAIDs and insufficient plans for managing pain and de-escalation of opioids in the medical patient. Further work needs to be done to improve opioid prescribing practices.

Thursday 21 November
Themed Session 6
Nursing Interventions

Partnership during chronic illness - understanding nurse navigator and consumer experiences

Elisabeth Coyne (1), Laurie Grealish (1,2), Joan Carlini (1), Marion Mitchell (1,3), Tracey Doherty (2), Warren Harlow (2), Archana Khadka (1,3)

(1) Griffith University; (2) Gold Coast Hospital; (3) Princess Alexandra Hospital

Background: ‘Partnering with consumers’ is an element in ensuring safe and quality healthcare to improve health outcomes of consumers. Clients with chronic disease have complex physical, social and psychological needs and the provision of tailored support

enables information and assistance to be provided in a timely manner and at the appropriate level. The nurse navigator (NN) aims to integrate acute and community care, partnering with the client and family for optimum client outcomes. This research explored the expectations of the role and experience of partnership for the consumer and NN.

Methods: We used a qualitative, interpretive approach with telephone interviews with clients, family and NN, with a content analysis to understand the experience of partnership

Results: Interviews with NN (n=7) and clients and family using the NN service (n=11) were analysed separately and then together to provide themes related to the role and experience of partnership. The four themes were; Coordination is aligned with client assessment, establishing and sustaining relationships, nurse led planning, the value of presence. The themes related to how the NN built the relationship with the consumer and how the consumer valued and depended on the relationship to ease the burden of chronicdisease. Clients health needs often extended to social supportive care needs, tending to overwhelm nurse's partnership role.

Conclusion: The partnership role of nurse with the consumer was the key to meeting the consumer's needs. Understanding the needs of the client and tailoring support provided the client with direction but lacked an empowerment aspect.

Falls prevention for older people with cognitive impairment

Laurie Grealish (1,2), Jo-Anne Todd (2)

Contributing authors include: Wendy Chaboyer, Marie Cooke, Susan Brandis, Jacob Darch, Matthew Lunn, Maggie Phelan, Belinda Real, Dawn Soltau, A. Adeleye, Gillian Stockwell-Smith.

(1) Gold Coast Health; (2) School of Nursing and Midwifery, Griffith University

Background: Evidence-based guidelines for falls prevention do not address cognitive impairment, despite a three times higher fall rate for people with cognitive impairment. The aim is to clarify the challenges of falls prevention for older people with cognitive impairment and make recommendations for effective preventative strategies.

Methods: Three studies were conducted: (1) structured observations of up to four hours over two months (155 hours); (2) individual semi-structured interviews (n=13) with nursing personnel; and (3) a mixed studies literature review focused on studies that reduced falls for older people with cognitive impairment.

Results: The observation data showed variability in adherence to falls prevention activities. The categories with the highest adherence were nutrition and hydration, mobilization safety, and social engagement. Clinical care, comfort, and elimination categories had lower adherence. Three themes emerged from the interview data "direct observation is confounded by multiple observers"; "knowing the person has cognitive impairment is not enough"; and "nurses want to rely on the guideline but unsure how to enact it". Effective interventions found to reduce falls in older people with cognitive impairment were not singular, but complex, and include medication review, delirium prevention, and communication strategies that enhance partnership between families and staff.

Conclusion: Falls prevention for older people with cognitive impairment is complicated by limited understanding of cognitive impairment and the frequency of missed care. Preventing falls should incorporate delirium prevention and medication review, and structured inclusion of family, when available.

Funding Source: A grant from the Gold Coast Hospital and Health Service Private Practice Trust Fund (PPTF 120 18.5.16) supported the conduct of two of these studies.

Promoting lifestyle change in midlife adults using narrative stories and virtual coaching: Results of the GroWell for Health feasibility study

Amanda McGuire (1), Nicole McDonald (1), Janine Porter-Steele (1,2), Joy Parkinson (3), Debra Anderson (1)

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Background: Midlife adults are at increased risk of chronic disease as the lifetime cumulative effect of unhealthy lifestyle leads to physiological and metabolic changes. This study aims to evaluate the feasibility of a novel 8-week eHealth behaviour change intervention tailored for midlife adults (GroWell for Health Program) incorporating narrative stories and virtual online coaching to promote increased physical activity, healthy eating, stress management and better sleep.

Methods: Healthy volunteers aged 40 to 59 were recruited online and randomly allocated to one of two groups: Arm A received the eBook; Arm B received the eBook plus virtual nurse coaching. The intervention includes a structured 8 week program, health information, narrative stories and motivational interviewing delivered via Skype. Data were collected using online questionnaires using validated instruments, open ended questions and semi-structured exit interviews.

Results: Forty adults (n = 40) enrolled in the study, the majority were female with an average age of 52 years. Participants in both study arms had positive feedback about Program and the use of fictional characters where they could identify with both their stories and struggles with behaviour change. Those participants receiving virtual nurse coaching valued the convenience and flexibility of virtual nurse consultations and the personalised and tailored support they received.

Conclusion: The Program demonstrated good feasibility and utility with high rates of participant satisfaction. Virtual eHealth delivery allows improved reach and flexible delivery with the use of fictional character narratives showing promise as a means of increasing participant motivation and engagement in health promoting behaviours.

Funding Source: Menzies Health Institute New Researcher Grant.

Thursday 21 November
Themed Session 7
Women's and Family Health

Peripartum urinary incontinence: Prevalence, severity and risk factors. Is there a role for primary prevention?

Valerie Slavin (1,2), Jenny Gamble (2), Debra K Creedy (2)

(1) Women, Newborn & Children's Services, Gold Coast Health; (2) School of Nursing and Midwifery, Griffith University

Background: Urinary incontinence (UI) is a common condition affecting women. Modifiable risk factors include obesity, smoking, diet, and birth outcomes, suggesting a role for primary prevention. The perinatal period offers a unique opportunity for education, assessment and support. This study identified the local prevalence, severity and risk factors associated with UI in childbearing women at Gold Coast University Hospital.

Methods: In this prospective cohort study, 309 women reported the prevalence of urinary incontinence during pregnancy (<27 weeks and 36 weeks) and postpartum (6- and 26 weeks) using the International Consultation on Incontinence Questionnaire- Urinary Incontinence Short Form.

Results: Response rates for each survey were 100% (Time 1), 89.3% (Time 2), 85.1%, (Time 3) and 77.7% (Time 4). UI was reported by 34% of women in early pregnancy, 50% in late pregnancy and around 20% postpartum. Compared to primiparous women, multiparous women were almost twice as likely to report UI during pregnancy. Primiparity, spontaneous labour, vaginal birth and mental health disorder were associated with postpartum UI. Mode of birth was the strongest predictor. Compared with caesarean section, spontaneous vaginal birth and instrumental birth increased the risk of postpartum urinary incontinence more than 6 and 14 times respectively.

Conclusion: UI is prevalent in childbearing women and highlights the need for education, support and prevention. Birth-related factors were the strongest predictors of postpartum UI. To inform targeted primary prevention strategies further research is needed to investigate the impact of birth interventions, birth practices and birth support on postpartum UI.

Funding Source: This work was supported in part by the Gold Coast Hospital and Health Service Research Grants Committee under grant number 015-01.02.17.

Effectiveness of caseload midwifery care in promoting maternal physical, mental and social health during pregnancy and birth

Valerie Slavin (1,2), Hazel Brittain (1), Jenny Gamble (2), Debra K Creedy (2)

(1) Women, Newborn & Children's Services, Gold Coast University Hospital; (2) Transforming Maternity Care Collaborative, School of Nursing and Midwifery, Griffith University

Background: Caseload midwifery provides women with continuity of care from a known midwife throughout pregnancy, during birth, and postpartum. While caseload midwifery has significant physical benefits for mother and baby, the effects of caseload midwifery in promoting mental and social well-being is under-researched. This study determined the contribution of caseload midwifery for better physical, mental and social maternal outcomes during pregnancy and postpartum.

Methods: A prospective, 2-arm, longitudinal, cohort study was conducted using the International Consortium for Health Outcomes Measurement (ICHOM) Standard Set of Outcome Measures for Pregnancy and Childbirth. The standard set includes validated self-report measures of health, wellbeing and satisfaction. Women (n=309) completed surveys at 5 time-points during pregnancy (<27-weeks and 36-weeks) and postpartum (birth week, 6- and 26-weeks). Routinely collected hospital data were also analysed.

Results: Survey response rates were high (89.3%–77.7%). Compared to women in non-caseload (n=153), women receiving caseload (n=156) were significantly more likely to: labour and birth spontaneously, and experience water immersion and waterbirth. Lower rates of induction, epidural, caesarean section and preterm birth were found. Further, women receiving caseload were more likely to initiate breastfeeding compared to women in non-caseload. Rates of depressive symptoms were very low for both groups. There were no significant group differences in terms of mental health or social support.

Conclusion: Caseload midwifery was associated with several positive birth outcomes for mothers and babies but nuanced research on indicators of mental health and social support is required.

Funding Source: This work was supported in part by the Gold Coast Hospital and Health Service Research Grants Committee under the Grant number 015–01.02.17.

Breaking the Silence: Exploring staff detection and responses to Domestic and Family Violence in clinical practice

Kathleen Baird (1,2), Debra Creedy (2), Angel Carrasco (1), Grace Branjerdporn (1)

(1) Women Newborn & Children's Services, Gold Coast Health; (2) School of Nursing & Midwifery, Griffith University

Background: Women living with domestic and family violence (DFV) are more likely to be high users of Health Care Services due to the deleterious effects of DFV. To improve health care responses to DFV, the aim of this study is to examine the knowledge, perceptions, barriers and confidence in detection and response of DFV for clinicians in a tertiary hospital.

Methods: A link to an online survey was provided to clinicians working in Maternity and Mental Health Services. The surveys were completed at a time most convenient and remained confidential and un-identifiable. Descriptive statistics were conducted. HREC ethical approval was gained for the study.

Results: Preliminary analyses reveal that participants (N=138) were mostly female (88.71%). On average staff had completed 40 hrs of DFV training, and more than half (56.45%) had positively detected DFV. Clinicians felt least prepared to complete legal reporting requirements for DFV. Factors identified as most limiting for screening included the presence of a partner and unavailability of interpreters. While the majority (95.16%) of clinicians agreed that many types of abuse should be screened for, most clinicians (65.63%) did not routinely ask about sexual abuse. Clinicians tended to refer women to individual therapy (73.08%) and women's DFV shelters (73.08%).

Conclusion: Results of the present study identified a range of clinician-related, environmental and organisational barriers for detection and response to DFV.

Recommendations to improve healthcare's approach to DFV include tailoring training to meet clinician's needs and the benefits of applying a trauma violence informed framework to care.

Funding Source: Research Grant Foundation

Thursday 21 November
Themed Session 8
Allied Health

Re-referral rates are low and do not differ between patients in the traditional medical specialist-first and dietitian-first model of care

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(1) Nutrition and Food Service Department, Gold Coast Health; (2) Gastroenterology Department, Gold Coast Health; (3) School of Allied Health Sciences, Griffith University; (4) Menzies Health Institute Queensland, Griffith University; (5) Centre for Applied Health Economics, School of Medicine, Griffith University

Background: The dietitian-first gastroenterology clinic(DFGC) is an expanded scope of practice initiative implemented in response to increased gastroenterology demand. We have previously demonstrated the DFGC is a safe model of care, reducing waitlists, wait-times and has positive patient health outcomes. This study examined patient re-presentation to gastroenterology with similar complaints after management in the DFGC, in comparison to the traditional, medical-specialist first model.

Methods: Patients discharged from DFGC in the first year were criteria matched with traditional model patients by age, presenting condition, categorisation and absence of red flags. Demographic, clinical and process-related service characteristics were compared between the two cohorts using Fisher's exact or Mann- Whitney U tests. Logistic regression analysis used to determine relationships between re-presentation rates and model of care 12, 18, and 24 months after discharge.

Results: The DFGC (109 patients) and traditional-model (62 patients) cohorts were similar, with no significant differences in gender, smoking status, age, weight, BMI or anxiety/depression. Wait and treatment times were significantly longer in the traditional model ($p<0.001$). Both the DFGC and traditional models showed low re-referral rates at 12 months (0 vs 1.61%), 18 months (1.85 vs 6.45%) and 24 months (3.7 vs 8.06%) respectively, with no significant difference between the models at any time point.

Conclusion: Most patients do not re-present for similar conditions within 2 years when managed in either the DFGC or traditional medical model (96% vs 92% respectively). This finding further supports the safety and effectiveness of a DFGC model as a strategy tomanage specialist gastroenterology service demands.

Funding Source: This work was supported by the Allied Health Profession office of Queensland (AHPOQ) Health Practitioner Research Scheme [grant number AH001649]

Predictors of outcome to the uplift program for people with persistent back pain: A prospective cohort study – a preliminary analysis

Hayley Thomson (1,2), Kerrie Evans (3,4), Jonathon Dearness (1), John Kelley (1), Kylie Conway (1), Collette Morris (1), Leanne Bisset (4,5), Gwendolijne Scholten-Peeters (6), Pim Cuijpers (6), Michel Coppieters (5,6)

(1) Gold Coast University Hospital; (2) School of Medical Science, Griffith University; (3) Faculty of Health Sciences, The University of Sydney; (4) School of Allied Health Sciences, Griffith University; (5) The Hopkins Centre, Menzies Health Institute Queensland, Griffith University; (6) Amsterdam Movement Sciences, Faculty of Behavioural and Movement Sciences, Vrije Universiteit Amsterdam

Background: Identify whether psychosocial variables predict outcome to a combined exercise and psychologically-informed education intervention (UPLIFT) for patients with persistent low back pain in a secondary healthcare setting.

Methods: 121 participants completed ten questionnaires before and following the 5-week UPLIFT program, consisting of weekly 90-

minute group sessions of interactive education and graded exercise. The questionnaires assessed psychosocial variables including fear avoidance, self-efficacy, treatment beliefs, catastrophising, perceived injustice, depression, anxiety and stress and social connectedness. Primary outcome was Global Rating of Change (GROC) upon completion and at 6-months follow-up.

Results: Immediately following UPLIFT, 48% of participants reported success (defined a-priori as GROC score ≥3); 35% reported improvement but smaller than considered clinically meaningful (i.e., 1≥ GROC <3); 16% reported no improvement. There were significant reductions for catastrophising, disability, anxiety and stress, and perceived injustice ($p<0.001$). A reduction in depression, anxiety and stress was significantly correlated with high self-efficacy and lower depression, anxiety and stress at baseline.

Conclusion: A high proportion of patients reported clinically meaningful improvement immediately after the UPLIFT program. There was a strong association between patients with higher self-efficacy at baseline and significant improvements in disability, anxiety and stress scores following UPLIFT. Our follow-up data at 6 months will help determine whether these immediate improvements are sustained. Larger patient numbers in our trial(n=250) will allow the development of prediction models.

Funding Source: 2017 Gold Coast Hospital and Health Service and Gold Coast Hospital Foundation research small grants funding scheme (SG0027)

Feasibility of using the mnutric nutritional risk screening tool to identify nutritionally at-risk patients in an Australian ICU

Sean Kenworthy (1,3), Ekta Agarwal (1), Lisa Farlow (2), Rebecca Angus (2,3), Andrea P Marshall (2,3)

(1) Bond University; (2) Gold Coast Health; (3) Griffith University

Background: The modified NUTrition Risk In the Critically ill (mNUTRIC) score has been demonstrated to accurately quantify the risk of negative patient outcomes and discriminate which patients will benefit the most from nutrition intervention in the context of critical illness. However, the mNUTRIC is not widely used and questions have been raised about whether this is feasible in the context of routine clinical practice.

Methods: A retrospective observational study of critically-ill patients admitted to the ICU was conducted. All patients admitted to ICU for ≥72 hours during the 5-month period from 1 January-30 May 2017 were included. Feasibility was determined by time taken to calculate the mNUTRIC score where resources suggested feasibility would be supported if this could be done in <5 minutes. Data availability was also a feasibility outcome with all data to be available for >90% of patients.

Results: For the 260 eligible patients, calculation of a mNUTRIC score took a median of 4 minutes and 54 seconds (IQR 4.3-5.6 mins) with 96% of scores calculated in <10 minutes. Data were available to calculate mNUTRIC scores for 93% (241/260) of patients. One-third of the patients (n=81, 31%) were at high nutrition-risk with a mNUTRIC score of 6. Of these, 44% (36/81) had not been reviewed by a dietitian. The feasibility of using the mNUTRIC score in clinical practice was contested given dietitian availability in this clinical setting (0.6FTE).

Conclusion: Available staffing resources can impact the feasibility of manually calculating mNUTRIC scores.

Lightning Talk Abstracts

Wednesday 20 November
Lightning Talk Session

Characteristics and service utilisation of new patients attending a Sexual Health Service during the Gold Coast Commonwealth Games 2018

Karen Biggs (1), Maureen Todkill (1), Courtney Lougoon (1), Simon White (1), Maree O'Sullivan (1), Caroline Thng (1)

(1) Sexual Health Service, Gold Coast Health

Background: In 2018 the City of Gold Coast hosted the Commonwealth Games (GC2018). Large-scale gatherings such as this have the potential to pose a risk of sexually transmissible infection (STI) transmission and increase burden on local sexual health services. This study aims to describe the characteristics and service utilisation of new patients attending Gold Coast Sexual Health Service (GCSHS) during GC2018.

Methods: All new clients attending GCSHS during the GC2018 period were reviewed to identify reasons for presentation, demographics, STI diagnosis and provision of post-exposure prophylaxis for HIV (PEP). Data was also collected on usual place of residence and whether visits to the Gold Coast were associated with GC2018. Data were benchmarked against a comparison group who attended during the corresponding period in 2017.

Results: Of all new attendees, only 4.1% (n=23) stated their visit to the Gold Coast was associated with GC2018. The majority of new attendees (424/555 or 76%) lived on the Gold Coast. There were no significant differencesbetween the 2017 and GC2018 groups for diagnosis of an STI (p= 0.469). Reasons for presentation showed no significant differences between the two groups. Demand for HIV post exposure prophylaxis and contraceptive services remained low (3% and <1 % respectively in 2017).

Conclusion: The GC2018 event had a minimal impact on the number of new clients attending GCSHS. Previous concerns that large scale events such as GC2018 will increase attendances for HIV PEP, sexual assault follow-up or emergency contraception are refuted by this study.

PEP in the era of PrEP: A comparison of PEP use in South-East Queensland since the widespread introduction of PrEP

Karen Biggs (1), Jacqualine McLellan (2), Adam Spinks (2), Cheryn Palmer (3), Maree O'Sullivan (1), Fiona Marple-Clark (1), Julian Langton-Lockton (2), Caroline Thng (1)

(1) Sexual Health Service, Gold Coast Health; (2) Sexual Health & HIV Service, Metro North Health Service; (3) Sexual Health, Princess Alexandra Hospital, Metro South Health Service

Background: Post-exposure prophylaxis (PEP) and pre-exposure prophylaxis (PrEP) for HIV are biomedical components in the HIV prevention toolkit. PrEP became widely available in Australia when it was listed on thePharmaceutical Benefits Scheme (PBS) in 2018. To date, little is known about the effects of widespread PrEP availability on rates of PEP use within the community. This study aims to compare numbers and characteristics of individuals utilising PEP across three large south-east Queensland (SEQ) sexual health clinics (SHCs) between 2016 (pre-PrEP) and 2019 (post-PrEP).

Methods: Data on patients prescribed PEP were collected over two 6-month comparison periods in 2016 and 2019. Analysis was done using the Chi-square statistic to identify differences between the two periods.

Results: As the 2019 study period is currently ongoing, full results are not yet available. The comparative data for the 2016 (pre-PrEP) period to date shows that across two SHCs, 137 individuals were prescribed PEP, 94% male, average age 33 years. Of these, 71.5% were Medicare-eligible; and 99% had not used PrEP in the preceding year.

Conclusion: This study will test the hypothesis that in an era of widespread PrEP access, there has been no significant decline in PEP use across SEQ. Potential drivers for this may be that patients still do not discuss HIV testing with sexual partners, or a mistrust or inability to validate a sexual partner's HIV or PrEP status. It may also be possible that for Medicare-ineligible patients, PEP provided free at Queensland SHCs, may be used as a surrogate PrEP.

Enhanced surveillance of Chlamydia and Gonorrhoea infections diagnosed in the Gold Coast during the period of the Commonwealth Games 2018

Maureen Todkill (1), Courtney Lougoon C (1), Karen Lynch (1), Ian Hunter (2), Satyamurthy Anuradha (2), Simon White (1), Maree O'Sullivan (1), Caroline Thng (1)

(1) Gold Coast Sexual Health Service, Gold Coast University Hospital; (2) Gold Coast Public Health Unit, Gold Coast Health

Background: The primary aim of the study was to describe the demographics of patients who have been diagnosed with Chlamydia trachomatis (CT) and Neisseria gonorrhoea (NG) in the Gold Coast (GC) area, during the period of the Commonwealth Games 2018 compared to a similar period in 2017.

The secondary aim was to evaluate differences in non-specialist sexual health services (non-SHS) compared to Gold Coast sexual health service (GCSHS) in terms of patient demographics and clinical management.

Methods: Data was analysed from the Notifications of Communicable Diseases (NoC) database. The requesting clinician for each patient was sent a one-page questionnaire tocollect further data on the management of the infection.

Results: During the Games period, more “out of area” patients were diagnosed and in the “Post Games” period, non-SHS services saw an increase in diagnoses while GCSHS made fewer diagnoses compared to 2017. During the study periods lost to follow up rate <1%; patients were treated according to guidelines; contact tracing was done in 99% of patients. However, significantly longer time to treatment was noted in GPs compared to SHS.

Conclusion: Significant differences including; an increase in patients “out of area”, more patients diagnosed at non-SHS, and an increased time to treatment for patients treated at non-SHS was shown. The importance of strengthening partnerships between specialist sexual health services and other services including upskilling community services, development of clear referral pathways and signposting likely visitors to sexual health services during times of mass gatherings, to maintain low rates of STIs and prevent onward transmission.

Exploring miRNA pathogenicity biomarkers for Non-Hodgkin’s Lymphoma and Immunodeficiency and the utility of gene editing

Esther Elliott (1), Gabrielle Bradshaw (1), Heidi Sutherland (1), Larisa M Haupt (1), Lyn Griffiths (1)

(1) Genomics Research Centre, Institute of Health and Biomedical Innovation, School of Biomedical Sciences, QUT

Background: NHL incidence rates have doubled over the past 20 years, with around 6000 new cases diagnosed each year in Australia. A large number of patients unresponsive to treatment or suffer rapid post-treatment relapse. Specific miRNAs show unique correlation to certain NHL subtypes, as well in primary immunodeficiency disorders (PID). However, there is still a deficit in understanding of the role of miRNAs in gene regulation, expression and epigenetic modifications. Applying CRISPR-Cas9 gene editing to key miRNA target genes may serve as a potential treatment for R-CHOP resistant NHL and immunodeficiency disorders.

Aims
1. To characterise global small RNASeq (including miRNAs) via next generation sequencing in NHL samples to identify key miRNA and target genes including the impact of localised methylation changes.
2. To investigate and develop the utility of CRISPR-Cas9 gene editing of target genes (such as MSN) in NHL and PID

Methods: Total RNA transcriptomes will be investigated on 20 NHL tumour biopsies, healthy controls and NHL cell lines, using RNAseq. Key miRNA will be selected for validation using qRT-PCR and Western Blotting. DNA methylation studies will be conducted on key miRNA target genes. CRISPR-Cas9 RNP complex kit and Neon Transfection will be used for SNP substitution in *MSN*, then validated using NGS and Western Blotting.

Results: N/A

Conclusion: Our study will contribute new knowledge into the mechanisms behind gene regulation and expression in NHL and PID, regulated by miRNA. Our findings may identify

new miRNA pathogenicity biomarkers and key target genes for CRISPR-Cas9 gene editing.

Funding Source: QUT MPhil candidate

A retrospective audit of paediatric intravenous cannula insertion at the Gold Coast University Hospital Emergency Department

Clayton Lam (1,2), Lucy Dunstan (2), Peter Snelling (2), Stuart Watkins (2), Prue Gramp (2), Amber Cumner (2), Merna Richards (2), Amy Sweeny (1,2)

1) School of Medicine, Griffith University; 2) Emergency Department, Gold Coast Health

Background: The current practice of paediatric peripheral intravenous cannula (PIVC) insertion at the Gold Coast University Hospital (GCUH) emergency department (ED) was evaluated through a retrospective audit to inform a prospective observational trial, focusing on paediatric difficult intravenous access.

Methods: Children (0 - 16 years) presenting to GCUH ED from May 1 to 31st 2019 were selected from the integrated electronic medical record (iEMR). PIVC placement was identified through manual iEMR review, and checked with supplemental data from health information service. Proportions and 95% confidence intervals (CI) were calculated using the Wilson Score.

Results: 1114 presentations were reviewed, comprising 45.6% of all GCUH May 2019 paediatric ED presentations. 11.8% of children received a PIVC (95% CI: 10.1-13.9). iEMR digital extracts produced correct PIVC identification, although some were not inserted by ED clinicians. Most (75%) cannulations identified through manual review were undocumented in the cannula-specific iEMR fields. Children aged 3-5 years had half the relative risk of cannulation than children aged 12-16 years (Rate ratio 0.5, 95% CI 0.3-0.9).

Conclusion: Paediatric PIVC insertion in the ED is a common event and was more frequent in the older age groups. This discrepancy was an unexpected finding and will be further explained at research week with comparison of indications and demographics. iEMR capture of cannulation in digital fields is currently poorly documented and is anticipated to have improved after the prospective paediatric PIVC observational trial.

An operational definition for end-of-life: Implementing a validated framework for researchers and care providers

Peter Fawzy (1), Paulina Stehlik (2,3), Justin Clark (2), Jarrah Dadd (4), Magnolia Cardona (2,3).

(1) Faculty of Health Sciences and Medicine, Bond University; (2) Gold Coast Health; (3) Institute for Evidence-Based Healthcare; (4) School of Pharmacy and Pharmacology, Griffith University

Background: Identifying elderly patients near end-of-life (EOL) is critical to improving care and facilitating a dignified death. Scarcity in the literature pertinent to EOL patients, makes evidence informed decisions and evidence synthesis challenging. However, some studies may include EOL patients while not explicitly defining them in those terms. We describe the use of a validated operational definition for EOL during the systematic review process to identify additional relevant studies.

Methods: We undertook a systematic review exploring effectiveness of deprescribing interventions for older patients near EOL. The validated CriSTAL criteria (19 items with predictive accuracy of 82.5% for short-term mortality) was used as a framework to identify EOL patients. Screening phase of the systematic review was completed with and without the operational definition.

Results: A total of 121 abstracts were screened by three blinded investigators to determine which of the eligible elderly-patient studies applied to EOL. Without the use of an operational definition, only one abstract explicitly focused on EOL. After applying the CriSTAL criteria, the number of eligible abstracts increased to 5, and an additional 10 studies were deemed eligible following full-text assessment.

Conclusion: Patients near EOL are often not explicitly identified in the literature. However, by utilizing a validated operational definition, such as the CriSTAL criteria, additional EOL patients can be identified from the literature. We recommend using this approach to systematic review researchers and treating

clinicians when identifying primary literature applicable to older patients. This would provide relevant findings on EOL discussions and palliative interventions.

Primary outcomes of blood transfusions in the Solomon Islands

Rachit Datta (1), Lawrence On (1), Suhas Bolisety (1), Sathya Selvakumar (1), Peter Jones (1,2)

(1) School of Medicine, Bond University; (2) Gold Coast Health

Background: Anaemia requiring blood transfusion is a common problem in Solomon Islands where there is limited access to safe blood transfusions. Kirakira Hospital (KKH) is the 40-bed provincial in Makira-Ulawa and the only facility capable to perform blood transfusions.

Methods: A retrospective audit of blood transfusions performed in KKH from January 2016 to January 2019 was performed. The patients were identified from laboratory records. The pre and post transfusion Haemoglobin, blood group, clinical diagnosis, number of units transfused, adverse reactions for each transfusion were recorded.

Results: There were 119 patients that received a total of 193 units of blood with 67% of recipients being female. All transfusions were from relatives and administered within 24 hours. Common causes for transfusion were Obstetric /Gynaecology (67%) & Chronic Disease (23%). All patients in the Makira province were Rhesus positive. The median Hb pre-transfusion was 56 grams/litre with a 33 grams/litre increase post Hb transfusion. Minor reactions were recorded in 22% of transfusion and no documented transfusion related deaths. The calculated transfusion rate for Makira was 1.3 units per 1000 people.

Conclusion: Access to blood transfusion in Makira is very limited and lower than the WHO average of 3.9 units/1000 for a resource poor country. It is encouraging that the staff in KKH have safely administered a blood transfusion every 10 days over a three-year period. Transfusion predominantly is reserved for young women suffering from Obstetric and Gynaecological emergencies and chronic disease. This is different from Australia where majority of transfusion are elective surgery, cancer treatment and trauma.

A retrospective audit of the use of lidocaine 5% patches in the Palliative Care setting

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Background: Lidocaine patches are approved for post-hepatic neuralgia. There has been an increase in “off-label” use in the Supportive and Specialist Palliative Care Unit (SSPCU), with limited outcome data.

Methods: A retrospective audit of patients prescribed lidocaine patches between 1/12/2017 and 31/3/2019. Outcome measures included opioids (morphine 1mg equivalents (meq))1, benzodiazepines (diazepam 5mg equivalents (deq))2, Problem Severity Scores, Phase, Resource Utilisation Groups-Activities of Daily Living, and Symptom Assessment Scale. Non-parametric (medication) and parametric (patient outcomes) paired statistical tests were performed (SPSSv22) with negative differences indicating improvement.

Results: Forty-nine patients used lidocaine patches in SSPCU. At two days after application, 39 patients were still using the patches. Reasons for cessation included but were not limited to lack of compliance (n=5), ineffectiveness (n=1), and unexplained (n=4). Those still using patches did not change morphine (median difference 8 meq; p=0.520) or benzodiazepine (median difference 0 deq; p=0.726) use, Problem Severity Scores (mean difference 0.16, 95%CI:-0.28 to 0.60), Phase (-0.19,-0.64 to 0.25) or Symptom Assessment Scale (1.08,-0.13 to 2.30), however Resource Utilisation Groups-Activities of Daily Living improved (-1.77,-3.23 to -0.30). No serious adverse reactions were noted.

Conclusion: Lidocaine patches did not appear to change the use of opioids, benzodiazepines or patient outcomes other than the Resource Utilisation Groups-Activities of Daily Living, which showed a slight improvement. Given the small sample and the deteriorating nature of their underlying conditions, the benefits or

otherwise of lidocaine patches in this population remain unclear.

Funding Source: Miss Shonouda received a Summer Research Scholarship valued at $1,000 from the School of Pharmacy and Pharmacology at Griffith University, Gold Coast campus to undertake this research.

HIV Post Exposure Prophylaxis in the Emergency Department: A quality review of prescribing and follow-up of patients by sexual health

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(1) Pharmacy Department, Gold Coast Health; (2) School of Pharmacy, The University of Queensland

Background: Non-occupational Post Exposure Prophylaxis (nPEP) refers to HIV Antiretroviral Medications that must be administered within 72 hours following an exposure to a potential HIV-positive source. When taken continuously for 28 days, nPEP provides optimum opportunity to prevent HIV infection.

The purpose of this project was to determine:
1. Describe utilisation of nPEP
2. Whether nPEP 3-day starter kits in the GCUH or Robina Emergency Department (ED) were prescribed according to the Australian National Guidelines
3. The proportion of patients who attend a follow-up visit in Sexual Health Clinic before they ran out of starter packs.

Methods: This study was conducted as a retrospective cohort audit over an 18-month period from December 2017 to July 2019. Participants involved were adult patients (aged 18 years or above) being supplied nPEP starter packs in the ED. The participants were identified using the hospital pharmacy database and further information was extracted from the electronic medical record (ieMR) or Sexual Health electronic medical record system (SHIP).

Results: -53 patients (32 male) who received nPEP where included into the final analysis

-79% of the patients attended the scheduled follow up at GC Sexual Health Clinic. 68% of which did so before running out of nPEP supply.

-64.25% of the nPEP was prescribed according to the national guidelines.

Conclusion: The majority of nPEP supplied from Gold Coast Health EDs was prescribed according to the national guidelines and most patients attended a follow-up visit at GC Sexual Health within 72 hours.

An exploration of the discharge education needs of general surgical patients

Evelyn Kang (1), Brigid Gillespie (1,2), Georgia Tobiano (2), Wendy Chaboyer (1)

(1) School of Nursing and Midwifery, Griffith University; (2) Nursing and Midwifery Education and Research Unit, Gold Coast University Hospital

Background: Postoperatively, self-care management is altered because of pain,fatigue and the presence of a surgical wound. Inadequate discharge education has detrimental consequences for surgical patients as postoperative complications can lead to increased morbidity, unplanned hospital re-admission and reoperations. An exploration of the education needs of general surgical patients from patients' and doctors' perspectives may inform the design of strategies to improve the delivery and quality of discharge education.

Methods: A qualitative study using interviews was conducted with a purposive sample of 13 patients and 10 doctors from two general surgical wards at the GCUH. Thematic analysis was used.

Results: Discharge education provided was often inadequate for patients to manage their post-discharge recovery, heightening anxiety and stress. Thus, patients sought a variety of informal information sources, especially the internet. Patients with limited health literacy, language barriers and complex needs were at higher risk of being discharged home with incomplete understanding of their discharge plans. Doctors identified poor timing of discharge education, a lack of standardised information, delays in providing patients' discharge summaries, time and production pressures as challenges encountered in the delivery of discharge education.

Conclusion: Quality discharge education is essential for general surgical patients to

participate and regain control of their life post-discharge. Doctors recognised that discharge education provided were often haphazard with limited instructions for patients to adequately manage their post-discharge recovery. Education delivered using a patient-centred approach is essential to foster doctor-patient relationship and increase patients' understanding of their discharge plans to improve their ability to self-manage their post-discharge recovery.

Motorcycle accidents and the use of protective gear: A retrospective audit of data quality in hospital electronic medical records

Sara Izwan (1), Kathy Heathcote (1,2), Ben Gardiner (1,2), Martin Wullschleger (1,2), Don Campbell (2)

(1) School of Medicine, Griffith University; (2) Trauma Service, Gold Coast University Hospital

Background: The use of protective clothing has been found to reduce the severity of injuries sustained from motorbike accidents (MBA). Accurate documentation of specific items of protective clothing is essential for the Australian Trauma Registry, however there is no standardised protocol for data collection within the hospital electronic medical records (eMR). To inform this process, this study aimed to quantify the completeness of data collected on protective gear worn by patients involved in MBAs.

Methods: A retrospective review was undertaken in patients presenting post-MBA between 1 April to 31 June 2018 and compared to 1 April to 31 June 2019. Quantitative data were extracted from the eMR for the first period, and the integrated eMR (ieMR) for the second period, and compared for completeness.

Results: 35 patients were included. Of these, helmet use was documented in 100% (n=21 and n=14) in eMR and ieMR respectively. Jackets were recorded in 76.2% (n=16) on eMR and 85.7% (n=12) on ieMR. Pants were recorded in 76.2% (n=16) on eMR and 85.7% (n=12) on ieMR. Shoes (47.6%, n=10 and 57.2%, n=8) and gloves (42.9%, n=9 and 14.3%, n=2) on eMR and ieMR respectively, were documented the least. Documentation of data was more complete in ieMR for all categories apart from gloves.

Conclusion: Documentation regarding use of protective clothing for MBA injuries has improved with the introduction of ieMR. To address current deficits, a standardised data collection tool could be developed. Improving documentation of protective wear will enable ongoing research of associated risk factors and ultimately provide incentives for hospitals to fund health promotion for MBA riders.

Empiric intravenous Amoxycillin\Clavulanic Acid versus Piperacillin\Tazobactam for diabetic foot infections: A retrospective audit

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Background: Diabetic foot ulcer infections (DFI) cause significant morbidity amongst patients with diabetes. Standard first-line empiric treatment is IV piperacillin and tazobactam (PTZ). During a three-month global shortage in 2017 PTZ was replaced with IV amoxicillin and clavulanate (AUG). Currently local practice sees both used empirically for DFIs and Therapeutic Guideline now recommends AUG first line for moderate DFI treatment. These recommendations are predominantly expert-based rather evidence-based.

In designing a pragmatic non-inferiority trial, we conducted a retrospective audit to assess treatment failure rates of both PTZ and AUG in DFI.

Methods: We audited all patients admitted to the vascular department at Gold Coast University Hospital for management of DFIs over two-three-month periods, PTZ period and AUG(PTZ-shortage) period. We included patients with a diagnosis of diabetes prior to admission and were given at least two in-

hospital doses of IV PTZ or IV AUG as empiric therapy. We excluded patients with a non-foot ulcer (above the ankle) and under the age of 18. Treatment failure was clinician determined by global assessment (infectious disease consultant or vascular surgeon). Baseline data and additional in-hospital DFI care was also documented.

Results: Of 300 patients identified, 70 patients met the inclusion criteria. Failure rates were higher in the AUG (12/40, 30%) group compared with PTZ (5/30, 17%).

Conclusion: Patients receiving AUG had a higher proportion of failure compared to PTZ; however, due to limitations of audits in causal inference, we cannot draw conclusions on optimal antibiotic choice. Given local practice and guideline advice, these findings were unexpected and a pragmatic non-inferiority trial is warranted.

Funding Source: Mr Jarrah Anderson was awarded a Griffith University Summer Vacation Scholarship to undertake this project.

Surgical Rib Fixation: Does increased case volume lead to improved outcomes?

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Background: Surgical rib fixation for rib fractures has been associated with positive patient outcomes in the literature. There is no literature detailing the volume related outcomes in centres that offer surgical rib fixation. The aim of this study was to investigate the volume related outcomes following surgical rib fixation at GCUH.

Methods: A retrospective review was conducted on surgical rib fixation cases performed from 2014 to 2018 which were divided into early (EP, 2014 – 2017) and recent phases (RP, 2018 to date). Data collected included injury severity score (ISS), indication for intervention, pain outcomes, and length of stay (LOS).

Results: Thirty-seven patients were enrolled with 17 in the EP and 20 in the RP. All were severely injured with an average ISS of 21(EP) and 19(RP) respectively; all underwent surgical rib fixation within 96 hours of admission. The average LOS decreased from 18 to 13 days over the time period. Pain was the predominant indication for surgery in 65% (n=11) in the EP whereas in the RP, deformity and respiratory support was indicated RP (55%, n = 11). Subjective pain scores improved at day four in the EP, and day two in the RP .

Complications in the case series consisted of a postoperative bleed requiring operative intervention with intercostal catheter placement, and a wound infection managed non-operatively with intravenous antibiotics .

Conclusion: This review suggests surgical rib fixation can be conducted with minimal complications. Indications for surgery changed over time with a reduction in pain scores and length of stay.

Outcomes of splenic salvage following implementation of clinical practice guidelines: A prospective multi-institutional study

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Background: The trend towards the management of haemodynamically stable blunt splenic injuries with radiological intervention has increased.

There is still debate with regards to optimal management in the timing, frequency and mode of scanning, interventional radiological techniques, the frequency for follow-up imaging, and the incidence of complications.

We instituted a multi-disciplinary clinical practice guideline (CPG) for the management of the hemodynamically stable blunt splenic injury patients (Grade III – V) across two major trauma centres. The aim was to assess rates of splenic salvage and included evaluation of six-month outcomes.

Methods: Clinical Practice Guidelines(CPG) were implemented at two trauma referral centres. Inclusion criteria was all

haemodynamically stable blunt trauma splenic injuries (Grade III – V) over the aged of 18. Data collected included embolization procedures, asplenia rates and incidence of splenectomy and splenic rupture.

Results: Twenty-four patients were included ; all underwent angio-embolization with 92% (n=22) not requiring splenectomy. Two patients required splenectomy on day 4 for their Grade V splenic injury. One patient (4%) required selective followed by non-selective angioembolisation in the same admission Two patients (8%) had altered red cell morphology and required vaccinations for presumed asplenia. On 6 month review there were no cases of delayed splenic rupture.

Conclusion: Splenic salvage in the blunt injury patient is possible with multi -disciplinary input and should be contemplated in all patients who are hemodynamically stable. Clinical Practice Guidelines provides further input into the pathophysiology of the disease process and may also prevent disparity in the management of this subset of patients at trauma centres.

Increasing medical doctor engagement in research at Gold Coast Health: A Knowledge Translation study

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Background: Research shows that health services that conduct more research tend to have lower mortality rates, improved organizational efficiency, higher staff retention and higher patient and staff satisfaction. Complex health systems like GCH experience various pressures and drivers that affect research engagement. This study aims to increase medical doctor engagement at GCH, using a Knowledge Translation methodology to co-design and implement interventions.

Methods: The Knowledge to Action(KTA) framework will guide this 3-phase, mixed-methods study. Phase 1 (2019): KTA component ”Identify/define the problem and needs gap”. We are currently using the validated Research Capacity and Culture survey to measure research engagement and barriers/facilitators to research engagement for GCH doctors. Phase 2 (2020-2021): KTA components “Synthesize, select and adapt knowledge to local context” and “Assess barriers and facilitators to implementation". Phase 2a will use a scoping literature review to identify possible evidence-based interventions. Phase 2b will use mixed methodology focus groups, including Nominal Group Technique, to explore, refine and reach consensus on these interventions. Phase 2c will use case study methodology, selecting early adopter specialties and conducting qualitative interviews with stakeholder staff to determine barriers/facilitators and behaviour change strategies for implementation. Phase 3 (2021-): KTA components “Select, tailor and implement interventions” and “Monitor and evaluate outcomes". This phase will pilot, implement and evaluate key interventions with the specialities interviewed in Phase 2c.

Results: Phase 2 will begin in 2020.

Conclusion: While the engagement of clinicians in research is a complex problem, this study aims to apply a systematic process to drive improvements.

A systematic review of physical rehabilitation for Central Facial Palsy

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Background: Central facial palsy (CFP) is a frequent and debilitating sequela of stroke and brain injury. CFP causes functional and aesthetic deficits and has a significant effect on quality of life and well-being. Current literature reports that CFP does not always recover spontaneously, and more information is needed regarding the efficacy of current therapeutic approaches. The purpose of this review is to evaluate the current available literature relating specifically to the physical rehabilitation of CFP in adults.

Methods: A systematic search of electronic databases and grey literature was performed. Studies included addressed physical rehabilitation interventions for adults with acquired CFP. Independent data extraction, quality assessment, and risk of bias assessment followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Risk of bias assessment for case series was performed using JBI case series evaluation and PEDRO-P.

Results: Twelve studies (six case series and six control trials) were identified. Of the six control trials, two used a non-randomized design. There was a high degree of heterogeneity in physical rehabilitation methods described for adults with central facial palsy. The main types of interventions presented in the included studies are grouped broadly as either active (eg. strength training, exercise with biofeedback), passive (eg. stretching, massage), or a combination of the two. There was a high risk of bias in included studies and methodological limitations impact on the interpretation of findings.

Conclusion: Physical rehabilitation of central facial palsy may be of benefit however further studies are required.

Funding Source: GCHHS Allied Health Clinical Backfill for Research, SERTA Committee

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Promoting Confident Body, Confident Child (CBCC) in the Gold Coast community: A mixed methods implementation study

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Background: Body dissatisfaction is a predictor for low self-esteem, depression, unhealthy eating patterns, overweight/obesity and eating disorder development in children/adolescents. Foundations for negative body image develop in early childhood, hence prevention programs should target young children. Confident Body, Confident Child (CBCC) is an innovative, evidence-based program providing parenting strategies to promote healthy eating, physical activity and body satisfaction in children aged 2-6 years.

This study aims to evaluate the population-level implementation of CBCC by training Child Health Nurses (CHNs) across Gold Coast Health (GCH) to disseminate CBCC to parents of young children in their usual clinics.

Methods: This study uses an implementation-effectiveness hybrid design, with dual focus on assessing implementation (process evaluation) and clinical effectiveness (outcomes evaluation). CBCC implementation will be done at two levels: CHN training and parent delivery. Process data on CBCC reach, dose and fidelity among CHNs and parents and outcome data on changes in CHN and parent knowledge, attitudes and behaviours pre- and post-intervention will be collected. CHN and parent acceptability will also be assessed through interviews.

Results: Preliminary data on implementation processes will be available for the conference.

Conclusion: This study involves optimising existing community health services and addressing an identified gap in current care. This is the first study to evaluate population-wide CBCC implementation in a real-world health service setting.

Funding Source: Allied Health Research Officer – Allied Health Grant / GCHHS

A qualitative study of hospital pharmacists' ethical dilemmas and reasoning

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Background: Studies have explored community pharmacy ethical dilemmas however limited research exists on hospital pharmacy ethical issues and pharmacists' management of dilemmas. Research exploring this is timely considering developments in hospital pharmacy practices, new hospital

pharmacist roles and evolving responsibilities. This study explored hospital pharmacists' ethical reasoning processes and perceived current dilemmas and challenges.

Methods: Face-to-face semi-structured interviews with 20 purposively selected hospital pharmacists from four hospitals. An interview guide with 11 open-ended questions and prompts was developed, validated and trialled. Pharmacists who consented received the guide prior to interviews. Interviews were audio recorded, transcribed verbatim and compared with field notes. Transcribed data were imported into NVivo 12 to facilitate coding and thematic analysis.

Results: Participants were interviewed December 2018 – April 2019; interviews averaged 19.32 minutes. Data saturation was reached as no new themes emerged. Participants' experiences ranged from junior level pharmacists to senior management positions, in clinical and non-clinical roles. Thediversity of experiences and roles provided a wide range of contemporary ethical issues unique to hospital pharmacy practice, mainly around medication safety and cost. Many participants were unaware of resources available to guide ethical decisions and less experienced pharmacists indicated they would benefit from additional guidance.

Conclusion: This study highlighted the importance of sound and structured ethical reasoning as hospital pharmacists are regularly faced with ethical issues unique to the hospital pharmacy practice context. Participants identified many interrelated factors that impacted their ethical reasoning and behaviour.

Funding Source: Griffith University School of Pharmacy and Pharmacology

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Learning to surf the wave of Electronic Medicines Management using a multi-modal pharmacist-led training package

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(1) Gold Coast Health

Background: In April 2019 the integrated electronic Medical Record (ieMR) was implemented. Electronic Medicines Management was integral. The Pharmacy Department recognised successful implementation would be more likely if pharmacists were skilled and confident. A pharmacist-led multi-modal training package was developed, facilitated and evaluated to upskill pharmacists.

Methods: The training package built on core ieMR medication management. A fundamental component was seven, one-hour practical sessions using a patient journey to practise pharmacist workflows. Additionally, ad hoc questions were addressed in "Tip of the Day" emails. Some pharmacists were also identified to be ieMR superusers.

During the training, superusers and pharmacists provided ad hoc feedback and completed weekly surveys to evaluate training opportunities. Seven days pre-ieMR implementation, pharmacists completed a survey on the support received and preparedness to use ieMR. Online surveys comprised multiple choice questions, open responses and percentage rating scales.

Results: Seventeen superusers facilitated training to 78 pharmacists. Seventy-three responses from four surveys and ad hoc feedback identified three common training suggestions: rostered practice times, self-directed scenarios and scheduling more practical sessions.

Pre-ieMR implementation, 24 pharmacists responded to the survey. Overall support through the training process had an average rating of 87%. On average, practical sessions were highly valued at 90% with preparedness to use ieMR at 69%. Most commonly accessed modes of training were rostered practice times and practical sessions, averaging 1.75hrs/week each.

Conclusion: This training package supported pharmacist upskilling using a collaborative and needs-based educational approach. The health service acknowledged pharmacist preparedness as a key element in the successful implementation of ieMR.

Prevalence of antiphospholipid antibodies in women with early onset preeclampsia in a tertiary centre

Lightning Talk Abstracts

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Background: Preeclampsia (PEC) is a multisystem disorder triggered by a failure to develop adequate placental blood flow early on in pregnancy, associated with increased maternofetal morbidity/mortality. The link between antiphospholipid antibodies (APL) and early PEC is controversial with many studies hampered by difficulties in diagnostic guidelines and lack of standardised titres for detection of APL's.

Objective: To assess whether APL's are associated with early PEC.

Methods: Cross-sectional, retrospective study analysed 9768 records of women delivering between 1st June 2016 and 30th June 2018 to assess the prevalence of APL's in women who were diagnosed with PEC at <36 weeks' gestation.

Results: Of 9768 records, 140 (1.43%) patients were diagnosed with PEC at ≤36 weeks' gestation. Only 71 (51%) were tested for at least one of the three APL's, four (6%) had a positive result. Categorical characteristics for the overall tested group (Table 1). Regarding lupus anticoagulant (LAC), 73 were not tested (NT) for APL's (52.14%), 65 were negative (46.43%) and 2 positive (1.43%).

Conclusion: Four of 71 patients (6%) with early preeclampsia had at least one positive APL which could suggest a possible association between APLs and PEC. Statistical analysis is therefore limited by the small number of positive subjects and further studies are required. Of severe PEC groups, 22 to 26% were not tested for APL's despite best practice guidelines, which may underestimate the number of patients with underlying positive APL's. The number of patients with positive APL's were too low to compare maternofetal outcomes.

Time to CT: Does this effect trauma patient outcomes?

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Background: Computed Tomography (CT) is an essential diagnostic tool for severe multi-trauma patients. International guidelines recommend an optimal time of 1hour from arrival.

The aim of this study was to determine the time to CT for all trauma patients at the Gold Coast University Hospital and the effects on hospital mortality and length of stay (LOS).

Methods: Retrospective audit of prospectively collected data from the Trauma service registry combined with electronic medical records and radiology PACS system. Inclusion criteria were all trauma patient who triggered a trauma call and underwent CT scanning over a 24-months period. Exclusion criteria were scans performed at peripheral hospitals or performed more than 5hrs after arrival to ED.

Results: 1916 eligible trauma patients admitted over the study period underwent CT scans. Median time to CT were found to be 43min (IQR 27-78). CTs done within 1hour had a mean 9 +/- 21 day LOS and a 1.2% mortality rate whilst CTs done more than 1hour later had a mean 7 +/- 13 day LOS and a 0.6% mortality rate. The differences correlated with a higher injury severity score (ISS) in the time to CT within 1hour group compared to the more than 1hour group.

Conclusion: A median of 43 minutes for obtaining trauma CT scans is well within the recommended international guidelines. This result however does not correlate with reduced LOS or improved mortality rates overall, and is likely due to higher acuity of these patients (higher ISS) within that group.

Intradialytic Parenteral Nutrition improves nutritional status in a complex Cystic Fibrosis and End Stage Renal Disease patient: A case report

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Background: There are an increasing number of patients with both cystic fibrosis and chronic kidney disease. The contradicting requirements for these conditions make nutritional management challenging. Intradialytic parenteral nutrition (IPDN) may provide a useful adjunct therapy for malnutrition in this population. However, there is a lack of evidence-based guidelines, and no previous literature reports.

Methods: This case study reports on IPDN use in a 38 year old female double lung transplant recipient with a complex medical history including cystic fibrosis (CF) and end stage renal disease (ESRD). Subsequent complications of gastroparesis and severe post-prandial abdominal pain limited oral/enteral nutrition input. The patient was reviewed regularly by dietitians in the haemodialysis unit and during hospital admissions with dry weight, biochemical results, nutrition impact symptoms and intake (oral, enteral, IDPN) collected and nutritional assessments made. The patient was interviewed about the use of IDPN in the management of her nutritional needs.

Results: Management was complicated by contradicting sodium requirements (CF >6000mg versus ESRD <2300 mg), drug interactions between phosphate binders and transplant anti-rejection medications and patient adherence to enteral nutrition. However, a substantial dry weight increase of 13.6% over 12-months, and an improvement in malnutrition status from severe to moderate was achieved. The patient said she would recommend IDPN to others in a similar situation.

Conclusion: Management of patients with co-existing CF and ESRD requires patient engagement in treatment planning and a multi-disciplinary team approach for clinical decision making in the absence of guidelines. The use

of IDPN should be considered for other similar cases.

Patient engagement in admission and discharge medication communication: A systematic review

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Background: To synthesise peer-reviewed research evidence concerning patients' perceptions of how they engage in admission and discharge medication communication, and barriers and enablers to engagement in medication admission and discharge communication.

Methods: Two search strategies were undertaken including a bibliographic database search, followed by citation tracking. Fifteen studies were included in this review. Study selection and quality appraisal were undertaken independently by two reviewers. One reviewer extracted data and synthesised findings, with input from team members to check the accuracy or confirm/question findings.

Results: Three themes were found during data synthesis. In first theme 'desiring and enacting a range of levels of engagement', patients displayed medication communication by taking responsibility for sharing accurate medication information, and by seeking out different choices during communication. The second theme 'enabling patients' medication communication' uncovered various strategies to promote patients' medication communication, including informing and empowering patients, and encouraging familyinvolvement. The final theme, 'barriers to undertaking medication communication' included challenges enacting two-way information sharing and patients' preference.

Conclusion: Patients view patient engagement in admission and discharge medication communication as two-way accurate information-sharing; however, they sometimes experience challenges undertaking this role or prefer a passive role in information-sharing. Various strategies inform and empower patients to engage in medication communication, however, further investigation is needed of patients' experiences and acceptability of these strategies, and of further strategies that empower patients.

Patient and family participation in medication communication at discharge

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(1) Gold Coast Health; (2) Griffith University; (3) Deakin University

Background: Patient and family engagement is advocated internationally as a strategy to enhance medication safety at transitions of care. The aim of this study is to explore patients' and families' participation in discharge medication communication.

Methods: Mixed-methods study. In Phase 1, 30 patients were observed for up to two hours on day of discharge (Phase 1) and their communication was audio-recorded, and seven patients and three family members were interviewed after hospital discharge (Phase 2).

Results: For Phase 1, information-giving was the most frequent level of participation undertaken by patients. Patients participated most frequently with pharmacists on day of discharge. Half of the patients had a family member manage their medication at home, yet half of these patients did not have a family member present on day of discharge. Frequent background noise, interruptions and multi-taking were observed during discharge medication communication. In Phase 2, three categories were found; 1) attaining comprehensive medication information; 2) preferred approaches for delivering information; 3) speaking about medications in hospital.

Conclusion: Patients and families learn about medications in hospital, and some keep actively seeking information in the community. Health care professionals need to deliver medication information in both written and verbal ways, ideally displaying an inviting manner in a context that minimises distractions. There are opportunities for higher levels of patient and family engagement, as they are currently confident undertaking lower

levels of participation, but unknowingly have the knowledge to participate at a higher level.

Funding Source: The Sigma Theta Tau International Honor Society of Nursing.

Cardiac patients' perceptions of nutrition and their preferences for nutrition education delivery: A qualitative study

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Background: Nutrition has an important role in the secondary prevention of coronary heart disease (CHD) and is a key area of patient education as part of cardiac rehabilitation services, which remain largely underutilised. This study aimed to explore cardiac patients' awareness and understanding of nutrition in managing their condition, and their preferences for nutrition education delivery.

Methods: In this qualitative study, face-to-face interviews were conducted with 50 patients admitted to the cardiology wards at Gold Coast University Hospital. Eligible patients had myocardial infarction or established CHD. Interviews were tape-recorded, transcribed and thematically analysed.

Results: Most participants (76%) said they were aware of nutrition managing their heart condition, however, when asked to explain this relationship were unable to do so. Although many participants (50%) believed their diet was already healthy; when asked to give an example of a heart healthy diet, none were able to describe one. This suggests a disconnect between perception, and actual, knowledge of a diet that is healthy for the heart. While participants (76%) often indicated nutrition education as a "number one" priority, a large portion of participants (66%) expressed perceived barriers to receiving this. Participants (34%) often identified a home-based program as their preferred model of cardiac rehabilitation, however responses were highly heterogeneous.

Conclusion: Despite believing nutrition education to be important, patients' belief in their own knowledge often led to misconceptions regarding the need for nutrition education, which may deter them from attending further cardiac rehabilitation in this area.
