Professor Tracey Bucknall and her team have been awarded an NHMRC Partnership Project grant for their study ‘PRONTO - Prioritising responses of nurses to deteriorating patient observations’, with generous contributions from Alfred Health, Monash Health, Eastern Health, SA Health, and the Australian Commission on Safety and Quality in Health Care. Total funding will come to $972,213.

Professor Alison Hutchinson and her team have been awarded $197,025 from the Dementia Collaborative Research Centres for their project ‘Reducing harm, in the acute hospital setting, to people displaying symptoms associated with a neurocognitive disorders’.

Professor Alison Hutchinson and Professor Bodil Rasmussen have both been awarded Nurses Board of Victoria Legacy Limited (NBVLL) grants for projects in 2016. Professor Hutchinson received a Mona Menzies grant of $49,985 for her project ‘Partnering with patients in medication administration’, Professor Rasmussen received an Ella Lowe grant of $49,985 for her project ‘Physical, social, psychological and cultural factors influencing breastfeeding intention, initiation and duration among women with Type 1 and Type 2 Diabetes living in Victoria’.

Professor Trisha Dunning will conduct a webinar as part of the Alumni series, titled: Ah! Language: Today a person – Tomorrow a DIABETIC. The webinar will be held on June 7, 2016, from 12:30-1:30pm.

To register, go to http://www.deakin.edu.au/alumni and click on ‘Events and Webinars’.

Grants Success for QPS

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The risk of comorbid illness, frailty, and dependency sharply increases after 75 years of age. Chronic diseases have the greatest effect of any disease type in older adults. Diabetes is one of the most prevalent chronic diseases in care home residents. Recent research shows that diabetes lowers the chances of successful ageing, increases functional limitations and impairs quality of life. Diabetes diagnosed at age 60 reduces quality of life years by 11.1 years in men and 13.8 years in women. Older people with diabetes are at higher risk of diseases such as stroke, heart failure, kidney disease, and are more likely to develop delirium during acute medical illnesses, surgical procedures, and palliative care scenarios. Long-duration of diabetes increases the loss of skeletal muscle mass and function, which contributes to reduced mobility and increases the risk of falls, frailty and disability.

Diabetes is often detected in old people presenting for other health concerns. For example, the disease may present as urinary incontinence, falls, or cognitive and behavioural disturbances. Diabetes frequently co-exists with dementia, and is associated with mild cognitive impairment that can cause difficulties performing instrumental daily tasks. Diabetes is also associated with a two-fold increase in the risk of depression: more than a quarter of older people with diabetes have mood disturbances.

Diabetes management strategies are often based on evidence from younger populations and on a single disease and do not adequately address the complexity of illness in older people. The treatment goals and plan for older people with diabetes need to be individualised and reviewed regularly. Clinicians need to understand age-related physiological and metabolic changes to appreciate the need to focus on safety and quality of life rather than ‘tight blood glucose control’ to prevent long term diabetes complications and implement individualised care.

An algorithm was proposed that places an obligation on the clinician to tailor treatment to characteristics of the individual, their risk of hypoglycaemia, the degree of frailty, and their life expectancy. The focus of care needs to move from a focus on managing the diabetes to managing the individual and recognising diabetes as a model of pre-disability.

Reference
Heart failure has a high rate of hospitalisations and mortality. Large clinical trials have shown that the prescribing of beta-adrenergic blocking agents, angiotensin converting enzyme inhibitors (ACEIs), and angiotensin receptor blockers (ARBs) will improve these outcomes. These medications are recommended as first-line therapy in the treatment of heart failure. Also, there is a dose response, so the higher the dose of these medications, the greater the improvement in patient outcomes. However, general practitioners are often reluctant to up-titrate these medications. New strategies aimed at facilitating this up-titration are warranted. Nurse-led titration is one such strategy.

A literature search was undertaken for articles published up to 31st December 2014. We conducted a meta-analysis of seven randomised controlled trials of 1684 participants, comparing nurse-led titration of beta-adrenergic blocking agents, ACEIs, and ARBs with titration of these medications by a general practitioner. The aim of the meta-analysis was to assess the effects of nurse-led titration of beta-adrenergic blocking agents, angiotensin converting enzyme inhibitors (ACEIs), and angiotensin receptor blockers (ARBs) in patients with heart failure in terms of safety and patient outcomes.

Results showed that the demographic characteristics of participants within each study were similar. All participants had been diagnosed with heart failure. The mean age of participants ranged from 59 to 81 years of age. Participants in the nurse-led titration group had a 20% reduction in risk for all-cause hospital admission and 49% reduction in risk for a hospital admission related to heart failure compared to the usual-care group.

Participants in the nurse-led titration group were 34% less likely to die compared to usual care. Approximately 27 deaths could be avoided for every 1000 people receiving nurse-led titration of beta-adrenergic blocking agents, ACEIs, and ARBs. Participants in the nurse-led titration group were also 40% more likely to survive and have no hospital readmissions compared to participants in the usual-care group. Participants in the nurse-led titration group were twice more likely to reach maximal dose of beta-adrenergic blocking agents and in half the time compared with participants in usual care. Two studies reported on adverse events; one of these studies stated there were no adverse events, and the other study found one adverse event but did not specify the type or severity of the adverse event.

In summary, participants in the nurse-led titration group experienced fewer hospital admissions for any cause and an increase in survival and number of participants reaching target dose within a shorter time period. However, the quality of evidence regarding the proportion of participants reaching target dose was low and should be interpreted with caution. We found high-quality evidence supporting nurse-led titration as one strategy that may improve the optimisation of beta-adrenergic blocking agents resulting in a reduction in hospital admissions and mortality. Despite evidence of a dose dependent relationship of beta-adrenergic blocking agents, ACEIs, and ARBs with improving patient outcomes, translation of this evidence into clinical practice is poor. Nurse-led titration is one strategy that facilitates the implementation of this evidence into practice.

Reference


Key message

Heart failure is associated with a high burden of disease and poor patient outcomes. It has no cure, so strategies aimed at improving patient outcomes are warranted.

Nurse-led titration has been shown to be a safe and effective strategy to improve patient outcomes through the optimisation of key medications in heart failure resulting in a reduction in hospital readmissions and mortality.

Funding acknowledgement

Andrea Driscoll was supported by an Early Career Training Fellowship 546250 from the National Health and Medical Research Council of Australia and a Heart Foundation Future Leader fellowship 100472 from the National Heart Foundation of Australia.
RESEARCHER PROFILE: DR MELISSA BLOOMER

Dr Melissa Bloomer joined the School of Nursing and Midwifery at Deakin University in February, 2016 after eight years at Monash University. Melissa has more than 20 years experience as a registered nurse in intensive care (ICU), general acute and sub-acute care settings across four states of Australia.

During this time, Melissa enjoyed working in clinical and education roles but a desire to improve nursing care, patient outcomes and the family's experience, led to Melissa's interest in pursuing research. Working with a team of ICU clinicians, Melissa first got involved with research in 2007 examining End-of-Life management practices in the ICU.

Since then, Melissa has passionately pursued research, completing a PhD in 2013 with the support of 4 scholarships. Her ongoing commitment to research has resulted in more than 40 peer-reviewed research publications, $135,000 in research funding and a growing local and international research profile in the fields of End-of-Life Care and Intensive Care.

Current research interests
Melissa’s PhD utilised a mixed methods approach to explore the registered nurse’s recognition of and responsiveness to the dying patient in acute hospital (non-palliative care) wards. Melissa has also undertaken research focusing on End-of-Life care in adult, paediatric and neonatal ICU settings, sub-acute care and rehabilitation. Her research work focuses primarily on care and management practices, communication between clinicians and with family members, decision making and the preparedness of nurses to deal with preparing for death, death and grieving.

Melissa is a Research Fellow for the INACTIC project, funded by the European Society of Intensive Care Medicine, exploring the educational preparation of advanced practice roles in critical care across Europe. Melissa has also been involved in work around cultural competent care and as a result of this work, Melissa will be participating in the development of the ‘Brisbane Declaration’ at the upcoming World Federation of Critical Care Nurses International Congress, an international collaboration designed to inform culturally competent care in critical care.

With skills in qualitative and mixed methods research, Melissa is keen to continue researching by developing new research collaborations and higher degree supervision opportunities within the School.

Recent key publications


RESEARCHER PROFILE: DR EMILY TOMLINSON (NEE CULL)

Dr Emily Tomlinson joined the School of Nursing and Midwifery at Deakin University as a Lecturer in February 2016 after six years working as a sessional within the school. Emily has an extensive history with Deakin University having completed her Bachelor of Nursing and Honours and more recently a PhD.

Emily has worked as a Registered Nurse since completing her Bachelor in 2008 and has experience in both general acute and sub-acute care settings. While Emily loves to work in the clinical setting and engaging with patients, she strongly felt that her passion for learning, teaching and research should be perused.

Working in a busy acute general medical ward, Emily still remembers the patient she cared for that made her want to do more for patients who develop delirium while in hospital. After having only recently completed her honours, her wonderful supervisors convinced her to continue on with a PhD. Emily was awarded a Babe Norman Scholarship through the Nurses Memorial Centre to undertake her PhD. Emily graduated in April 2016.

Emily’s PhD work titled “Incident Delirium in the Acute General Medical Setting” focused on investigating the risk factors, outcomes and management of patients who develop incident delirium in an acute medical setting. She conducted a systematic review on risk factors for delirium that was published in the JBI library of systematic reviews. The research undertaken for her PhD also involved conducting a case-control study, reviewing medical records of patients with delirium. A number of interesting findings have come out of this research, including aligning research findings from international settings with a population in Australia. The work will be an excellent stepping stone for further research into cognitive impairment and delirium in the future.

Current research interests
Emily’s current research interests are to extend the work of her PhD. Emily is keen to continue focusing on improving the quality of care and safety of patients who are at risk of developing delirium in hospital settings. There is still a lot of work that needs to be continued in this field and Emily is excited by what the future may hold.

Emily is also working collaboratively with Dr Joan O who was a previous post-doctoral research fellow within QPS. Emily is involved in a number of projects with Joan regarding continence in residential aged care settings, as well as investigating the role of the continence nurse in implementing interventions for incontinence.

Emily is also keen to be involved in other research projects and is looking forward to working collaboratively with other researchers within the School of Nursing and Midwifery and QPS.

Recent publications
Tomlinson, E., Phillips, N., Mohebbi, M and Hutchinson, A. Risk Factors for Incident Delirium in an Acute General Medical Setting: A Retrospective Case – Control Study. 2016. Unpublished manuscript [In draft]