

NURSING RESEARCH INSTITUTE

ANNUAL REPORT 2016



NURSING RESEARCH INSTITUTE

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The Nursing Research Institute (NRI) is a collaboration between St Vincent's Health Australia Sydney and the Australian Catholic University, and is based at St Vincent's Hospital Sydney. Launched in 2009, the NRI facilitates multidisciplinary outcomes-focused healthcare research.

OUR VISION

To create a world-class centre in health services research with our industry partners to improve the safety and quality of patient care and health service delivery.

OUR MISSION

- *Conduct high-quality, multidisciplinary health research focused on improving patient outcomes and research translation.*
- *Build research capacity through training and mentoring of research students, clinicians and career researchers.*
- *Advise, collaborate and consult on health services and translational research with clinicians, the health industry, government and consumers.*
- *Create and sustain a collegiate, supportive and high-performance research culture attractive to the best researchers and research students.*

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Message from the Directors



The NRI continues to achieve its goals of conducting and publishing health services research of national and international significance. In 2016, the NRI research team consisted of **17 core staff** and an additional **69 clinical research assistants** located across New South Wales, the Australian Capital Territory, Victoria and Queensland. Collectively, the NRI conducted **33 locally and nationally funded projects**. These projects are guided by the Australian Catholic University (ACU) research intensification priorities and the St Vincent's Health Australia Sydney (SVHAS) health service goals of conducting clinically relevant, high-quality research to benefit patients and staff. NRI projects also align with the clinical priorities of the Australian Commission on Safety and Quality in Health Care's National Safety and Quality Health Service Standards. In 2016, NRI researchers published **24 manuscripts** in international top-tier journals, reflecting the high quality of our work.

Three research projects stand out for their significance:

- Consolidation of the Australian Catholic University-funded NRI **International Stroke Research Collaboration (ISReC) research program**. Partnering with leading international stroke and health services researchers, ISReC aims to become a leader in multidisciplinary research on nurse-initiated stroke care in acute care settings. Last year, we completed an international survey of thrombolysis administration practices involving Australia, the United States and the United Kingdom. This project showed international variation in the use of selection criteria for thrombolysis and we anticipate a high level of international interest in the pending publication.
- Completion of patient recruitment for the National Health and Medical Research Council (NHMRC)-funded, **Triage, Treatment and Transfer (T³) of patients with stroke in emergency departments trial**. The trial is evaluating the impact of an organisational intervention in emergency departments for people with stroke in 26 hospitals in New South Wales, the Australian Capital Territory, Victoria and Queensland.
- Completion of a long-term follow-up of the patient cohort of our previous NHMRC-funded **Quality in Acute Stroke Care (QASC) stroke trial**. Excitingly, we have found that patients with stroke who received nurse-initiated, evidence-based care following admission to a stroke unit were significantly more likely to be alive four years later. The results of this study have been accepted for publication in *Stroke*.

This annual report shows that the NRI has grown substantially since our establishment in 2009 and has established an international profile based on the strength and rigour of our stroke research program.

We thank our funders, partner institutions and hospital partners for another outstanding year and look forward to ongoing and productive collaborations.

Professor Sandy Middleton
DIRECTOR

Associate Professor Elizabeth McInnes
DEPUTY DIRECTOR



+ + + + + NRI Partnerships and Governance

The Steering Committee meets biannually to govern and monitor the strategic direction of the NRI, while the Management Committee meets three times a year to discuss the management of the NRI.

St Vincent's Health Australia Sydney

NRI Steering Committee



Associate Professor Anthony Schembri
Chief Executive Officer

St Vincent's Health Network Sydney

External

NRI Steering Committee



Professor Judy Lumby AM
Emeritus Professor, University of Technology Sydney
Honorary Professor, University of Sydney and University of Adelaide

NRI Steering and Management Committees



Adjunct Professor Steven Bernardi
Director of Nursing

St Vincent's Health Network Sydney



Adjunct Professor Jose Aguilera OAM
Director of Nursing and Clinical Services

St Vincent's Private Hospital Sydney

Australian Catholic University

NRI Steering Committee



Professor Michelle Campbell
Executive Dean
Faculty of Health Sciences



Professor Patrick Heaven
Dean of Research

NRI Management Committee



Adjunct Professor John Geoghegan
Director of Nursing and Operations

St Joseph's Hospital, Sydney



Ms Leanne Laidler
Director of Nursing and Clinical Services

Mater Hospital Sydney

NRI Management Committee



Professor Patrick Crookes
National Head
School of Nursing, Midwifery and Paramedicine



Associate Professor Amanda Johnson
State Head (NSW and ACT)
School of Nursing, Midwifery and Paramedicine

NRI Steering and Management Committees – NRI Staff

Professor Sandy Middleton
Director

Associate Professor Elizabeth McInnes
Deputy Director

Ms Patty Zenonos
Executive Officer and Project Manager

Mrs Joylynn Israel
Executive Assistant to the Director of NRI

NRI Staff



Director



Professor Sandy Middleton, RN ICU Cert
BAppSc (Nursing) MN PhD (Medicine) FACN

Deputy Director



Associate Professor Elizabeth McInnes, BA (Hons) GradDip AppSci
(Nursing) MPH PhD

Researchers



Ms Kelly Coughlan, RN BNursing Post
Grad Dip (CCU) GradCert (Research
Methods)
Research Assistant
QASC Stroke Survivorship Project
*Triage, Treatment and Transfer (T³) of
patients with stroke in emergency
departments trial*



Dr Louise Craig, BSc (Hons) PhD
Senior Research Fellow
*International Stroke Research Collaboration
(ISReC)*



Ms Simeon Dale, RN BA (Hons)
**Clinical Research Fellow and Trial
Manager**
*Triage, Treatment and Transfer (T³) of
patients with stroke in emergency
departments trial*



Dr Anoja Gunaratne, BA MedSc (Hons)
MSc (Food and Nutrition) PhD
Research Officer
All projects



Mrs Helen Hamilton, RN BSc (Hons) BN
Research Assistant
*International Stroke Research
Collaboration (ISReC)*



Ms Natanya Hunt, BA (MedRadSc) DipBA
**Research Assistant and Administration
Officer**
*Triage, Treatment and Transfer (T³) of
patients with stroke in emergency
departments trial*



Ms Asmara Jammali-Blasi, RN BN (Hons)
MPH
Research Assistant
All projects



Dr Maria McNamara, BA (AppPsych) PhD
**Senior Research Officer
(January – September)**
*International Stroke Research Collaboration
(ISReC)*



Ms Joanne Maxwell, BSpSc (ExPhys)
Postgrad DipExRehab AEP
**Queensland State Coordinator
(August – December)**
*Triage, Treatment and Transfer (T³) of
patients with stroke in emergency
departments trial*



Ms Rosemary Phillips, BA GradDip
(Science)
Research Assistant
*International Stroke Research Collaboration
(ISReC)
Surgical Patient Pressure Injury Incidence
Study (SPPII)
Qualitative study of purchasing and
disinvestment processes in acute care
hospitals*



Ms Janne Pitkin, RN BA
Victorian State Coordinator
*Triage, Treatment and Transfer (T³) of
patients with stroke in emergency
departments trial*



Ms Enna Salama, BSc (Hons)
**Queensland State Coordinator
(January – July)**
*Triage, Treatment and Transfer (T³) of
patients with stroke in emergency
departments trial*



Ms Toni Sheridan, RN GradCert
(Clinical Mgt) CertIV PM&TE
New South Wales State Coordinator
*Triage, Treatment and Transfer (T³) of
patients with stroke in emergency
departments trial*



+ + + + + NRI Staff

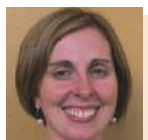
Clinician Researchers



Mr Paul Morgan, RN BA Grad Dip
(Bus Admin) MEdPA
Clinical Data Analyst, Quality Improvement, Mater Hospital Sydney
Implementation of a patient blood management program in an Australian orthopaedic unit: A pilot study



Ms Jane Rodgers, RN M (Clinical Nursing)
GC (Stomal Therapy Nursing) Dip AppSc (Nursing)
Vascular Plastics Wound Clinical Nurse Consultant, St Vincent's Hospital Sydney
Clinical Fellow, Australian Catholic University
INTroducing A Care bundle To prevent pressure injury (INTACT)
Surgical patients pressure injury incidence study



Ms Edel Murray, RN GradDip (NursMgt) M (CINurs)
Quality Manager Accreditation, St Vincent's Private Hospital Sydney
Clinical Fellow, Australian Catholic University
INTroducing A Care bundle To prevent pressure injury (INTACT)

International Stroke Research Collaboration (ISReC) Partners

Principal Investigators



Professor Anne Alexandrov, RN CCRN NVRN-BC ANVP-BC AGACNP-BC PhD
Professor of Nursing, University of Tennessee Health Science Center, USA
Professorial Fellow, Faculty of Health Sciences, Australian Catholic University



Professor Caroline Watkins, RN BA (Hons) Psychology State NMC PhD
Faculty Director of Research and Innovation, Faculty of Health & Wellbeing, University of Central Lancashire, UK
Professorial Fellow, Faculty of Health Sciences, Australian Catholic University



Associate Professor Dominique Cadilhac, RN BN MPH PhD
Head of Translational Public Health and Evaluation, Stroke and Ageing Research, Monash University
Head of Public Health and Health Services Research, Stroke Division of the Florey Institute of Neuroscience and Health, University of Melbourne

Associate Investigator

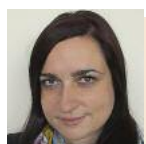


Dr Elizabeth Lightbody, RN BN (Hons) MPhil PhD
Research Fellow and Senior Lecturer, Faculty of Health & Wellbeing, University of Central Lancashire, UK
Clinical Fellow, Faculty of Health Sciences, Australian Catholic University

Administration



Ms Patty Zenonos, BBus MN
Executive Officer and Program Manager



Mrs Joylynn Israel, BA MSW
Executive Assistant to the Director of NRI

Research Projects



In 2016, over 30 NRI research projects were conducted, as shown below:

2016 NRI Projects aligned with the Australian Commission on Safety and Quality in Health Care's National Safety and Quality Health Service Standards

STANDARD 1: GOVERNANCE FOR SAFETY AND QUALITY IN HEALTH SERVICE ORGANISATIONS

ACU International Stroke Research Collaboration (ISReC)

1. Validation of the Acute Screening of Swallow in Stroke/TIA (ASSIST) swallow screening tool
2. Oral care and oral hygiene after stroke
3. International variation in patient thrombolysis selection criteria
4. Diagnostic review of screening tools
5. Use of telemedicine to improve processes of stroke care
6. Fever, sugar, swallowing management: An international perspective
7. Interrogation of the Australian Stroke Clinical Registry (AuSCR) and the National Stroke Foundation datasets

Altering the Rehabilitation Environment to Improve Stroke Survivor Activity (AREISSA)

Head Position in Stroke Trial (HeadPoST)

An evaluation of the international uptake of the QASC Fever, Sugar, Swallowing (FeSS) protocols and implementation resources

Reducing disability from stroke by improving access to best practice stroke care in Victoria

STROKE123: A collaborative national effort to monitor, promote, and improve the quality of stroke care in hospitals and patient outcomes

Triage, Treatment and Transfer (T³) of patients with stroke in emergency departments trial

Very Early Rehabilitation in SpEech (VERSE): Development of an Australian randomised controlled trial of aphasia therapy after stroke

National Health and Medical Research Council (NHMRC) Centre for Research Excellence for stroke rehabilitation and brain recovery

Emergency Department nurse PRACtitioner project (EDPRAC)

Qualitative study of purchasing and disinvestment processes in acute care hospitals

Primary care Early Intervention for COPD mANagement (PELICAN) study: Progress on a cluster randomised trial

STANDARD 2: PARTNERING WITH CONSUMERS

HosQuit: Brief smoking cessation program in acute care

Headset EEG predictors of cognitive outcome after stroke

Stage II stroke survivorship study: A follow-up of health, physical function, self-efficacy, and falls risk in stroke survivors and care-givers

Very Early Rehabilitation in SpEech (VERSE): Development of an Australian randomised controlled trial of aphasia therapy after stroke

STANDARD 7: BLOOD AND BLOOD PRODUCTS

Implementation of a patient blood management program in an Australian orthopaedic unit: A pilot study

STANDARD 8: PREVENTING AND MANAGING PRESSURE INJURIES

Interventions to manage pressure injuries in Australian hospitals: A retrospective study

INTroducing A Care bundle to prevent pressure injury Trial (INTACT)

Surgical Patients Pressure Injury Incidence (SPPII) study

Cochrane review update: Support surfaces for pressure ulcer treatment

OTHER PROJECTS

1. Cochrane review: Screening for aspiration risk associated with dysphagia in acute stroke
2. DELPHI study to validate a health service intervention to support effective nursing assessment in acute hospitals
3. Enhancing nursing assessment in acute hospitals: Cluster RCT of evidence-based Core Assessment protocol (ENCORE trial)
4. Quality in Acute Stroke Care (QASC) mortality project
5. Reporting research translation and impact: An international survey of health researchers
6. Cochrane Review: Interventions for the uptake of evidence-based recommendations in acute stroke settings





International Research Student Program



In July, the NRI welcomed two research exchange students from the University of Miami's (UM) Minority Health and Health Disparities International Research Training Program. This program is funded by the United States of America's National Health Institute and is designed to give students exposure to research in another country. Participants were competitively selected and underwent a four-week intensive research training program at the UM. This was followed by an eight-week international placement working with NRI research teams. **Ms Monica Skoko** (top row, middle) worked with **Dr Louise Craig, NRI Senior Research Fellow** (top row, left) and **Ms Chinonyelum Maduka** (top row, third from right) worked with **Dr Anoja Gunaratne, NRI Research Officer** (bottom row, left) on stroke research projects.

Ms Chinonyelum Maduka

Socioeconomic Status and Time of Presentation to Emergency Departments After a Stroke

Ms Chinonyelum Maduka has a Bachelor of Science in Microbiology and Immunology from the UM. The project she undertook under Dr Craig's supervision involved analysis of the association between status and time of presentation to an Australian emergency department after onset of stroke symptoms. Chinonyelum's work also involved conducting a literature review, as well as creating a poster and assisting with the preparation of a journal article. She said that this experience had given her skills and insight into the conduct of health services research. Her time at the NRI has inspired her to enrol in a Master of International Public Health degree program.

Ms Monica Skoko

Oral Health After Stroke

Ms Monica Skoko graduated from the UM with a Bachelor of Science in Nursing (Registered Nurse). Under the supervision of Dr Gunaratne, Monica conducted a literature review on the importance of oral health after stroke and was also part of a team who are planning an international survey of oral health in stroke patients. Monica's interest is in oncology nursing and, after gaining experience as a nurse, she plans to pursue a joint degree in Doctor of Nursing Practice and Doctorate of Philosophy.



Early Career Researcher Secondees



In 2016, the NRI in partnership with the ACU North Sydney School of Nursing, Midwifery and Paramedicine (SONMP) initiated a scheme to provide research experience for academic staff newly graduated from doctoral studies. This scheme involved successful applicants working at the NRI for one day a week for three months on a funded research project under the mentorship of NRI researchers. The aim of the scheme was to provide academic early career researchers with an opportunity to expand their research skills and to link into research teams doing hands-on research.



Dr Peta Drury, DipAppSc (Nursing) BHSc (Nursing) MN PhD

Dr Peta Drury, Senior Lecturer and Undergraduate Course Coordinator for SONMP (NSW/ACT), has an emerging track record in quantitative research and her PhD was focused on stroke. She was involved in the Surgical Patient Pressure Injury Incidence Study, which is a prospective cohort study designed to ascertain pressure injury incidence in a cohort of high-risk surgical patients at St Vincent's Hospital Sydney. Dr Drury assisted with data analysis and preparation of study presentations. She was mentored by **Associate Professor Elizabeth McInnes**, **Ms Rosemary Phillips** and **Dr Anoja Gunaratne**.



Dr Farida Saghafi, RN BN PGCert (CritCare) MEd PhD

Dr Farida Saghafi is a Lecturer in SONMP (North Sydney) and has teaching expertise in critical care (undergraduate and postgraduate). Dr Saghafi's PhD examined the transition of new graduate to proficient nurse in the intensive care unit. Dr Saghafi was seconded to an international research project that surveyed selection criteria used for the initiation of thrombolysis in acute stroke care. The project involved data entry and analysis, and she was mentored by **Dr Louise Craig**.



Thank You to Collaborating Clinicians

Triage, Treatment and Transfer (T³) Trial

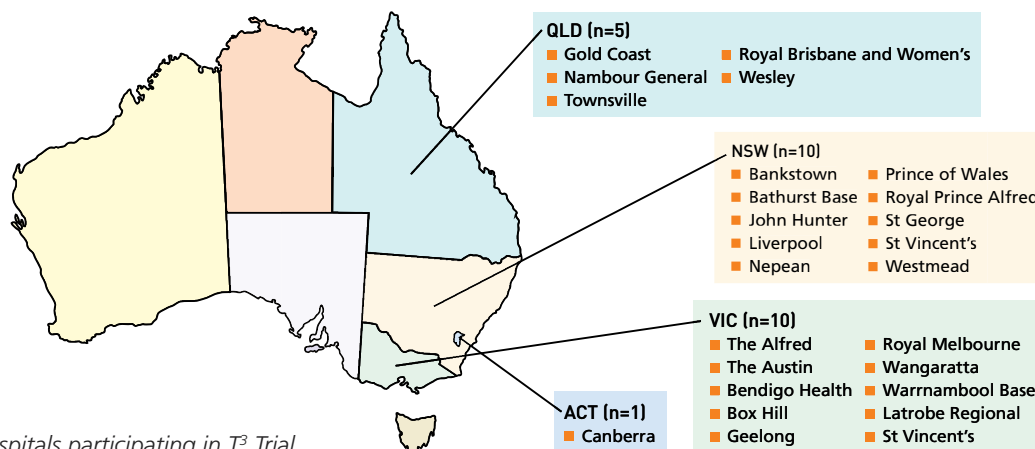


FIGURE 1 Hospitals participating in T³ Trial

Funded by the National Health and Medical Research Council (NHMRC), the Triage, Treatment and Transfer (T³) trial of patients with stroke in emergency departments will be completed by the end of 2017. T³ is evaluating an organisational intervention in emergency departments to facilitate critical clinical elements for stroke patients to improve mortality and morbidity post-stroke.

The project would not have been possible without the involvement of 69 clinical staff and clinical associates at 26 study sites throughout eastern Australia.

We thank all clinicians who have worked with the NRI on this project at various emergency departments and stroke units in New South Wales, the Australian Capital Territory, Victoria and Queensland.

Surgical Patients Pressure Injury Incidence Study

The Surgical Patients Pressure Injury Incidence (SPPII) study investigated the incidence of post-surgical pressure injuries (also known as pressure ulcers and bed sores) among high-risk, elective surgical patients at St Vincent's Hospital Sydney (SVHS). A secondary aim was to capture information on the type of pressure injury prevention care received by surgical patients.

Ms Jane Rodgers, who is a St Vincent's Hospital Vascular Plastics Wound Clinical Nurse Consultant and a Clinical Fellow of the ACU, received mentoring and support in the conduct of this study from **Associate Professor Elizabeth McInnes** and **Ms Rosemary Phillips**. Funding for the study was generously provided by St Vincent's Clinic Foundation. The study results will give valuable information about the risk of pressure injury among a high-risk surgical group of patients and provide a snapshot of pressure injury processes of care.

This study required the expertise, cooperation, and assistance of a multidisciplinary group of SVHS clinicians with expertise in wound care, peri-operative nursing, plastics and anaesthesia.

We would like to thank all SVHS staff below who contributed to this study:

- Mrs Kristel Alken, Clinical Nurse Educator, Peri-operative and Interventional Services Day Procedures Centre
- Mr Gavin Bruncker, Nurse Unit Manager, Admissions Centre
- Mrs Margaret Butler, Nurse Educator, Peri-operative and Interventional Services Peri-operative Scrub Team
- Dominique Christian, Physiotherapist, Level 4 Aikenhead Building
- Mr David Ireland, Registered Nurse, Day Procedure Centre
- Ms Hilary Kloczko, Registered Nurse, Peri-operative and Interventional Services Peri-operative recovery
- Dr Maroun Mallat, Visiting Medical Officer, Anaesthetics Department
- Mrs Dominique Pennington, Nurse Unit Manager, Peri-operative and Interventional Services Day Procedure Centre
- Ms Jane Rodgers, Vascular Plastics Wound Clinical Nurse Consultant
- Ms Levina Saad, Clinical Nurse Educator, Xavier 7 South
- Dr James Southwell-Keely, Visiting Medical Officer, Plastic Surgery Department

Highlights of 2016



The European Stroke Organisation Conference

The NRI stroke research program was recognised internationally with the acceptance of an oral presentation and three posters at the European Stroke Organisation Conference, held in Barcelona on 10–12 May 2016. Director, **Professor Sandy Middleton** was also invited to present the award-winning Quality in Acute Stroke Research Implementation Project to over one hundred delegates at the Vall d'Hebron Hospital, Barcelona.

The results of the Quality in Acute Stroke Research Implementation Project were published in 2016: *Middleton S et al., BMJ Open 2016.*



The Asia Pacific Stroke Conference and Smart Strokes Conference

NRI stroke research was also recognised at both the Asia Pacific Stroke Conference, held in Brisbane on 15–17 July 2016, and the Smart Strokes Conference, held in Canberra on 25–26 August 2016. Four oral presentations and five posters were presented. Pictured at the Smart Strokes Conference are NRI researchers **Ms Helen Hamilton** (left) and **Dr Louise Craig** (right), with the NRI poster, *Nurses' views on hospital organisational factors associated with administration of intravenous (IV) thrombolysis for patients with acute ischaemic stroke in Australia.*



++++ Highlights of 2016



Mobile Stroke Unit – Presentation by Professor Anne Alexandrov

Professor Anne Alexandrov, from the University of Tennessee, is an internationally recognised stroke researcher and also a key collaborator with the ACU's International Stroke Research Collaboration (ISReC). Professor Alexandrov's expertise is in emergency and critical care, and she is a leading nurse expert in acute stroke management in the USA. On 11 July 2016, she delivered a presentation at St Vincent's Hospital Sydney to over 40 researchers and clinicians about the introduction of a Mobile Stroke Unit in Memphis. The Mobile Stroke Unit is an ambulance that undertakes on-the-spot computed tomography angiography and subsequent thrombolysis for stroke.



St Vincent's Campus Research Week

The NRI was involved in the annual St Vincent's Campus Research Week, held on 5–9 September 2016. Research Week celebrates the translational healthcare research conducted across the Sydney St Vincent's Campus. This year, the NRI showcased current research through education booths and presentations. Pictured at the NRI booth (left to right) are NRI researchers **Ms Rosemary Phillips**, **Dr Anoja Gunaratne**, **Ms Helen Hamilton**, **Ms Toni Sheridan** and **Dr Maria McNamara**.

As part of the program, Professor Sandy Middleton welcomed as guest plenary speaker **Associate Professor Sally Inglis**, one of Australia's top cardiovascular researchers, from the University of Technology, Sydney. She presented on *Telephone support and telemonitoring for people with heart failure – Past, present and future*.



Ms Patty Zenonos was the Master of Ceremonies for a session of the 5 minute Fast Forward Presentations, and NRI staff and clinical associates presented at the 5 Minute Research presentations as follows: **Dr Anoja Gunaratne**, *Socioeconomic factors influencing arrival time to emergency department after stroke: The T³ trial*; **Ms Rosemary Phillips**, *Investment and disinvestment decision making in acute hospitals: A qualitative study*; **Ms Jane Rodgers**, *Preliminary results from the surgical patients pressure injury incidence study*; and **Ms Kelly Coughlan**, *Can a nurse-initiated intervention reduce long-term mortality? Follow-up results from the QASC trial*.

Highlights of 2016



University of Tokyo Researcher Visit

Associate Professor Yuki Miyamoto (centre), from the University of Tokyo, visited the NRI from 1 to 3 March 2016 to learn about the research collaboration between St Vincent's Health Australia Sydney and the Australian Catholic University. Associate Professor Miyamoto also took the opportunity to visit ACU's North Sydney Campus.



Congratulations

Staff Educational Achievements

Researchers **Dr Verena Schadewaldt** (left) and **Dr Anoja Gunuratne** (middle) were awarded the degree of Doctorate of Philosophy. Executive Officer **Ms Patty Zenonos** (right) was awarded the degree of Master of Nursing.



Clinician Researcher Paul Morgan

Mr Paul Morgan (Mater Hospital Sydney), a clinician researcher seconded to the NRI, was selected as a finalist in the 2016 St Vincent's Health Australia (SVHA) Excellence and Innovation Awards for his research: *Implementation of a patient blood management program in an Australian orthopaedic unit: A pilot study*. These annual awards acknowledge and encourage outstanding quality improvement activities, programs or strategies that have been implemented at SVHA hospitals. Mr Morgan's selection was a testament to his research efforts.



Grants Awarded

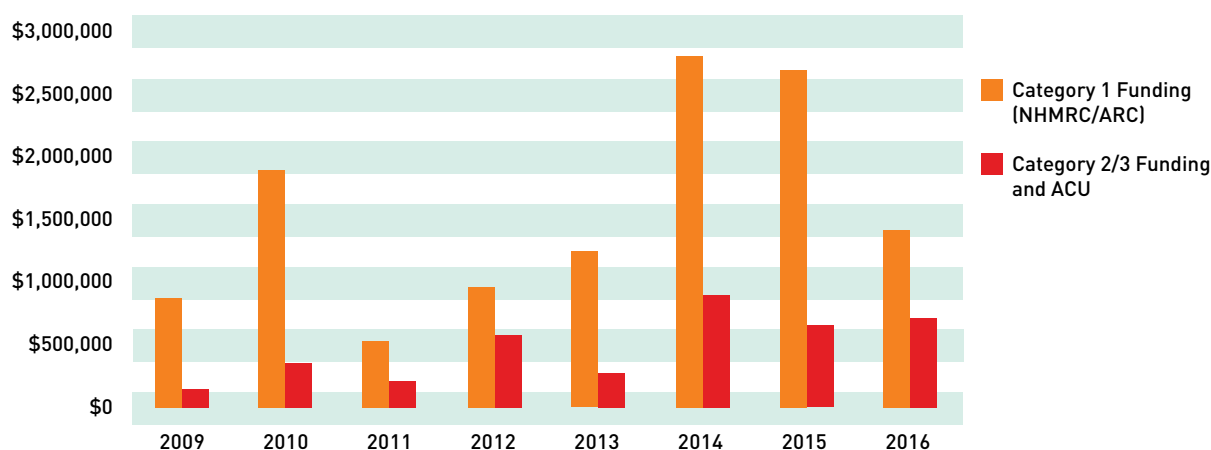


FIGURE 2 NRI grant funds awarded: 2009–16

New Grants 2016

NRI staff in bold

Category 1*

Bladin C, Cheung N, Dewey H, Churilov L, **Middleton S**, Thijs V, Ekinici E. Post-stroke hyperglycaemia-Treatment with Exenatide in Acute Ischaemic Stroke (TEXAIS) trial. National Health and Medical Research Council Project Grant. 2017: \$465,165; 2018: \$448,874; 2019: \$448,874.

Total funds awarded: \$1,362,913

(Project ID: APP1126070)

Category 2/3^

Cadilhac D, Hand P, Andrew N, **Middleton S**. Reducing disability from stroke by improving access to best practice stroke care in Victoria. The Florey Institute of Neuroscience and Mental Health. The Ian Potter Foundation. 2016: \$50,000; 2017: \$50,000.

Total Funds Awarded: \$100,000

Curtis K, Fry M, D'Amato A, Considine J, Shaban R, McCarthy S, Mitchell R, Ramsden C, **Middleton S**, Asha S. An evidence-based approach to improving outcomes and reducing hospital-acquired complications in patients with rib fractures: Chest Injury Pathway (ChiP). HCF Foundation. 2017: \$109,582; 2018: \$116,191; 2019: \$65,023.

Total Funds Awarded: \$290,796

Continuing Grants 2016

Category 1*

Arima H, Lavados P, **Middleton S**, Watkins C, Robinson T, Heritier S, Hackett M, Olavarria V, Heeley, E. Head Position in Stroke Trial (HeadPoST). National Health and Medical Research Council Project Grant. 2014: \$612,315; 2015: \$803,230; 2016: \$363,518.

Total Funds Awarded: \$1,709,566

(Project ID: APP1066966)

Bernhardt J, Nilsson M, Carey L, van Vilet P, Cadilhac D, Parsons M, Bladin C, **Middleton S**, Levi C, Donnan G. Centre for Research Excellence in Stroke Rehabilitation and Brain Recovery. National Health and Medical Research Council. 2014: \$631,079; 2015: \$667,228; 2016: \$549,930; 2017: \$351,723; 2018: \$300,574.

Total Funds Awarded: \$2,500,537

(Project ID: APP1077898).

Chaboyer W, Bucknall T, Webster J, **McInnes E**, Banks M, Whitty J, Wallis M, Gillespie B, Thalib L, Cullum N. INtroducing A Care bundle To prevent pressure injury (the INTACT trial). National Health and Medical Research Council Project Grant. 2014: \$864,493; 2015: \$241,584.

Total Funds Awarded: \$1,071,077

(Project ID: APP1058963)

Middleton S, Levi C, Fitzgerald M, Considine J, Grimshaw J, D'Este C, Gerraty R, Cheung W, Cadilhac D, **McInnes E**. Associate Investigators: Quinn C, Cadigan G, Ward J, Longworth M, McElduff P, **Dale S**, Denisenko S. T3 Trial: Triage, Treatment and Transfer of patients with stroke in emergency departments. National Health and Medical Research Council Project Grant. 2012: \$251,591; 2013: \$597,762; 2014: \$590,819; 2015: \$446,077; 2016: \$488,909.

Total Funds Awarded: \$2,375,158

(Project ID: APP1024812)

Category 2/3^

Spratt N, Ada L, Nilsson M, **Middleton S**, Bernhardt J, Churilov L, Levi C, Pollack M, Faux S, Perry L, McCluskey A. Altering the Rehabilitation Environment to Improve Stroke Survivor Activity (AREISSA): A Phase II Trial. NSW CVRN Research Development Project Grant. Jan 2014 to March 2016.

Total Funds Awarded: \$254,633

(Project ID: APP2013000634)

*Category 1: All schemes listed on the 2016 Australian Competitive Grants Register

^ Category 2: Income received from state or territory government departments, whether via programs, grants or contracts. It also includes local government grant or contract income / Category 3: Funding received from non-Category 1 and 2 organisations or businesses

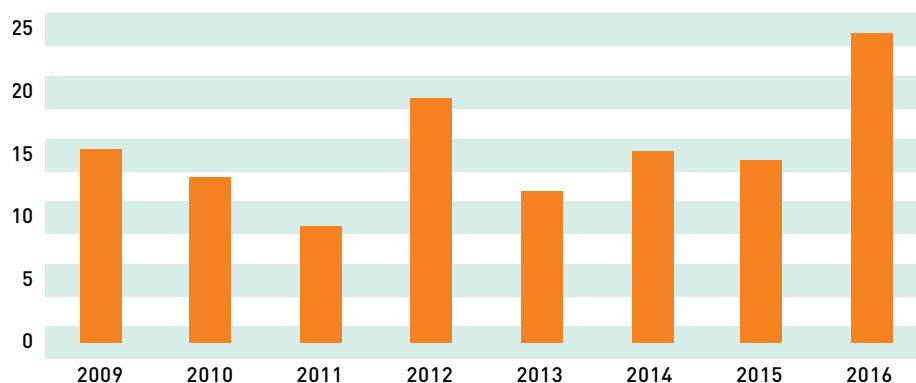


FIGURE 3 Number of NRI peer-reviewed publications: 2009–2016

Published Publications

NRI staff in bold

Brown B, Haines M, **Middleton S**, Paul C, D'Este C, Klineberg E, Elliot E on behalf of the Clinical Networks Research Group. Development and validation of a survey to measure features of clinical networks. *BMC Health Services Research* 2016;16:531.

doi: 10.1186/s12913-016-18000.

Brown B, Patel C, **McInnes E**, Mays N, Young J, Haines M. The effectiveness of clinical networks in improving quality of care and patient outcomes: a systematic review of quantitative and qualitative studies. *BMC Health Services Research* 2016;16:360.

doi: 10.1186/s12913-016-1615-z.

Cadilhac D, Kilkenny M, Levi C, Lannin N, Thrift A, Kim J, Grabsch B, Churilov L, Dewey H, Hill K, Faux S, Grimley R, Castley H, Hand P, Wong A, Herkes G, Gill M, Crompton D, **Middleton S**, Donnan G, Anderson C. Risk-adjusted mortality rates following stroke by hospital: Evidence from the Australian Stroke Clinical Registry (AuSCR). *Medical Journal of Australia*. In Press. Accepted 17 September 2016.

Cadilhac D, Kim J, Lannin N, Levi C, Dewey H, Hill K, Faux S, Andrew N, Kilkenny M, Grimley R, Thrift A, Grabsch B, **Middleton S**, Anderson C, Donnan G. Better outcomes for hospitalised patients with TIA when in stroke units. *Neurology* 2016;86(22):2042–8.

doi: 10.1212/WNL.0000000000002715.

Chaboyer W, Bucknall T, Webster J, **McInnes E**, Gillespie BM, Banks M, Whitty JA, Thalib L, Roberts S, Tallott M, Cullum N, Wallis M. The effect of a patient centred care bundle intervention on pressure ulcer incidence (INTACT): A cluster randomised trial. *International Journal of Nursing Studies* 2016;64:63–71.

doi: 10.1016/j.ijnurstu.2016.09.015.

Craig L, McInnes E, Taylor N, Grimley R, Cadilhac D, Considine J, **Middleton S**. Identifying the barriers and enablers for a triage, treatment and transfer clinical intervention to manage acute stroke patients in the emergency department: A systematic review using the theoretical domains framework (TDF). *Implementation Science* 2016;11:157.

doi: 10.1186/s13012-016-0524-1.

Dennis S, Reddel H, **Middleton S**, Hasan I, Hermiz O, **Phillips R**, Crockett A, Vagholkar S, Marks G, Zwar N. Barriers and outcomes of an evidence-based approach to diagnosis and management of chronic obstructive pulmonary disease (COPD) in Australia: A qualitative study. *Family Practice* 2016;1–6.

doi: 10.1093/fampra/cmw103.

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NRI staff in bold

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Research Seminars



In 2016, the NRI combined with the St Vincent's Centre for Applied Medical Research, part of the Darlinghurst Sydney Research hub, to present and chair monthly research seminars as listed below. This provided an opportunity to disseminate information about our current research to a broad range of researchers across the St Vincent's Health Australia Sydney campuses.

DATE	NRI SPEAKER & TOPIC
4 May	<p>Presenter: Dr Louise Craig</p> <p>A national survey to establish administration practices of intravenous thrombolysis for patients with acute ischaemic stroke in Australia</p> <p>Chair: Associate Professor Elizabeth McInnes</p>
1 June	<p>Presenter: Associate Professor Elizabeth McInnes</p> <p>The views of hospital managers on investment and disinvestment decision-making by acute health care services: A qualitative study</p> <p>Chair: Ms Simeon Dale</p>
6 July	<p>Presenter: Mr Paul Morgan</p> <p>Implementation of a patient blood management program in an Australian orthopaedic unit: A pilot study</p> <p>Chair: Dr Maria McNamara</p>
3 August	<p>Presenter: Ms Kelly Coughlan</p> <p>Can a nurse-initiated intervention reduce long-term mortality? Follow-up results from the QASC trial</p> <p>Chair: Ms Rosemary Phillips</p>
5 October	<p>Presenter: Ms Helen Hamilton</p> <p>Hospital organisational factors associated with administration of intravenous thrombolysis for patients with acute ischaemic stroke in Australia</p> <p>Chair: Dr Louise Craig</p>
2 November	<p>Presenter: Ms Jane Rodgers</p> <p>Surgical Patient Pressure Injury Incidence Study: A prospective cohort study of high-risk patients</p> <p>Chair: Dr Anoja Gunaratne</p>
7 December	<p>Presenter: Dr Anoja Gunaratne</p> <p>Maternal prenatal and/or postnatal n-3 long chain polyunsaturated fatty acids (LCPUFA) supplementation for preventing allergies in early childhood</p> <p>Chair: Dr Louise Craig</p>





Conferences

NRI staff in red / Presenting author underlined

EUROPEAN STROKE ORGANISATION CONFERENCE. BARCELONA, SPAIN, 10–12 MAY 2016

Andrew N, Anderson C, Lannin N, **Middleton S**, Levi C, Dewey H, Grabsch B, Faux S, Hill K, Grimley R, Donnan G, Cadilhac D. *Receiving all components of a stroke care bundle improves post-discharge survival and quality of life outcomes.* [Poster]

Andrew N, Kilkenny M, Lannin N, Anderson C, Donnan G, Hill K, **Middleton S**, Levi C, Faux S, Grimley R, Thrift A, Kim J, Grabsch B, Cadilhac D. *Prescription of antihypertensive medication at hospital discharge is associated with improved long-term survival post-stroke.* [Oral Presentation]

Cadilhac D, Kilkenny M, Lannin N, Levi C, Faux S, Dewey H, Grimley R, Hill K, Grabsch B, Andrew N, Anderson C, Donnan G, **Middleton S**. *Weekend versus weekday hospital discharge: Experience from the Australian stroke clinical registry.* [Poster]

Craig L, Churilov L, Olenko L, **Dale S**, **Martinez-Garduno C**, Cadilhac D, **Middleton S**. *Triage, Treatment and Transfer (T3) intervention in acute stroke care: Identifying a set of priority barriers to facilitate successful implementation.* [Poster]

Craig L, **Hamilton H**, Alexandrov A, Lightbody E, Watkins C, Cadilhac D, **Dale S**, **Middleton S**. *A national survey to establish administration practices of intravenous thrombolysis for patients with acute ischaemic stroke in Australia.* [Poster]

Craig L, **McInnes E**, **Middleton S**. *Systematic review to identify the barriers and enablers for a triage, treatment and transfer clinical intervention to manage acute stroke patients in the emergency department.* [Poster]

Dewey H, Thrift A, Langhorne P, Lindley R, Bath P, Bladin C, Reid C, Read S, **Middleton S**, Frayne J, Srikanth V, Churilov L, Collier J, Donnan G, Bernhardt J, on behalf of the AVERT Trial Collaboration Group. *Very early stroke rehabilitation safety in the first 14 days.* [Oral Presentation]

Godecke E, Armstrong E, Ciccone N, **Middleton S**, Rai T, Holland A, Ellery F, Cadilhac D, Whitworth A, Rose M, Hankey GJ, Bernhardt J. *Very Early Rehabilitation in SpEech (VERSE) after stroke: Trial status and recruitment.* [Poster]

Lim J, Hackett M, Munoz Venturelli P, Arima H, **Middleton S**, Olavarria V, Lavados P, Lee T, Lin R, Peng B, Cui L, Pontes-Neto O, Pandian J, Anderson C, De Silva A, Robinson T, Watkins C, Mead G. *Head POSITION in Stroke Trial (HeadPOST): An international cluster randomised trial.* [Poster]

Munoz Venturelli P, Lavados P, Olavarria V, Arima H, Billot L, Hackett M, Lim J, **Middleton S**, Pontes-Neto O, Peng B, Cui L, Song L, Mead G, Robinson T, Watkins C, Lin R, Lee T, Pandian J, Da Silva A, Anderson C. *Regional variation in organisation of acute stroke care: Analyses from the HeadPOST trial network.* [Poster]

Middleton S, Mnatzaganian G, **Coughlan K**, D'Este C, Low Choy N, **Jammali-Blasi A**, Grimshaw J, Levi C, Cheung NW, Ward J, Cadilhac D, McElduff P, **Dale S**. *Can a nurse-initiated intervention to manage fever, hyperglycaemia and swallowing post stroke reduce long-term mortality? Follow-up results from the QASC trial.* [Oral Presentation]

SPEECH PATHOLOGY AUSTRALIA NATIONAL CONFERENCE. PERTH, 15–18 MAY 2016

Godecke E, Armstrong E, Ciccone NA, Rose M, Whitworth A, Rai T, **Middleton S**, Ellery F, Holland A, Hankey GJ, Cadilhac D, Bernhardt J. *Therapy fidelity in the Very Early Rehabilitation in SpEech (VERSE) aphasia after stroke Randomised Controlled Trial (RCT): Lessons learned and progress to date.* [Poster]

Godecke E, Armstrong E, Ciccone N, Rai T, **Middleton S**, Whitworth A, Rose M, Holland A, Ellery F, Hankey G, Cadilhac D, Bernhardt J. *The progress of a complex rehabilitation randomised controlled trial: Very Early Rehabilitation in SpEech (VERSE) after stroke.* [Oral Presentation]

13TH KNOWLEDGE TRANSLATION ANNUAL SCIENTIFIC MEETING 2016. TORONTO, CANADA, 13–14 JUNE 2016

Middleton S. *State wide upscale and spread of a proven intervention: The Quality in Acute Stroke Care (QASC) Implementation Project.* ****Invited Keynote Speaker****



Conferences



NRI staff in red / Presenting author underlined

ASIA PACIFIC STROKE CONFERENCE (APSC). BRISBANE, 15–17 JULY 2016

Andrew N, **Middleton S**, Grimley R, Anderson C, Donnan G, Lannin N, **Salama E**, Grabsch B, Cadilhac D. *The influence of organisational context on delivery of thrombolysis and stroke unit care.* [Poster]

Bernhardt J, Dewey H, Thrift H, Langhorne P, Lindley R, Bath P, Bladin C, Reid C, Read S, Said C, **Middleton S**, Frayne J, Srikanth V, Churilov L, Collier J, Donnan G, and AVERT Collaboration Group. *A Very Early Rehabilitation Trial (AVERT): Safety in the first 14 days after stroke.* [Poster]

Cadilhac D, Andrew N, Kim J, Kilkenny M, Hill K, Grabsch B, Grimley R, Dewey H, Lannin N, Levi C, Faux S, Anderson C, Donnan G, **Middleton S**. *Establishment of national performance benchmarks for acute stroke care: New evidence from the Australian stroke clinical registry.* [Poster]

Craig L, Churilov L, Olenko L, **Dale S**, **Martinez-Garduno C**, Cadilhac D, **Middleton S**. *Identifying a set of priority barriers to facilitate successful implementation of a Triage, Treatment and Transfer (T3) intervention in acute stroke care.* [Poster]

Craig L, **Hamilton H**, Alexandrov A, Lightbody E, Watkins C, Cadilhac D, **Dale S**, **Middleton S**. *Establishing administration practices of intravenous thrombolysis for patients with acute ischaemic stroke.* [Oral Presentation]

Godecke E, Armstrong E, Ciccone N, **Middleton S**, Rai T, Holland A, Ellery F, Cadilhac D, Whitworth A, Rose M, Hankey GJ, Bernhardt J. *Trial status and recruitment: Very Early Rehabilitation in SpEEch (VERSE) after stroke trial.* [Poster]

Grimley R, Andrew N, Kilkenny M, Grabsch B, **Salama E**, Rosbergen I, Bew P, Walker K, Cadigan G, Dewey H, Anderson C, Bernhardt J, **Middleton S**, Cadilhac D. *Timing of initial mobilisation after acute stroke – Relation to 180 day outcomes.* [Oral Presentation]

Kilkenny M, Lannin N, Anderson C, Dewey H, Levi C, Faux S, Hill K, Grabsch B, **Middleton S**, Thrift A, Grimley R, Donnan G, Cadilhac D, for the AuSCR consortium partners. *Quality of care over-time: New evidence from the Australian stroke clinical registry.* [Poster]

Kilkenny M, Lannin N, Anderson C, Dewey H, Levi C, Faux S, Hill K, Grabsch B, **Middleton S**, Thrift A, Grimley R, Donnan G, Cadilhac D, for the AuSCR consortium partners. *Stroke care and outcomes for patients who require an interpreter: Evidence from the Australian stroke clinical registry.* [Poster]

Kim J, Andrew N, Kilkenny M, Lannin N, Hill K, Grabsch B, Grimley R, Dewey H, Thrift A, Levi C, Faux S, **Middleton S**, Donnan G, Anderson C, Cadilhac D. *Changes in post-stroke survival over time: New evidence from the Australian stroke clinical registry.* [Oral Presentation]

Lim J, Hackett M, Arima H, **Middleton S**, Olavarria V, Brunser A, Lavados P, Peng B, Cui L, Lee T, Lin R, Pontes-Neto O, Watkins C, Mead G, Robinson T, Anderson C, Pandian J, De Silva J, Munoz Venturelli P. *Head Position in Stroke Trial (HeadPoST): An international cluster randomised nursing trial.* [Poster]

Middleton S, Levi C, **Dale S**, Cheung N, **McInnes E**, Considine J, D'Este C, Cadilhac C, Grimshaw J, Gerraty R, **Craig L**, **Schadewaldt V**, McElduff P, Fitzgerald M, Quinn C, Cadigan G, Denisenko S, Longworth M, Ward J. *The triage, treatment and transfer of patients with stroke in emergency departments. **Invited to Provide Trial Update***

Middleton S, Mnatzaganian G, **Coughlan K**, D'Este C, Choy N L, **Jammali-Blasi A**, Grimshaw J, Levi C, Cheung N, Ward J, Cadilhac D, McElduff P, **Dale S**. *Can a nurse-initiated intervention to manage fever, hyperglycaemia and swallowing post stroke reduce long-term mortality? Follow-up results from the QASC trial.* [Poster]

Turner A, Weir L, Stratton S, Murphy B, **Middleton S**, Hand P, Davis S. *Depression and anxiety following a transient ischemic attack.* [Poster]

NSW AGENCY FOR CLINICAL INNOVATION, DRUG AND ALCOHOL INNOVATION FORUM. SYDNEY, 11 AUGUST 2016

Malone V, Ezard N, **Middleton S**, **McInnes E**, Schembri A, Bonevski B. *Successful intervention to increase smoking cessation support to inpatients: HosQuit.* [Poster]

Middleton S. *Improving stroke and cardiovascular outcomes: Part 1: Nurses improving stroke outcomes. **Invited Speaker***





Conferences

NRI staff in red / Presenting author underlined

Middleton S. *Contextualising translational research in clinical nursing: Part 2: Academic clinical chairs: Strategies and advice-voices from the field.* ****Invited Panel Speaker****

SMART STROKES 2016. CANBERRA, 25–26 AUGUST 2016

Craig L, Hamilton H, Alexandrov A, Lightbody E, Watkins C, Cadilhac D, **Dale S**, **Middleton S**. *A national survey to establish administration practices of intravenous thrombolysis for patients with acute ischaemic stroke in Australia.* [Poster]

Craig L, Hamilton H, Alexandrov A, Lightbody E, Watkins C, Cadilhac D, **Dale S**, **McInnes E**, **Middleton S**. *Do nurses have an active role in intravenous (IV) thrombolysis administration decision-making in Australia? A national survey.* [Poster]

Hamilton H, Craig L, Alexandrov A, Lightbody E, Watkins C, Cadilhac D, **Dale S**, **McInnes E**, **Middleton S**. *Nurses' views on hospital organisational factors associated with administration of intravenous (IV) thrombolysis for patients with acute ischaemic stroke in Australia.* [Poster]

Middleton S, Mnatzaganian G, Coughlan K, D'Este C, Low Choy N, **Jammali-Blasi A**, **Dale S**, **McInnes E**. *Does a nurse-initiated intervention reduce long-term mortality? Follow up results from the QASC trial.* [Oral Presentation]

9TH INTERNATIONAL COUNCIL OF NURSES – INTERNATIONAL NURSE PRACTITIONER/ADVANCED PRACTICE NURSING NETWORK (INP/APNN) CONFERENCE. HONG KONG, 9–11 SEPTEMBER 2016

Helms C, Gardner A, **McInnes E**. *An exploration of nurse practitioners' confidence, experience and consensus in Delphi Research.* [Oral Presentation]

Helms C, Gardner A, **McInnes E**. *Validation of an Australian nurse practitioner specialty taxonomy using delphi methodology.* [Oral Presentation]

NHMRC CENTRE OF RESEARCH EXCELLENCE IN NURSING (NCREN) COMPLEX NURSING INTERVENTIONS SYMPOSIUM. BRISBANE, 30 SEPTEMBER 2016

Middleton S. *Changing nursing practice using a multifaceted intervention: Can this be done at a state-wide level?* ****Invited Speaker****

Middleton S. *Patient and family participation in nursing interventions.* ****Invited Panel Discussion****

AUSTRALASIAN IMPLEMENTATION SCIENCE CONFERENCE. MELBOURNE, 5–7 OCTOBER 2016

McInnes E and Harvey G. *How can models of implementation inform de-implementation?* [Poster]

INTERNATIONAL SOCIETY FOR QUALITY IN HEALTHCARE CONFERENCE. TOKYO, JAPAN, 16–19 OCTOBER 2016

Chaboyer W, Bucknall T, **McInnes E**, Wallis M. *The effect of a patient centred care bundle intervention on pressure ulcer incidence (INTACT): A cluster randomised trial.* [Oral Presentation]

41ST AUSTRALIAN AND NEW ZEALAND INTENSIVE CARE SOCIETY (ANZICS)/AUSTRALIAN COLLEGE OF CRITICAL CARE NURSES (ACCCN) INTENSIVE CARE CONFERENCE. PERTH, 20–22 OCTOBER 2016

Coventry A, **McInnes E**, Rosenberg J, Ford R. *End-of-life-care in the ICU: A qualitative meta-synthesis investigating the experiences and perceptions of the patient's family.* [Poster]

AUSTRALASIAN PROFESSIONAL SOCIETY ON ALCOHOL AND OTHER DRUGS SCIENTIFIC CONFERENCE. SYDNEY, 30 OCTOBER–2 NOVEMBER 2016

Malone V, Ezard N, **Middleton S**, **McInnes E**, Schembri A, Bonevski B. *Universal support to help inpatients quit smoking: HosQuit Part 2: Uncontrolled before and after study of systems change intervention pilot.* [Poster]

1ST WOUNDS AUSTRALIA CONFERENCE 2016. MELBOURNE, 9–12 NOVEMBER 2016

McInnes E, Harvey G, Hiller J, **Phillips R**. *What sources of evidence are used by hospitals to inform wound care product purchasing decisions?* [Poster]



Professional Affiliations



Director, Professor Sandy Middleton

Professional Membership

- Fellow, Australian College of Nursing
- Member, American Heart Association
- Member, Australasian Association for Quality in Health Care
- Member, European Stroke Organisation
- Member, International Society for Quality in Health Care
- Member, Sigma Theta Tau International, Xi Omicron Chapter
- Member, Stroke Society of Australasia
- Member, World Stroke Organisation

Invited Committees and Boards

- Member, National Health and Medical Research Council Research Committee (2015–present)
- Member, St Vincent's Health Sydney Local Health District, Nursing Leadership Council (2015–present)
- Member, National Stroke Foundation Stroke Guidelines Development Working Group (2015–present)
- Member, St Vincent's Health Network Sydney Clinical Council (2014–present)
- Member, Agency for Clinical Innovation Board of Directors (2014–present)
- Member, Clinical Excellence Commission Board of Directors (2014–present)
- Member, Australian Stroke Coalition Data and Quality Working Group Committee (2013–present)
- Member, Agency for Clinical Innovation Research Committee (2011–present)
- Member, Clinical Excellence Commission Research Committee (2011–present)
- Member, St Vincent's Campus Research Council Committee (2011–present)
- Member, St Vincent's Clinic Board of Directors (2008–present)
- Member, National Stroke Foundation Clinical Council (June 2010–present)
- Chair, Australian Clinical Stroke Registry Steering Committee (2008–present)
- Member, Steering Committee and Member Expert Advisory Committee. Thrombolysis Implementation Plan for Stroke. National Health and Medical Research Council funded Cluster randomised controlled trial (2010–present)
- Member, Agency for Clinical Innovation Stroke Co-ordinating Committee (2005–present)
- Member, Agency for Clinical Innovation Stroke Research Working Group (2004–present)

Deputy Director, Associate Professor Elizabeth McInnes

Professional Membership

- Associate, Cochrane Qualitative Methods Group
- Member, Association for Qualitative Research
- Member, Australasian Evaluation Society
- Member, Health Services Research Association of Australia and New Zealand

Invited Committees and Boards

- Deputy Chair, Australian Catholic University School of Nursing, Midwifery and Paramedicine Research and Research Training Committee (2013–present)
- Deputises for Director at: St Vincent's Health Sydney Nursing Advisory Council; Research Council; Clinical Council
- Member, St Vincent's Hospital Sydney Pressure Injury Working Party
- Member, St Vincent's Hospital Sydney Wound Care Committee
- Chair, St Vincent's Hospital Sydney Wound Care Committee Research Group

