

2021

RBWH Research Report

RESEARCH
SERVICES

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Published by the State of Queensland (Metro North Hospital and Health Service), July 2022

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Centre for Palliative Care Research and Education



Professor Patsy Yates
Director
Centre for Palliative Care Research and Education

The primary role of the Centre for Palliative Care Research and Education (CPCRE) is to enhance palliative care services in Queensland through research and education endeavours. To achieve these aims, CPCRE operates as a 'centre without walls', committed to building and fostering partnerships with the palliative care community in its endeavours.

Highlights of 2021:

CPCRE celebrated its 20th anniversary in 2021 with a fully online Annual Research Conference, themed "Brave New World – Palliative Care post-pandemic". Prof Janet Hardy was successful in applying for the renewal of her contract with CPCRE, via a competitive merit process. In 2021, Prof Hardy (Clinical Research Program Leader) and colleagues were awarded a second prestigious Medical Research Future Fund (MRFF) grant, to run clinical trials of Medicinal Cannabis in patients with advanced cancer, and completed the first randomised clinical trial of the series. Distinguished Professor Patsy Yates was awarded an NHMRC Investigator Grant.

CPCRE staff have continued collaborative research projects in 2021. Research projects are multi-disciplinary and are across institutions (within Queensland and across the country), and results have been published in national and international peer reviewed publications. CPCRE staff hold appointments on state, national and international Palliative Care/Oncological & Nursing, Medical and Indigenous advisory boards/reference groups.

CPCRE education activities include: The General Practice Palliative Care Education Program; The Program of Experience in the Palliative Approach; The Evidence Based Palliative Care Strategy; The Queensland Palliative Care Research Group & Workforce Development Programs. The Centre disseminates pertinent palliative care education and research information to health professionals via: the CPCRE Website, CPCRE Newsletter (quarterly), CPCRE Calendar (biannually), Monthly E-Bulletins, the Annual Research Conference & the Annual Update Symposium (topic rotates 3 yearly between general medicine, oncology and supportive care); the Annual Master Class and the Annual Nurse Practitioner Symposium.

Benefits for clinical practice:

- ❖ The Centre's work focuses on:
 - Developing the capacity of the palliative care workforce to provide quality palliative care
 - Improving the links between research and practice in palliative care
 - Undertaking research to enhance the quality of palliative care
 - Providing information which supports the delivery of palliative care services

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Yates, P.	Awarded Fellowship of the Queensland Academy of Arts and Sciences	Queensland Academy of Arts & Sciences Council Meeting 13/10/2021

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Danby, S., Ekberg, S., Rendle-Short, J., Yates, P. , Herbert, A., Bradford, N., Bluebond-Langner, M.	Centre for Palliative Care Research and Education	Extraordinary yet mundane talk: children navigating palliative care	Australian Research Council Discovery Grant (DP180101941)	\$588,592	3yrs 2018-2021
Bradford, N., Ekberg, S., Brain, D., Yates, P. , & Hassall, T.	Centre for Palliative Care Research and Education	Childhood brain cancer survivorship and palliative care effects on family functioning (CASPER)	Children's Health Foundation Queensland	\$400,056	6yrs, 2020-2025
Yates, P. , Liu, W. & Cockerell, R.	Centre for Palliative Care Research and Education	Evaluation of the case management model of support (CMMS) for ovarian cancer care	Ovarian Cancer Australia Ltd.	\$147,390	2yrs, 2020-2021
Beesley, V., Neale, R., Turner, J., Yates, P. , Wyld, D., Chan, R. & Gordon, L.	Centre for Palliative Care Research and Education	PRoCESS: Pancreatic cancer Relatives Counselling and Education Support Service trial	National Health and Medical Research Council, Medical Research Future Fund	\$801,229	4yrs, 2020-2023
Willmott, L., White, B. & Yates, P.	Centre for Palliative Care Research and Education	Services to develop and provide online voluntary assisted dying participating practitioner training	Department of Health (WA)	\$996,165	4yrs, 2020-2023
Delaforce, A., Duff, J., Munday, J., Hardy, J. , Farmer, S., Miller, K., Glover, L., Ansell, G., Corney, C., Hurst, C., Taffaha, H.	Centre for Palliative Care Research and Education	A theoretically informed approach to support the implementation of preoperative anaemia and iron deficiency screening, evaluation and management pathways (PAIDSEMP): a type 2 hybrid-effectiveness study	Mater Foundation	\$50,000	2yrs, 2020-2021
Chan, R., Yates, P. , Emery, J., Koczwara, B., Mann, G., Eakin, E., Turner, M., Krishnasamy, M., Gordon, L., Skerman, H.	Centre for Palliative Care Research and Education	Implementation of a nurse-enabled, shared-care follow-up model for early Breast cancer survivorS (The IBIS-Survivorship Study)	National Health and Medical Research Council (APP1170519)	\$1,444,032	6yrs, 2020-2025

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Chan, R., Emery, J., Yates, P. , Dunn, J.C., Hart, N., Koczwara, B., Gordon, L., Jefford, M., Vela. I., Jones, L., Davis, I., Sengupta, S., Ee, C., Halcomb, E., Rhee, J., Sara, S., Hemming, K., Pryor, D., Shub, M. & Raupach, A.	Centre for Palliative Care Research and Education	A Hybrid, Implementation-Effectiveness Trial of a Nurse-Enabled, Shared-Care Model Between Primary and Acute Care for proStatE Cancer Survivors (The MOSES Trial)	National Health and Medical Research Council MRFF (MRF2006113)	\$1,625,286	4yrs, 2021-2024
Yates, P. , Miller, E., Hargraves, M., Maher, S. & Tyurina, A.	Centre for Palliative Care Research and Education	Co-Designing the Palliative Care Hospital Experience	St. Vincent's Private Hospital – Brisbane	\$15,000	1yr, 2021
Zhao, I., Yates, P. , Liu, W.-H. & Polotan, M.	Centre for Palliative Care Research and Education	The Effect of Practice Nurse Coordinated Home Care Package Administration Model for Cancer Patients: A Pilot Randomised Controlled Trial	Rosemary Bryant Foundation	\$9,091	1yr, 2021-2022
Good, P., Hardy, J. , Haywood, A., Olson, R., Greer, R., Philip, J., Yates, P. & Mendis, R.	Centre for Palliative Care Research and Education	Medicinal Cannabis (MedCan 3) – randomised, multicentre, double blind, placebo-controlled trial to assess THC/CBD (1:20) to relieve symptom burden in patients with cancer	National Health and Medical Research Council MRFF (APP2006191)	\$1,526,796	5yrs, 2021-2025
Yates, P.	Centre for Palliative Care Research and Education	Optimising palliative care services to deliver better value health care for older persons	National Health and Medical Research Council Investigator Grant (APP2009529)	\$1,500,000	6yrs, 2021-2026
Hudson, P., Philip, J., Francis, J., De Abreu Lourenco, R., Juraskova, I., Gray, K., Jefford, M., Kapp, S., Coher, J., Al's: Phillips, J., Yates, P. , Athan, S., Brown, L., De Vleminck, A., Chang, S., Thomas, K.	Centre for Palliative Care Research and Education	Improving the wellbeing of people with advanced cancer and their family carers: An effectiveness-implementation trial of an Australian dyadic digital health intervention (FOCUSau).	National Health and Medical Research Council TCR into End-of-Life Care (APP2006170)	\$1,095,278	5yrs, 2021-2025
Hardy, J.	Centre for Palliative Care Research and Education	MedCan 1 and 2, Nausea 4 Pilot, Pilocarpine study, Melatonin for prevention of delirium	Cancer Council Queensland	\$134,000	2021 (reviewed yearly)

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 RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Hardy, J., Yates, P.	Hardy, J. , Good, P., Lintzeris, N., Martin, J., Yates, P., Chye, R., Haywood, A., Olsen, R.	Medicinal cannabinoids to relieve symptom burden in the palliative care of patients with advanced cancer	MedCan1=35 MedCan2=24 Inflam=15 Post-Trial=33	MedCan1=144 MedCan2=57 Inflam=33 Post-Trial=44
Yates, P.	Yates, P. , Alexander, K., Miaskowski, C., Chan, R., McCarthy, A., McPhail, S., Wyld, D., Skerman, H	A sequential multiple assignment randomized trial (SMART) of nursing interventions to reduce pain associated with chemotherapy induced peripheral neuropathy	35	195
Hardy, J.	Good, P., Sullivan, K., Woodford, N., Hardy, J.	An open label pilot study of oral water soluble contrast (Gastrografin) in addition to conservative management for the resolution of malignant bowel obstruction in adult patients	0	20. Completed and published.
Hardy, J.	Good, P., Hardy, J. , Philip, J. Weil, J., Crawford, G., McNeil, R., Yates, P.	A randomised, controlled, double blind study of olanzapine versus haloperidol in patients with cancer and nausea not related to anticancer therapy. A pilot study (Nausea 4 study)	1	5
Hardy, J.	Richard, E., Mitchell, G., Nikles, J., Good, P., Senior, H., Steadman, K., Hardy, J.	Oral pilocarpine tablets for xerostomia	11	18
Hardy, J.	Good, P., Hardy, J.	Assessing physical activity as an outcome of pain management in patients with advanced cancer	4 (recruitment closed)	24
Hardy, J.	Hardy, J., Yates, P. , Miakowski, C., Good, P., Skerman, S.	Assessing the influence of genetic variation on symptom clusters in men with castrate resistant prostate cancer	0 (recruitment closed)	63

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 RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Danby, S., Ekberg, S., Rendle-Short, J., Yates, P. , Herbert, A., Bradford, N., Bluebond-Langer, M.	Yates, P.	Extraordinary yet mundane talk: children navigating palliative care	-	-
Bradford, N., Yates, P., Chan, R. & Tjondronegoro, D.	Yates, P.	RESPONse: Remote Symptom Management in Paediatric Oncology	-	-

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Juraskova, I., Butow, P., Laidsaar-Powell, R., Boyle, F., Yates, P. , Schofield, P., Kay, J. & Costa, D.	Yates, P.	Empowering the clinician-patient-carer TRIO: RCT of novel online education modules to facilitate effective family carer involvement in oncology	-	-

Research Publications

Publications in 2021

Journal Articles (RBWH staff in bold)

1. Molassiotis, A., Brown, T., Cheng, H.L., Byrnes, A., Chan, R.J., Wyld, D., Eastgate, M., **Yates, P.**, Marshall, A.P., Fichera, R., Isenring, L., To, K.F., Ko., P.S., Lam, W., Lam, Y.F., Au, L.F. & Lo, S.-K. The effects of a family-centered psychosocial-based nutrition intervention in patients with advanced cancer: the PiCNIC2 pilot randomized controlled trial. *Nutrition Journal*, (2021), 20(1):2.
2. Bradford, N.K., Chan, R.J., Walker, R., Herbert, A., Cashion, C., Tondronegoro, D & **Yates, P.** Adaptation and evaluation of a child-friendly patient reported outcome measure for use in Australia. *Collegian*, (2021), 28(1), 63-70.
3. Daveson, B.A., Allingham, S.F., Clapham, S., Johnson, C.E., Currow, D.C., **Yates, P.** & Eagar, K. The PCOC Symptom Assessment Scale (SAS): A valid measure for daily use at point of care and in palliative care programs. *Plos One*, (2021), 16(3), e0247250.
4. McHugh, M.D., Aiken, L.H., Sloane, D.M., Windsor, C., Douglas, C. & **Yates, P.** Effects of nurse-to-patient ratio legislation on nurse staffing and patient mortality, readmissions, and length of stay: a prospective study in a panel of hospitals. *The Lancet*, (2021), 397 (10288), 1905-1913.
5. Hughes, J.A., Alexander, K., Spencer, L. & **Yates, P.** Factors associated with time to first analgesic medication in the emergency department. *Journal of Clinical Nursing*, (2021), 30(13-14), 1973-1989.
6. Wong, C.L., So, W.K.W., Choi, K.C., Tong, M., Choy, Y.P., Molassiotis, A., **Yates, P.** & Chan, R.J. Oncology nurses' perspectives and practices toward the delivery of cancer survivorship care in Hong Kong. *Cancer Nursing*, (2021), 44(4), 295-304.
7. Juraskova, I., Laidsaar-Powell, R., Keast, R., Schofield, P., Costa, D.S.J., Kay, J., Turner, S., Koczwara, B., Saunders, C., Jefford, M., **Yates, P.**, Boyle, F., White, K., Miller, A., Morton, R.L., Butt, Z. & Butow, P. eTRIO trial: study protocol of a randomized controlled trial of online education modules to facilitate effective family caregiver involvement in oncology. *BMJ Open*, (2021), 11:e043224.
8. White, B.P., Willmott, L., Close, E., Hewitt, J., Meehan, R., Greaves, L.L., Parker, M.H. & **Yates, P.** Development of voluntary assisted dying training in Victoria, Australia: A model for consideration. *Journal of Palliative Care*, (2021), 36(3), 162-167.
9. Willmott, L., White, B.P., Sellars, M. & **Yates, P.M.** Participating doctors' perspectives on the regulation of voluntary assisted dying in Victoria: a qualitative study. *Medical Journal of Australia*, (2021), 215(3), 125-129.
10. Mills, J., Fox, J., Damarell, R., Tieman, J. & **Yates, P.** Palliative care providers' use of digital health and perspectives on technological innovation: a national study. *BMC Palliative Care*, (2021), 20:124.
11. **Yates, P.**, Carter, R., Cockerell, R., Cowan, D., Dixon, C., Magnus, A., Newton, R.U., Hart, N.H., Galvao, D.A., Baguley, B., Denniston, N., Skinner, T., Couper, J., Emery, J., Frydenberg, M. & Liu, W.-H. An integrated multicomponent care model for men affected by prostate cancer: A feasibility study of TrueNTH Australia. *Psycho-Oncology*, (2021), 30(9), 1544-1554.
12. Ogle, T., Alexander, K., **Yates, P.**, Paul, S.M., Kober, K.M., Conley, Y.P., Schumacher, M., Levine, J.D. & Miaskowski, C. Occurrence and perceived effectiveness of activities used to decrease chemotherapy-induced peripheral neuropathy symptoms in the feet. *European Journal of Oncology Nursing*, (2021), 54:102025.
13. Bradford, N., Bowers, A., Chan, R.J., Walker, R., Herbert, A., Cashion, C., Condon, P. & **Yates, P.** Documentation of symptoms in children newly diagnosed with cancer highlights the need for routine assessment using self-report. *Cancer Nursing*, (2021), 44(6). 443-452.

Journal Articles (RBWH staff in bold)

14. Huang, R.-L., **Yates, P.**, Thorberg, F.A. & Wu, C.-J. Influence of social interactions, professional supports and fear of death on adults' preferences for life-sustaining treatments and palliative care. *International Journal of Nursing Practice*, (2021), e12940.
15. Button, E., Gavin, N.C., Bates, T., Ahmed, D., Nasato, G., Wyld, D., Kennedy, G., Fennelly, E., Smith, M., Northfield, S. & **Yates, P.** Prospective cohort study of an Australian cancer care services-led model of emergent care. *Australian Health Review*, (2021), 45(5). 61-621.
16. Willmott, L., White, B., Feeney, R., Chambaere, K., **Yates, P.** & Mitchell, G. Intentional hastening of death through medication: A case series analysis of Victorian deaths prior to the Voluntary Assisted Dying Act 2017. *Internal Medicine Journal*, (2021), 51,1650-1656.
17. Beatty, L., Kemp, E., Turner, J., Butow, P., Milne, D., **Yates, P.**, Lambert, S., Wootten, A. & Koczwara, B. Moderators of intervention efficacy for Finding My Way: A web-based psychosocial intervention for cancer-related distress. *Supportive Care in Cancer*, (2021), 29:7669-7678.
18. Lou, Y., **Yates, P.**, Chan, R.J., Ni, X., Hu, W., Zhuo, S. & Xu, H. Unmet supportive care needs and associated factors: a cross-sectional survey of Chinese cancer survivors. *Journal of Cancer Education*, (2021), 36:1219-1229.
19. **Hardy, J.**, Haywood, A., Rickett, K., Sallnow, L., Good, P. Practice review: Evidence-based quality use of corticosteroids in the palliative care of patients with advanced cancer. *Palliative Medicine*, (2021), 35(3):461-472. doi: <https://doi.org/10.1177/0269216320986717>
20. **Hardy, J.**, Davis, M.P. The management of nausea and vomiting not related to anticancer therapy in patients with Cancer. *Current Treatment Options in Oncology*, (2021), Jan 14, 22(2):17.
21. Herbert, A., **Hardy, J.** Medicinal cannabis use in palliative care. *Australian Journal of General Practice*, (2021), Jun, 50(6):363-368. doi: 10.31128/AJGP-02-21-5831. PMID: 34059839.
22. Gunawan, B., Foster, K., **Hardy, J.** & Good, P. Survival following palliative percutaneous nephrostomy tube insertion in patients with malignant ureteric obstruction: Validating a prognostic model. *Progress in Palliative Care*, (2022), 30:1,21-28. (Published online 23 April 2021). doi: [10.1080/09699260.2021.1905145](https://doi.org/10.1080/09699260.2021.1905145)
23. Delaforce, A., Duff, J., Munday, J., **Hardy, J.**, Farmer, S., Miller, K., Glover, L., Corney, C., Hurst, C., Ansell, G., Gutta, N., Tuffaha, H. A theoretically informed approach to support the implementation of preoperative anemia and iron deficiency screening, evaluation, and management pathways: protocol for a type two hybrid-effectiveness study. *Journal of Multidisciplinary Healthcare*, (2021), May 6;14:1037-1044. doi: 10.2147/JMDH.S313309. PMID: 33986598; PMCID: PMC8110260.
24. Wan Bahrum, W.F.I.B, **Hardy, J.**, Foster, K, Good, P. An open label pilot study of oral water-soluble contrast (Gastrografin) in addition to conservative medical management for the resolution of malignant bowel obstruction in adult patients. *BMJ Supportive & Palliative Care*, (2022), Jan 19. (Published online in 2021). doi: 10.1136/bmjspcare-2021-003444
25. Lord, S., **Hardy, J.**, Good, P. Does Cannabidiol have a benefit as a supportive care drug in cancer? *Current Treatment Options in Oncology*, (in press).
26. **Hardy, J.**, Philip, J. (Editorial) Interests and conflicts when writing, reviewing and editing papers on Voluntary Assisted Dying. *Internal Medicine Journal*, (2021), 51(10): 1563-1566. <https://doi.org/10.1111/imj.14915>

Keynote or Plenary Lectures given in 2021

Date	Title
06/2021	Yates, P. Developments in the role of nurses in providing supportive cancer care over the past 40 years. MASCC/ISOO 2021 Annual Meeting, Virtual, 24th June 2021.
09/2021	Yates, P. Building a workforce to meet the needs of palliative care. Oceanic Palliative Care Conference 2021, Virtual, 10th September 2021.
10/2021	Yates, P. 20 years of CPCRE – what next? Centre for Palliative Care Research and Education Annual Research Conference, Virtual, 22nd October 2021.
11/2021	Yates, P. Reducing the burden of chronic life-limiting diseases at the end of life. How can nurses lead the future of palliative care? ICN Congress, Virtual, 2nd November 2021.

11/2021	Yates, P. Nursing innovations in the era of precision cancer care. The 5th Asian Oncology Nursing Society (AONS) Conference, Virtual, 18th November 2021.
08/2021	Hardy, J. Current clinical trials in Queensland of medicinal cannabis in cancer patients. Princess Alexandra Hospital Online Health Symposium, Virtual, 26th August 2021.
10/2021	Hardy, J. Medicinal cannabis in palliative care. 20th Annual CPCRE Research Conference, Virtual, 22nd October 2021.
11/2021	Hardy, J. (Plenary) Medicinal cannabis – weeding out truth from fiction. Brisbane Cancer Conference, Brisbane, 25th November 2021.

Herston Imaging Research Facility (HIRF)

The Herston Imaging Research Facility (HIRF) is a dedicated facility for human imaging research on the RBWH campus. The facility is committed to supporting translational research that has the potential to have impact through early diagnosis, new therapies or changed clinical practice. It offers cutting edge technology including a 3T Prisma MRI, a PET/CT, and a simultaneous MRI-PET. It has extensive supporting infrastructure for delivering fMRI stimuli, recording responses and measuring simultaneous EEG. HIRF is an alliance of Queensland University of Technology, The University of Queensland, Metro North Hospital and Health Service, and Queensland Institute of Medical Research-Berghofer, operated by RBWH, using RBWH radiographers and nuclear medicine technologists to operate the scanners. Being a stand-alone facility separate to the clinical radiology and nuclear medicine departments, HIRF offers greater access and booking certainty to imaging scanners than is possible in a busy clinical environment. As well as offering a pleasant environment for research participants, HIRF reduces the research load on clinical scanners, reducing wait-list times.

Researchers from all partners, as well as external institutions, collaborate on research at HIRF. It is involved in multi-centre national and international trials, commercial work and clinical trials. HIRF also collaborates closely with the radiopharmaceutical laboratory of the nuclear medicine department at RBWH to make available a wide variety of PET tracers for researchers to use at HIRF. In 2021, HIRF became a partner in the National Imaging Facility (NIF), part of the National Research Infrastructure, NCRIS. Funding from NIF, Queensland State Government, RBWH and the University of Queensland provided additional radiochemistry equipment and staff to increase the availability and lower the cost of radiotracers for first in human trials.

Highlights of our research from 2021 include:

COVID continued to impose challenges with shutdowns both on this campus and with our partner campuses, staff furloughed, and a reluctance among research participants to volunteer. Despite this, HIRF has made significant contributions to a large number of projects, producing high quality outputs, and developing opportunities for future research. Fostering these strong collaborative relationships with the partners and other external research institutes means that the quality of research and research productivity from HIRF will continue to grow.

During 2021, HIRF made significant contributions to:

- ❖ National multi-centre trials:
 - The Australian Dementia Network (ADNeT): Screening for trials and longitudinal research on trials ready cohort, lead by Christopher Rowe, University of Melbourne
 - Statins in Reducing Events in the Elderly. Cholesterol-lowering therapy and its effect in reducing both cardiovascular events and dementia – STAREE, lead by Sophia Zoungas, Monash University
 - TheraP: A randomised phase 2 trial of 177Lu-PSMA617 theranostic versus cabazitaxel in progressive metastatic castration resistant prostate cancer, lead by Michael Hofmann, Peter Mac
- ❖ MRFF Projects:
 - Prospective Imaging Study of Ageing: Genes, Brain and Behaviour – PISA, lead by Michael Breakspear, QIMR-B
 - PREDICT-TBI - PREDiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury: the value of Magnetic Resonance Imaging. Lead by Fatima Nasrallah, UQ
- ❖ 33 locally led projects recruiting RBWH patients in discovery science or clinical trials

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Katie McMahon	Lifetime Achievement Award, 2021	The Australian, Research Report
Nadeeka Dissanayaka	2021 UQCCR Outstanding Mid career researcher of the year award	2021 UQCCR award
Graham Galloway	Fellow, International Society of Magnetic Resonance in Medicine	2021 Annual Meeting, Vancouver

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Gillinder, McMahon, Papacostas, Brownsett, Reardon, Copland, O'Gorman	HIRF	Language in Epilepsy Assessment Program (LEAP)	Mater Foundation	\$33,438	3, 2021-2023
Gillinder, McMahon, Papacostas, Brownsett, Reardon, Copland, O'Gorman	HIRF	Betty McGrath Award	Mater Research	\$47623	1, 2021
Pritchard, de Zubicaray, McMahon, Bradford, Ekberg, White	HIRF	Promoting School Re-Entry and Enhancing Academic Engagement in Survivors of Paediatric Brain Cancer	Perpetual's 2021 IMPACT Philanthropy	\$53000	2, 2021-2022
McMahon	HIRF	New Professor Grant Scheme	QUT	\$25000	4, 2020-2023
McMahon, Brownsett, Gillinder, Copland, de Silva, Burfien, Berry.	HIRF	Improving reliability and validity of presurgical language mapping	RBWH Foundation	\$46,831	2, 2021-2022
Dissanayaka, Byrne, O'Sullivan, Adam, McMahon, Bakker	HIRF	Uncovering a novel therapeutic target to reduce dementia risk in Parkinson's disease (TRIP study)	RBWH Foundation	\$50,000	2, 2021-2022
Ma, De Zubicaray, Wall, McMahon, Laing, Walker, Kahler, Coyne, Alexander, Tomlinson, Pattie, Biggs, Morrison	HIRF	A prospective study of language impairment and recovery following surgery for brain tumours	WRI	\$75,638	3, 2021-2023
F Nasrallah, D Reutens, Chandra, Walsham, Russell, Bhuta, J Ross, C Winter, Senthuran, J Bellapart	Neurology/ED	PREDICT-TBI - PREdiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury: the value of Magnetic Resonance Imaging	MRFF	\$1,765,000	6, 2021-2026
De Zubicaray, McMahon, Brownsett, Piai, Liegeois-Chauvel	HIRF	How the brain produces speech: Neuronal oscillations to neuromodulation	ARC	\$569000	4, 2020-2023

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
De Zubicaray, Hassall, McMahon , Wood, Ma, Tolleson, Nicholls, McEniery, Gauvin, Radford, Swain	HIRF	Risk factors for speech and language impairments and long term outcomes in survivors of childhood primary posterior fossa tumours	Children's Hospital Foundation	\$271236.88	3, 2020-2023
deZubicaray, Robinson, Copland, McMahon , Drummond	HIRF	A prospective study of language function following surgical resection of left hemisphere primary brain tumours	NHMRC	\$823,663	7, 2015-2022
André Van Zundert, George Pang, Chris Futter, Sarj Vasani, Katie McMahon	Anaesthesia & Perioperative Medicine	Construction Virtual Model Airway Manikin – Part A. MRI studies Head & Neck.	HIRF Project Support Scheme 2021	5 MRI Scans	1, 2021-2022
Alice Greenwood , Michael Breakspear, Sarah Ward , Kana Appadurai , Shanthi Kanagarajah , Elizabeth Waldie , Eamonn Eeles, Robert Adam , Madeleine Cameron	Internal Medicine and Aged Care	FunDementa! Study: Functional MRI in Delirium Study	HIRF Project Support Scheme 2021	12 MRI Scans	1, 2021-2022
Rachael Wilks, Scott Crowe, Tanya Kairn, Philip Chan, Robyn Cheuk	Cancer Care Services	Design of a patient-matched vaginal applicator for brachytherapy treatments	HIRF Project Support Scheme 2021	10 MRI Scans	1, 2021-2022
Paul Thomas , Richard Bryant, Nicholas Butler, Mike Fay, Stephen Rose, Euan Walpole, Kellee Slater, Thomas O'Rourke, Peter Hodgkinson, Shinn Yeung, Benedict Devereaux, David Wyld	Nuclear Medicine and PET Services Queensland	Using PET to image the tumour micro-environment of pancreatic cancer; applications to improve early diagnosis, staging and therapy. (FAPI)	HIRF Project Support Scheme 2021	12 PET/CT Scans	1, 2021-2022
Karen Barlow, Athena Stein, Kartik Iyer	University of Queensland/Children's Health Queensland	Investigating the use of non-invasive brain stimulation to improve executive function in children following acquired brain injury (TBS-Attention)	HIRF Project Support Scheme 2021	15 MRI Scans	1, 2021-2022

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Dr Eamonn Eeles, Jurgen Fripp Vanessa Lo, Paul Thomas , Parnesh Raniga, Julie Trinder, Melissa Latter , Stephen Tapper	Nuclear Medicine and QTRaCE Queensland	Evaluating early cholinergic degeneration in preclinical Alzheimer's disease using F18 fluoroethoxybenzovesamicol ([18F]FEOBV) PET Imaging..	The Prince Charles Hospital Foundation	\$580,295	8 years 2014-2022

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 RBWH Patients Recruited in 2021
Zara Ioannides		NeuroRx ATA 188-MS-101: An Open-Label Phase 1 Study to Evaluate the Safety of ATA188 in Subjects with Progressive and Relapsing-Remitting Multiple Sclerosis	48
Nicholas Weber		An International, Phase 3, Open-label, Randomized Study of BGB-3111 Compared with Bendamustine plus Rituximab in Patients with Previously Untreated Chronic Lymphocytic Leukemia or Small Lymphocytic Lymphoma-Beigene 304	1
Dr Lee Reid	Dr Jurgen Fripp (CSIRO), Professor Stephen Rose (CSIRO), Dr Marita Prior (RBWH) , Dr Rosalind (Lindy) Jeffree (RBWH) , Professor Alan Coulthard (RBWH) , Dr Thulasi Rajah (RBWH) , Dr Andrew Groundwater (RBWH) , Professor David Walker (Wesley)	Predicting Surgery-induced Neurological Deficits - Consult II	2
Paul Thomas	William McGahan	FAPI Pancreas with PET Imaging	12
Matthew Roberts	Paul Thomas , John Yaxley , David Pattison	Staging of aggressive prostate cancer "invisible" to PSMA-PET: The FDG-PET for INvisible Disease (FIND) Trial	7
Anders Cervin		A Phase II, Randomized, Blinded, Sham Procedure-Controlled, Parallel-Group Trial to Evaluate the Efficacy, Safety and Tolerability of LYR-210 in Adult Subjects with Chronic Sinusitis - LYR-210 Sinus MRI (LYRA)	3
David Fielding	Farzad Bashirzadeh , Karin Steinke , Morgan Windsor , Paul Thomas , Andreas Moller	Improving the quality of PET imaging of pulmonary nodules and lymph nodes to facilitate invasive and non-invasive assessment - PET FIRST	27
John Atherton	Andre La Gerche, Sudhir Wahi, Mitra Shirazi, James Ottom, Kazuaki Negishi, Peter Dias, Joseph Selvanayagam	Strain sUrveillance during Chemotherapy for improving Cardiovascular OUTcomes (SUCCOUR-MRI Study)	3

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021
Eamonn Eeles	Dr Jurgen Fripp (CSIRO), Professor Stephen Rose (CSIRO), Dr Marita Prior (RBWH), Dr Rosalind (Lindy) Jeffree (RBWH), Professor Alan Coulthard (RBWH), Dr Thulasi Rajah (RBWH), Dr Andrew Groundwater (RBWH) , Professor David Walker (Wesley)	Stirlings Dream - Evaluating early cholinergic degeneration in preclinical Alzheimer's disease using F18 fluoroethoxybenzovesamicol ([18F]FEOBV) PET Imaging	18
Ashleigh Scott	Cameron Curley; Elango Subramonia Pillai; Kirk Morris; Nicholas Weber	MINERAL: Magnetic Resonance Imaging and Quantitative Susceptibility Mapping (MRI-QSM) of brain iron to identify Chemotherapy-Associated Neurocognitive Impairment (CANI) in Acute Myeloid Leukaemia (AML).	25
Trevor Gervais	Paul McEnery, Michael Schuetz, Katie McMahon , et al.	Use of advanced MRI to diagnose brachial plexus injuries and inform surgical intervention	13
David Pattison	Jeffrey Goh	A randomised phase II trial using PSMA as a therapeutic agent and prognostic indicator in men with metastatic castrate-resistant prostate cancer treated with enzalutamide - ENZA-p	21
Jeffrey Goh	David Pattison, Matthew Burge, David Wyld, Aneta Suder, Michal Hoffmann	TheraP: A randomised phase 2 trial of 177Lu-PSMA617 theranostic versus cabazitaxel in progressive metastatic castration resistant prostate cancer	12
Steven Lang		Lymphoma PET/CT for relapsed refractory Lymphoma - MOST-Lly	10
Zarnie Lwin	Po-Ling Inglis, Ben Chau, Catherine Bettington,	A Randomised phase II study of nivolumab and temozolomide vs temozolomide alone in newly diagnosed elderly patients with glioblastoma - NUTMEG	5
Anders Cervin		Multicentre, randomised, double-blind, parallel-group, placebo-controlled, Phase 3 efficacy and safety of Benralizumab in patients with eosinophilic chronic rhinosinusitis with nasal polyps. - Orchid	2
Arun Azad		In men with metastatic prostate cancer, what is the safety and benefit of Lutetium-177 PSMA radionuclide treatment in addition to conventional hormone and chemotherapy - Upfront PSMA	4
Katie McMahon	Sonia Brownsett, David Copland, Clare Berry, Penni Burfien	Improving reliability and validity of presurgical language mapping - LangMap	40

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 RBWH Patients Recruited in 2021
Chris Rowe	O'Sullivan	The Australian Dementia Network (ADNeT): Screening for trials and longitudinal research on trials ready cohort (TRC)	59

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021
Nashrallah	Stephen Rose, Alan Coultard , Geoff Osborne UQ, Paul Nichols LCH, Prof. Naomi Wray UQ, Ms Anjali Henders UQ, Ms Leanne Wallace UQ, Ms Megan Campbell QIMR, Dr. Jas Jason Ross, Dr. Warwick Locke, Amelia Livermore, Craig Winter	A Magnetic Resonance Imaging approach to investigate blood brain barrier dysfunction in brain injury and subarachnoid haemorrhage patients as a predictor of patient outcome.- Blood Brain Barrier (BBB)	18
Michael Breakspear	Dr Eamonn Eeles (TPCH), Dr Kana Appadurai RBWH, Dr Shanathi Kanagarajah (Wesley), Dr Elizabeth Waldie (Wesley), Dr Robert Adam RBWH	FunDementa! Pilot Study: Functional MRI in Delirium Pilot Study	8
Phil Moseley		Investigating Brain Signatures of Melancholic Depression	12
Michael Breakspear	Nick Martin (QIMR); Gerard Byrne ; Stephen Rose (CSIRO); Nick Martin (QIMR), Olivier Salvado (CSIRO); Gail Robinson (UQ); Nancy Pachana (UQ); Osvaldo Almeida (UWA); Margaret Wright (UQ), Michelle Lupton (QIMR); Vinh Nguyen (QIMR)	Prospective Imaging Study of Ageing: Genes, Brain and Behaviour - PISA	120
Joanne George	Alex Pagnozzi (CSIRO), Samudragupta Bora (Mater), Roslyn Boyd (UQ), Paul Colditz (UQ), Stephen Rose (CSIRO), Robert Ware (Griffith), Kerstin Pannek (CSIRO), Jane Bursle, Karen Barlow (UQ), Kartik Iyer (UQ)	Prediction of childhood Brain Outcomes in infants born preterm using neonatal MRI and concurrent clinical biomarkers - PREBO-6	27
Michael Breakspear	Sascha Dionisio	Using Advanced Brain Imaging to guide the surgical treatment of refractory epilepsy- SEEG	39
Ian Harding	Michael O'Sullivan , Prof Sophia Zoungas (PI: Monash), Dr Ian Harding (CI: Monash),	Statins in Reducing Events in the Elderly. Cholesterol-lowering therapy and its effect in reducing both cardiovascular events and dementia - STAREE	109
Nashrallah	David Reutens , Chandra, Walsham (PAH), Russell, Bhuta, Ross, Craig Winter , Senthuran, Judith Bellapart .	PREDICT-TBI - PREdiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury: the value of Magnetic Resonance Imaging	14
Dissanayaka	Gerard Byrne , Katie McMahon , David Copland, John O'Sullivan , Robert Adam , Arnold Bakker, Gregory Pontone, Zoltan Mari, Virendra Mishra.	Neuroimaging (fMRI) Biomarker Target for Therapies to Lower Dementia Risk in Parkinson's Disease - TRIP	36
Sly	Wainright ,	Early Origins of CF lung disease - ELO-CF	3
Lucca Cocchi	Bjorn Burgher	QNC	6
Yamamoto	Cumming, Baumann	The navigating brain	4
Sunil Lakhani	Prof Owen Ung , Stephen Rose, Paul Thomas , Kowis Murugappan , Ben Green , Liz Kenny , Po Inglis , Lindy Jeffrey , Katie McMahon , Colleen Niland (UQ), Shohreh Rezai	Improving the precision of clinical staging of the axilla - PETAL	10

Research Publications

Publications in 2021

Journal Articles (RBWH staff in bold)

1. Ross MT, Antico M, **McMahon KL**, Ren J, Powell SK, Pandey AK, Allenby MC, Fontanarosa D, Wood MA. (2021) Ultrasound imaging offers promising alternative to capture 3D models for personalised auricular implants. *Ultrasound in Medicine and Biology*, Accepted Sept 2021.
2. Gutman BA, van Erp TGM, Alpert K, ...de Zubicaray GI, **McMahon KL**, Wright M, Thompson PM, Turner JA, Wang L. (2021) A Meta-Analysis of Deep Brain Structural Shape and Asymmetry Abnormalities in 2,833 Individuals with Schizophrenia Compared to 3,929 Healthy Volunteers via the ENIGMA Consortium. *HBM*, Accepted August 2021. DOI: 10.1002/hbm.25625
3. Yap CX, Henders A, Alvares GA, Wood D, Krause L, Tyson GW, Restuadi R, Wallace L, McLaren T, Hansell NK, Cleary D, Grove R, Hafekost C, Harun A, Holdsworth H, Jellett R, Khan F, Lawson L, Leslie J, Frenk ML, Masi A, Matthew NE, Muniandy M, Nothard M, Miller J, Nunn L, Hotlmann G, Strike L, de Zubicaray G, Thompson PM, **McMahon KL**, Wright MJ, Visscher PM, Dawson PA, Dissanayake C, Eapen V, Heussler HS, McRae AF, Whitehouse AJO, Wray NR, Gratten J. (2021) Restricted diet drives autism-gut microbiome associations. *Cell*. Accepted August 2021
4. Pourzinal D, Yang JHJ, **Byrne GJ**, **McMahon KL**, Bakker A, Pontone G, Mari Z, Dissanayaka NN. (2021) Hippocampal correlates of episodic memory in Parkinson's disease: A systematic review of Magnetic Resonance studies. *Journal of Neuroscience Research*, DOI: 10.1002/jnr.24863.
5. Van Eijk L, Zhu D, Couvy-Duchesne B, Strike LT, Lee AJ, Hansell NK, Thompson PM, de Zubicaray GI, **McMahon KL**, Wright MJ, Zietsch BP. (2019) Are sex differences in the structural human brain associated with sex differences observed in behaviour? *Psychological Science*. <https://doi.org/10.1177/0956797621996664>. PsyARXiv - DOI: 10.31234/osf.io/8f9cve
6. Whelan B-M, Theodoros D, **McMahon KL**, Copland D, Aldridge D, Campbell J. (2021) Substrates of speech treatment-induced neuroplasticity in adults and children with motor speech disorders: A systematic scoping review of neuroimaging evidence. *International Journal of Speech-Language Pathology*. Accepted March 2021. DOI: 10.1080/17549507.2021.1908425
7. Campos AI, Posszi E, Baune BT, ...**McMahon KL**, ...Renteria ME. (2020) Brain correlates of suicide attempt in 18,925 participants across 18 international cohorts. *Biological Psychiatry*, Accepted March 2021
8. Dima D, Modabbernia A, Papachristou E, Doucet GE, ..., **McMahon KL**, ..., Thompson PM, Frangou S; Karolinska Schizophrenia Project (KaSP). Subcortical volumes across the lifespan: Data from 18,605 healthy individuals aged 3-90 years. *Hum Brain Mapp*. 2021 Feb 11. doi: 10.1002/hbm.25320. Epub ahead of print. PMID: 33570244.
9. Frangou S, Modabbernia A, Williams SCR, Papachristou E, Doucet GE, ..., **McMahon KL**, ..., Karolinska Schizophrenia Project (KaSP), Thompson PM, Dima D. Cortical thickness across the lifespan: Data from 17,075 healthy individuals aged 3-90 years. *Hum Brain Mapp*. 2021 Feb 17. doi: 10.1002/hbm.25364. Epub ahead of print. PMID: 33595143.
10. Yang JHJ, Pourzinal D, **McMahon KL**, **Byrne GJ**, Copland DA, **O'Sullivan JD**, Dissanayaka NN. (2020) Neural Correlates of Attentional Deficits in Parkinson's disease patients with mild cognitive impairment. *Parkinsonism and Related Disorders*, Accepted Jan 2021.
11. Sonderby IE, van der Meer D, Moreau C, Kaufmann T, Walters G, ..., **McMahon K**, ..., Jacquemont S, Thompson P, Andreassen O, for ENIGMA-CNV working group. (2021) 1q21.1 distal copy number variants are associated with cerebral and cognitive alterations in humans. *Translational Psychiatry*, 1-15, Accepted Dec 2020. DOI: 10.1038/s41398-021-01213-0 Open Science PsyArXiv Preprint DOI: 10.31234/osf.io/tbjxh
12. O'Callaghan VS, Couvy-Duchesne B, Strike LT, **McMahon KL**, Byrne EM, Wright MJ. (2021) A Meta-Analysis of the Relationship between Subjective Sleep and Depression Symptoms in Adolescence, *Sleep Medicine*, Accepted Jan 2021.
13. Mascelloni M, **McMahon KL**, Piai V, Kleinman D, de Zubicaray G. (2021) Mediated Phonological-Semantic Priming in Spoken Word Production: Evidence for Cascaded Processing from Picture-Word Interference. *QJEP*, April 2021. DOI: 10.1177/17470218211010591
14. Isaacs M, **McMahon KL**, Angwin AJ, Crosson B, Copland DA. (2021) The Influence of Contextual Constraint on Verbal Selection Mechanisms and its Neural Correlates in Parkinson's Disease. *Brain Imaging and Behaviour*, 15(20), 865-881, DOI: 10.1007/s11682-020-00296-5.
15. McSween M-P, **McMahon K**, Coombes J, Maguire K, Rodriguez A, Erickson K, Copland DA. (2021) The acute effects of different exercise intensities on associative novel word learning in healthy older adults: A randomized controlled trial. *Journal of Aging and Physical Activity*, Accepted Nov 2020.

Journal Articles (RBWH staff in bold)

16. Asiri A, Dimpudus F, Atcheson N, AlNajjar A, **McMahon KL**, Kurniawan N. (2021) Comparison between 2D and 3D MEDIC in human cervical spinal cord at 3T. *J Medical Radiation Science*, Accepted Sept 2020. DOI: 10.1002/jmrs.433.
17. van der Meer D, Sondeerby IE, Kaufmann T, Walters GB, ...de Zubicaray GI, ..., **McMahon KL**, ...Wright MJ, ..., Dale AM, Djurovic S, Agartz I, Westlye LT, Stafsson H, Stefansson K, Thompson PM, Andreassen OA. (2021) Association of copy number variation of the 15q11.2 (BP1-2) region with cortical and subcortical morphology and cognition. *JAMA Psychiatry*, 77, 420-430. DOI: 10.1001/jamapsychiatry.2019.3779
18. Shanker MD, **Moodaley P**, Soon W, Liu HY, Lee YY, Pryor DI. Stereotactic ablative radiotherapy for hepatocellular carcinoma: A systematic review and meta-analysis of local control, survival and toxicity outcomes. *J Med Imaging Radiat Oncol*. 2021 Dec;65(7):956-968. doi: 10.1111/1754-9485.13309. Epub 2021 Aug 15. PMID: 34396706.
19. de Zubicaray GI, **McMahon KL**, Arciuli J. A Sound Explanation for Motor Cortex Engagement during Action Word Comprehension. *J Cogn Neurosci*. 2021 Jan;33(1):129-145. doi: 10.1162/jocn_a_01640. Epub 2020 Oct 15. PMID: 33054555.
20. Jia T, Chu C, Liu Y, van Dongen J, Papastergios E, Armstrong NJ, Bastin ME, Carrillo-Roa T, den Braber A, Harris M, Jansen R, Liu J, Luciano M, Ori APS, Roiz Santiañez R, Ruggeri B, Sarkisyan D, Shin J, Sungeun K, Tordesillas Gutiérrez D, Van't Ent D, Ames D, Artiges E, Bakalkin G, Banaschewski T, Bokde ALW, Brodaty H, Bromberg U, Brouwer R, Büchel C, Burke Quinlan E, Cahn W, de Zubicaray GI, Ehrlich S, Ekström TJ, Flor H, Fröhner JH, Frouin V, Garavan H, Gowland P, Heinz A, Hoare J, Ittermann B, Jahanshad N, Jiang J, Kwok JB, Martin NG, Martinot JL, Mather KA, **McMahon KL**, McRae AF, Nees F, Papadopoulos Orfanos D, Paus T, Poustka L, Sämann PG, Schofield PR, Smolka MN, Stein DJ, Strike LT, Teeuw J, Thalamuthu A, Trollor J, Walter H, Wardlaw JM, Wen W, Whelan R, Apostolova LG, Binder EB, Boomsma DI, Calhoun V, Crespo-Facorro B, Deary IJ, Hulshoff Pol H, Ophoff RA, Pausova Z, Sachdev PS, Saykin A, Wright MJ, Thompson PM, Schumann G, Desrivieres S. Epigenome-wide meta-analysis of blood DNA methylation and its association with subcortical volumes: findings from the ENIGMA Epigenetics Working Group. *Mol Psychiatry*. 2021 Aug;26(8):3884-3895. doi: 10.1038/s41380-019-0605-z. Epub 2019 Dec 6. PMID: 31811260; PMCID: PMC8550939.
21. **Tariq A, Westera J, Navaratnam A, Dunglison N, Esler R, Roberts MJ**. Extra-peritoneal oligometastatic renal cell carcinoma: atypical pattern of metastasis and novel localization techniques. *ANZ J Surg*. 2021 Nov 1. doi: 10.1111/ans.17335. Epub ahead of print. PMID: 34719834.
22. **McGeorge S**, Phillips R, Rukin NJ, Reynolds J, **Roberts MJ**. Solitary castrate-resistant prostate cancer metastasis to adrenal gland with concordant intense avidity on PSMA and FDG PET. *Urol Case Rep*. 2021 Apr 27;38:101696. doi: 10.1016/j.eucr.2021.101696. PMID: 34007790; PMCID: PMC8111578.
23. **McGeorge S**, Kwok M, Jiang A, Emmett L, **Pattison DA, Thomas PA, Yaxley JW, Roberts MJ**. Dual-Tracer Positron-Emission Tomography Using Prostate-Specific Membrane Antigen and Fluorodeoxyglucose for Staging of Prostate Cancer: A Systematic Review. *Adv Urol*. 2021 Aug 18;2021:1544208. doi: 10.1155/2021/1544208. PMID: 34456998; PMCID: PMC8387192.
24. **Roberts MJ**, Morton A, **Donato P, Kyle S, Pattison DA, Thomas P, Coughlin G, Esler R, Dunglison N, Gardiner RA**, Doi SA, Emmett L, **Yaxley J**. 68Ga-PSMA PET/CT tumour intensity pre-operatively predicts adverse pathological outcomes and progression-free survival in localised prostate cancer. *Eur J Nucl Med Mol Imaging*. 2021 Feb;48(2):477-482. doi: 10.1007/s00259-020-04944-2. Epub 2020 Jul 22. Erratum in: *Eur J Nucl Med Mol Imaging*. 2020 Sep 12;: PMID: 32696091.
25. **McGeorge S**, Kwok M, Jiang A, Emmett L, **Pattison DA, Thomas PA, Yaxley JW, Roberts MJ**. Dual-Tracer Positron-Emission Tomography Using Prostate-Specific Membrane Antigen and Fluorodeoxyglucose for Staging of Prostate Cancer: A Systematic Review. *Adv Urol*. 2021 Aug 18;2021:1544208. doi: 10.1155/2021/1544208. PMID: 34456998; PMCID: PMC8387192.
26. **Ryder SJ**, Love AJ, Duncan EL, **Pattison DA**. PET detectives: Molecular imaging for pheochromocytomas and paragangliomas in the genomics era. *Clin Endocrinol (Oxf)*. 2021 Jul;95(1):13-28. doi: 10.1111/cen.14375. Epub 2020 Dec 9. PMID: 33296100.
27. Mosley PE, Robinson K, **Dissanayaka NN**, Coyne T, Silburn P, **Marsh R**, Pye D. A Pilot Trial of Cognitive Behavioral Therapy for Caregivers After Deep Brain Stimulation for Parkinson's Disease. *J Geriatr Psychiatry Neurol*. 2021 Sep;34(5):454-465. doi: 10.1177/0891988720924720. Epub 2020 May 13. PMID: 32400266.
28. Mosley PE, Velakoulis D, Farrand S, **Marsh R**, Mohan A, Castle D, Sachdev PS. Deep brain stimulation for treatment-refractory obsessive-compulsive disorder should be an accepted therapy in Australia. *Aust N Z J Psychiatry*. 2021 Jul 15:48674211031482. doi: 10.1177/00048674211031482. Epub ahead of print. PMID: 34263654.
29. Mosley PE, Windels F, Morris J, Coyne T, **Marsh R**, Giorni A, Mohan A, Sachdev P, O'Leary E, Boschen M, Sah P, Silburn PA. A randomised, double-blind, sham-controlled trial of deep brain stimulation of the bed nucleus of the stria terminalis for treatment-resistant obsessive-compulsive disorder. *Transl Psychiatry*. 2021 Mar 29;11(1):190. doi: 10.1038/s41398-021-01307-9. PMID: 33782383; PMCID: PMC8007749.

Journal Articles (RBWH staff in bold)

30. Fitzgerald PB, Gill S, Breakspear M, Kulkarni J, Chen L, Pridmore S, **Purushothaman S**, Galletly C, Clarke P, Ng F, Hussain S, Chamoli S, Csizmadia T, Tolan P, Cocchi L, Ibrahim Oam S, Shankar K, Sarma S, Lau M, Loo C, Yadav T, Hoy KE. Revisiting the effectiveness of repetitive transcranial magnetic stimulation treatment in depression, again. *Aust N Z J Psychiatry*. 2021 Dec 30;48674211068788. doi: 10.1177/00048674211068788. Epub ahead of print. PMID: 34969310.
31. **Burgher B**, Whybird G, Koussis N, Scott JG, Cocchi L, Breakspear M. Sub-optimal modulation of gain by the cognitive control system in young adults with early psychosis. *Transl Psychiatry*. 2021 Oct 27;11(1):549. doi: 10.1038/s41398-021-01673-4. PMID: 34707092; PMCID: PMC8551269.
32. **Simpson-Page E**, Hamlett L, Lew D, Stephens H, **Wilks R**, **Kairn T**, **Crowe SB**. 3D printed brachytherapy jig for Reference Air Kerma Rate calibration. *Phys Eng Sci Med*. 2021 Dec;44(4):1141-1150. doi: 10.1007/s13246-021-01050-x. Epub 2021 Aug 30. PMID: 34460090.
33. Stein A, Iyer KK, Khetani AM, Barlow KM. Changes in working memory-related cortical responses following pediatric mild traumatic brain injury: A longitudinal fMRI study. *Journal of Concussion*. 2021 Apr;5:20597002211006541.
34. Barlow, Karen M. (2021). *Post-traumatic headache: an unmet medical need*. *Headache: The Journal of Head and Face Pain*, 61 (10), 1465-1466. doi: 10.1111/head.14241
35. Ly, Anh, Zemek, Roger, Wright, Bruce, Zwicker, Jennifer, Schneider, Kathryn, Mikrogianakis, Angelo, Conradi, Alf, Johnson, David, Clark, Brenda, Barlow, Karen, Burey, Joseph, Kolstad, Ash and Yeates, Keith Owen (2021). "What is the actual goal of the pathway?": examining emergency department physician and nurse perspectives on the implementation of a pediatric concussion pathway using the theoretical domains framework. *BMC Health Services Research*, 21 (1) 119, 119. doi: 10.1186/s12913-021-06110-2
36. Barlow, Karen M., Iyer, Kartik, Yan, Tingting, Scurfield, Alex, Carlson, Helen and Wang, Yang (2021). *Cerebral blood flow predicts recovery in children with persistent post-concussion symptoms after mild traumatic brain injury*. *Journal of Neurotrauma*, 38 (16), 2275-2283. doi: 10.1089/neu.2020.7566
37. Enticott, Peter G, Barlow, Karen, Guastella, Adam J, Licari, Melissa K, Rogasch, Nigel C, Middeldorp, Christel M, Clark, Scott R, Vallence, Ann-Maree, Boulton, Kelsie A, Hickie, Ian B, Whitehouse, Andrew J O, Galletly, Cherrie, Alvares, Gail A, Fujiyama, Hakuei, Heussler, Helen, Craig, Jeffrey M, Kirkovski, Melissa, Mills, Natalie T, Rinehart, Nicole J, Donaldson, Peter H, Ford, Talitha C, Caeyenberghs, Karen, Albein-Urios, Natalia, Bekkali, Soukayna and Fitzgerald, Paul B (2021). *Repetitive transcranial magnetic stimulation (rTMS) in autism spectrum disorder: protocol for a multicentre randomised controlled clinical trial*. *BMJ Open*, 11 (7) e046830, 1-9. doi: 10.1136/bmjopen-2020-046830
38. Babl, Franz E, Tavender, Emma, Ballard, Dustin W, Borland, Meredith L, Oakley, Ed, Cotterell, Elizabeth, Halkidis, Lambros, Goergen, Stacy, Davis, Gavin A, Perry, David, Anderson, Vicki, Barlow, Karen M, Barnett, Peter, Bennetts, Scott, Bhamjee, Roisin, Cole, Joanne, Craven, John, Haskell, Libby, Lawton, Ben, Lithgow, Anna, Mullen, Glenda, O'Brien, Sharon, Paproth, Michelle, Wilson, Catherine L, Ring, Jenny, Wilson, Agnes, Leo, Grace SY and Dalziel, Stuart R (2021). *Australian and New Zealand guideline for mild to moderate head injuries in children*. *Emergency Medicine Australasia*, 33 (2), 214-231. doi: 10.1111/1742-6723.13722
39. Schneider, Kathryn J., Nettel-Aguirre, Alberto, Palacios-Derflingher, Luz, Mrazik, Martin, Brooks, Brian L., Woollings, Kaikanani, Blake, Tracy, McKay, Carly, Lebrun, Constance, Barlow, Karen, Taylor, Kirsten, Lemke, Nicole, Meeuwisse, Willem H. and Emery, Carolyn A. (2021). *Concussion burden, recovery, and risk factors in elite youth ice hockey players*. *Clinical Journal of Sport Medicine*, 31 (1), 70-77. doi: 10.1097/JSM.0000000000000673
40. Yang JH, Pourzinal D, Rheinberger T, Copland, D. A., **McMahon, K**, **Byrne, G. J**, Dissanayaka N, *The Attention Network Test in Parkinson's disease: A Systematic Review*. *Cognitive and Behavioural Neurology*, 2022 [Accepted for publication]

Book Chapters (RBWH staff in bold)

1. Stein, A., Iyer, K.K., Barlow, K.M. (2021) "Cerebral Activation of Attention and Working Memory in Traumatic Brain Injury". In: *Neuroscience of Traumatic Brain Injury* (Preedy Ed.). (In press).

Keynote or Plenary Lectures given in 2021

Date	Title
11/ 2021	Invited co-chair Neurodegeneration session ISMRM-ANZ Session, Katie McMahon

2021	DCRC Anxiety and Depression in Dementia Research Network - Inaugural International Symposium (Chair: Nadeeka Dissanayaka)
2021	DCRC Anxiety and Depression in Dementia Research Network - Inaugural International Symposium (Co-Chair Julia Yang)
2021	Australia Dementia Forum (ADF) 2021 (Chair: Nadeeka Dissanayaka)
2021	Australia Dementia Forum (ADF) 2021 (Co-Chair Julia Yang)

Jamieson Trauma Institute

In 2021 the Jamieson Trauma Institute greatly expanded, and projects developed, partnerships increased in number and commitment, and outputs multiplied. Our vision for future trauma healthcare from emergency, hospital and recovery was outlined in a video that illustrated how the best possible care could be provided to patients using innovation, data visualisation, remote robotics, biofabrication and virtual care. This video, created in collaboration with QUT Creative Industries, was first shown in February 2021 at the 3rd Jamieson Trauma Institute Annual Showcase Event – ‘Intersections and Opportunities’, officially opened by the Queensland Minister for Health and Ambulance Services, the Hon. Yvette D’Ath.

JTI continued to lead trauma care system improvements. The new multidisciplinary Device-Related InFection Team (mDRIFT) ward and associated research program, aimed at providing better care to patients with orthopaedic infections, delivered, in the first six months of 2021, 1.5-million-dollar savings and a reduction in patient length of stay of over two days. JTI continued to investigate avenues and advocate for solutions to progress the establishment of a trauma and injury intelligence platform within Queensland Health. Meanwhile, the team curated and analysed significant volumes of injury data and continued to work on three key visualisation projects: the Queensland Injury Atlas, now in development of the beta release, the injury dashboard, which provides a user-friendly interface to injury analytics, and the development of the iTRAQI accessibility/remoteness indicator for traumatic brain injury care in Queensland. The research examining Emergency Department presentations from personal mobility device (ePMD) injuries drove JTI to establish an interagency workgroup to progress safety strategies and positioned JTI as an authority, contacted by state and national media. JTI’s research and recommendations informed the Brisbane’s E-mobility Strategy and various government submissions. JTI commenced a 1-million-dollar successful partnership with CSIRO focused on research in data linkage and interoperability, outcome measurement tools, artificial intelligence in medical imaging and databases, and intelligent connected medical devices. New staffing appointments were made for joint positions with the Department of Transport and Main Roads. The election of Professor Michael Schuetz as Chair of the Australian Orthopaedics Association (AOA) Strategic Research Plan 2022-2024 will ensure that trauma is strongly represented in the national orthopaedics research portfolio.

JTI researchers published 67 peer-reviewed manuscripts, delivered 63 conference presentations and received 12 research grants for a total of 4 million dollars. Of note, JTI and the RBWH Trauma Service, in collaboration with the Australian Centre for Health Services Innovation (AusHSI) at QUT, obtained a Metro North Collaborative Research Grant to examine the benefits of the new dedicated trauma ward at RBWH. Seventeen UQ Medicine students and several UQ and QUT undergraduate students from diverse disciplines participated in research projects under the supervision of JTI researchers and clinicians. JTI awarded funding to four external projects, three as part of the Mental Health after Trauma grant program and one as part of the JTI Research Advisory Committee grants. We are committed to using this funding for the benefit of trauma patients and the health of all Queenslanders.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Frances Williamson	Best medical oral paper	Trauma 2021 - Australasian Trauma Society Conference
Andrew McKinlay	Best non-medical oral paper	Trauma 2021 - Australasian Trauma Society Conference
Claire Bertenshaw	Highly commended poster award	Trauma 2021 - Australasian Trauma Society Conference
Jacelle Warren	Third prize for oral presentation	QUT School of Public Health and Social Work HDR Conference
Andrew Foster	Best Registrar Paper	Australian Orthopaedic Association Annual Scientific Meeting
Andrew Foster	Best Paper	Redcliffe Hospital Research Symposium 2021
Samuel Smith	Queensland's Lead Nomination	Confederation of Postgraduate Medical Education Councils Australia and New Zealand

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Fatima Nasrallah, David Reutens, Shekhar Chandra, James Walsham, Trevor Russell, Sandeep Bhuta, Jason Ross, Craig Winter , Siva Senthuran, Judith Bellapart , ..., Cliff Pollard , Jacelle Warren , Victoria McCreanor	Intensive Care, Neurosurgery, Jamieson Trauma Institute	PREDICT-TBI - PREdiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury: the value of Magnetic Resonance Imaging	Medical Research Future Fund Traumatic Brain Injury Mission 2020	\$1,765,000	3yrs, 2020-2023
Cate Cameron , Robert Eley, Kerrienne Watt, Michael Rudd , Michael Handy , Roisin O'Neill	Jamieson Trauma Institute, Trauma Service	P.A.R.T.Y. (Prevent Alcohol and Risk-Related Trauma in Youth) Program	BDHP Trauma, Critical Care and Recovery 2020 Theme Funding	\$4,788	1yr, 2020- 2021
Michael Schuetz , David Paterson, David Hansen, Victoria McCreanor , Andrej Trampuz, Andrew Foster	Jamieson Trauma Institute	Artificial intelligence-assisted medical consultation portal for orthopaedic device-related infection	BDHP Trauma, Critical Care and Recovery 2020 Theme Funding	\$8,600	1yr, 2020-2021
Chiara Santomauro, Mia McLanders, Cliff Pollard , Drew Rae, Penelope Sanderson	Clinical Skills Development Service, Jamieson Trauma Institute	Improving emergency trauma care for rural, regional and remote Queenslanders	Advance Qld Industry Research Fellowship	\$180,000	3yr, 2020-2023
Moe Thandar Wynn, Arthur ter Hofstede, Robert Andrews, Kirsten Vallmuur , Emma Bosley, Stephen Rashford, Clinton Gibbs, Michael Schuetz , Martin Wullschleger	Jamieson Trauma Institute	Road Trauma: Modelling the Patient Journey from Pre-hospital Triage to Outcome Using Process Mining	Motor Accident Insurance Commission	\$325,790	3yr, 2020-2023
Laurent Frossard, Michael Schuetz , Christian Langton, David Lloyd, Rod Barrett, Pei Huang, Ross Powrie	Jamieson Trauma Institute	Innovative In-Vivo Kinetic System to Facilitate Rehabilitation and Maintenance Residuum Health After Limb Loss	Department of Defense Medical Research and Development Program RESTORE awards	US\$900K = AU\$1,2M	2yr, 2020-2022

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Michael Schuetz , Prasad Yarlagadda, Kaushik Chatterjee, Dietmar Hutmacher, Kirsten Spann, YuanTong Gu, Alka Jagessar, Amit Singh, Krispin Hajkiewicz , Suryasarathi Bose, Asha Mathew	Jamieson Trauma Institute, Infectious Diseases	Nanoscale manufacturing platform to combat pandemics like COVID-19	Australia-India Strategic Research Fund Round 13 COVID19 Collaborative Research Projects	\$577,130	1yr, 2021-2022
Kirsten Vallmuur , Catherine Niven	Jamieson Trauma Institute	Developing the evidence base to inform consumer product safety regulatory responses	QUT Edge Scheme	\$116,962	1yr, 2021-2021
Trevor Gervais , Paul McEniery , Michael Schuetz , Nyoman Kurniawan, Katie McMahon, Michael O'Sullivan , Jin Jin, Silvia Manzanero	Orthopaedics, Herston Imaging Research Facility, Jamieson Trauma Institute	Use of advanced magnetic resonance imaging to diagnose brachial plexus injuries and inform surgical intervention	HIRF Project Support Scheme 2020	In kind scans (approx. \$14,000)	1yr, 2021-2021
Mark Daniel, Gavin Turrell, S Suzanne Carroll, Margaret Cargo, K Shuvo Bakar, Luis Salvador-Carulla, A Taylor, Yogi Vidyattama, Nasser Bagheri, Susanna Cramb	Jamieson Trauma Institute	Novel modelling to improve decision-making for neighbourhood design to reduce chronic disease risk	NHMRC Ideas grant	\$901,564	4yrs, 2021-2025
Andrew Foster , Michael Schuetz David Paterson, Paul Chapman , Anjali Jaiprakash Kelvin Tetsworth , Ross Crawford, Jacelle Warren	Jamieson Trauma Institute, Orthopaedics, Infectious Diseases	Antibiotic coated rods: a 15-year experience of Indications, Surgical Techniques and Clinical Outcomes	Queensland Orthopaedic Research Fund Grant 2021	\$1,000	1yr, 2021- 2022

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Melinda Fitzgerald, Belinda Gabbe, Natasha Lannin, Kirsten Vallmuur , Kate Curtis, James Harrison, Jesse Young, David Menon, Jennifer Cullen, Elizabeth Armstrong, Sandra Eades, Peter Cameron, Jamie Cooper, Mark Fitzgerald, Zsolt Balogh, Daniel Fatovich, Stephen Honeybul, Rosalind Jeffree, Robert McNamara, Gary Mitchell , Anthony Delaney, Michael Reade , ..., Fatima Nasrallah, Sandy Shultz, Sarah Hellewell	Jamieson Trauma Institute, Emergency and Trauma Centre	An informatics approach to predict outcomes and monitor intervention efficacy following moderate to severe traumatic brain injury	MRFF 2020 Traumatic Brain Injury Mission - Stream 1	\$499,816	2yrs, 2021-2023
Fatima Nasrallah, Cliff Pollard , Craig Winter , Dylan Flaws , Esther Jacobson , Gary Mitchell , Jacelle Warren , Judith Bellapart , Katie McMahon, Maria Hennessy, Mark Midwinter, Michael O'Sullivan , Michael Reade , Michael Redmond , Michael Schuetz , Nathan Brown , Patrick Donnelly, Paul Thomas, Rachael Brown , Silvia Manzanero , Trevor Russell, Victoria McCreanor	Jamieson Trauma Institute, Neurosurgery, Mental Health, Emergency and Trauma Centre, Intensive Care, Neurology	PREDICT-TBI - PREdiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury: the value of Magnetic Resonance Imaging	Motor Accident Insurance Commission	\$1,490,687	3yrs, 2021-2024

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Marie-Luise Wille, Dietmar Hutmacher, Sinduja Suresh, Mohit Chhaya, Navid Khani, Markus Laubach, Boris Holzapfel, Michael Wagels, Paige Little, Beat Schmutz, Michael Schuetz	Jamieson Trauma Institute	An Innovative 3D Printed Patient-Specific Bone Scaffold Design for the Treatment of Large Volume Bone Defects	Clive & Vera Ramaciotti Foundation & QUT	Clive & Vera Ramaciotti Foundation \$100,000 & QUT \$30,000	3yrs, 2021-2024
Victoria McCreanor, Kirsten Vallmuur, Geoffrey Binge, Emma Bosley, Kerriane Watt, M Allen, Susanna Cramb, Shannon Dias, Genevieve Westacott	Jamieson Trauma Institute	Research co-production with First Nations Australians: informing emergency and injury-related health services research with Aboriginal and Torres Strait Islander perspectives: Phase 1	Centre for Healthcare Transformation Grant Enabling Scheme 2021	\$15,409.95	1yrs, 2021-2022
Susanna Cramb, Alan Woodley, Jacelle Warren, Kirsten Vallmuur, Clinton Gibbs	Jamieson Trauma Institute	Impact of location on access to trauma care and rehabilitation services: Developing an Accessibility/Remoteness Index for traumatic brain injury in Queensland	ACEMS Sprint Funding	\$19,480	1yrs, 2021-2021
Susanna Cramb, Alan Woodley, Jacelle Warren, Kirsten Vallmuur, Clinton Gibbs	Jamieson Trauma Institute	Impact of location on access to trauma care and rehabilitation services: Developing an Accessibility/Remoteness Index for traumatic brain injury in Queensland	ARC Centre of Excellence for Mathematical & Statistical Frontiers (ACEMS) Sprint Funding	\$18,263	1yrs, 2021-2022
Susanna Cramb	Jamieson Trauma Institute	PLACE (Prioritising Location-based Analysis and Consumer Engagement) for Change	NHMRC Emerging Leadership 1 Investigator Award	\$575,740	4yrs, 2022-2026
Frances Williamson, Zephania Tyack, Victoria McCreanor, Martin Wullschleger, Jacelle Warren, Michael Handy, Steven McPhail	Trauma Service, Jamieson Trauma Institute	Value-based trauma care: understanding the cost, effect and implementation of an innovative specialist-led multidisciplinary trauma admitting service	Metro North Health Collaborative Research Grants	\$49,913.54	2yrs, 2021-2023

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 RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Kirsten Vallmuur	Matthew Hope, Ben Beck, Victoria McCreanor , Gary Mitchell , Rob Eley, Shefta Huda, Cate Cameron , Jacelle Warren	Personal mobility device injuries: observational study using data from Brisbane	0	Data from 1,500 admissions to RBWH, PAH and Mater
Cate Cameron	Jacobus Ungerer, Kirsten Vallmuur , Jacelle Warren , Victoria McCreanor , Cliff Pollard , Michael Schuetz , Tegwen Howell, Gary Mitchell	PACE - Alcohol and injury: Prevalence study at RBWH ED.	1160	1160
Cate Cameron	Bill Loveday, Kirsten Vallmuur , Victoria McCreanor , Melanie Proper, Jacelle Warren , Cliff Pollard , Nick Graves	CODI - Prevalence and patterns of opioid use pre- and post-trauma in Queensland: population-based data linkage study	0	Data from over 600,000 admissions statewide
Cate Cameron	Matthew Hope, Victoria McCreanor , Jacelle Warren , Kirsten Vallmuur , Kevin Tetsworth , Cliff Pollard	The burden and cost of pelvic and lower extremity orthopaedic injuries from land transport crashes in Queensland	0	Data from 27,303 admitted patient episodes statewide
Cate Cameron	Jacelle Warren , Michael Muller , Michael Rudd	Epidemiology of burns patients admitted to the state-wide Adults Burns Service in Queensland: A 10year review	0	6,554 patients included on the RBWH Burns Registry 2000 – 2020
Kirsten Vallmuur	Angela Watson, Paul Taylor, Victoria McCreanor , Cate Cameron , Jacelle Warren	An examination of the quality of injury data and patterns, trends and burden of injury for informing establishment of a statewide trauma data warehouse	0	595,604 admitted patient episodes of acute care statewide
Kirsten Vallmuur	Angela Watson, Chris Uber, Belinda Gabbe, James Harrison, Son Ngheim, Cate Cameron , Jacelle Warren , Victoria McCreanor	Evaluation of ICD-10-AM based injury severity estimation models	0	92,140 admitted patient acute care episodes statewide – matched the Queensland Trauma Registry data
Kirsten Vallmuur	Angela Watson, Paul Taylor, Michael Clacher, Sebastian Bielen, Andrew Currie, Cate Cameron , Jacelle Warren , Victoria McCreanor	Feasibility, requirements, and value of data linkage of motor vehicle accident compensation, workers compensation and health data in Queensland	0	Data from over 1 million records
Cate Cameron	Maura Desmond, Michael Rudd , Cliff Pollard , Kerriane Watt	A retrospective analysis of data collected from the P.A.R.T.Y. (Prevent Alcohol and Risk-Related Trauma in Youth) program 2010-2018	0	Data from 11,773 students completing the program statewide
Panos Barlas	Michael Schuetz , Venerina Johnston, Christopher Smith , Jerry van de Pol , Melanie Plinsinga, Richard Hanly , Silvia Manzanero , Victoria McCreanor , Peter Slattery , Esther Jacobson	SMART-Ankle: Streamlining Management And Rehabilitation with Technology for Ankle fractures	0	0

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Kirsten Vallmuur	Jesani Catchpoole, Goshad Nand, Michelle Hillcoat, Ruth Barker , Gaurav Nanda, Mark Lehto	Machine learning classifier development using ED triage text	n.a.	Methodological study – does not involve patient recruitment
Kirsten Vallmuur	Jacelle Warren, Jesani Catchpoole , Donna Truran, Ming Zhang, Michael Lawley,	SNOMED-ICD interoperability and mapping project	n.a.	Methodological study – does not involve patient recruitment
Helena Franco	Michael Schuetz, Frances Williamson	The use of analgesia between operative and conservative management of clavicle fractures in trauma patients with associated ipsilateral rib fractures	62	62
Beat Schmutz	Marie-Luise Wille, Paige Little, Buddhi Herath	Best work practise for the manufacturing of patient specific 3D printed scaffolds (for critical size bone defects) – Improved workflow with open source software.	n.a.	Use of data from existing databases – does not involve patient recruitment
Shahera Banu	Jacelle Warren, Cate Cameron, Victoria McCreanor, Cliff Pollard, Kirsten Vallmuur	Penetrating injury related hospitalisation and patient outcome in Queensland over a 5-year period	0	37,491 episodes of care (31,223 distinct patients statewide)
Beat Schmutz	Tri Phan, Kevin Tetsworth	Variation in femoral morphology and its effects on implant design and implant fit in Asian populations	n.a.	Use of data from existing databases – does not involve patient recruitment
Kirsten Vallmuur	Susanna Cramb, Victoria McCreanor , Thom Saunders, Michael Schuetz	Developing the Queensland Injury Atlas: An interactive platform for clinical and policy decision making	0	595,604 admitted patient episodes of acute care state-wide linked to hospital costs
Beat Schmutz	Nicole Milham, Thomas Cooper, Edward Hsu, Anthony Lynham , Dietmar Hutmacher	Differences in orbital volumes generated from MRI-based 3D models of the fractured bony orbit with a virtually positioned pre-bent fan plate in situ compared to CT based models	0	Use of data from existing databases – does not involve patient recruitment
Beat Schmutz	Hiro Minehara, Chun Yuen, Yohan Schmutz-Leong, Aaron Kurti, Michael Schuetz	Location of tibial nail entry point relative to patellar tendon with patellar centring knee alignment	0	Use of data from existing databases – does not involve patient recruitment
Beat Schmutz	Husain Tabassum, Paige Little, Andrew Fielding, Andreas Petersik, Heiko Gottschling, Manuel Schroeder	Virtual Automated Anatomical 3D Alignment of Bone Fragments – Solving the Fracture Puzzle	0	Use of data from existing databases – does not involve patient recruitment

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Beat Schmutz	Michael Schuetz , Yousef Rabi	Patient-Specific Pelvic and Acetabular Fracture Classification using Artificial Intelligence	0	Use of data from existing databases – does not involve patient recruitment
Beat Schmutz	Marco Zucchet, Cristiano Pizzamiglio	Femur Morphometric Analysis	n.a.	Use of data from existing databases – does not involve patient recruitment
Susanna Cramb	Alan Woodley, Jacelle Warren , Kirsten Vallmuur , Clinton Gibbs	Impact of location on access to trauma care and rehabilitation services: Developing an Accessibility/Remoteness Index for traumatic brain injury in Queensland	n.a.	Methodological study – does not involve patient recruitment
Michael Schuetz	Prasad Yarlagadda, Kirsten Spann, Jason Roberts , Alka Jaggessar, Phong Tran, Adam Irwin, Silvia Manzanero , Esther Jacobson	Nanoscale manufacturing platform to combat pandemics like COVID-19	n.a.	Not human research – does not involve patient recruitment
Beat Schmutz	Michael Schuetz , Yusef Rabi	Patient-Specific Pelvic and Acetabular Fracture Classification using Artificial Intelligence	n.a.	Methodological study – does not involve patient recruitment
Beat Schmutz	Marco Zucchet, Chiara Pizzamiglio	Femur Morphometric Analysis	n.a.	Methodological study – does not involve patient recruitment
Frances Williamson	Victoria McCreanor , Zephania Tyack, Martin Wullschleger , Jacelle Warren , Michael Handy , Steven McPhail	Value-based trauma care: understanding the cost, effect and implementation of an innovative specialist-led multidisciplinary trauma admitting service	0	0
Ashish Wadhawan	Michael Schuetz , Kevin Tetworth , Beat Schmutz , Pierrick Bourgeat, Jurgen Fripp	Development of an Artificial Intelligence screening system to identify patients requiring a CT scan following distal radius fractures	0	525 x-rays from RBWH patients
Genevieve Westacott	Panos Barlas , Beat Schmutz , Michael Schuetz , Marlien Varnfield, Christian Redd , David Silvera	Intelligent Connected Medical Devices	n.a.	Methodological study – does not involve patient recruitment

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 RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Deborah Theodoros, Louise Cahill	Jacelle Warren, Cate Cameron, Kirsten Vallmuur	Distribution and type of inpatient allied health services provided to patients following road traffic crashes across Queensland	0	Data from 8,721 patients statewide
Craig Winter , Fatima Nasrallah	Stephen Rose, Alan Coulthard , Geoff Osborne, Paul Nichols, Naomi Wray, Anjali Henders, Leanne Wallace, Megan Campbell, Jason Ross, Warwick Locke, Amelia Livermore , Therese Starr , Melissa Lassig-Smith , Janine Stuart , Cheryl Fourie , Judith Bellapart , Patrick Donnelly , Timothy Whyte , Javier Urriola, Paul Thomas , Cliff Pollard , Katie McMahon, Gary Mitchell , Eduardo Miguel Apellaniz, Liam MacLachlan , Dana Bradford	An MRI approach to investigate blood-brain barrier dysfunction in TBI and SAH patients as a predictor of patient outcome	10	40
Gary Mitchell	Cliff Pollard , Fatima Nasrallah, Michael O'Sullivan , Jason Ross, Louise Cullen , Jack Taylor , Nathan Brown , Warwick Locke – Project funded by JTI	The sensitivity and specificity of brain-origin circulating cell free DNA (ccfDNA) for the diagnosis of concussion and prediction of intracranial injuries	0	154
Christopher Futter	Alvin Obed , Paul Schlosser, Penelope Sanderson, Christine Woods, Kerstin Wyssusek – Project funded by JTI	The use of Head-Mounted Displays (HMDs) to detect patient deterioration in a simulated trauma setting	0	0
Elizabeth Vujcich	Jason Brown , Michelle Donovan , Noah Betar – Project funded by JTI	ELATE - Early versus Late Ablative CO2 Fractional Laser Treatment Evaluation	8	11
Andrea Mc Kittrick	Michelle Donovan , Amber Jones , Jason Brown , Elizabeth Vujcich , Sue Laracy , Jennifer Strong – Project funded by JTI	ELEVATE – Feasibility, acceptability and safety of vacuum therapy on burn scar outcomes	11	14
Christopher Futter	George Pang , Mark Trembath , Kerstin Wyssusek , Christine Woods – Project funded by JTI	3D Printed Thoracic Epidural Trainer and a novel approach to ultrasound guided epidural insertion	0	0
Fatima Nasrallah	David Reutens, Shekhar Chandra, James Walsham, Trevor Russell, Sandeep Bhuta, Jason Ross, Craig Winter , Siva Senthuran, Judith Bellapart , ..., Cliff Pollard , Jacelle Warren , Victoria McCreanor	PREDICT-TBI: PREdiction and Diagnosis using Imaging and Clinical biomarkers Trial in Traumatic Brain Injury	24	24
Frances Williamson	Cate Cameron , Jacelle Warren	Rib fractures in blunt chest trauma: factors including the use of regional analgesia and the presence of shoulder girdle injuries that influence daily opiate use	0	Data from 85 RBWH trauma patients

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Luke Visscher	Anjali Prakash, Ross Crawford, Michael Schuetz, Beat Schmutz	Can statistical shape modelling of population variation in bony anatomy be used to improve orthopaedic surgery outcomes in terms of implant design and surgical planning compared to the standard	n.a.	Use of data from existing databases – does not involve patient recruitment
Jennifer Paratz	Cate Cameron, Jacelle Warren	Incidence and cause of mortality in burns survivors	0	Data from 4,134 RBWH Burns patients
Ruth Barker	Jesani Catchpoole	Button Battery Monitoring & Injury Prevention Activities	n.a.	Use of data from existing databases – does not involve patient recruitment
Ruth Barker	Jesani Catchpoole	Magnets monitoring & injury prevention activities	n.a.	Use of data from existing databases – does not involve patient recruitment
Ruth Barker	Michelle Hillcoat, Jesani Catchpoole	Cherbourg Suicide Prevention Project	n.a.	Use of data from existing databases – does not involve patient recruitment
Ruth Barker	Jesani Catchpoole, David Eager, Lisa Sharwood	A longitudinal study of domestic trampoline-related injuries	n.a.	Use of data from existing databases – does not involve patient recruitment
Martha Druery	Cate Cameron, Jacelle Warren , Michael Waller, Danielle Ford	Factors affecting psychosocial and physical outcomes after major burn injuries in adults	Data from 274 patients from the Professor Stuart Pegg Adult Burns Centre	Data from 274 patients from the Professor Stuart Pegg Adult Burns Centre
Moe Thandar Wynn	Arthur ter Hofstede, Robert Andrews, Kirsten Vallmuur , Emma Bosley, Stephen Rashford, Clinton Gibbs, Michael Schuetz, Martin Wullschlegel	Road Trauma: Modelling the Patient Journey from Pre-hospital Triage to Outcome Using Process Mining	n.a.	Use of data from existing databases – does not involve patient recruitment
Belinda Dow	Justin Kenardy, Debbie Long, Grace Scott, Alexandra De Young	Feasibility of an early intervention to prevent persistent traumatic stress reactions in young children admitted to intensive care	n.a.	Recruitment at QCH
Bronwyn Griffin	Alexandra De Young, Roy Kimble, Kate Trenowth	Co-design and implementation pilot of a post trauma electronic paediatric psychosocial screen	n.a.	Recruitment at QCH

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Nicole Brigg	Dylan Flaws, Vivienne Tippet	UR-TOPIC Understanding Recovery and Tracking Outcomes of Post Intensive Care	0	0
Dylan Flaws	Adrian Barnett, John Fraser, Jiville Latu, Mahesh Ramanan, Alexis Tabah, Vivienne Tippet, Oystein Tronstad, Sue Patterson	Tracking Outcomes Post Intensive Care (TOPIC)	170 patients across Metro North hospitals	170 patients across Metro North hospitals

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 RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Victoria McCreanor	Kirsten Vallmuur, Geoffrey Binge, Emma Bosley, Kerriane Watt, M Allen, Susanna Cramb , Shannon Dias , Genevieve Westacott	Research co-production with First Nations Australians: informing emergency and injury-related health services research with Aboriginal and Torres Strait Islander perspectives: Phase 1	0	0

Research Publications

Publications in 2021

Journal Articles (RBWH staff in bold)

- Agyeman AA, Rogers KE, Tait JR, Bergen PJ, Kirkpatrick CM, Wallis SC, Bulitta JB, Paterson DL, Lipman J, Nation RL, Roberts JA, Landersdorfer CB. Evaluation of Meropenem-Ciprofloxacin Combination Dosage Regimens for the Pharmacokinetics of Critically Ill Patients With Augmented Renal Clearance. Clin Pharmacol Ther. 2021;109(4):1104-15. <https://doi.org/10.1002/cpt.2191>
- Andrews R, Wynn MT, **Vallmuur K**, Elcock M, Rashford S, Bosley E, ter Hofstede AH. Trauma by-pass guideline: A data-driven conformance analysis for road trauma cases in Queensland. Emerg Med Australas. 2021. <https://doi.org/10.1111/1742-6723.13807>
- Barker R**. Button Batteries, Convenience at a Cost. J Pediatr Gastroenterol Nutr. 2021;73(1):2-3. <https://doi.org/10.1097/mpg.00000000000003160>
- Beraldi-Magalhaes F, Parker SL, Sanches C, Sousa Garcia L, Souza Carvalho BK, Fachi MM, de Liz MV, Pontarolo R, **Lipman J**, Cordeiro-Santos M, Roberts JA. Is Dosing of Ethambutol as Part of a Fixed-Dose Combination Product Optimal for Mechanically Ventilated ICU Patients with Tuberculosis? A Population Pharmacokinetic Study. Antibiotics (Basel). 2021;10(12):1559. <https://doi.org/10.3390/antibiotics10121559>
- Bitton E, Zimmerman S, Azevedo LCP, Benhamou D, Cecconi M, De Waele JJ, **Lipman J**, Martin-Loeches I, Pirracchio R, Scheeren TWL, Leone M, Einav S. An international survey of adherence to Surviving Sepsis Campaign Guidelines 2016 regarding fluid resuscitation and vasopressors in the initial management of septic shock. J Crit Care. 2021. <https://doi.org/10.1016/j.jcrc.2021.11.016>
- Boot W, Schmid T, D'Este M, Guillaume O, **Foster A**, Decosterd L, Richards RG, Eglin D, Zeiter S, Moriarty TF. A Hyaluronic Acid Hydrogel Loaded with Gentamicin and Vancomycin Successfully Eradicates Chronic Methicillin-Resistant Staphylococcus aureus Orthopedic Infection in a Sheep Model. Antimicrob Agents Chemother. 2021;65(4). <https://doi.org/10.1128/AAC.01840-20>
- Buschbaum J, Freitag L, Slongo TF, Zeiter S, **Schütz M**, Windolf M. Growth modulation of angular deformities with a novel constant force implant concept-preclinical results. J Child Orthop. 2021;15(2):137-48. <https://doi.org/10.1302/1863-2548.15.200218>

Journal Articles (RBWH staff in bold)

8. **Cameron CM**, Eley R, Judge C, Neill R, Handy M. Did attending P.A.R.T.Y. change youth perceptions? Results from 148 Queensland schools participating in the Prevent Alcohol and Risk-Related Trauma in Youth Program, 2018–2019. *Injury Prevention*. 2021;injuryprev-2021-044222. <https://doi.org/10.1136/injuryprev-2021-044222>

9. Dodd KW, Zvosec DL, Hart MA, Glass G, 3rd, Bannister LE, Body RM, Boggust BA, Brady WJ, Chang AM, Cullen L, Gómez-Vicente R, Huis In 't Veld MA, Karim RM, Meyers HP, 3rd, Miranda DF, **Mitchell GJ**, Reynard C, Rice C, Salverda BJ, Stellpflug SJ, Tolia VM, Walsh BM, White JL, Smith SW. Electrocardiographic Diagnosis of Acute Coronary Occlusion Myocardial Infarction in Ventricular Paced Rhythm Using the Modified Sgarbossa Criteria. *Ann Emerg Med*. 2021;78(4):517-29. <https://doi.org/10.1016/j.annemergmed.2021.03.036>

10. Epari DR, Gurung R, Hofmann-Fliri L, Schwyn R, **Schuetz M**, Windolf M. Biphasic plating improves the mechanical performance of locked plating for distal femur fractures. *J Biomechanics*. 2021;115:110192. <https://doi.org/10.1016/j.jbiomech.2020.110192>

11. Farkas A, Oikonomou K, Ghanbar M, Villasurda P, Varghese J, **Lipman J**, Sassine J, Ranganathan D, **Roberts JA**. Population pharmacokinetics of intra-peritoneal gentamicin and the impact of varying dwell times on pharmacodynamic target attainment in patients with acute peritonitis undergoing peritoneal dialysis. *Antimicrob Agents Chemother*. 2021;AAC0167921. <https://doi.org/10.1128/AAC.01679-21>

12. **Foster AL**, Boot W, Stenger V, D'Este M, Jaiprakash A, Eglin D, Zeiter S, Richards RG, Moriarty TF. Single-stage revision of MRSA orthopedic device-related infection in sheep with an antibiotic-loaded hydrogel. *J Orthop Res*. 2021;39(2):438-48. <https://doi.org/10.1002/jor.24949>

13. **Foster AL**, Cutbush K, Ezure Y, **Schuetz MA**, Crawford R, Paterson DL. Cutibacterium acnes in shoulder surgery: a scoping review of strategies for prevention, diagnosis, and treatment. *J Shoulder Elbow Surg*. 2021;30(6):1410-22. <https://doi.org/10.1016/j.jse.2020.11.011>

14. **Foster AL**, Moriarty TF, Zalavras C, Morgenstern M, Jaiprakash A, Crawford R, Burch MA, Boot W, Tetsworth K, Miclau T, Ochsner P, **Schuetz MA**, Richards RG, Metsemakers WJ. The influence of biomechanical stability on bone healing and fracture-related infection: the legacy of Stephan Perren. *Injury*. 2021;52(1):43-52. <https://doi.org/10.1016/j.injury.2020.06.044>

15. Garbez N, Mbatchi L, Wallis SC, Muller L, **Lipman J**, Roberts JA, Lefrant JY, Roger C. Prospective Cohort Study of Micafungin Population Pharmacokinetic Analysis in Plasma and Peritoneal Fluid in Septic Patients with Intra-abdominal Infections. *Antimicrob Agents Chemother*. 2021;65(7):e0230720. <https://doi.org/10.1128/aac.02307-20>

16. Garbez N, Mbatchi LC, Maseda E, Luque S, Grau S, Wallis SC, Muller L, **Lipman J**, Roberts JA, Lefrant JY, Roger C. A Loading Micafungin Dose in Critically Ill Patients Undergoing Continuous Veno-Venous Hemofiltration or Continuous Veno-Venous Hemodiafiltration: A Population Pharmacokinetic Analysis. *Ther Drug Monit*. 2021. <https://doi.org/10.1097/ftd.0000000000000874>

17. Groarke P, Jagernauth S, Peters SE, **Manzanero S**, O'Connell P, Cowderoy G, Gilpin D, Hope B, Marchant D, Cutbush K, Andrews S, Duke PF, Ross M. Correlation of magnetic resonance and arthroscopy in the diagnosis of shoulder injury. *ANZ J Surg*. 2021;91(10):2145-2152. <https://doi.org/10.1111/ans.17164>

18. Guerra Valero Y, Dorofaeff T, Parker L, Coulthard MG, Sparkes L, **Lipman J**, Wallis SC, Roberts JA, Parker SL. Microsampling to support pharmacokinetic clinical studies in pediatrics. *Pediatric Research*. 2021. <https://doi.org/10.1038/s41390-021-01586-4>

19. Guerra Valero YC, Dorofaeff T, Roberts JA, **Lipman J**, Coulthard MG, Sparkes L, Wallis SC, Parker SL. Development and validation of a UHPLC-MS/MS method to measure cefotaxime and metabolite desacetylcefotaxime in blood plasma: a pilot study suitable for capillary microsampling in critically ill children. *Anal Bioanal Chem*. 2021;413(17):4483-91. <https://doi.org/10.1007/s00216-021-03411-7>

20. Gullo MJ, Papinczak ZE, Feeney GFX, **Young RM**, Connor JP. Precision Mental Health Care for Cannabis Use Disorder: Utility of a bioSocial Cognitive Theory to Inform Treatment. *Front. Psychiatry*. 2021;12(1010). <https://doi.org/10.3389/fpsy.2021.643107>

21. Heffernan AJ, Curran RA, Denny KJ, Sime FB, Stanford CL, McWhinney B, Ungerer J, Roberts JA, **Lipman J**. Ceftriaxone dosing in patients admitted from the emergency department with sepsis. *Eur J Clin Pharmacol*. 2021;77(2):207-14. <https://doi.org/10.1007/s00228-020-03001-z>

22. Heffernan AJ, Sime FB, Lim SMS, Naicker S, Andrews KT, Ellwood D, **Lipman J**, Grimwood K, Roberts JA. Impact of the Epithelial Lining Fluid Milieu on Amikacin Pharmacodynamics Against *Pseudomonas aeruginosa*. *Drugs R D*. 2021;21(2):203-15. <https://doi.org/10.1007/s40268-021-00344-5>

Journal Articles (RBWH staff in bold)

23. Heffernan AJ, Sime FB, Naicker S, Andrews K, Ellwood D, Guerra-Valero Y, Wallis S, **Lipman J**, Grimwood K, Roberts JA. Pharmacodynamics of once- versus twice-daily dosing of nebulized amikacin in an in vitro Hollow-Fiber Infection Model against 3 clinical isolates of *Pseudomonas aeruginosa*. *Diagn Microbiol Infect Dis*. 2021;100(2):115329. <https://doi.org/10.1016/j.diagmicrobio.2021.115329>

24. Henkel J, Savi FM, Berne A, Fountain S, Saifzadeh S, Steck R, Epari DR, Woodruff MA, Knacksted M, **Schuetz MA**, Hutmacher DW. Scaffold-Guided Bone Regeneration in large volume tibial segmental defects. *Bone*. 2021:116163. <https://doi.org/10.1016/j.bone.2021.116163>

25. **Herath B**, Suresh S, Downing D, Cometta S, Tino R, Castro NJ, Leary M, **Schmutz B**, Wille M-L, Hutmacher DW. Mechanical and geometrical study of 3D printed Voronoi scaffold design for large bone defects. *Mater Des*. 2021;212:110224. <https://doi.org/10.1016/j.matdes.2021.110224>

26. Hides L, Quinn C, Chan G, Cotton S, Pocuca N, Connor JP, Witkiewitz K, Daglish MR, **Young RM**, Stoyanov S. Telephone-based motivational interviewing enhanced with individualised personality-specific coping skills training for young people with alcohol-related injuries and illnesses accessing emergency or rest/recovery services: a randomized controlled trial (QuikFix). *J Addiction*. 2021;116(3):474-84. <https://doi.org/10.1111/add.15146>

27. **Holley A**, Coatsworth N, **Lipman J**. The Australian response to the COVID-19 pandemic: A co-ordinated and effective strategy. *Anaesth Crit Care Pain Med*. 2021;40(2):100859. <https://doi.org/10.1016/j.accpm.2021.100859>

28. **Holley AD**, Dulhunty J, **Udy A**, Midwinter M, Lukin B, **Stuart J**, Boots R, **Lassig-Smith M**, Holley RB, **Paratz J**, **Lipman J**. Early Sequential Microcirculation Assessment In Shocked Patients as a Predictor of Outcome: A Prospective Observational Cohort Study. *Shock*. 2021;55(5):581-6. <https://doi.org/10.1097/shk.0000000000001578>

29. **Holley A**, **Droder B**, **Reade M**, **Lipman J**, Pilcher D, Litton E, Karamujic N, **Laupland K**, **Vallmuur K**, Delaney A, **Cohen J**. The need for an Australasian burns critical care standardised data collection tool. *Crit Care Resusc*. 2021;23(4):361-3. <https://doi.org/10.51893/2021.4.POV>

30. Irwin AD, Coin LJM, Harris PNA, Cotta MO, Bauer MJ, Buckley C, Balch R, Kruger P, Meyer J, Shekar K, Brady K, **Fourie C**, Sharp N, Vlad L, Whiley D, Beatson SA, Forde BM, Paterson D, Clark J, **Hajkowicz K**, Raman S, Bialasiewicz S, **Lipman J**, Schlapbach LJ, **Roberts JA**. Optimising Treatment Outcomes for Children and Adults Through Rapid Genome Sequencing of Sepsis Pathogens. A Study Protocol for a Prospective, Multi-Centre Trial (DIRECT). *Front. Cell. Infect. Microbiol*. 2021;11(502). <https://doi.org/10.3389/fcimb.2021.667680>

31. Jogia T, Lübster T, **Jacobson E**, Scriven E, Atresh S, Nguyen QH, Liebscher T, Schwab JM, Kopp MA, Walsham J, Campbell KE, Ruitenberg MJ. Prognostic value of early leukocyte fluctuations for recovery from traumatic spinal cord injury. *Clin Transl Med*. 2021;11(1):e272. <https://doi.org/10.1002/ctm2.272>

32. Lahr CA, Landgraf M, Wagner F, Cipitria A, Moreno-Jiménez I, Bas O, **Schmutz B**, Meinert C, Mashimo T, Miyasaka Y, Holzapfel BM, Shafiee A, McGovern JA, Hutmacher DW. A humanised rat model reveals ultrastructural differences between bone and mineralised tumour tissue. *Bone*. 2021:116018. <https://doi.org/10.1016/j.bone.2021.116018>

33. Ling L, Joynt GM, **Lipman J**. A narrative review on antimicrobial therapy in septic shock: updates and controversies. *Curr Opin Anaesthesiol*. 2021;34(2):92-8. <https://doi.org/10.1097/aco.0000000000000954>

34. Lonsdale DO, **Lipman J**. Global personalization of antibiotic therapy in critically ill patients. *Expert Rev. Precis. Med. Drug Dev*. 2021;6(2):87-93. <https://doi.org/10.1080/23808993.2021.1874823>

35. **McCreanor V**, Nowbar A, Rajkumar C, Barnett AG, Francis D, Graves N, Boden WE, Weintraub WS, Al-Lamee R, Parsonage WA. Cost-effectiveness analysis of percutaneous coronary intervention for single-vessel coronary artery disease: an economic evaluation of the ORBITA trial. *BMJ Open*. 2021;11(2):e044054. <http://dx.doi.org/10.1136/bmjopen-2020-044054>

36. Meurk C, Wittenhagen L, Lucke J, **Barker R**, Roberts S, Moss K, Waterson E, Heffernan E. Suicidal behaviours in the peripartum period: a systematic scoping review of data linkage studies. *Arch Womens Ment Health*. 2021;24(4):579-93. <https://doi.org/10.1007/s00737-021-01102-x>

37. **Mitchell G**, Taylor J, Jin G, Snelling R. A review of minor traumatic brain injury presentations and their management in Brisbane emergency departments. *J Concussion*. 2021;5:20597002211006551. <https://doi.org/10.1177/20597002211006551>

38. Mitchell RJ, **Cameron CM**, McMaugh A, Lystad RP, Badgery-Parker T, Ryder T. The impact of childhood injury and injury severity on school performance and high school completion in Australia: a matched population-based retrospective cohort study. *BMC Pediatr*. 2021;21(1):426. <https://doi.org/10.1186/s12887-021-02891-x>

Journal Articles (RBWH staff in bold)

39. Mitchell RJ, McMaugh A, Homaira N, Lystad RP, Badgery-Parker T, **Cameron CM**. The impact of childhood asthma on academic performance: A matched population-based cohort study. Clin Exp Allergy. 2021. <https://doi.org/10.1186/s12887-021-02891-x>
40. Mitchell RJ, McMaugh A, Schniering C, **Cameron CM**, Lystad RP, Badgery-Parker T, Nielssen O. Mental disorders and their impact on school performance and high school completion by gender in Australia: A matched population-based cohort study. Aust N Z J Psychiatry. 2021;48674211061684. <https://doi.org/10.1177/00048674211061684>.
41. Niederman MS, Baron RM, Bouadma L, Calandra T, Daneman N, DeWaele J, Kollef MH, **Lipman J**, Nair GB. Initial antimicrobial management of sepsis. Critical Care. 2021;25(1):307. <https://doi.org/10.1186/s13054-021-03736-w>
42. Parker SL, Irwin AD, Hosking F, August D, Schoenmaker B, Pandey S, Wallis SC, **Lipman J**, **Roberts JA**, Davies MW. Microsampling for monitoring gentamicin in neonates. medRxiv. 2021:2021.03.27.21254449. <https://doi.org/10.1101/2021.03.27.21254449>.
43. Parker SL, Pandey S, Sime FB, **Stuart J**, **Lipman J**, **Roberts JA**, Wallis SC. A validated LC-MS/MS method for the simultaneous quantification of the novel combination antibiotic, ceftolozane-tazobactam, in plasma (total and unbound), CSF, urine and renal replacement therapy effluent: application to pilot pharmacokinetic studies. Clin Chem Lab Med. 2021;59(5):921-33. <https://doi.org/10.1515/ccm-2020-1196>.
44. Phan M-D, Peters KM, Fraga LA, Wallis SC, Hancock S, Nhu NTK, Forde B, Bauer MJ, Paterson DL, Beatson SA, **Lipman J**, Schembri MA. Plasmid-mediated ciprofloxacin resistance imparts a selective advantage on Escherichia coli ST131. Antimicrob Agents Chemother. 2021;0(ja):AAC.02146-21. <https://doi.org/10.1128/AAC.02146-21>
45. Raciti M, Badejo FA, Previte J, **Schuetz M**. Commentary: The moral limits of service markets – just because we can, should we? J Serv Mark. 2021; published ahead-of-print. <https://doi.org/10.1108/JSM-06-2021-0212>.
46. Raj N, & **Brown J**. (2021). An EEMD-BiLSTM Algorithm Integrated with Boruta Random Forest Optimiser for Significant Wave Height Forecasting along Coastal Areas of Queensland, Australia. Remote Sens. 13(8), 1456. <https://doi.org/10.3390/rs13081456>.
47. Roberts LW, Forde BM, Hurst T, Ling W, Nimmo GR, Bergh H, George N, **Hajkowicz K**, McNamara JF, **Lipman J**, Permana B, Schembri MA, Paterson D, Beatson SA, Harris PNA. Genomic surveillance, characterization and intervention of a polymicrobial multidrug-resistant outbreak in critical care. Microb Genom. 2021;7(3). <https://doi.org/10.1099/mgen.0.000530>.
48. Roger C, Louart B, Elotmani L, Barton G, Escobar L, Koulenti D, **Lipman J**, Leone M, Muller L, Boutin C, Amour J, Banakh I, Cousson J, Bourenne J, Constantin JM, Albanese J, **Roberts JA**, Lefrant JY. An international survey on aminoglycoside practices in critically ill patients: the AMINO III study. Ann Intensive Care. 2021;11(1):49. <https://doi.org/10.1186/s13613-021-00834-4>.
49. Sarai H, **Schmutz B**, **Schuetz M**. Effects of ethnicity on proximal femoral intramedullary nail protrusion-a 3D computer graphical analysis. Arch Orthop Trauma Surg. 2021;141(5):845-53. <https://doi.org/10.1007/s00402-020-03539-8>
50. Sarai H, **Schmutz B**, **Schuetz M**. Potential pitfalls of lateral radiographic assessment of the nail position in the distal femur. Arch Orthop Trauma Surg. 2021. <https://doi.org/10.1007/s00402-021-03851-x>
51. **Schmutz B**, Lüthi M, Schmutz-Leong YK, Shulman R, Platt S. Morphological analysis of Gissane's angle utilising a statistical shape model of the calcaneus. Arch Orthop Trauma Surg. 2021;141(6):937-45. <https://doi.org/10.1007/s00402-020-03566-5>
52. Sime FB, **Roberts JA**, Jeffree RL, Pandey S, Adiraju S, Livermore A, Butler J, Parker SL, Wallis SC, **Lipman J**, Cotta MO. Population Pharmacokinetics of Levetiracetam in Patients with Traumatic Brain Injury and Subarachnoid Hemorrhage Exhibiting Augmented Renal Clearance. Clin Pharmacokinet. 2021. <https://doi.org/10.1007/s40262-020-00979-8>.
53. Smith S, Ketheesan S, Touma E, **Lipman J**, Brown AF. Lorazepam challenge test for catatonia. Emerg Med Australas. 2021;33(4):763-4. <https://doi.org/10.1111/1742-6723.13780>
54. Smith SL, Waters PS, Mirza W, Keogh C, **Lipman J**, Cavallucci DJ, O'Rourke N, Bryant RD. Re-expansion pulmonary oedema with Takotsubo cardiomyopathy: a rare complication of giant hepatic cyst drainage. ANZ J Surg. 2021. <https://doi.org/10.1111/ans.16745>.
55. Sterling M, Ritchie C, Rebbeck T, Cameron ID, Griffin A, Jagnoor J, Nicholas M, Nguyen H, **Warren J**. Comparison of the Accuracy of WhipPredict to That of a Modified Version of the Short-Form Örebro Musculoskeletal Pain Screening Questionnaire to Predict Poor Recovery After Whiplash Injury. J Orthop Sports Phys Ther. 2021;51(5):207-15. <https://doi.org/10.2519/jospt.2021.9987>.

Journal Articles (RBWH staff in bold)

56. Sumner JA, Maihofer AX, Michopoulos V, Rothbaum AO, Almlı LM, Andreassen OA, Ashley-Koch AE, Baker DG, Beckham JC, Bradley B, Breen G, Coleman JRI, Dale AM, Dennis MF, Feeny NC, Franz CE, Garrett ME, Gillespie CF, Guffanti G, Hauser MA, Hemmings SMJ, Jovanovic T, Kimbrel NA, Kremen WS, Lawford BR, Logue MW, Lori A, Lyons MJ, Maples-Keller J, Mavissakalian MR, McGlinchey RE, Mehta D, Mellor R, Milberg W, Miller MW, Morris CP, Panizzon MS, Ressler KJ, Risbrough VB, Rothbaum BO, Roy-Byrne P, Seedat S, Smith AK, Stevens JS, van den Heuvel LL, Voisey J, **Young RM**, Zoellner LA, Nievergelt CM, Wolf EJ. Examining Individual and Synergistic Contributions of PTSD and Genetics to Blood Pressure: A Trans-Ethnic Meta-Analysis. *Front Neurosci.* 2021;15(652). <https://doi.org/10.3389/fnins.2021.678503>.
57. Torisson G, Bruun Madsen M, Schmidt Davidsen A, Perner A, **Lipman J**, Dulhunty J, Sjövall F. A Multicenter Observational Study Evaluating Outcomes Associated With Antibiotic Combination Versus Monotherapy in Patients With Septic Shock. *Crit Care Explor.* 2021;3(5):e0383. <https://doi.org/10.1097/cce.0000000000000383>.
58. **Vallmuur K, Cameron CM**, Watson A, **Warren J**. Comparing the accuracy of ICD-based severity estimates to trauma registry-based injury severity estimates for predicting mortality outcomes. *Injury.* 2021. <https://doi.org/10.1016/j.injury.2021.05.016>
59. **Vallmuur K, McCreanor V, Cameron C**, Watson A, Shibl R, **Banu S**, McPhail SM, **Warren J**. Three Es of linked injury data: Episodes, Encounters and Events. *Inj Prev.* 2021. <https://doi.org/10.1136/injuryprev-2020-044098>.
60. **Vallmuur K, Cameron CM**, Watson A, **Warren J**. Comparing the accuracy of ICD-based severity estimates to trauma registry-based injury severity estimates for predicting mortality outcomes. *Injury.* 2021;52(7):1732-9. <https://doi.org/10.1016/j.injury.2021.05.016>.
61. Vuong KA, **Manzanero S**, Ungerer JPJ, **Mitchell G**, McWhinney B, **Vallmuur K, Warren J, McCreanor V**, Howell T, **Pollard C, Schuetz M**, Zournazi A, **Cameron CM**. Prevalence of Alcohol Consumption in Emergency department presentations (PACE) in Queensland, Australia, using alcohol biomarkers ethanol and phosphatidylethanol: an observational study protocol. *BMJ Open.* 2021;11(11):e047887. [10.1136/bmjopen-2020-047887](https://doi.org/10.1136/bmjopen-2020-047887)
62. **Westacott G, Vallmuur K, Schuetz M**. Data Transfer from Clinic to Clinic—Queensland Perspective. *OP-JOURNAL.* 2021;37(1):76-83. <https://doi.org/10.1055/a-1283-9944>.
63. Wiebe J, **Lipman J, Reade M**. 909: Challenging Informed Consent: A Study of Off-Label Medication Use in an Australian Adult ICU. *Crit Care Med.* 2021;49(1):451. <https://doi.org/10.1097/01.ccm.0000729524.01422.fd>
64. **Williamson F, Grant K, Warren J, Handy M**. Trauma Tertiary Survey: Trauma Service Medical Officers and Trauma Nurses Detect Similar Rates of Missed Injuries. *J Trauma Nurs.* 2021;28(3):166-72. <https://doi.org/10.1097/jtn.0000000000000578>.
65. **Williamson F, Warren J, Cameron CM**. Rib fractures in blunt chest trauma: factors that influence daily patient controlled opiate use during acute care. *Injury.* 2021. <https://doi.org/10.1016/j.injury.2021.08.029>.
66. Yu XQ, Dasgupta P, Kahn C, Kou K, **Cramb S**, Baade P. Crude probability of death for cancer patients by spread of disease in New South Wales, Australia 1985 to 2014. *Cancer Med.* 2021;10(11):3524-32. [10.1002/cam4.3844](https://doi.org/10.1002/cam4.3844)
67. Zhang Y, van Netten JJ, Baba M, Cheng Q, Pacella R, McPhail SM, **Cramb S**, Lazzarini PA. Diabetes-related foot disease in Australia: a systematic review of the prevalence and incidence of risk factors, disease and amputation in Australian populations. *J. Foot Ankle Res.* 2021;14(1):8. <https://doi.org/10.1186/s13047-021-00447-x>.

Keynote or Plenary Lectures given in 2021

Date	Title
02/2021	Susanna Cramb . TIPS (Ten Incorrect Pithy Statements) for disease mapping. Plenary lecture. Spatial and Temporal Statistics Symposium, virtual
09/2021	Michael Schuetz . Data: The integral part of quality improvement within trauma systems. Co-chair. Herston Health Precinct Symposium 2021, Brisbane
09/2021	Sarah Pearce . Trauma education and training. Co-chair. Trauma 2021, Brisbane
09/2021	Michael Schuetz . Rural and remote trauma care in QLD. Chair. Trauma 2021, Brisbane
09/2021	Frances Williamson . QLD Trauma Symposium: pre-hospital trauma care management. Co-chair. Trauma 2021, Brisbane