

# Nursing Research Institute

ANNUAL REPORT 2017



# Nursing Research Institute

The Nursing Research Institute (NRI) is a collaboration between Australian Catholic University (ACU) and St Vincent's Health Australia Sydney (SVHAS). The NRI is based at St Vincent's Hospital Sydney. Since 2008 the NRI has conducted multidisciplinary outcomes-focused healthcare research of high clinical relevance.

## OUR VISION

To create a world-class centre in nursing 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 enjoyed a year in which key collaborative ACU and SVHAS projects, funded locally and nationally, were completed and new ones commenced. In 2017, the NRI research team consisted of 15 core staff located across New South Wales, the Australian Capital Territory and Victoria. Our research is strategically positioned to fulfil important clinical and research priorities, including those of the Australian Commission on Safety and Quality in Health Care's (ACSQHC) National Safety and Quality Health Service Standards. NRI researchers were first or co-authors on 29 publications in high-impact journals and presented at 17 national and international conferences and workshops. These outputs reflect the high quality and national and international significance of the NRI's research program.

A number of research projects, including those that were conducted on SVHAS sites, were completed in 2017 and stand out for their potential translational benefits:

- + The ACSQHC undertook an economic evaluation that included the NRI-led Quality in Acute Stroke Care (QASC) trial. This report showed that if Fever, Sugar, Swallow (FeSS) protocols were implemented in 65 per cent of the eligible Australian stroke patient populations for one year, the total economic benefit (savings) would be \$281m. National implementation of these protocols will therefore significantly benefit the health system as well as markedly improve patient outcomes.
- + In 2017, the National Health and Medical Research Council endorsed the Clinical Guidelines for Stroke Management, which include a strong recommendation for all stroke services to implement the standardised protocols to manage fever, hyperglycaemia and swallowing, as a direct result of the QASC trial – a measure of the trial's impact.
- + Mr Paul Morgan of the Mater Hospital completed a study titled: Implementation of a Patient Blood Management Program (PBMP) in an Australian private hospital orthopaedic unit. Following introduction of an evidence-based guideline implementation intervention, there was a significant improvement in the number of patients who received the complete set of pre-operative tests screening for anaemia and iron deficiency prior to total hip arthroplasty surgery as per national guidelines. It also showed a reduction in the number of post-operative blood transfusions. This implementation study resulted in clinician behaviour change, mitigating the inherent risks associated with blood transfusions and conserving valuable blood products.

- + An international study, led by Senior Research Fellow Dr Louise Craig, investigated whether adding tissue plasminogen activator (rt-PA) non-license inclusion and exclusion criteria reduces thrombolysis rates. This study was conducted in three countries: Australia, the United States and the United Kingdom. It found that use of non-standard criteria could, in part, explain the low rates of rt-PA in all three countries. The study received 'Best New Investigator Award 2017' at the annual national Smart Strokes Conference.

As government research funding structures change, these clinically relevant and practice-changing research investigations illustrate the value of industry-academic partnerships which the NRI actively pursues. The NRI is proud to have spearheaded this type of research for almost a decade and we acknowledge with gratitude the support we receive from both ACU and SVHAS. We again thank our funders, collaborators and hospital partners for another productive year and look forward to ongoing and productive partnerships.

**Professor Sandy Middleton**  
Director

**Associate Professor Elizabeth McInnes**  
Deputy Director





St Vincent's



# NRI Partnerships and Governance

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

## ST VINCENT'S HEALTH AUSTRALIA SYDNEY

### NRI Steering and Management Committees



**Associate Professor Anthony Schembri**  
(2017 Chair – Steering Committee)  
Chief Executive Officer  
St Vincent's Health Network Sydney



**Ms Kirsty McLeod**  
Acting 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

### NRI Management Committee



**Adjunct Professor John Geoghegan**  
Director of Nursing and Operations  
St Joseph's Hospital Sydney



**Ms Alexandra Joyner**  
Director of Nursing and Clinical Services  
Mater Hospital Sydney

## EXTERNAL

### NRI Steering Committee



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

### NRI Steering Committee



**Professor Michelle Campbell**  
Executive Dean  
Faculty of Health Sciences



**Professor James McLaren**  
Pro Vice-Chancellor (Research)  
Office of the Deputy Vice-Chancellor (Research)

### NRI Management Committee



**Professor Patrick Crookes**  
(2017 Chair – Management Committee)  
National Head  
School of Nursing, Midwifery and Paramedicine



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

### NRI Staff Steering and Management Committees



**Professor Sandy Middleton**  
Director  
Nursing Research Institute



**Associate Professor Elizabeth McInnes**  
Deputy Director  
Nursing Research Institute



**Mrs Tara Doyle**  
Personal Assistant to the Director of NRI  
(part-time)  
Nursing Research Institute



**Mrs Joylynn Israel**  
Research Officer and Personal Assistant to the  
Director of NRI (part-time)  
Nursing Research Institute



**Ms Patty Zenonos**  
Executive Officer and Project Manager  
Nursing Research Institute

# NRI Staff

## Director



**Professor Sandy Middleton**

## Deputy Director



**Associate Professor Elizabeth McInnes**

## RESEARCHERS



**Ms Heilok Cheng**

Research Assistant

*Triage, Treatment and Transfer (T<sup>3</sup>) of patients with stroke in emergency departments*  
*Acute care hospital disinvestment decision-making – Systematic review*  
*Cochrane Review: Interventions for uptake of evidence-based recommendations for acute stroke*



**Ms Kelly Coughlan**

Research Assistant

*QASC Stroke Survivorship Project*  
*Triage, Treatment and Transfer (T<sup>3</sup>) of patients with stroke in emergency departments*  
*Post-stroke hyperglycaemia – Treatment with Exenatide in Acute Ischaemic Stroke (TEXAIS)*



**Dr Louise Craig**

Senior Research Fellow

*International Stroke Research Collaboration (ISReC)*



**Ms Simeon Dale**

Clinical Research Fellow and Trial Manager  
*Triage, Treatment and Transfer (T<sup>3</sup>) of patients with stroke in emergency departments*  
*Post-stroke hyperglycaemia – Treatment with Exenatide in Acute Ischaemic Stroke (TEXAIS)*  
*Quality in Acute Stroke Care (QASC) Europe*



**Dr Oyebola Fasugba**

Research Assistant

*Triage, Treatment and Transfer (T<sup>3</sup>) of patients with stroke in emergency departments*



**Dr Anoja Gunaratne**

Research Officer

*All projects*



**Mrs Helen Hamilton**

Research Assistant

*Triage, Treatment and Transfer (T<sup>3</sup>) of patients with stroke in emergency departments*  
*Oral health care practices for stroke patients in acute care: an international survey*



**Ms Natanya Hunt**

Research Assistant and Administration Officer

*Triage, Treatment and Transfer (T<sup>3</sup>) of patients with stroke in emergency departments*



**Mrs Joylynn Israel**

Research Officer (part-time)

*All projects*



**Dr Cintia Martinez-Garduno**

Research Officer (part-time)

*All projects*



**Mr Benjamin McElduff**

Research Assistant/Statistician

*Triage, Treatment and Transfer (T<sup>3</sup>) of patients with stroke in emergency departments*



**Ms Rosemary Phillips**

Research Assistant (January–July)

*International Stroke Research Collaboration (ISReC)*  
*Surgical Patient Pressure Injury Incidence Study (SPPII)*  
*Qualitative study of purchasing and disinvestment processes in acute care hospitals*



**Dr Verena Schadewaldt**

Research Fellow

*International Stroke Research Collaboration (ISReC)*  
*Triage, Treatment and Transfer (T<sup>3</sup>) of patients with stroke in emergency departments*

# NRI Staff

## CLINICIAN RESEARCHERS



### Ms Julie Gawthorne

Emergency Department Clinical Nurse Consultant, St Vincent's Hospital Sydney  
*Use of Fascia Iliaca Blocks in elderly patients with a fractured neck of femur*



### Ms Victoria Malone

Health Services Manager, Stimulant Treatment Centre, St Vincent's Hospital Sydney  
*HosQuit: Brief smoking cessation program in acute care*



### Ms Rachael McKinnon

Clinical Nurse Educator, St Vincent's Hospital Sydney  
*Post-stroke hyperglycaemia – Treatment with Exenatide in Acute Ischaemic Stroke (TEXAIS)*



### Mr Paul Morgan

Clinical Data Analyst, Quality Improvement, Mater Hospital Sydney  
*Implementation of a patient blood management program in an Australian orthopaedic unit*



### Ms Edel Murray

Quality Manager Accreditation, St Vincent's Private Hospital Sydney  
*Clinical Fellow, Australian Catholic University  
DecubICUs: International prevalence study on pressure injuries in Intensive Care Units*



### Ms Jenny O'Mahony

Integrated Care Project Manager, St Vincent's Hospital Sydney  
*Justice Connect Evaluation*



### Ms Kirsty Page

Clinical Nurse Consultant, St Vincent's Hospital Sydney  
*Post-stroke hyperglycaemia – Treatment with Exenatide in Acute Ischaemic Stroke (TEXAIS)*



### Ms Jane Rodgers

Vascular Plastics Wound Clinical Nurse Consultant, St Vincent's Hospital Sydney  
Clinical Fellow, Australian Catholic University  
*DecubICUs: International prevalence study on pressure injuries in Intensive Care Units  
Surgical Patient Pressure Injury Incidence Study (SPPII)*

## RESEARCH STUDENTS

### PhD



### Ms Jane Allnutt

Thesis title: *Exploring the Nurse Practitioner Service in New South Wales*



### Ms Anna Aminov

Thesis title: *Interventions and Outcomes in Stroke*

### MPhil



### Ms Alysia Coventry

Thesis title: *Qualitative synthesis of families and carers views of end of life care in intensive care units*

## ADMINISTRATION



### Mrs Tara Doyle

Personal Assistant to Director of NRI (part-time)



### Mrs Joylynn Israel

Research Officer and Personal Assistant to Director of NRI (part-time)



### Ms Patty Zenonos

Executive Officer and Project Manager

# Research Projects

In 2017, the NRI was involved in 27 research projects as shown below.  
*Projects that involved both the NRI and SVHAS are indicated in italics.*

<b>NRI PROJECTS BY NATIONAL SAFETY AND QUALITY HEALTH SERVICE STANDARDS</b>
<b>Standard 1: Governance for Safety and Quality in Health Service Organisations</b>
STROKE123: A collaborative national effort to monitor, promote and improve the quality of stroke care in hospitals and patient outcomes
<i>Qualitative study of purchasing and disinvestment processes in acute care hospitals</i>
<i>Acute care hospital and local health services disinvestment decision-making – Systematic review</i>
<b>Standard 2: Partnering with Consumers</b>
<i>HosQuit: Brief smoking cessation program in acute care</i>
<i>Justice Connect Evaluation</i>
<b>Standard 4: Medication Safety</b>
<i>Use of Fascia Iliaca Blocks in elderly patients with a fractured neck of femur</i>
<b>Standard 5: Comprehensive Care</b>
Cochrane Review: Interventions for uptake of evidence-based recommendations in acute stroke settings
Cochrane Review: Screening for aspiration risk associated with dysphagia in acute stroke
Head Position in Stroke Trial (HeadPoST)
Altering the Rehabilitation Environment to Improve Stroke Survivor Activity (AREISSA)
An evidence-based approach to improve outcomes and reducing hospital-acquired complications in patients with rib fractures: Chest Injury Pathway (ChIP)
International variation in patient thrombolysis selection criteria
National Health and Medical Research Council Centre for Research Excellence for stroke rehabilitation and brain recovery
National Institute for Health Research Global Health Research Programme – Global stroke research group in India
Oral health care practices for stroke patients in acute care: An international survey
<i>Post-stroke hyperglycaemia – Treatment with Exenatide in Acute Ischaemic Stroke (TEXAIS) trial</i>
Reducing disability from stroke by improving access to best practice stroke care in Victoria (STELAR)
<i>Triage, Treatment and Transfer of patients with stroke in emergency departments trial (T<sup>3</sup> Trial)</i>
Improving arm function after stroke using task specific training
Very Early Rehabilitation in SpEech (VERSE): Development of an Australian randomised controlled trial of aphasia therapy after stroke
Quality in Acute Stroke Care (QASC) Europe project
Emergency Department nurse PRACTitioner project (EDPRAC)
<i>DecubICUs: International prevalence study on pressure injuries in Intensive Care Units</i>
<i>Surgical Patients Pressure Injury Incidence (SPPII) study</i>
Cochrane Review: The effectiveness of support surfaces in treating pressure injury
<b>Standard 6: Communicating for Safety</b>
<i>Creating a culture of safety and respect: A controlled, mixed methods study of the effectiveness of a behavioural accountability intervention to reduce unprofessional behaviours (ETHOS)</i>
<b>Standard 7: Blood and Blood Products</b>
<i>Implementation of a patient blood management program in an Australian orthopaedic unit: A pilot study</i>

# Highlights of 2017

## AWARDS AND HONOURS



### International Nurse Researcher Hall of Fame award

Professor Sandy Middleton was chosen by the Honor Society of Nursing, Sigma Theta Tau International (STTI), as one of 23 nurse researchers to be inducted into the International Nurse Researcher Hall of Fame. The award ceremony was held at the STTI's 28th International Nursing Research Congress in Dublin, Ireland, on 31 July 2017. This award recognises nurse researchers who have achieved significant results, and sustained national and international recognition in their field of research.

*Pictured: Professor Middleton during the Hall of Fame induction ceremony. Also pictured with STTI President, Dr Cathy Catrambone (left).*



### Fellowship for American Academy of Nursing

Professor Sandy Middleton was also chosen by the American Academy of Nursing (AAN) to be an American Academy of Nursing Fellow. This honour recognises significant contributions to nursing and health care, particularly in relation to how the nominee's nursing career has influenced health policies and population health. Professor Middleton accepted her appointment at the Academy's 2017 Transforming Health, Driving Policy Conference hosted by the AAN in Washington DC.

*Pictured: Professor Middleton with her award and Professor Anne Alexandrov (right), a collaborator and leading international nursing expert in acute stroke management from The University of Tennessee.*



### Best New Investigator Award

Dr Louise Craig's abstract, 'Does adding rt-PA non-license inclusion and exclusion criteria reduce thrombolysis rates? Findings in Australia, the United Kingdom and the United States of America', was chosen for the Best New Investigator Award and was presented at the annual Smart Strokes Conference in August.

*Pictured: Ms Helen Hamilton presenting on behalf of Dr Louise Craig.*

# Highlights of 2017

## HIGHLIGHTS



### Quality in Acute Stroke Care (QASC) economic evaluation – \$281m savings

The Australian Commission on Safety and Quality in Health Care undertook an economic evaluation that included the NRI-led Quality in Acute Stroke Care (QASC) trial and the impact of the Fever, Sugar, Swallow (FeSS) protocols. This evaluation found that if the FeSS protocols were implemented in 65 per cent of the eligible Australian patient population for one year, the total economic benefit (savings) would be \$281m. For further information go to:

<https://bit.ly/2pP1akG>



### Quality in Acute Stroke Care (QASC) protocols in NHMRC Clinical Guidelines for Stroke Management

In 2017, the National Health and Medical Research Council (NHMRC) endorsed National Clinical Guidelines for Stroke Management, which update and supersede the 2010 stroke guidelines. The guidelines include a strong recommendation for all stroke services to implement the standardised protocols to manage fever, hyperglycaemia and swallowing, a recommendation underpinned by the practice-changing results of the QASC trial.



### T<sup>3</sup> Trial showcased at European Stroke Organisation Conference 2017

Professor Sandy Middleton's abstract submission was competitively selected and awarded a plenary session at the European Stroke Organisation Conference held in Prague from 16–18 May 2017. Professor Middleton presented the outcomes of the T<sup>3</sup> Trial: Triage, Treatment and Transfer of patients with stroke in emergency departments and was interviewed by conference organisers. In addition, the work of NRI researchers was showcased in seven oral presentations and four posters. Follow the link to watch Professor Middleton's interview:

<https://bit.ly/2GxnTff>

*Pictured: Professor Sandy Middleton presenting at the European Stroke Organisation Conference.*

# Highlights of 2017



## Loyola University Chicago – ACU visit

Professor Sandy Middleton visited Loyola University Chicago (LUC) for discussions regarding future research, visiting scholars and teaching collaborations. While there, Professor Middleton gave a number of seminars about the NRI research program. Associate Professor Karen Saban, the Associate Dean for Research with the Niehoff School of Nursing at LUC, plans on visiting the ACU next year and will meet with the NRI team to discuss possible research projects.

*Pictured (Front L–R): Professor Patrick Boyle, Vice Provost, Global Initiatives and Academic Centers, LUC | Professor Sandy Middleton, NRI | Associate Professor Karen Saban, Niehoff School of Nursing, LUC | Dean Vicki Keough, Niehoff School of Nursing, LUC – pictured with faculty members and nursing students from Niehoff School of Nursing, LUC.*



## Stroke nurses improving patient outcomes

St Vincent's Hospital Melbourne Nursing Grand Rounds hosted Professor Sandy Middleton to present *Stroke nurses improving patient outcomes*. The presentation focused on stroke research trials undertaken by the QASC team and how nurse-initiated stroke protocols save lives.

*Pictured (L–R): Ms Lucy Walsh, Practice Development Nurse, St Vincent's Hospital Melbourne | Ms Deanne Riddington, Manager, Nursing Education Centre, St Vincent's Hospital Melbourne | Ms Shantelle Fernandez, ACU Student | Ms Anuja Fernando, ACU Student | Professor Sandy Middleton | Dr Lauren Saunders, Stroke Doctor, Melbourne | Mr Tan Nguyen, Executive Officer Research, St Vincent's Hospital Melbourne*



## T<sup>3</sup> Trial for Stroke Week at St Vincent's Hospital Grand Rounds

St Vincent's Hospital Sydney Grand Rounds hosted a Stroke Week presentation, *The T<sup>3</sup> Trial: Triage, Treatment and Transfer of patients with stroke in emergency departments*, in which Professor Middleton presented to a clinical audience the trial results and implications, as well as future plans for stroke research.

# Highlights of 2017



## St Vincent's Campus Research Week, Sydney

The NRI was again involved in the annual St Vincent's Campus Research Week in Sydney, which was held on 11–15 September 2017. Research Week celebrates the translational healthcare research conducted across the Sydney St Vincent's Campus. This year, the NRI showcased its research through an education booth and four presentations. NRI Research Assistant, Ms Kelly Coughlan, won the Best Fast Forward Presentation about the translation of the findings from the Quality in Acute Stroke Care (QASC) implementation program into clinical practice at a local and international level. Ms Simeon Dale, Clinical Research Fellow and Trial Manager for the NRI, was also featured on a promotional video for Research Week discussing the NRI's program of stroke research. Follow the link to watch the video: <http://bit.ly/2ytBsFX>

*Pictured: Ms Joylynn Israel (left) and Dr Anoja Gunuratne at this year's NRI booth at St Vincent's Campus Research Week (top); Ms Kelly Coughlan (bottom)*



## NHMRC profiles ACU's Professor Sandy Middleton with simple stroke protocols going international

Professor Sandy Middleton's internationally recognised work on stroke care was profiled on NHMRC's 'In Focus' website. Professor Middleton was the lead investigator of the NHMRC-funded Quality in Acute Stroke Care (QASC) trial, which has achieved wide acclaim for its practice-changing findings that implementing nurse-led protocols saves the lives of stroke patients and results in health system cost savings. Six years after the original trial, the protocols are now being implemented in 300 hospitals in 12 European countries. The profile is available on the NHMRC website: <http://bit.ly/2ozXDGC>



## National Institute for Health Research Signals

The United Kingdom National Institute for Health Research (NIHR) Signals provides summaries of recent, important health research to facilitate the use of rigorous research evidence in clinical decision-making. The research, *Head Positioning in Acute Stroke*, in which Professor Middleton was an investigator, was chosen to be profiled. Follow the link to find out more: <http://bit.ly/2y0ostF>

# Highlights of 2017



## St Vincent's Clinic Foundation 25th Anniversary – NRI research grant success

As part of the St Vincent's Clinic Foundation 25th Anniversary, NRI projects funded by the Clinic Foundation research grant program were profiled in short videos. The NRI projects profiled were *Pressure ulcer prevention and management – An observational study of nursing practice and examination of inter-rater reliability of outcome measurement* [awarded \$25,000 in 2011] and *Quality in Acute Stroke Care (QASC)* [awarded \$50,000 in 2009]. Videos can be accessed by contacting the NRI.



# Grants Awarded

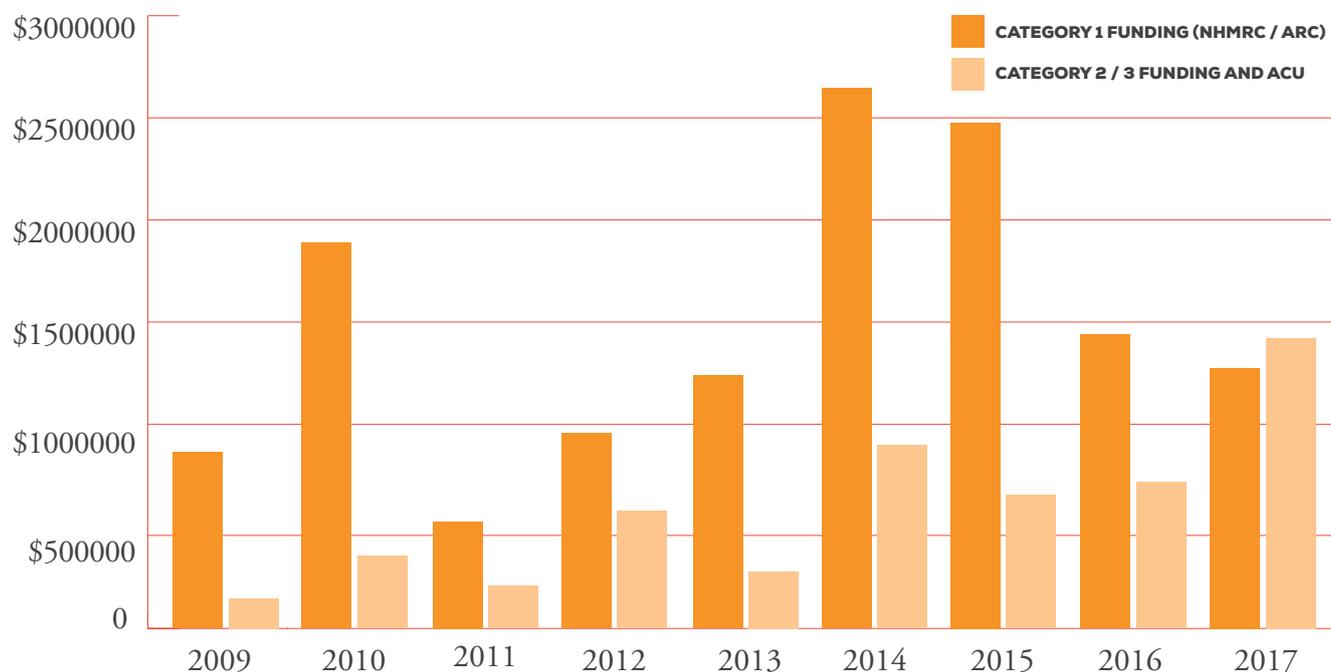


Figure 1: NRI grant funds awarded: 2009–2017

## NEW GRANTS 2017

### Category 1\*

Bernhardt J, Donnan G, Churilov L, Langhorne P, Pandian J, Dewey H, Srikanth V, English C, Moodie M, **Middleton S**.

A Very Early Research Trial – Determining Optimal early rehabilitation after Stroke (AVERT–DOSE): A multi-arm covariate-adjusted, response-adaptive randomised controlled trial. National Health and Medical Research Council – Project Grant. 2018: \$753,168; 2019: \$1,081,331; 2020: \$1,087,555; 2021: \$1,068,584; 2022: \$368,925.

**Total funds awarded: \$4,359,563. (Project ID: APP1139712).**

Bladin C, Cheung NW, Dewey H, Churilov L, **Middleton S**, Thijs V, Ekinci E. Post-stroke hyperglycaemia – Treatment with Exenatide in Acute Ischaemic Stroke (TEXAIS) trial. National Health and Medical Research Council – Project Grant. 2017: \$432,459.60; 2018: \$416,844.70; 2019: \$416,844.70.

**Total funds awarded: \$1,266,149. (Project ID: APP1126070).**

Douglas C, **Middleton S**, Gardner G, Kelly P, Morton R, **McInnes E**, Windsor C. Transforming nursing assessment in acute hospitals: A cluster randomised controlled trial of an EvidenCe-based CORE

assessment protocol (the ENCORE trial). National Health and Medical Research Council – Partnership Project Grant. 2018: \$228,343; 2019: \$735,923; 2020: \$105,001.

**Total funds awarded: \$1,069,267. (Project ID: APP1145859).**

Van Vilet P, Carey L, Turton A, McElduff P, Kwakkel G. Associate Investigator: **Middleton S**. Improving arm function after stroke using task specific training. National Health and Medical Research Council. 2017: \$208,149; 2018: \$208,149; 2019: \$208,149; 2020: \$208,149.

**Total funds awarded: \$832,596. (Project ID: APP1129008).**

Westbrook J, Braithwaite J, Day R, **Middleton S**, Scott D, Rapport F, Mitchell R, Baysari M, Li L, Taylor N. Associate Investigator: **McInnes E**. Creating a culture of safety and respect: A controlled, mixed methods study of the effectiveness of a behavioural accountability intervention to reduce unprofessional behaviours (ETHOS). National Health and Medical Research Council – Partnership Grant. NHMRC Contribution: \$875,978 – 2017: \$282,483; 2018: \$138,037; 2019: \$307,421; 2020: \$148,037. Cash contribution: St Vincent's Health Australia: \$350,000.

**Total funds awarded: \$1,225,978. (Project ID: APP1134459).**

# Grants Awarded

## Category 2/3<sup>^</sup>

Cadilhac DA, Lannin N, **Middleton S**, Andrew N, Kilkenny M, Dewey H, Li J, Thrift A. Reintegration into the Community to Address patient-centred recovery goals and improve Participation after Stroke (ReCAPS). Victorian Medical Research Acceleration Fund 2017.

**Total funds awarded: \$99,356.**

**Gawthorne J, Middleton S, McInnes E, Martinez-Gardano C.** Emergency Nurses can safely and effectively perform Fascia Iliaca Blocks (FIBs) in patients with a fractured neck of femur (NOF). St Vincent's Clinic Foundation Research Grant.

**Total fund awarded: \$25,000.**

Godecke E, Armstrong E, Bernhardt J, **Middleton S**, Rai T, Holland A, Cadilhac DA, Hankey GJ, Whitworth A, Rose M, Ciccone N. Very Early Rehabilitation in SpEEch (VERSE): RCT of aphasia therapy after stroke. The Tavistock Trust for Aphasia, United Kingdom. Philanthropic funding.

**Total funds awarded: £75,000 (AU\$122,000).**

Levi C, Bhaskar S, McDougall A, Wenderoth J, Cordato D, Zagami A, Middleton P, **Middleton S**. Thrombolysis and Endovascular Workflow Network (TEFLON) Trial. UNSW Neuroscience, Mental Health and Addictions and SPHERE Mindgardens CAG. 2018.

**Total funds awarded: \$40,000.**

**Middleton S, Dale S, McInnes E,** Levi C, Cheung NW, Grimshaw J, D'Este C, Cadilhac D, Quinn C. Quality in Acute Stroke Care Europe: A proposal to implement and evaluate nurse-initiated evidence-based stroke care in Europe, to manage fever, hyperglycaemia and swallowing difficulties. European Stroke Organisation. 2017: \$417,244; 2018: \$417,244; 2019: \$417,244.

**Total funds awarded: \$1,251,732.**

Watkins CL, Lightbody E, Schroeder D, Hackett M, Clegg A, Sharma A, Sutton C, Gibson J, Georgiou R, Forshaw D, Walker M, Gabbay M, Sanders C, Maulik P, Pandian J, Srivastava P, Sylaja PN, Kalkonde Y, Lindley R, **Middleton S**, Cadilhac DA. National Institute for Health Research – Global Health Research Group. 2018: £528,724; 2019: £743,874; 2020: £646,198.

**Total funds awarded: £1,918,796 (AU\$3,154,663). (Project ID: 16/137/16).**



\* Category 1: All schemes listed on the 2017 Australian Competitive Grants Register.

<sup>^</sup> 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.

# Grants Awarded

## CONTINUING GRANTS 2017

### Category 1\*

Arima H, Lavados P, **Middleton S**, Watkins CL, 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: \$570,671; 2015: \$745,056; 2016: \$393,838.

**Total funds awarded: \$1,709,566. (Project ID: APP1066966).**

Bernhardt J, Nilsson M, Carey L, van Vilet P, Cadilhac DA, 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: \$2,500,534. (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: \$216,584.

**Total funds awarded: \$1,081,077. (Project ID: APP1058963).**

**Middleton S**, Levi C, Fitzgerald M, Considine J, Grimshaw J, D'Este C, Gerraty R, Cheung NW, Cadilhac DA, **McInnes E**. Associate Investigators: Quinn C, Cadigan G, Ward J, Longworth M, McElduff P, **Dale S**, Denisenko S. T<sup>3</sup> 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^

Cadilhac DA, 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.**

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 2017 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.





# Research Publications

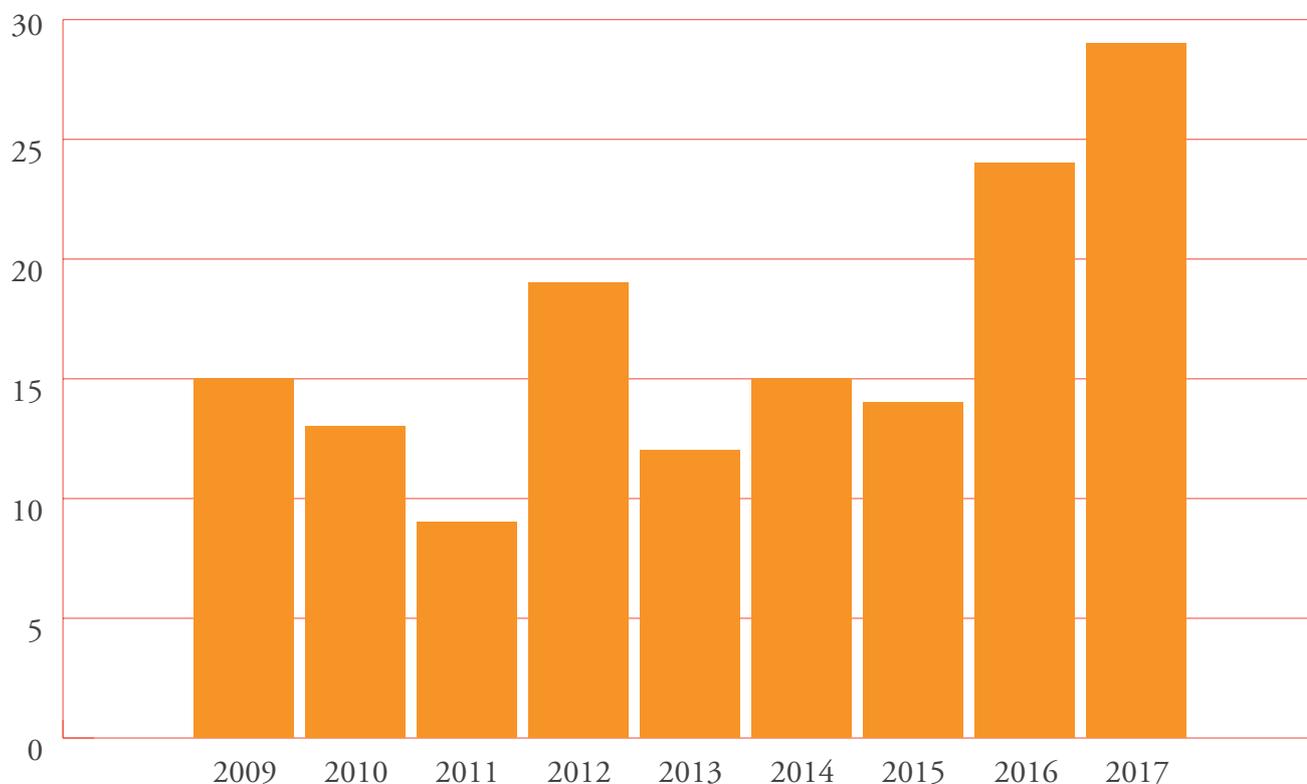


Figure 2: Number of NRI peer-reviewed publications – 2009–2017

## PEER-REVIEWED PUBLICATIONS

### NRI staff in bold

1. **Aminov A**, Rogers JM, Wilson PH, Johnstone SJ, **Middleton S**. Acute single channel EEG predictors of cognitive function after stroke. *PLOS ONE* 2017;12(10):e0185841. doi: doi.org/10.1371/journal.pone.0185841.
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8. Cadilhac DA, 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* 2017;206(8):345-350. doi: 10.5694/mja16.00525.
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## PUBLISHED ABSTRACTS

### Presenting author / NRI staff in bold

1. **Aminov A,** Rogers JM, Wilson PH, Johnstone SJ, **Middleton S.** Acute single channel EEG predictors of cognitive function after stroke. *International Journal of Stroke* 2017;12(2):18. doi: 10.1177/1747493017714154.
2. **Boaden E,** Anderson C, Araima H, Lavados P, Billot L, Hackatt M, Olavarria V, Munoz-Venturelli P, Brunser A, Peng B, Rogers K, **Middleton S,** Lim J, Forshaw D, Woodward M, Lin RT, Lee TH, Pandian J, Robinson T, Watkins CL. Variation in the identification and management of dysphagia and pneumonia across the world: Exploration of head position in stroke trial (HeadPost) trial data. *European Journal of Stroke* 2017;2:81. doi: 10.1177/2396987317705236.
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# Research Publications

5. Cadilhac DA, Kilkenny M, Andrew N, Dewey H, Flack F, Boyd J, Chen Y, Johnston T, Katzenellenbogen J, Gattellari M, Thrift A, Lannin N, Grimley R, Levi C, Anderson C, Donnan G, **Middleton S**, Sundararajan V. Pre-stroke hospital admissions for intracerebral haemorrhage: linked AuSCR registry and national hospital data. *International Journal of Stroke* 2017;12(3):16. doi: 10.1177/1747493017720548.
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\*\*\*Best New Investigator Award\*\*\*
9. Forshaw D, Anderson C, Araitha H, Lavados P, Billot L, Hackett M, Olavarria V, Munoz-Venturelli P, Brunser A, Peng B, Cui L, Song L, Rogers K, **Middleton S**, Lim J, Woodward M, Pontes-Neto O, Asita DS, Robinson T, Watkins CL. Variation in the use of urinary catheters in acute stroke: Exploration of head position in stroke (HeadPost) trial data. *European Journal of Stroke* 2017;2:79.
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12. Grove MA, Biby S, Dusenbury W, Doerr A, Lindstrom A, Grove SB, **Middleton S**, Alexandrov AW. Stress-mediated hyperglycemia or undiagnosed diabetes? *International Journal of Stroke* 2017;48:AWP376.
13. **Hamilton H**, **Craig LE**, Steele M, Alexandrov A, Lightbody E, Watkins CL, Cadilhac DA, **McInnes E**, **Dale S**, **Middleton S**. Do Australian and UK nurses have different roles in thrombolysis administration and does this impact on tPA rates? *International Journal of Stroke* 2017;12(2):4. doi: 10.1177/1747493017714154.
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15. Kilkenny M, Andrew N, Grimley R, Sundararajan V, Johnston T, Lannin N, Churilov L, **Middleton S**, Anderson C, Cadilhac DA. Does linking the Australian Stroke Clinical Registry with admissions data provide a better explanation of variability in stroke risk-adjusted mortality rates? *European Journal of Stroke* 2017;2:442.
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19. Lavados P, Olavarria V, Hackett M, Brunser A, Munoz-Venturelli P, Arima H, Robinson T, **Middleton S**, Billot L, Watkins CL, Anderson C. Head positioning in high risk patients: Post-hoc subgroup analysis of HeadPost, an international cluster crossover trial. *European Journal of Stroke* 2017;2:482. doi: 10.1177/2396987317706897.
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22. Lim JY, Munoz-Venturelli P, Arima H, **Middleton S**, Olavarria VV, Lavados PM, Peng B, Lee TH, Lin RT, Pontes-Neto OM, Watkins CL, Robinson T, Mead G, Pandian JD, de Silva HA, Anderson C. Monitoring a large-scale international cluster stroke trial: Lessons from head position in stroke trial. *International Journal of Stroke* 2017;48:AtP371.
23. **Middleton S**, Levi C, **Dale S**, Cheung NW, **McInnes E**, Considine J, D'Este C, Cadilhac DA, Grimshaw J, Gerraty R, **Craig LE**, **Schadewaldt V**, McElduff P, Fitzgerald M, Quinn C, Cadigan G, Denisenk S, Longworth M, Ward J. The T<sup>3</sup> Trial: Triage, Treatment and Transfer of patients with stroke in emergency departments. *International Journal of Stroke* 2017;12(2):15. doi: 10.1177/1747493017714154.  
\*\*\*Invited plenary speaker\*\*\*
24. **Middleton S**, Levi C, **Dale S**, Cheung NW, **McInnes E**, Considine J, D'Este C, Cadilhac DA, Grimshaw J, Gerraty R, **Craig LE**, **Schadewaldt V**, McElduff P, Fitzgerald M, Quinn C, Cadigan G, Denisenk S, Longworth M, Ward J. The T<sup>3</sup> Trial: Triage, Treatment and Transfer of patients with stroke in emergency departments. *European Journal of Stroke* 2017;2:490.
25. Purvis T, Kilkenny MF, **Middleton S**, Cadilhac DA. Do stroke coordinators influence the delivery of acute care and hospital based patient outcomes? *International Journal of Stroke* 2017;12(2):10. doi: 10.1177/1747493017714154.
26. Saghafi F, **Craig LE**, **Hamilton H**, Cadilhac DA, **McInnes E**, Alexandrov A, Lightbody E, Watkins CL, **Dale S**, **Middleton S**. Do clinicians adhere to hospital protocols when selecting patients for thrombolysis? A nationwide Australian survey. *International Journal of Stroke* 2017;12(2):5. doi: 10.1177/1747493017714154.



# Research Seminars

In 2017, the NRI and affiliated researchers presented at research seminars convened by St Vincent's Centre for Applied Medical Research as shown below.

SPEAKER AND TOPIC
<p><b>Speaker:</b> Ms Julie Gawthorne  <b>Title:</b> <i>Use of Fascia Iliaca Blocks in elderly patients with fractured neck of femur – A pilot study</i>  <b>Chair:</b> Professor Sandy Middleton</p>
<p><b>Speaker:</b> Ms Bianca Hoban  <b>Title:</b> <i>The risks and limitations of using multiple medications in people with chronic non-cancer pain prescribed opioids – a longitudinal cohort study</i>  <b>Chair:</b> Professor Sandy Middleton</p>
<p><b>Speaker:</b> Mr John Rihari-Thomas  <b>Title:</b> <i>Clinician perspectives of barriers to effective implementation of a Rapid Response System (RRS) in an academic health centre: A focus group study</i>  <b>Chair:</b> Dr Anoja Gunaratne</p>
<p><b>Speaker:</b> Dr Angelica Thompson Butel  <b>Title:</b> <i>Imagine walking through your own arteries: The role of virtual reality and motivation in stroke education and rehabilitation</i>  <b>Chair:</b> Ms Simeon Dale</p>
<p><b>Speaker:</b> Ms Helen Hamilton  <b>Title:</b> <i>Nurses' role in thrombolysis administration in Australia and UK</i>  <b>Chair:</b> Ms Simeon Dale</p>
<p><b>Speaker:</b> Dr Verena Schadewaldt  <b>Title:</b> <i>Organisational context of Emergency Departments in the T<sup>3</sup> Trial – Why context matters when implementing new guidelines</i>  <b>Chair:</b> Dr Cintia Martinez-Garduno</p>
<p><b>Speaker:</b> Professor Niels Buus  <b>Title:</b> <i>The St Vincent's Open Dialogue Initiative</i>  <b>Chair:</b> Associate Professor Elizabeth McInnes</p>
<p><b>Speaker:</b> Ms Simeon Dale  <b>Title:</b> <i>Triage, Treatment and Transfer of patients with stroke in emergency departments: T<sup>3</sup> Trial</i>  <b>Chair:</b> Associate Professor Elizabeth McInnes</p>



# Conferences and Workshops

NRI staff in bold / Presenting author underlined

## INTERNATIONAL STROKE CONFERENCE 2017, HOUSTON, 22–24 FEBRUARY 2017

Grove M, Biby S, Dusenbury W, Doerr A, Lindstrom A, Grove S, **Middleton S**, Alexandrov A. *Stress-mediated hyperglycemia or undiagnosed diabetes?* [Poster]

Lim J, Hackett M, Munoz-Venturelli P, Arima H, **Middleton S**, Olavarria V, Lavados P, Brunser A, Cui L, Peng B, Lee T, Lin R, Pontes-Neto O, Watkins CL, Robinson T, Mead G, Pandian J, De Silva H, Anderson C. *Monitoring a large-scale international cluster stroke trial: Lessons from head position in stroke trial.* [Poster]

## IN-SERVICE FOR HAEMATOLOGY/ONCOLOGY, ST VINCENT'S HOSPITAL SYDNEY, 2 MARCH 2017

**Middleton S**. *Introduction to Nursing Research and the NRI.*

\*\*\*Invited presenter\*\*\*

## NATIONAL STROKE DATA AND QUALITY IMPROVEMENT WORKSHOP, MELBOURNE, 21–22 MARCH 2017

**Middleton S**. *T<sup>3</sup> Clinical trial update.*

\*\*\*Invited presenter\*\*\*

**Middleton S**. *Registry programs, the Australian stroke data tool and state-based initiatives.*

## 3RD EUROPEAN STROKE ORGANISATION CONFERENCE, PRAGUE, 16–18 MAY 2017

Boaden E, Anderson C, Arima H, Lavados P, Billot L, Hackett M, Olavarria V, Munoz-Venturelli P, Brunser A, Peng B, Rogers K, **Middleton S**, Lim J, Forshaw D, Woodward M, Lin RT, Lee T, Pandian J, Robinson T, Watkins CL. *Variation in the identification and management of dysphagia and pneumonia across the world: Exploration of head position in stroke trial (HeadPost) trial data.* [Oral]

Cadilhac DA, Kilkenny M, Grimley R, Sundararajan V, Johnston T, Grabsch B, Thrift A, Lannin N, Anderson C, Donnan G, **Middleton S**, Andrew N. *Pre-stroke hospital contacts for patients with intracerebral haemorrhage: Observational study using linked Australian stroke clinical registry and Queensland hospital data.* [Poster]

**Craig LE**, **Middleton S**, **Hamilton H**, Cudlip F, Swatzell V, Lightbody E, Watkins CL, Cadilhac DA, **McInnes E**, **Dale S**, Alexandrov A. *The use of non-standard selection criteria in administration of intravenous tissue plasminogen activator for patients with acute ischaemic stroke: An international survey.* [Poster]

Forshaw D, Anderson C, Arima H, Lavados P, Billot L, Hackett M, Olavarria V, Munoz-Venturelli P, Brunser A, Peng B, Cui L, Song L, Rogers K, **Middleton S**, Lim J, Woodward M, Pontes-Neto O, Asita D, Robinson T, Watkins CL. *Variation in the use of urinary catheters in acute stroke: Exploration of head position in stroke trial (HeadPost) trial data.* [Oral]

Godecke E, Armstrong E, **Middleton S**, Rai T, Ciccone N, Holland A, Whitworth A, Rose M, Ellery F, Cadilhac DA, Hankey G, Bernhardt J. *Trial progress and therapy fidelity monitoring in the Very Early Rehabilitation in SpEech (VERSE) after stroke study.* [Poster]

Kawano H, Bivard A, Parsons M, Paul C, Krause M, D'Este C, Bladin C, Lindley R, Attia J, Henskens F, Longworth M, **Middleton S**, Ryan A, Kerr E, Sanson-Fisher R, Hirano T, Levi C. *Early hospital arrival time and in-hospital delays in stroke thrombolysis.* [Poster]

Kilkenny M, Andrew N, Grimley R, Sundararajan V, Johnston T, Lannin N, Churilov L, **Middleton S**, Anderson C, Cadilhac DA. *Does linking Australian Stroke Clinical Registry with admissions data provide a better explanation of variability in stroke risk-adjusted mortality rates?* [Poster]

Lavados P, Olavarria V, Hackett M, Brunser A, Munoz-Venturelli P, Arima H, Robinson T, **Middleton S**, Billot L, Watkins CL, Anderson C. *Head positioning in high risk patients: Post-hoc subgroup analysis of HeadPost, an international cluster crossover trial.* [Poster]

Levi C, Sanson-Fisher R, Attia J, Bivard A, Parsons M, Spratt N, **Middleton S**, Bladin C, Lindley R, Kerr E, Ryan A, Donnan G, Oldmeadow C, Morris K, Russle M, Evans M, Paul C. *Thrombolysis implementation in stroke (TIPS): A C-RCT of implementation strategies for intravenous thrombolysis.* [Oral]

Lightbody E, Anderson C, Arima H, Lavados P, Billot L, Hackett M, Olavarria V, Munoz-Venturelli P, Cui L, Song L, **Middleton S**, Lim J, Woodward M, Pontes-Neto O, De Silva A, Lin RT, Lee T, Pandian J, Robinson T, Watkins CL. *Variation in the management of venous thromboembolism (DVT and PE) across the world: Exploration of head position in stroke trial (HeadPost) trial data.* [Oral]

**Middleton S**. *Expansion of Quality in Acute Stroke Care (QASC) in Europe.* [Oral]

**Middleton S**, **Levi C**, **Dale S**, Cheung NW, **McInnes E**, Considine J, D'Este C, Cadilhac DA, Grimshaw J, Gerraty R, **Craig LE**, **Schadewaldt V**, McElduff P, Fitzgerald M, Quinn C, Cadigan G, Denisenko S, Longworth M, Ward J. *T<sup>3</sup> trial: Triage, treatment and transfer of patients with stroke in emergency departments.*

\*\*\*Invited plenary presenter\*\*\*

## GRAND ROUNDS PRESENTATION AT ST VINCENT'S HOSPITAL, MELBOURNE, 11 JULY 2017

**Middleton S**. *Stroke nurses improving patient outcomes.*

\*\*\*Invited presenter\*\*\*

# Conferences and Workshops

## SMART STROKES 2017, SURFERS PARADISE, 10–11 AUGUST 2017

- Aminov A**, Rogers JM, Wilson PH, Johnstone SJ, **Middleton S**. *Acute single channel EEG predictors of cognitive function after stroke*. [Oral]
- Cadilhac DA, Andrew N, Joosup K, Grabsch B, Kilkenny MF, Shehata S, Levi C, Faux S, Hill K, Donnan GAO, Anderson C, Hand P, Grimley R, Dewey H, **Middleton S**, Lannin NA. *Are we providing patients with the best achievable care? Update from the Australian Stroke Clinical Registry*. [Oral]
- Craig LE**, **Middleton S**, **Hamilton H**, Cudlip F, Swartzell V, Aledandrov AW, Lightbody E, Watkins CL, Sheeba P, Cadilhac DA, **McInnes E**, **Dale S**, **Alexandrov A**. *Does adding rt-PA non-license inclusion and exclusion criteria reduce thrombolysis rates? Findings in Australia, the UK and the USA*.  
\*\*\*Best New Investigator Award\*\*\*
- Hamilton H**, **Craig LE**, Steele M, Alexandrov A, Lightbody E, Watkins CL, Cadilhac DA, **McInnes E**, **Dale S**, **Middleton S**. *Do Australian and UK nurses have different roles in thrombolysis administration and does this impact on tPA rates?* [Oral]
- Middleton S**, Levi C, **Dale S**, Cheung NW, **McInnes E**, Considine J, D'Este C, Cadilhac DA, Grimshaw J, Gerraty R, **Craig LE**, **Schadewaldt V**, McElduff P, Fitzgerald M, Quinn C, Cadigan G, Denisenk S, Longworth M, Ward J. *The T<sup>3</sup> Trial: Triage, Treatment and Transfer of patients with stroke in emergency departments*.  
\*\*\*Plenary presenter\*\*\*
- Middleton S**. Session co-chair, *Stream 1 Workshop – Let's Toast*.
- Purvis T, Kilkenny MF, **Middleton S**, Cadilhac DA. *Do stroke coordinators influence the delivery of acute care and hospital based patient outcomes?* [Oral]
- Saghafi F, **Craig LE**, **Hamilton H**, Cadilhac DA, **McInnes E**, Alexandrov A, Lightbody E, Watkins CL, **Dale S**, **Middleton S**. *Do clinicians adhere to hospital protocols when selecting patients for thrombolysis? A nationwide Australian survey*. [Oral]

## DEAKIN SCHOOL OF NURSING & MIDWIFERY RESEARCH WORKSHOP, MELBOURNE, 14 AUGUST 2017

- Middleton S**. *Changing clinical practice in the emergency department setting*.  
\*\*\*Invited keynote presenter\*\*\*

## 27TH ANNUAL SCIENTIFIC MEETING OF STROKE SOCIETY OF AUSTRALASIA 2017, QUEENSTOWN, 23–25 AUGUST 2017

- Busingye D, Kilkenny M, Purvis T, Kim J, **Middleton S**, Campbell B. *Length of time in a stroke unit is associated with better outcomes for patients with stroke in Australia*.
- Cadilhac DA, Kilkenny M, Andrew N, Dewey H, Flack F, Boyd J, Chen Y, Johnston T, Katzenellenbogen J, Gattellari M, Thrift A, Lannin N, Grimley R, Levi C, Anderson C, Donnan G, **Middleton S**, Sundararajan V. *Pre-stroke hospital admissions for intracerebral haemorrhage: Linked AuSCR registry and national hospital data*.
- Dale S**. *Quality in Acute Stroke Care (QASC) Europe Project*.  
\*\*\*Invited presenter\*\*\*
- Godecke E, Armstrong E, **Middleton S**, Ciccone N, Rai T, Holland A, Whitworth A, Rose M, Ellery F, Cadilhac DA, Hankey G, Bernhardt J. *Therapy fidelity and trial progress in the Very Early Rehabilitation in SpEEch (VERSE) Trial*.
- Hamilton H**, **Craig LE**, Alexandrov A, Lightbody E, Watkins CL, Cadilhac DA, **Dale S**, **McInnes E**, **Middleton S**. *Nurses' role in thrombolysis administration in Australia and UK*.  
\*\*\*Invited presenter\*\*\*
- Kilkenny M, Sundararajan V, Kim J, Andre N, Dewey H, Chen Y, Johnston T, Katzenellenbogen J, Flack F, Boyd J, Grabsch B, Gattellari M, Thrift A, Lannin N, **Middleton S**, Cadilhac DA. *Larger comorbidity and risk factor burden before stroke is associated with readmissions: Linked AuSCR registry and national hospital data*.
- Kilkenny M, Sundararajan V, Levi C, Thrift A, Churilov L, Andrew N, Anderson P, Grimly R, Kim J, Johnston T, Katzenellenbogen J, Flack F, Boyd J, Lannin N, Gattellari M, Chen Y, **Middleton S**, Anderson C, Cadilhac DA. *Stroke severity is an important covariate to explain variability in stroke risk-adjusted mortality rates: Linked AuSCR registry and national hospital data*.
- Kim J, Lannin N, Kilkenny M, Anderson C, Thrift A, Moss K, Dewey H, Grimley R, Bagot K, Bernhardt J, **Middleton S**, Cadilhac DA. *Health-related quality of life of working-age adults in the Australian Stroke Clinical Registry*.
- Middleton S**, Levi C, **Dale S**, Cheung NW, **McInnes E**, Considine J, D'Este C, Cadilhac DA, Grimshaw J, Gerraty R, **Craig LE**, **Schadewaldt V**, McElduff P, Fitzgerald M, Quinn C, Cadigan G, Denisenk S, Longworth M, Ward J. *The T<sup>3</sup> Trial: Triage, Treatment and Transfer of patients with stroke in Emergency Departments*.  
\*\*\*Invited plenary presenter\*\*\*

## LECTURE TO 3RD YEAR STUDENTS AT NOTRE DAME UNIVERSITY, SYDNEY, 30 AUGUST 2017

- Middleton S**. *Getting evidence into practice*.  
\*\*\*Invited presenter\*\*\*

# Conferences and Workshops

## 2017 AUSTRALASIA NEUROSCIENCE NURSES ASSOCIATION ANNUAL CONFERENCE, ADELAIDE, 31 AUGUST–1 SEPTEMBER 2017

**Dale S.** *Changing stroke care in emergency departments: The T<sup>3</sup> Trial: Triage, Treatment and Transfer of patients with stroke in emergency departments.*

\*\*\*Invited keynote presenter\*\*\*

## 25TH ANNUAL ST VINCENT'S CAMPUS RESEARCH WEEK 2017, FAST FORWARD PRESENTATIONS, SYDNEY, 11–13 SEPTEMBER 2017

**Coughlan K, Dale S,** Cadilhac DA, **McInnes E,** Grimshaw J, Quinn C, Cheung NW, Rijkssen M, Levi C., D'Este C, **Middleton S** on behalf of QASC Europe Project Group and Steering Committee. *International nursing care translation: Quality in Acute Stroke Care (QASC) implementation program.*

\*\*\*Winner of Best Fast Forward Presentation\*\*\*

**Dale S,** Considine J, Cheung NW, **McInnes E,** Levi C, D'Este C, Cadilhac DA, Grimshaw J, Gerraty R, **Craig LE, Schaedewaldt V,** McElduff P, Fitzgerald M, Quinn C, Cadigan G, Denisenko S, Longworth M, Ward J, **Middleton S.** *Improving Triage, Treatment and Transfer of patients with stroke in emergency departments: T<sup>3</sup> Trial.*

**Hamilton H, Craig LE,** Alexandrov A, Lightbody E, Watkins CL, Cadilhac DA, **Dale S, McInnes E, Middleton S.** *Nurses' role in thrombolysis administration in Australia and UK.*

**Paul Morgan,** Coleman P, **Martinez-Garduno C, Gunaratne A, Middleton S.** *Implentation of a patient blood management program in an Australian orthopaedic unit: A pilot study.*

## 25TH ANNIVERSARY ST VINCENT'S CAMPUS RESEARCH SYMPOSIUM, SYDNEY, 14 SEPTEMBER 2017

**Coughlan K, Dale S,** Cadilhac DA, **McInnes E,** Grimshaw J, Quinn C, Cheung NW, Rijkssen M, Levi C., D'Este C, **Middleton S** on behalf of QASC Europe Project Group and Steering Committee. *International nursing care: Quality in Acute Stroke Care (QASC) implementation program.* [Oral]

**Dale S,** Considine J, Cheung NW, **McInnes E,** Levi C, D'Este C, Cadilhac DA, Grimshaw J, Gerraty R, **Craig LE, Schaedewaldt V,** McElduff P, Fitzgerald M, Quinn C, Cadigan G, Denisenko S, Longworth M, Ward J, **Middleton S.** *Improving Triage, Treatment and Transfer of patients with stroke in emergency departments: The T<sup>3</sup> Trial.* [Oral]

**Hamilton H, Craig LE,** Alexandrov A, Lightbody E, Watkins CL, Cadilhac DA, **Dale S, McInnes E, Middleton S.** *Nurses' role in thrombolysis administration in Australia and UK.* [Poster]

## PRESENTATION AT LOYOLA UNIVERSITY, CHICAGO, ILLINOIS, 2–3 OCTOBER 2017

**Middleton S.** *Nurse-initiated protocols save lives: The Quality in Acute Stroke Trial.*

## 15TH INTERNATIONAL CONFERENCE FOR EMERGENCY NURSES, SYDNEY, 11–13 OCTOBER 2017

**Middleton S.** *Triage, Treatment and Transfer for stroke in the ED: Final results from the T<sup>3</sup> Trial.*

\*\*\*Invited plenary presenter\*\*\*

## ASNEN STROKE NURSE LEADERS SYMPOSIUM, MELBOURNE, 27 OCTOBER 2017

**Middleton S, Dale S.** *Getting started in research.*

\*\*\*Invited presenter\*\*\*

**Middleton S.** *Stroke Nurse Leadership presentations.*

\*\*\*Invited chair\*\*\*

## PRESENTATION TO DEPARTMENT OF CLINICAL PHARMACOLOGY AND TOXICOLOGY'S RESEARCH MEETING, ST VINCENT'S HOSPITAL, SYDNEY, 3 NOVEMBER 2017

**Middleton S.** *Changing ED clinician behaviour: The T<sup>3</sup> Trial.*

\*\*\*Invited presenter\*\*\*

## KNOWLEDGE UTILISATION COLLOQUIUM 2017, MELBOURNE, 8–10 NOVEMBER 2017

**Middleton S, Dale S,** Cadilhac D, D'Este C, **McInnes E,** Grimshaw J, Quinn C, Levi C, Cheung W, Coughlan K, Molony-Rijkssen M. *Quality in Acute Stroke Care (QASC) implementation program: From proof of concept to international translation.*

# Professional Affiliations

## Director, Professor Sandy Middleton

### Professional Membership

- + Fellow, Australian College of Nursing
- + Fellow, American Academy of Nursing
- + Fellow, European Stroke Organisation
- + Member, American Heart Association
- + Member, Australasian Association for Quality in Health Care
- + 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
- + Member, St Vincent's Clinic Board of Directors
- + Member, Clinical Excellence Commission Board of Directors
- + Member, Agency for Clinical Innovation Board of Directors
- + Chair, Australian Clinical Stroke Registry Steering Committee
- + Member, St Vincent's Health Sydney Local Health District, Nursing Leadership Council
- + Member, St Vincent's Health Network Sydney Clinical Council
- + Member, St Vincent's Campus Research Council Committee
- + Member, National Stroke Foundation Stroke Guidelines Development Working Group
- + Member, Australian Stroke Coalition Data and Quality Working Group Committee
- + Member, Agency for Clinical Innovation Research Committee
- + Member, Clinical Excellence Commission Research Committee
- + Member, Agency for Clinical Innovation Stroke Co-ordinating Committee

## Deputy Director, Associate Professor Elizabeth McInnes

### Professional Membership

- + Author and Editor Cochrane Wounds Group
- + Associate, Cochrane Qualitative Methods Group
- + 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
- + Member, St Vincent's Health Sydney Nursing Advisory Council
- + Member, St Vincent's Health Sydney Research Council
- + Member, St Vincent's Health Sydney Clinical Council
- + Member, St Vincent's Hospital Sydney Pressure Injury Working Party

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