

A PROJECT UPDATE: Increasing patient safety by eliminating unnecessary variation in fasting and sedation practices before cardiac procedures

Fasting and pre-procedural sedation are 'routine' practices for people undergoing elective percutaneous coronary interventions (PCIs). While there is variations in what is practiced, including suspending the practice altogether, there is little evidence to guide clinicians in deciding the most appropriate pre-procedural preparations for patients. Some patients experience adverse effects from fasting including hypotensive episodes and alterations in blood glucose levels which lead to interruptions in procedures and potential increased length of stay.

Earlier this year I, along with Professors Considine and Botti, commenced working on an Alfred Deakin Post-Doctoral Research Fellowship. The aim is to develop robust evidence to assist clinicians in eliminating unnecessary treatment and thereby improve the quality of care and patient safety. The project is for two years ending in December 2015.

The research study phases and their current status:

1. Review of pre-procedural (PCI) sedation and fasting policy and procedure documents;
 - a. Analysis phase
2. A survey of Interventional Cardiologist's attitudes toward and practice of pre-procedural sedation and fasting (online survey to all Interventional Cardiologists in ANZ);
 - a. Pilot survey undertaken – in discussion with the statistician prior to full survey.
3. A retrospective medical chart audit of people undergoing emergency PCIs following an acute myocardial infarction; and
 - a. Ethics approval from two out of three sites
 - b. Data collection underway at two sites
 - c. Total sample size target: 1900 records
4. A qualitative study exploring the beliefs and preferences for pre-procedural sedation and fasting practices of interventional cardiologists (Being undertaken by an Honours student – Annika Zinkle; Supervised by Associate Professor Bernice Redley and Dr John Rolley);
5. A prospective medical chart audit of people undergoing elective PCIs.
 - a. Scheduled to commence in 2015.



Patient outcomes (audits), clinicians' views and actual practice (survey and qualitative data), as well as policy and procedure documents will provide us with comprehensive data concerning pre-procedural sedation and fasting. In particular, the retrospective audit will provide us with adverse events data related to respiratory conditions resulting from not fasting the patient group. As patients experiencing an acute myocardial infarction require urgent treatment to re-vascularise the occluded arteries, waiting for fasting would jeopardise quality outcomes for the patient. Developing a predictive model from that data will provide clinicians with critical information in tailoring pre-procedural care to the patients under their care.

If you have any questions regarding the project, please do not hesitate to contact me.

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TACKLING A TRIPLE TABOO: Care work, Dementia and Incontinence

Roles that require individuals to attend to another person's bodily functions and that incur occupational exposure to urine and faeces, are consistently socially devalued, and individuals who perform such work, such as care staff in residential aged care facilities, typically have low occupational esteem or status. As a nurse and a researcher, Dr Joan Ostaszkiwicz is interested in how values, beliefs and fears about old age, incontinence, disability and dementia, impact on the care of older people, and particularly, those with dementia and incontinence. Her recently completed PhD study resulted in a Grounded theory that describes and explains factors influencing care in residential aged care facilities.

Dr Ostaszkiwicz has worked in continence nursing roles across a range of clinical settings, and has pursued a program of research on this topic since 2004. Her interest in continence promotion began over thirty years ago whilst working as a District Nurse. In her role as a Postdoctoral Research Fellow in the Centre for Quality and Patient Safety Research, Dr Ostaszkiwicz is conducting research that will result in a better understanding what constitutes 'quality continence care' for frail older adults in residential aged care facilities.

The findings will be used to develop a suite of quality indicators for continence care in the Australian residential aged care sector. They will also be used to inform the development of a systematic approach to evaluating the quality of continence care in the residential aged care sector more broadly.

The development and introduction of quality indicators represents a key element of the Australian Government's agenda to strength the quality framework that underpins care in Australian residential aged care services.

The quality of residents' continence care and the methods used to measure it, have important personal, social, financial and policy implications. As the population ages, the prevalence of incontinence and dementia will increase, as will the demand for skilled nursing care. Alongside this demand will be an increase in consumer's expectations about the quality of their care. Arguably, this quality should be evaluated with reference to residential aged care consumers' and other stakeholders' understandings and expectations about 'quality continence care'.

NEW RESEARCHERS JOIN QPS



Dr Mariann Fossum

Dr Mariann Fossum has been appointed as a Research Fellow within the Deakin Alfred Health Nursing Research Centre (DAHNR). Dr Fossum's research interest is in the area of clinical reasoning and decision making, decision support systems, risk assessment, quantitative research methods, effects and interventions studies. Prior to joining DAHNR, she has worked at University of Agder, Grimstad, Norway in the undergraduate and graduate nursing programs. She has published in peer review journals and presented at international conferences.



Dr Lisa Kuhn

Dr Lisa Kuhn has recently joined Deakin University's School of Nursing and Midwifery as a Research Fellow in the Deakin University – Eastern Health Nursing and Midwifery Research Centre, where she is involved in clinical research around cardiovascular diseases, particularly acute coronary syndromes (ACSs). Lisa has recently completed her PhD, examining the early assessment, management and outcomes of ACS for men and women in Victorian hospitals from emergency department arrival to hospital discharge. She uncovered a number of important evidence-practice gaps influencing equity in ACS care. Women were disadvantaged in the early stages of ACS management and their outcomes were likely compromised as a result. Lisa's future research interests are to improve the cardiovascular health of Australians at risk of under-assessment and under-treatment through identifying them and addressing evidence-practice gaps.

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ENGAGING PATIENTS IN COMMUNICATION AT TRANSITIONS OF CARE



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Engaging patients in communication at transitions of care

Patient engagement is widely recognised as a key element for improving patient care. Although patients are best placed to inform health care professionals about their progress or problems with treatment, communication with patients and families is frequently forgotten in busy clinical environments. In particular, when patients are moving between clinicians and clinical settings, the quality and safety of patient care has been found to be seriously compromised. Yet little is known about the extent to which patients and families are involved in the discussions about their transitions of care.

A consortium of researchers from Deakin and Griffith Universities received funding from the Australian Commission on Safety and Quality in Health Care to critically review current research evidence and Australian health service initiatives that promote the engagement of patients in communication at transitions into, within and from acute care. The project was co-lead by Professors Bucknall (Deakin QPS) and Chaboyer (Griffith NHMRC CRE in Nursing) who have an established record of collaboration, including research funded by the Australian Research Council and the National Health and Medical Research Council, focusing on active patient participation in care.

From the review the team found limited research evidence, and what was found focused on nurses' bedside handover. However, the key stakeholder interviews identified innovative quality improvement activities in Australian health services that demonstrated encouraging examples of tools, processes and strategies that enabled communication with patients and families during transitions of care. Notably these activities seem to have emerged since the implementation of the NSQHS Standards. The final report offers guiding principles and recommendations to raise awareness of the benefits of patient engagement, stimulate discussion and inform decision making at all levels of the health and education sectors.

Research Team: Professors Tracey Bucknall, Wendy Chaboyer, Alison Hutchinson, Anne McMurray, Mari Botti, Andrea Marshall, Associate Professor Bridget Gillespie, and Doctors Lauren McTier and Helen Rawson.

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Congratulations to the Bachelor of Nursing (Honours) Students – 2014



We would like to congratulate our 2014 group of the Bachelor of Nursing (Honours) students who completed their final study day for the Research Planning in Nursing (HNR412) unit at Burwood on 29 September. As is often the case in the Honours program at Deakin University, students that commenced this year represent diverse clinical and work settings, and their nursing experience ranged from new graduates to specialist clinicians, educators and academics. However, as is often the case in research, these students came together to join the study days as peers to learn, support each other and share their research journey this semester. Most students work in our partnership hospitals,

but some have come from non-partner hospitals and other roles in both metropolitan and regional country areas. Student are supervised by members of QPS as well as academics within the School of Nursing and Midwifery. Student research in the Honours programs addresses a wide range of quality and patient safety issues as illustrated below, that makes a valuable contribution to the research program of QPS and the School of Nursing and Midwifery.

Student topics include:

- Patient experiences across a wide range of healthcare settings and conditions
- Recognising and responding to clinical deterioration in settings such as acute care, regional hospitals, maternity and paediatrics
- Validation of a new falls prevention tool used in rehabilitation settings
- Pre-procedural fasting and sedation for interventional cardiology procedures
- Patient and clinician attitudes and experiences of exercise in dialysis
- Factors contributing to decreased renal function in children with spina bifida
- Use of social media by mental health clients

We would like to wish these students, who are the nurse researchers of the future, all the best for the next stages of their research journeys and successful outcomes for their studies.

IN PRESS: A review about managing older people with diabetes (The Lancet)

Managing older people with diabetes is challenging because of the significant age- and diabetes-related effects on physical and mental functioning and consequently self-care and independence. Polypharmacy is common and medicine-related adverse events are a major cause of preventable morbidity and mortality. The release of The Mckellar Guidelines for Managing Older People with Diabetes in Residential and Other Care facilities (Dunning et al. 2014) and the International Diabetes Federation Global Guideline for Managing Diabetes in Older People with Type 2 Diabetes (Sinclair et al. 2013) summaries the existing evidence into care recommendations to help health professionals deliver best practice care to older people with diabetes.

More recently, Sinclair, Dunning and Rodreguiez-Manas were invited to write a review article about managing older people with diabetes for the Lancet. The article summaries the key issues from both guidelines and is currently in press.

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Alfred Deakin Postdoctoral Fellowship

Exercise for people with end stage kidney disease during haemodialysis treatments can improve physical function, markers of cardiovascular disease and quality of life. However, exercise programs are not a part of standard therapy in the vast majority of haemodialysis clinics internationally. Haemodialysis unit-based Accredited Exercise Physiologists may contribute to an increased intradialytic exercise uptake and improved physical function.

During the past 2 years Alfred Deakin Postdoctoral Fellow, Paul Bennett, has led a study using a stepped wedge cluster randomised controlled trial design. 196 dialysis patients from 15 Melbourne community satellite hemodialysis clinics have participated in an accredited exercise physiologist-coordinated program consisting of six lower body resistance exercises using these Therabands. The resistance exercises included leg abduction, plantar flexion, dorsi-flexion, straight-leg/bent-knee raise, knee extension and knee flexion. The resistance training incorporated the principle of progressive overload and was completed in a seated position during the first hour of hemodialysis treatment.

The primary outcome measure is objective physical function measured by validated 30-second sit to stand test, 8-foot timed-up-and-go test and the four square step test. Early unpublished findings show an improvement in mean measures of physical function.

Cost-utility analysis including quality of life costings, uptake and involvement in community activity, self-reported falls, fall's confidence, medication use and morbidity (hospital admissions) is also planned.

Although this intervention has finished, further sustainability work currently being undertaken in this area includes the development of intradialytic Theraband exercise resources for Victorian and Australian dialysis units. In addition 3 Deakin University higher degree students, Brianna Sutcliffe, Gethsy Jayaseelan and Johnson Peter are further measuring

the deterioration in physical function of people with ESKD, exploring dialysis patients' perceptions of an EP coordinated exercise program and exploring satellite dialysis nurses' perceptions to an EP coordinated exercise program.

The past two years has also seen Paul introduce exercise into dialysis units in the form of Zumba and Laughter Yoga. As a reward for Paul's commitment to renal care, education and research Paul was awarded a Lifetime Achievement Award by the Renal Society of Australasia at its recent 42nd National Conference in Melbourne this year. In its 45 year history Paul is only the 4th recipient of this award.



REDUCING VARIATION IN ACUTE PAIN MANAGEMENT: A data driven solution to improve uptake of a management algorithm for postoperative pain.

A major focus of the drive to improve the quality and safety of healthcare is to standardise processes to ensure patients are treated using the best available evidence and do not experience unnecessary variation in care quality. Management of post-surgical pain is known to be highly variable and is often inadequate. The successful implementation of pain management solutions are urgently needed to improve patient pain outcomes.

In 2010, a team led by Professor Mari Botti with the assistance of ARC Linkage funding began a research program designed to improve the quality of pain management in the postoperative in-hospital period by translating best evidence, pharmacological pain management guidelines into practice in three sites in Melbourne: Epworth HealthCare (Richmond), Eastern Health (Box Hill and Maroondah Hospitals) and Cabrini Health. Analyses of baseline data identified significantly high postoperative pain intensity outcomes and variation in prescribing and administration of analgesic medications for patients undergoing total hip or knee replacement surgery. The management algorithm for postoperative pain (MAPP) for the pain management of patients undergoing total knee or hip replacement surgery was developed and is in the process of pilot implementation. The MAPP has inbuilt processes for improving the quality of pain management through evidence-based prescribing of analgesics, analgesic adjuvants, laxatives and anti-emetics to promote multimodal analgesic administration, treatment of side-effects and provide an algorithmic approach to the treatment of breakthrough pain. The MAPP is a model for the synthesis of surgery-specific, best evidence to reduce the intensity of postoperative pain for patients undergoing surgery.

The solution of standardised prescribing and algorithmic approaches to the treatment of breakthrough pain in the postoperative setting is likely to impact significantly on pain management outcomes in this context.

However the way in which an algorithm is implemented within health services is likely to require site-specific solutions because the barriers to standardisation vary within health services.

The research team has recently received seeding funding from QPS to advance this work beyond the pilot sites by investigating variability in site-specific attributes that may impact on the widespread adoption of the MAPP solution in an additional four partner health services (Barwon Health, Alfred Health, Monash Health and Western Health). The team will conduct a data-driven, multidimensional scoping study to identify sources of variability that contribute to poor pain management following hip and knee replacement surgery. This work will inform an adaptive implementation intervention to be tested across multiple sites to provide a cost effective, sustained improvement in postoperative pain management.

The research team will seek NHMRC funding for future phases of this research. This work is expected to have considerable clinical, theoretical and scientific impact.

Project findings will inform knowledge related to health service improvement and strengthen the links between the School of Nursing and Midwifery and partner health services.

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