

RBWH

TWENTY

20

RESEARCH REPORT

**NURSING AND MIDWIFERY
SERVICES**

Metro North
Health



Queensland
Government

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Nursing & Midwifery Services



Andy Carter
Director
Nursing and Midwifery Services

Nursing and Midwifery Services has had another outstanding year of high-quality research activity focused on providing best evidence to improve patient care and health service delivery. The ongoing and substantial expertise of our nursing and midwifery researchers is evident in our high number of peer reviewed publications, awarded grants and ongoing research projects funded by the NHMRC and industry partners. The depth and breadth of our research experience has been demonstrated by notable research excellence awards. For example, Dr Nicole Marsh received the *Rising Star Award*, Metro North Research Excellence Award; and Griffith University's *'Excellence in Publication'* Award; and Emily Larsen was awarded the *Nursing Research Award* at the Herston Healthcare Symposium. Congratulations Nicole and Emily!

This year we welcomed Professor Jed Duff who was appointed a Conjoint Professor and Nursing Chair with the Royal Brisbane and Women's Hospital and Queensland University of Technology. Professor Duff comes with a wealth of experience in research that focuses on improved patient outcomes through multidisciplinary practice-based research. His research has a particular emphasis on implementation science, and he is actively engaged in the national and international perioperative nursing community. In recognition of his commitment to global perioperative nursing, Jed was chosen to join the International Council of Nursing's Global Nursing Leadership Institute.

2020 has been a very successful year building on our already strong foundation of nursing and midwifery research. We are proud of our ongoing commitment to research and our successful collaborations with university and industry partners. Well done to our nursing and midwifery researchers!

Nursing & Midwifery Research Centre

The aim of the Nursing and Midwifery Research Centre is to lead and support excellence in nursing/midwifery research. Our focus is to ensure our research is funded, of high quality, clinically driven and undertaken in collaboration with consumers. Our notable achievements for 2020 include 43 peer reviewed publications, 5 invited international presentations, \$1,962,180 of grant funding, supervision of 21 higher degree research students and 7 research awards.

In 2020 our vascular access research program led by Dr Nicole Marsh had a successful year with the completion of our NHMRC funded PISCES trial. This large multi-centre randomised controlled trial (1027 participants) compared alternative dressings (chlorhexidine impregnated disc) and securement (integrated securement device) for the prevention of PICC failure and catheter associated bloodstream infection in cancer patients. In addition, our commitment to consumer participation in research has led to the co-development of a vascular access passport. This application allows patients to record information about their current vascular access device and participate in planning for future devices to meet their clinical needs and personal preferences.

Professor Fiona Coyer is based in Intensive Care Services where another busy year was seen in the research sphere. We were successful in receiving funding to explore family members and clinicians' experiences of, and satisfaction with, virtual visiting and meetings. We also received, in collaboration with the Herston Biofabrication Institute, MNHHS SEED funding to develop customised facial cushions for prone patients. Our collaboration continues with Sydney Local Health District researchers with 2 major funded studies. We completed a pilot RCT evaluating closed loop arterial blood sampling systems in the ICU.

The translation of research outcomes into clinical practice in our health care settings continues to be an important vision for Nursing and Midwifery Research and thus, our Research Centre continues to conduct research initiatives through collaboration and partnership with service lines and multidisciplinary teams. We are thrilled to welcome Professor Jed Duff to the Unit. Jed describes himself as a 'pracademic' – someone who helps solve real-world problems by combining the views of practitioners and academics. Of interest to Jed is overcoming the challenge of moving research outcomes into evidence-based practice.

Throughout 2020 we have provided opportunities for nurses and midwives to participate in research projects and evidence-based practice training, enabling skill development and promoting confidence for nurses to apply research principles in their relevant clinical specialities. We look forward to another successful year in 2021.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Dr Nicole Marsh	Rising Star Award	2020 Metro North Research Excellence Awards
Dr Nicole Marsh	Excellence in Publication Award – Alliance for vascular access for observational study of peripheral intravenous catheter outcomes in adult hospitalized patients: A multivariable analysis of peripheral intravenous catheter failure	Menzies Health Institute Queensland Publication Quality Scheme – Griffith University
Emily Larsen	Nursing Research Award	Herston Health Precinct Symposium, 2020
Dr Nicole Marsh	AVATAR Researcher of the Year	Alliance for Vascular Access Research and Education, Griffith University, 2020
Emily Larsen	AVATAR HDR Student of the Year	Griffith University
Dr Nicole Marsh	Service line award, Nursing and Midwifery Services, How many audits do you really need?	QuARRIES Award 2020
Professor Fiona Coyer	Service line CC and CCS award,	QuARRIES Award 2020

Research Grants Awarded in 2020

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded	Year/s
Andrew Bulmer, Nicole Marsh , Claire Rickard	Nursing and Midwifery Research Centre	GE venue go portable ultrasound console	Griffith University 2020 Health Group Equipment Scheme	\$46,375	2020-2021
Bryan Gregory, Annabelle Levido, Pierre Clement, Helena Morrey, Marianne Kirrane, Adam Stott, Kristy Jackman, Fiona Coyer	Intensive Care Services, Nursing and Midwifery Research Centre, Social Work, Surgical, Treatment & Rehabilitation	Virtual visiting for families in the ICU – the VITAL study	RBWH Foundation COVID grant round	\$25,267.95	2020-2021
Nicole Marsh, Emily Larsen , Claire Rickard, Kerrie McLeod, Rob Ware, Ass Prof Amanda Ullman, Catherine O'Brien, Andrew Bulmer, Julie Flynn	Nursing and Midwifery Research Centre, Nursing and Midwifery Services	Developing ideal catheter to vein ratio parameters for peripheral venous and midline devices: recommendations to prevent catheter failure (the DIAMETER study)	RBWH and RBWH Foundation Research Project Grant	\$40,000	2020-2021
Nicole Marsh, Emily Larsen , Prof Claire Rickard, Kerrie McLeod , Rob Ware, Amanda Ullman, Catherine O'Brien , Andrew Bulmer, Julie Flynn	Nursing & Midwifery Research Centre, Nursing & Midwifery Services	Comparing the use of Midline Catheters versus Peripherally Inserted Central Catheters for patients requiring peripherally Compatible Therapies: A randomised controlled trial (the COMPACT Trial)	Griffith University	\$66,900	2020-2021
Shaun O'Leary, Adrianne Young , Diann Eley, Peter Buttrum , Merrylin Banks , Nicole Marsh , Mark Cruickshank, James Elliott, Nicholas Talley, Scott Bell	Nursing and Midwifery Research Centre	Sustainable career pathways for clinician-scientists in Australian public health	RBWH and RBWH Foundation Research Project Grant	\$39,229.95	2020
Deanne August, Nicole Marsh , Colette McIntyre, Pieter Koorts, Rebecca Allen, Linda McLaughlin, Robert Ware, Ass Prof Amanda Ullman. Katie Foxcroft , Linda Cobbald, Kate Coghill, Gillian Lack, Gemma Yates, Patricia Smith	Nursing and Midwifery Research Centre, Women's and Newborn Services	Implementing the near infrared (NIR)-informed peripheral intravenous catheter (PIVC) scrum in neonatal care: an intervention study	RBWH and RBWH Foundation Research Project Grant	\$39,957.89	2020-2021

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded	Year/s
Prof Claire Rickard, Ass Prof Amanda Ullman, Nicole Marsh , Tricia Kleidon, Gerben Keijzers, Jessica Schults, Prof Marie Cooke, Ass Prof Joshua Byrnes, Robert Ware, Louise Cullen , Pauline Calleja, Fiona MacFarlane, Steven McTaggart, Henry Goldstein, Nathan Peters, Catriona Booker, Stephanie Hadikusumo, Krispin Hajkowicz , Stuart Watkins, Audra Gedmintas, Kerri McLeod , Herbert Down, Fiona Allsop, Jeremy Wellwood, Mark Elcock	Nursing and Midwifery Research Centre	Difficult peripheral intravenous catheter insertion: Australian considerations for sustainable implementation of ultrasound guided procedures	National Health and Medical Research Council (NHMRC) Partnership Grant	\$1,497,197.00	2020-2023
Di Marsden, Jed Duff , Kerry Boyle, Rachel Peake, Tony Martin, Joe Miller, Dominique Cadihac, Kelvin Hill, John Wiggers, Carlos Garcia Esperon	Nursing and Midwifery Research Centre	Let's have a yarn about our bladder	Early Career Seed Grant, Stroke Foundation	\$49,966	2020-2021
Claire Rickard, Nicole Marsh , Raymond Chan, Peter Mollee, Geoffrey Playford, Li Zhang, Andrew Hallahan, Evan Alexandrou	Nursing and Midwifery Research Centre	Peripherally inserted central catheter securement: the PISCES Trial	National Health and Medical Research Council (NHMRC)	\$98,830	2020-2021
Claire Rickard, Joshua Byrnes, Vineet Chopra, Amanda Ullman, Nicole Marsh, Emily Larsen , Raymond Chan	Nursing and Midwifery Research Centre	Measuring quality of life and experience for central venous access devices in cancer care: Developing and preliminary testing of MyVAD measures	Griffith University	\$22,953.00	2020-2021
Amanda Ullman, Nicole Marsh , Andrew Bulmer, Naomi Runnegar, Tricia Kleidon, Paul Lee-Archer, Benjamin Pearch, Deanne August, Cathy Biles, Joshua Byrnes, Vineet Chopra, Alan Coulthard, Rob Ware, Claire Rickard, Marianne Wallis, Peter Mollee	Nursing and Midwifery Research Centre	Peripherally inserted central catheter innovation to reduce infections and clots: the PICNIC trial	NHMRC Grant	\$30,936	2020-2021
Amanda Ullman, Nicole Marsh , Emily Larsen, Claire Rickard	Nursing and Midwifery Research Centre	Consumer-led innovation to implement improvements in vascular access device management: The Vascular Access Passport	Griffith University	\$4,567.00	2020

Current RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of Patients Recruited in 2020	Total number of Patients Recruited
Nicole Marsh	Emily Larsen , Claire Rickard (GU), Kerrie McLeod , Rob Ware (GU), Amanda Ullman (GU), Catherine O'Brien , Andrew Bulmer (GU), Julie Flynn	Developing ideal catheter to vein ratio parameters for peripheral venous and midline devices: recommendations to prevent catheter failure (the DIAMETER study)	70	70
Nicole Marsh	Emily Larsen , Julie Flynn , Samantha Keogh (QUT), Claire Rickard (GU)	Peripheral intravenous COCOA pilot randomised controlled trial	200	200
Nicole Marsh	Emily Larsen , Prof Claire Rickard (GU), Peter Groom , Tricia Kleidon (Qld Children's Hospital, QCH), Catherine O'Brien , Evan Alexandrou (Liverpool Hospital), Megan Nicholas , Catriona Booker	Comparing the use of Midline Catheters versus Peripherally Inserted Central Catheters for patients requiring peripherally Compatible Therapies: A randomised controlled trial (the COMPACT Trial)	18	18
Fiona Coyer	Tony Parker (QUT), Jill Campbell , Anna Doubrovsky (QUT)	Biochemical characteristics and healing rates of medical device-related pressure injuries (the MEDICI study); a prospective observational pilot study		
Fiona Coyer	Bryan Gregory , Annabelle Levido , Pierre Clement , Helena Morrey , Marianne Kirrane , Adam Stott , Kristy Jackman	Virtual visiting for families in the ICU: The VITAL study	48 staff 24 family members	48 staff 24 family members
Fiona Coyer	Annabel Levido , Kerrie Coleman , Kathy Hocking , Michelle Barakat-Johnson (University of Sydney, US), Tom Long (QUT)	Clinicians experiences of extended PPE wear, a qualitative study	9	9
Fiona Coyer	Jayesh Dhanani , Samantha Keogh (QUT), Flavia Huygens (QUT), Suzanne Parker, (University of Queensland, UQ)	Evaluation of a closed loop-blood sampling system in the intensive care: a pilot randomised controlled trial	80	80
Nicole Marsh	Emily Larsen , Julie Flynn (GU), Claire Rickard (GU), Sue Cadigan (Qld Children's Hospital, QCH), Barbara Hewer , Peter Groom	Managing Intravenous Devices among patients with limited vascular access or prolonged therapy: Investigating the Efficacy of midline catheters – the MIDLINE study	42	143
Theresa Green	Tara Hormann , Tony Parker (QUT), Jonathon Peake (QUT), Gregory Bix (USA)	Characteristics of physical activity required to elevate circulating neuroprotective LG3 peptide as a novel stroke therapy	0 (closed to recruitment)	10
Theresa Green	Anna Farrell , Lee Moylan , Bernd Ploderer (QUT)	An image-based tablet app to support communication of daily activity scheduling between patients with post-stroke aphasia, family and hospital staff	0 (closed to recruitment)	5
Theresa Green	Kevin Clark , Aneeka Bott (QUT), Bernd Ploderer (QUT)	Better Individualised Stroke Care Using Technology (BISCUT)	8 (now closed to recruitment)	10
Theresa Green	Bernd Ploderer (QUT), Anna Farrell , Lee Moylan	Aphasia Communication App/ StrokeAssist aphasia app evaluation	0 (closed to recruitment)	5

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of Patients Recruited in 2020	Total number of Patients Recruited
Theresa Green	Andrew Wong, Sandy Jamieson, Meaghan Osbourne	Post-acute NP-led stroke service delivery model: managing residual neurological issues and multiple chronic conditions post discharge – a pilot project.	N/A	
Joan Webster	Brigid Gillespie (GU), Wendy Chaboyer (GU), David Ellwood (GU), Jennifer Whitty (UQ), Luckman Thalib (Kuwait University), Nicky Cullum (Uni of Manchester), Margarette Somerville, Deborah Birthisel, Rebecca Kimble	Adding negative pressure to improve healing: The dressing trial	0	2035
Nicole Marsh	Amanda Ullman (GU), Gabor Mihala (GU), Marie Cooke (GU), Claire Rickard (GU)	Peripheral intravenous catheter failure and infection in adults: a systematic review and meta-analysis. (a study)	N/A	
Nicole Marsh	Emily Larsen, M Takashima, Tricia Kleidon (QCH), Samantha Keogh (QUT), Amanda Ullman (GU), Gabor Mihala (GU), Vineet Chopra (University of Michigan), Claire Rickard (GU)	Peripheral intravenous catheter failure: a secondary analysis of risks from 11,830 catheters	N/A	
Emily Larsen	Nicole Marsh, Gabor Mihala (GU), Michelle King, Matthew Zunk, Amanda Ullman (GU), Samantha Keogh (QUT), Tricia Kleidon (QCH), Claire Rickard (GU)	Intravenous antimicrobial administration through peripheral venous catheters – establishing risk profiles from an analysis of 5254 devices		
Emily Larsen	Nicole Marsh, Gillian Ray-Barruel (GU), Evan Alexandrou (Liverpool Hospital), C Friese, Claire Rickard (GU), Vineet Chopra (University of Michigan)	One Million Global Catheters (OMG) Oncology/Haematology sub-analysis project	N/A	
Emily Larsen	Nicole Marsh, Nicole Gavin, Julie Flynn (GU), Joan Webster	Cancer caRE: The risk factors of vEnous access failuRe (CareTaKER study)	0	201
Nicole Marsh	Emily Larsen, Joshua Byrnes (GU), Claire Rickard (GU), Tracey Hawkins, Kerri McLeod	Investigating and Measuring Patient outcome and experience tools to enable implementation within existing exit survey Applications in local Value Based Health_Care Teams (IMPACT Study)	N/A	

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of Patients Recruited in 2020	Total number of Patients Recruited
Shaun O'Leary	Adrienne Young, Diann Eley, Peter Buttrum, Merrylin Banks, Nicole Marsh, Mark Cruickshank, James Elliott, Nicholas Talley, Scott Bell	Sustainable career pathways for clinician-scientists in Australian public health	N/A	

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of Patients Recruited in 2020	Total number of Patients Recruited
Claire Rickard	Amanda Ullman, Nicole Marsh , Tricia Kleidon, Gerben Keijzers, Jessica Schults, Marie Cooke, Joshua Byrnes, Robert Ware, Louise Cullen , Pauline Calleja, Fiona MacFarlane, Steven McTaggart, Henry Goldstein, Nathan Peters , Catriona Booker , Stephanie Hadikusumo , Krispin Hajkowicz , Stuart Watkins, Audra Gedmintas, Kerri McLeod , Herbert Down, Jeremy Wellwood, Mark Elcock	Difficult peripheral intravenous catheter insertion: Australian considerations for sustainable implementation of ultrasound guided procedures	N/A	
Deanne August	Nicole Marsh , Colette McIntyre , Pieter Koorts , Rebecca Allen , Linda McLaughlin , Rob Ware, Amanda Ullman, Katie Foxcroft , Linda Cobbald , Kate Coghill , Gillian Lack , Gemma Yates , Patricia Smith	Implementing the near infrared (NIR)-informed peripheral intravenous catheter (PIVC) scrub in neonatal care: an intervention study	135	135
Bryan Gregory	Dwarakanathan Ranganathan , Fiona Coyer	The effects of renal replacement therapy on immunosuppressive drug concentrations (CITRIC II Study)		
Prof Amanda	Nicole Marsh , Andrew Bulmer, Naomi Runnegar, Tricia Kleidon, Paul Lee-Archer, Benjamin Pearch, Deanne August, Cathy Biles, Joshua Byrnes, Vineet Chopra, Alan Coulthard, Rob Ware, Claire Rickard, Marianne Wallis, Peter Mollee	Peripherally inserted central catheter innovation to reduce infections and clots: the PICNIC trial	69	388
Lauren Kearney	Nicole Marsh , Amanda Ullman, Deb Massey, Alison Craswell, Rachel Nugent, Guy Godsall	Peripheral intravenous catheter management in childbirth [PICMIC]: An observational study	101	101
Nicole Gavin	Nicole Marsh , Catherine O'Brien , Samantha Keogh, Louise Marquart, Makrina Totsika	Standard versUs peRForated peripheral intravenous catheters. The SURF trial: a pilot randomised controlled trial	101	101
Clint Douglas	Robyn Fox , Catriona Booker , Alanna Geary , Sandy Middleton, Glenn Gardner, Patrick Kelly, Rachael Morton, Elizabeth McInnes, Carol Windsor	Transforming nursing assessment in acute hospitals: A cluster randomised controlled trial of an evidence-based core assessment protocol (the ENCORE trial)		
Colette McIntyre	Nicole Marsh , Amanda Ullman, Karen New, Deanne August, Donna Hovey, Patricia Smith , Pieter Koorts , Katie Foxcroft	NeOnatal Vascular Access (NOVA) study: an observational study of neonatal vascular access complications	0	140
Nicole Gavin	Nicole Marsh , Amanda Ullman, Tricia Kleidon, Emily Larsen , Claire Rickard, Jill Campbell	Estimating prevalence of impaired skin surrounding DevicEs: the EPISODE study	0	639

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of Patients Recruited in 2020	Total number of Patients Recruited
Claire Rickard	Nicole Marsh , Sandy McCarthy, Tricia Kleidon, Emily Larsen , Li Zhang, Amanda Ullman, Rachel Edwards, Melissa Arneil	Controlling device Occlusion and infection by Connector Design And decontamination (The COCOA pilot trial)	0	180
Claire Rickard	Nicole Marsh , Raymond Chan, Peter Mollee, Geoffrey Playford, Li Zhang, Andrew Hallahan, Evan Alexandrou	Peripherally InSerted CEntral catheter Securement: the PISCES Trial	112	1027
Claire Rickard	Nicole Marsh , Peter Carr, Gavin Jackson, Marie Cooke, Marianne Wallis	Integrated versus nOn-integrated Peripheral inTravenous catheter. Which Is the most clinical and cost-effective systeM for peripheral intravenoUs catheter Management? (The OPTIMUM trial)	0	1759
Helen Edwards	Fiona Coyer , Patricia Sinasac, Kathleen Finlayson, Christina Parker, Jessica Schluter, Kerrie Coleman	Reducing the prevalence and severity of wounds through implementation of the Champions for Skin Integrity Model – Protecting Skin Integrity (PSI)	N/A	
Michelle Barakat-Johnson	Fiona Coyer , John Stephenson, Ashleigh Dolton, Sarah Jones, Jayne Campbell, Heidi Buhr	Efficacy of a heel off-loading boot in reducing heel pressure injuries in intensive care patients: a single-blinded randomised controlled trial	N/A	
Michelle Barakat-Johnson	Fiona Coyer , Kate White, John Stephenson	Effectiveness of a Pressure Injury Clinical Judgement Risk-screening tool and prevention plan: Cluster Randomised Control Trial (EmPIRE RCT)	N/A	
Michelle Barakat-Johnson	Fiona Coyer	A novel implementation of best available evidence into practice for incontinence-associated dermatitis (IMBED)	N/A	
Gillian Ray-Barruel	Nicole Marsh , Min-Lin Wu, Andrew Bulmer, Claire Rickard, Wendy Moyle	Adaptation of the catheter-associated urinary tract infection (CAUTI) targeted assessment for prevention (TAP) tool for use in the Australian acute healthcare setting: a validation study	N/A	
Gillian Ray-Barruel	Nicole Marsh , Vineet Chopra, Tricia Kleidon, Claire Rickard	To be or not to be left in situ: Prevalence and complications of ideal intravenous catheters. A secondary analysis of 15,000 catheters	N/A	
Amanda Ullman	Nicole Marsh, Emily Larsen , Claire Rickard	Consumer-led innovation to implement improvements in central venous access device management: The Vascular Access Passport	10	10

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of Patients Recruited in 2020	Total number of Patients Recruited
Gerben Keijzers	Hugo Evison, Amy Sweeney, Jamie Ranse, Nicole Marsh , Joshua Byrnes, Claire Rickard, Peter Carr	Clinician decision making in peripheral intravenous cannulation in emergency settings	0	1249
Claire Rickard	Amanda Corley, Nicole Marsh , Amanda Ullman, India Lye	Anti-microbial Disc infection preventions in vascular access (ADORN Trial)	10	80
Jessica Schults	Claire Rickard, Marie Cooke, Amanda Ullman, Tricia Kleidon), Nicole Marsh , Gillian Ray-Barruel	Developing a vascular access registry minimum dataset: An international Delphi study	N/A	
Claire Rickard	Jessica Schults, Amanda Ullman, Tricia Kleidon, Nicole Marsh , Gillian Ray-Barruel, Marie Cooke, Gabor Mihala, Robert Ware, Joshua Byrnes, Malcolm Wolski, Jolon Faichney	IVCare: A vascular access clinical registry based at Griffith University	N/A	
Claire Rickard	Joshua Byrnes, Vineet Chopra, Amanda Ullman, Nicole Marsh , Emily Larsen , Raymond Chan	Measuring Quality of Life and Experience for Central Venous Access Devices in Cancer Care: Developing and preliminary testing of <u>MyVAD</u>	N/A	

Research Activity With a Specific Focus on First Nations People

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of Patients Recruited in 2020	Total number of Patients Recruited
Di Marsden	Jed Duff , Kerry Boyle, Rachel Peake, Tony Martin, Joe Miller, Dominique Cadilhac, Kelvin Hill, John Wiggers, Carlos Garcia Esperon	Let's have a yarn about our bladder		

Research Publications

Journal Articles

- Gavin CN, Kleidon T, Larsen E, O'Brien C, Ullman A, Northfield S, Mihala G, Runnegar, **Marsh N**, Rickard CM. A comparison of hydrophobic polyurethane and polyurethane peripherally inserted central catheter: results from a feasibility randomized controlled trial. *Trials*. 2020; 21(787): 1-11 <https://doi.org/10.1186/s13063-020-04699-z>
- Schults J, Kleidon T, Chopra V, Cooke M, Paterson R, Ullman A, **Marsh N**, Ray-Barruel G, Hill J, Devrim I, Hammarskjold F, Pedreira M, Bertoglio S, Egan G, Mimos O, Van Boxtel T, DeVries M, Magalhaes M, Hallum C, Oakley S, Rickard C. International recommendations for a vascular access minimum dataset: a Delphi consensus-building study. *BMJ Qual Saf*. 2020; 0: 1-9 <http://doi.org/10.1136/bmjqs-2020-011274>
- Ingleman J, Parker C, **Coyer F**. Exploring body morphology and skin microcirculation in patients with critical illness. *Australian Critical Care*. 2020; 33: S1 – S3 <http://doi.org/10.1016/j.aucc.2020.04.009>
- Rheault H, **Coyer F**, Bonner A. Time to listen: Chronic disease yearning with Aboriginal and Torres Strait Islander peoples living in remote Australia. *Collegian*. 2020. <https://doi.org/10.1016/j.colegn.2020.06.001>
- Munday J, Higgins N, Mathew S, Dalgleish L, Batterbury A, Burgess L, Delaney LJ, Griffin BR, Hughes JA, Ingleman J, Keogh S, **Coyer F**. Nurse-led randomised controlled trials in the peri-operative setting: A scoping review. *Journal of Multidisciplinary Healthcare*. 2020;13:647-660. <http://doi.org/10.2147/JMDH.S255785>

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6. **Coyer F**, Coleman K, Hocking K, Leong T, Levido A, Barakat-Johnson M. Maintaining skin health and integrity for staff wearing personal protective equipment for prolonged periods: a practical tip sheet. *Wound Practice and Research*. 2020;28(2):75-83

 7. Barakat-Johnson M, Carey R, Coleman K, Hocking K, Leong T, Levido A, Counter K, **Coyer F**. Pressure injury prevention for COVID-19 patients in a prone position. *Wound Practice and Research*. 2020;28(2):50-57

 8. **Coyer F**, Cook J-L, Brown W, Vann A, Doubrovsky A. Securement to prevent device-related pressure injuries in the intensive care unit: A randomised controlled feasibility study. *International Wound Journal*. <http://dx.doi.org/10.1111/iwj.13432>

 9. **Coyer F**, Campbell J, Doubrovsky A. Efficacy of an incontinence-associated dermatitis intervention for critically ill patients in intensive care; an open label pilot randomised control trial. *Adv Skin & Wound Care*. 2020;33(7):375-382

 10. Larsen E, **Marsh N**, O'Brien C, Monteagel E, Friese C, Rickard CM. Inherent and modifiable risk factors for peripheral venous catheter failure during cancer treatment: a prospective cohort study. *Supportive Care in Cancer*. <https://doi.org/10.1007/s00520-020-05643-2>

 11. Larsen EM, Corley A, Mitchell M, Lye I Powell M, Tom S, Mihala G, Ullman AJ, Gibson V, **Marsh N**, Kleidon TM, Rapchuk IL, Rickard CM. A pilot randomised controlled trial of two dressing and securement methods to prevent arterial catheter failure in intensive care. *Australian Critical Care*. <http://doi.org/10.1016/j.aucc.2020.05.004>

 12. Keogh S, Shelverton C, Flynn J, Mihala G, Mathew S, Davies K, **Marsh N**, Rickard CM. Implementation and evaluation of peripheral intravascular catheter flushing guidelines: A stepped wedge cluster randomised trial. *BMC Medicine*. 2020; 18(252):1-11 <https://doi.org/10.1186/s12916-020-01728-1>

 13. Wang N, Doubrovsky A, Campbell J, Singh V, Collins J, **Coyer F**. Pressure injury development in critically ill patients with a cervical collar in situ: a retrospective longitudinal study. *Int Wound Journal*. 2020. <http://dx.doi.org/10.1111/iwj.13363>

 14. **Marsh N**, Larsen E, Webster J, Cooke M, Rickard C. The benefits of a vascular access specialist placing a peripheral intravenous catheter: a narrative review of the literature. *Vascular Access*. 2020; 6(1): 10-15

 15. **Marsh N**, Larsen E, Flynn J, O'Brien C, Kleidon T, Groom P, Hewer B, Rickard C. The MIDLINE trial – Managing intravenous devices among patients with limited vascular access or prolonged therapy: a pilot randomised control trial protocol. *Vascular Access*. 2020; 6(1): 20-24

 16. **Larsen E**, Byrnes J, **Marsh N**, Rickard C. Patient reported outcome and experience measures for peripheral venous catheters: a scoping review protocol. *Vascular Access*. 14 (1), 6-11

 17. Dalglish L, Campbell J, Finlayson K, **Coyer F**. Acute skin failure in the critically ill adult population: A systematic review. *Adv Skin & Wound Care*. 2020;33:76-83. <https://doi.org/10.1097/01.ASW.0000617844.69248.92>

 18. Gefen A, Alves P, Ciprandi G, **Coyer F**, Milne CT, Ousey K, Ohura N, Waters N, Worsley P, Black J, Barakat-Johnson M, Beeckman D, Fletcher J, Kirkland-Kyhn H, Lahmann NA, Moore Z, Payan Y, Schlüer A-B. Device-related pressure-ulcers: SECURE prevention. *Journal of Wound Care*. 2020;29(Sup2b):S1-S52

 19. Kleidon T, Rickard C, Gibson V, Mihala G, Schults J, Xu G, Bauer M, **Marsh N**, Larsen E, Cattanach P, Ullman A. (2020) A pilot randomized controlled trial of peripheral intravenous catheter securement in pediatrics. *Journal of Tissue Viability*. JIF=5.5 DOI: 10.1016/j.jtv.2020.03.006

 20. Ray-Barruel G, Wu M, **Marsh N**, Mitchell B. Strategies for CAUTI prevention: Are we on the same page? (letter to the Editor) *Infection, Disease and Health*. 2020. <https://doi.org/10.1016/j.idh.2020.01.005>

 21. Schults J, Woods C, Cooke M, Kleidon T, Marsh N, Ray-Barruel G, Rickard C. Healthcare practitioner perspectives and experiences regarding vascular access device data: An exploratory study. *International Journal of Healthcare Management*. 2020; <https://doi.org/10.1080/20479700.2020.1721750>

 22. Labeau S, Afonso E, Benbenishty J, Blackwood B, Boulanger C, Brett, SJ, Calvino-Gunther S, Chaboyer W, **Coyer F**, Deschepper M, Francois G, Honore P, Jankovic R, Khanna A, Llaurado-Serra M, Lin F, Rose L, Rubulotta F, Saager L, Williams G, Blot S. Prevalence associated factors and outcomes of pressure injuries in adult intensive care unit patients: the DecubICUs study. 2020 *Intensive Care Medicine*. <https://doi.org/10.1007/s00134-020-06234-9>
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Conference Presentations – Invited Speaker, Oral and Poster

Invited Speaker

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1. **Marsh N.** Be sure to secure VADs when patient access is limited. 3M Health Care Academy Webinar. 2020

 2. **Marsh N.** (online presentation) Lived experiences of clinical research higher degree journeys. Early and Mid-Career Clinical Researcher Workshop. RBWH Auditorium. 2020

 3. **Larsen E.** (online presentation) Risk factors for peripheral intravenous catheter failure in the care of patients with cancer: how can we improve care? Infusion Nurses Society. 2020

 4. **Larsen E, Marsh N.** (online presentation) Risk factors for PIVC failure: Answering big questions with big data. AVA at your Fingertips. 2020

 5. **Duff J.** (online presentation) How to promote evidence-based practice in the perioperative setting. ACORN, Australian College of Perioperative Nurses. Sunshine Coast University Hospital, Australia. 2020

 6. **Duff J.** (Digital Conference) Implementation Science. Centre of Interprofessional Collaboration within Emergency Care Annual Conference. Linnaeus University, Sweden. 2020
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Poster Presentations

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1. **Marsh N**, Larsen E, Takashima M, Kleidon T, Keogh S, Ullman A, Rickard CM. Preventing peripheral intravenous catheter failure: a secondary analysis of 11,830 catheters. Herston Health Precinct Symposium, 2020, Brisbane, Australia

 2. **Marsh N**, Larsen E, Webster J, Cooke M, Rickard CM. The benefit of a vascular access specialist placing a peripheral intravenous catheter: a narrative review of the literature. Herston Health Precinct Symposium, 2020, Brisbane, Australia

 3. **Marsh N**, Larsen E, Hewer B, Monteagle E, Ware R, Schults J, Rickard CM. Learnings from 2,274 Peripheral Intravenous Catheter Audits: 'How many audits do you really need?' Herston Health Precinct Symposium, 2020, Brisbane, Australia

 4. Larsen E, **Marsh N**, Mihala G, King M, Zunk M, Ullman AJ, Keogh S, Kleidon T, Rickard CM. Intravenous antimicrobial administration through peripheral venous catheters – establishing risk profiles from an analysis of 5252 devices. Herston Health Precinct Symposium, 2020, Brisbane, Australia

 5. Holmes E, **Marsh N.** Does the knowledge of fetal fibronectin (fFN) results impact clinical decision making and length of hospital stay for symptomatic women with a singleton pregnancy at risk of preterm labour. Herston Health Precinct Symposium, 2020, Brisbane, Australia

 6. Massey D, Cooke M, Ullman A, Craswell A, **Marsh N**, Ray-Barruel. - Undergraduate Nursing students' perceptions of peripheral intravenous catheter education. Herston Health Precinct Symposium, 2020, Brisbane, Australia

 7. Wheaton B, **Marsh N.** Does the Use of a Structured Risk Assessment Reduce Violence and Aggression in Acute Mental Health Units? Herston Health Precinct Symposium, 2020, Brisbane, Australia. Herston Health Precinct Symposium, 2020, Brisbane, Australia
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8. Radford R, **Marsh N**. Does removal of the wound dressing early increase the potential for surgical site infections in patients with clean, clean/contaminated wounds. Herston Health Precinct Symposium, 2020, Brisbane, Australia

 9. Higgins N, Marsh N, Jones L, McLeod K, Hutton T, Larsen E, Muir-Cochrane E, Dart N, Fawcett L. Survey of staff experiences during COVID19 pandemic. Herston Health Precinct Symposium, 2020, *Brisbane, Australia*

 10. Pearse I, **Marsh N**, Larsen E, Ullman A, Rickard C, Corley A. Polyhexamethylene biguanide discs for central line-associated infection in the intensive care unit: A pilot randomised controlled trial. Herston Health Precinct Symposium, 2020, Brisbane, Australia. Herston Health Precinct Symposium, 2020, Brisbane, Australia

 11. Corley A, **Marsh N**, Ullman A, Rickard CM. Securement bundles to prevent peripheral intravenous catheter (PIVC) failure: a 3-arm non masked pilot randomised controlled trial. Herston Health Precinct Symposium, 2020, Brisbane, Australia

 12. Barnbrook C, **Marsh N**. Does offering non-pharmaceutical interventions to patients at bedtime improve the patient's ability to sleep in the hospital environment? Herston Health Precinct Symposium, 2020, Brisbane, Australia

 13. Larsen EN, Ray-Barruel G, Takashima M, **Marsh N**, Friese CR, Chopra V, Alexandrou E, Rickard CM. Peripheral Intravenous catheters in the care of oncology and haematology patients. Herston Health Precinct Symposium, 2020, Brisbane, Australia
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