



Mercy Health

Care first

1920
100
YEARS
of MERCY
HEALTHCARE
2020



2020

RESEARCH REPORT



The Mercy Health reconciliation story in images

The *Mercy Health Research Report 2020* features original artwork by Yorta Yorta and Gunnai artist Dixon Patten. Dixon is Director and Designer of Bayila, an Aboriginal-owned graphic art company founded in Melbourne (Nairn). Dixon's own story is entwined with Mercy Health, having been born at the Mercy Maternity Hospital in East Melbourne. Dixon was also present for the birth of his two nieces at Mercy Hospital for Women in Heidelberg.

Here, Dixon explains the narrative and symbolism of the artwork:

This artwork represents Mercy Health's commitment to reconciliation and honours the connection and dedication to the communities it serves.

The central motifs represent the founding Sisters and Mercy Health's heritage story. The figures represent strong women and honouring the maternal roots of Mercy Health's identity. The hands represent Aboriginal people and honouring them as the First Peoples of Australia. The feet represent Aboriginal and non-Aboriginal people walking together in reconciliation and exchanging energy, knowledge and perspectives.

The formations to the left and right of the Sisters' represents the various branches

of Mercy Health beyond maternity. The various circles represent the different communities and the pathways depict our connection to each other.

The boomerangs represent returning to culture principles for guidance while on the reconciliation journey. The shields represent resilience. The 'birthing' trees represent traditional Aboriginal birthing practices; where a woman's placenta was placed in a tree and that tree was sacred to the newborn and during their lifetime. The gum leaves represent being 'Welcomed to Country'.

The coolamon was used for many traditions: babies were carried in them as a nurturing practice and they were also used in smoking ceremonies, which are a spiritual cleansing ritual. The message sticks were used as a 'passport' to allow others to cross the different countries, this allowed for exchange of dialogue and education.

The ancestors are wrapped in their possum-skin cloaks, a tradition in which a person had one cloak from birth to death.

Mercy Health was formed in Nairn (Melbourne). In the artwork, Bunjil and Waa, two creator beings for the Kulin (traditional owners of Melbourne) fly overhead, guiding and protecting us on our life's journey.

Title: wabung-ngetel

Call of Country
Gunnai Language

Artist

Dixon Patten
Bayila Creative
Gunnai and Yorta Yorta



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Cover: Mercy Hospital for Women researcher Associate Professor Natalie Hannan; Mercy Hospital for Women midwife Jessica with baby Bea Frances; Mercy Place Warrnambool Lifestyle Coordinator Bev with resident Murray enjoying a building group with lego technic — Murray was a watchmaker, so using lego technic is right up his alley

Back cover: Mercy Hospital for Women midwife Siobhan with patient Nicole

Opposite: Werribee Mercy Hospital midwife Sarah with mum Gowthami and her baby born September 2020

MESSAGE FROM THE GROUP CHIEF EXECUTIVE OFFICER

Research is driven by innovation, one of our core values. It is central to the continuation of Mercy Health's mission through which we deliver better care and outcomes for people at every stage of life, particularly for those facing significant disadvantage.

2020 was set to be a year of celebrations for Mercy Health, marking 100 years since the Sisters of Mercy opened St Benedict's Hospital in Malvern. Instead, a summer of bushfires followed by the COVID-19 global pandemic meant that celebrations could not go ahead. COVID-19 had a significant impact on our research endeavours as most staff had to work from home and could not continue their work in the laboratories, which meant our research work was scaled back.

In the areas where research was able to continue, Mercy Health researchers achieved great things. I would like to congratulate Associate Professor Tu'uhevaha Kaitu'u-Lino and the Mercy Perinatal team on being awarded a \$1.1 million grant from the National Health and Medical Research Council (NHMRC). The grant will be used to develop a new blood test which could identify women at risk of preeclampsia — one of the most significant complications of pregnancy. Federal Minister for Health Greg Hunt presented the award in person at Mercy Hospital for Women in December 2020. This reinforces Mercy Perinatal's standing as a world renowned centre of excellence and a leading example of Mercy Health's capability, uniting the three pillars of education, clinical care and research.

Health Services' Multicultural Services and Mercy Hospital for Women dietitians developed Mercy Health's *Healthy Eating for Gestational Diabetes* information sheets in collaboration with women from Arabic, Chinese, Persian and Vietnamese communities. These are culturally adapted, plain language, bilingual information sheets. A study showed that these information sheets, combined with education sessions, made a significant difference in helping women from these backgrounds manage their gestational diabetes. This is another example of Mercy Health's commitment to deliver better care and health outcomes to those for whom we care.

In these challenging times, the ongoing and invaluable support we receive from our academic, government and private sector research partners is more important than ever. Our success would not be possible without you — thank you all.



I would like to thank Associate Professor David Allen, Mercy Health Chief Medical Officer, who is retiring from this position. I am grateful to David for his material contribution over many years, and particularly his role in producing the *Mercy Health Research Report* each year. I, and the Mercy Health team, wish David all the best for the future. Dr Jeff Kirwan will be taking on the role of Chief Medical Officer and I look forward to working with Jeff as we continue to advance Mercy Health's mission of bringing God's mercy to those in need.

Finally, I wish to extend my gratitude to all Mercy Health researchers who have done their very best to continue their work during a global pandemic, whether that be in the laboratories or in their homes. The Founder of the Sisters of Mercy Catherine McAuley wrote, "We should be shining lamps, giving light to all." I am certain this is something our researchers strive to do each and every day.

Adjunct Professor Stephen Cornelissen
Group Chief Executive Officer, Mercy Health

MESSAGE FROM THE CHIEF MEDICAL OFFICER

Mercy Health promotes research throughout the organisation, supporting innovative projects and trials across a range of areas including women's health, fetal and newborn health, paediatrics, mental health, aged care, allied health and palliative care.

I am proud to present the *Mercy Health Research Report* highlighting the research projects, publications and achievements of the Mercy Health research teams in 2020. This will be my last report, as I have stepped down from my roles of Chief Medical Officer and Chair of the Academic Research and Development Committee. It has been a privilege coordinating the Research Report over the past 14 years. I would like to thank all of the Mercy Health researchers for your passion and dedication, and I am sure you will give the new Chief Medical Officer, Dr Jeff Kirwan, the same support you have given me over the years.

In 2020, much of our research effort was pared back or suspended due to the COVID-19 pandemic, but with careful management our research endeavours continued where possible. A COVID-19 Research Executive Committee was formed to determine what research could safely continue. I thank Professor Sue Walker AO for chairing this committee and for keeping the Mercy Health Human Research Ethics Committee (HREC) and Mercy Health Board informed of developments.

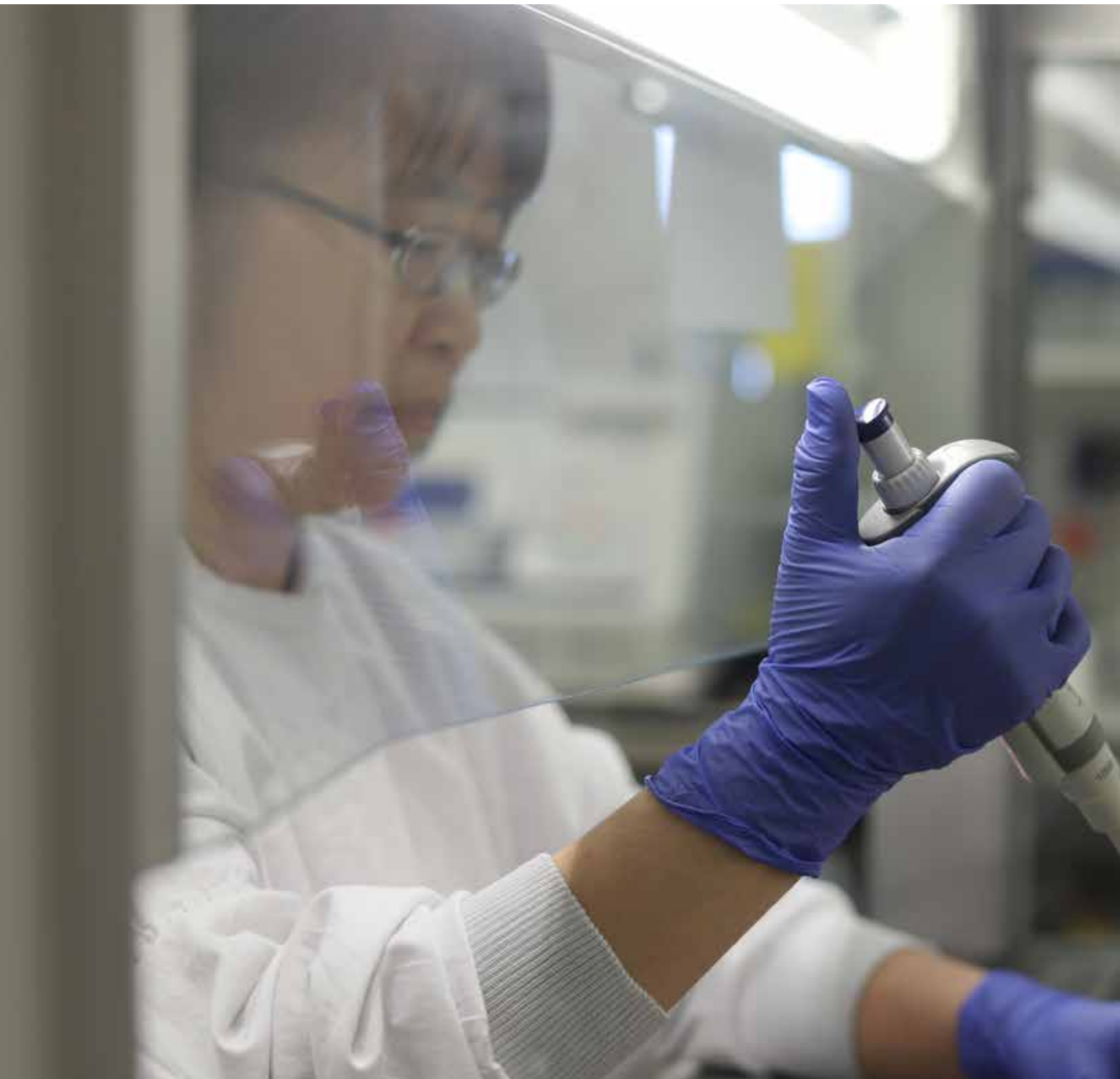
I would like to thank our many funding bodies, donors, supporters, partners and collaborators — our research would not be possible without you. I am also grateful for the support of research from the Mercy Health Group Chief Executive Officer Adjunct Professor Stephen Cornelissen and the entire Executive team. Lastly, I would like to thank Tim O'Leary for his leadership as Chair of HREC and the members of HREC, and the leaders of the various research teams, in particular, professors Sue Walker and Stephen Tong, and the University of Melbourne Department of Obstetrics and Gynaecology.

I am thrilled and proud that research activity has increased enormously over the past 10 years, and I am sure enthusiasm for research will continue to grow at Mercy Health.

I wish you all well.

Associate Professor David Allen
Chief Medical Officer, Mercy Health





THANK YOU TO OUR SUPPORTERS, PARTNERS AND COLLABORATORS

We acknowledge and celebrate the partnerships we have forged in 2020 and our shared vision for a better future through research and education.



Australia New Zealand Gynaecological Oncology Group (ANZGOG)

Australian Catholic University

Australian Society for Colposcopy and Cervical Pathology (ASCCP) Research Grants

Department of Premier and Cabinet (Victoria)

Ferring COVID-19 Investigational Grants

HealthWest Partnership

Medical Research Future Fund, Department of Health (Australian Government)

Mercy Health Academic Research and Development Committee Small Grants

Mercy Health Foundation

National Health and Medical Research Council (NHMRC)

Norman Beischer Medical Research Foundation

North West Melbourne Primary Health Network

Northern Health Foundation

University of Melbourne

*Mercy Hospital for Women researcher
Ping Cannon*



“We should be shining lamps, giving light to all.”

Catherine McAuley, Founder of the Sisters of Mercy

Mercy Hospital for Women researcher Sally Beard

ACADEMIC RESEARCH AND DEVELOPMENT COMMITTEE SMALL GRANTS 2020

These valuable grants are an essential source of funding for start-up research and audits at Mercy Health.

[Dr Paula Foran](#)

Below ten thousand — a noise and safety implementation for the operating suite

[Dr Lauren Hicks](#)

Vaginal Diazepam following Mirena IUD Insertion

[Natalija Nesvadba, Magdalena Pliszka, Professor Christine East](#)

Is there equity in telehealth? Exploring the experience of telehealth services by patients with limited or no English proficiency

[Maddison Maree Said](#)

Are restricted visitors positively influencing women's postnatal experiences or hindering them? A survey prompted by COVID-19 restrictions

[Dr Natasha Pritchard](#)

Identification of the optimal growth standards to identify infants at risk of adverse perinatal outcomes

[Dr Laura Whitburn, Professor Christine East](#)

Labour pain assessment: pilot evaluation of a new woman-centred approach

[Marlene Gojanovic](#)

Impacts of a tailored nutrition bundle on adequate provision of enteral nutrition in critically ill patients

[Dr Samantha Mooney](#)

Pelvic floor muscle tenderness and pelvic pain in women with endometriosis



WOMEN'S AND CHILDREN'S SERVICES

Mercy Health is dedicated to improving the lives of women and babies.

Sinem with baby Dilhan and big sister Alara at Mercy Hospital for Women

UNIVERSITY OF MELBOURNE

DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY, MERCY HOSPITAL FOR WOMEN

The department coordinates teaching of medical students in obstetrics and gynaecology and plays a pivotal role in innovative research and care.

Perinatal Research Group (Professor Sue Walker AO)

The Perinatal Research Group, led by Professor Sue Walker, is made up of maternal fetal medicine clinical researchers.

The group partners with the Translational Obstetric Group, University of Melbourne, led by Professor Stephen Tong; the Austin Health Institute for Breathing and Sleep; the Murdoch Children's Research Institute; and other University of Melbourne obstetric research groups led by Professor Michael Permezel, Associate Professor Martha Lappas, Associate Professor Megan Di Quinzio and Associate Professor Harry Georgiou.

The group also collaborates with Austin Health, La Trobe University, Deakin University, University of Papua New Guinea, University of Stellenbosch (South Africa), the Royal Women's Hospital and Monash Medical Centre.

Research team

Professor Sue Walker AO
Associate Professor Lisa Hui
Associate Professor Alexis Shub
Associate Professor Simon Meagher
Dr Alison Fung
Dr Elizabeth McCarthy
Dr George McGillivray
Dr Teresa MacDonald
Dr Danielle Wilson
Gabrielle Pell
Anna Middleton
Alexandra Roddy Mitchell
Alison Abboud
Valerie Kyritsis
Jacqueline Free

Projects and grants

Prevention of adverse child behavioural development following maternal depression in pregnancy
S Walker

Funded by NHMRC Project Grant (2018–22)

TURRIFIC: a Trial of URsodeoxycholic acid vs Rifampicin in severe early-onset Intrahepatic Cholestasis of pregnancy

S Walker

Funded by Medical Research Future Fund Research Grant (2018–20)

Using biomarkers and ultrasound in late pregnancy to minimise preventable stillbirth: the BUMPs study

S Walker

Funded by NHMRC Project Grant (2019–22)

'Find and Follow': scoping the data capture, reporting and follow-up of (i) pregnancies complicated by congenital abnormalities, (ii) health and development among 'high risk' newborns

S Walker

Funded by Melbourne Academic Centre for Health National System Level Initiatives (2019–20)

PreGen: Filling the Gap — antenatal genomics and newborn care

G McGillivray

Funded by Medical Research Future Fund Genomics Health Futures Mission Project Grant (2019–22)

Northern Centre for Health Education and Research Reproductive Health Biobank

L Hui

Funded by Northern Health Foundation philanthropic donation (2020)

Validation of a blood test to predict macrosomia

T MacDonald, S Walker

Funded by Norman Beischer Medical Research Foundation (2020)

A trial of a position modification device for the prevention of supine sleep during pregnancy

D Wilson, S Walker

Funded by Austin Medical Research Foundation and Norman Beischer Medical Research Foundation (2020)

Assessing fetal growth to identify babies at increased risk of developmental disability

S Walker

Funded by Austin Medical Research Foundation (2020)

Pregnancy-specific glycoproteins (PSGs) and their role in preeclampsia pathogenesis

T MacDonald, T Kaitu'u-Lino

Funded by University of Melbourne, Trevor Basil Kilvington Bequest (2020)

Coronavirus health outcomes in pregnancy and newborns (CHOPAN registry)

L Hui

Funding by Ferring COVID-19 Investigational Grants in Reproductive Medicine and Maternal Health (2020–21)

Single cell RNA sequencing of amniotic fluid

L Hui

Funded by Norman Beischer Medical Research Foundation (2020–21)

Collaborative Maternity and Newborn Dashboard (CoMaND) for the COVID-19 pandemic

L Hui

Funded by Norman Beischer Medical Research Foundation and University of Melbourne, Department of Obstetrics and Gynaecology Innovation Grant (2020–21)

Childhood outcomes of fetal genomic variants: the PrenatAL Microarray (PALM) cohort study

L Hui, S Walker

Funded by NHMRC Clinical Trials and Cohort Studies (2020–22)

Can intrapartum sildenafil safely avert the risks of contraction-induced hypoxia in labour? iSEARCH — a pragmatic phase 3 randomised controlled trial

S Walker

Funded by Medical Research Future Fund: Rare Cancers, Rare Disease and Unmet Needs (2020–24)

PROTECT Me: assessing antenatal maternal melatonin supplementation in fetal growth restriction to improve neurodevelopmental outcomes

S Walker

Funded by NHMRC Clinical Trials and Cohort Studies (2020–24)

Collaborations

C Cluver, Stellenbosch University South Africa: Preeclampsia therapeutics.

S Walker, Translational Obstetrics Group

J Hyett, University of Sydney; R Smith, University of Newcastle; S Ilanes, University of the Andes; G Smith, University of Cambridge; J Myers, University of Manchester: Improved detection of fetal growth restriction and pregnancies at risk of stillbirth.

S Walker

J Said, Murdoch Children's Research Institute; M Wake, Murdoch Children's Research Institute: Gen V: contribution of pregnancy to childhood outcomes: development of a state-wide birth cohort.

S Walker

M Delatycki, Murdoch Children's Research Institute: McKenzie's Mission: a population-based approach to reproductive carrier screening.

S Walker

M Howard, Institute of Breathing and Sleep, Austin Health: Sleep disordered breathing and its impact on perinatal outcomes.

S Walker

Victorian Fetal Therapy Service, Royal Women's Hospital, Monash Medical Centre: Outcomes of fetal surgery.

S Walker

Publications

Attwood LO, Holmes NE, Hui L. Identification and management of congenital parvovirus B19 infection. *Prenat Diagn.* 2020;40(13):1722–1731. DOI: 10.1002/pd.5819.

Bianchi DW, Deprest J, Levy B, Chitty LS, Ghidini A, Hui L, et al. The 2019 Malcolm Ferguson-Smith Young Investigator Award. *Prenat Diagn.* 2020;40(7):763–765. DOI: 10.1002/pd.5763.



(L-R) Alicia and Jessica with baby John and Professor Sue Walker AO at Mercy Hospital for Women

Bronkhorst AJ, Ungerer V, Diehl F, Anker P, Dor Y, Fleischhacker M, et al. Towards systematic nomenclature for cell-free DNA. *Hum Genet.* 2020 Oct 29. DOI: 10.1007/s00439-020-02227-2.

Brown I, Fernando S, Menezes M, da Silva Costa F, Ramkrishna J, Meagher S, et al. The importance of ultrasound preceding cell-free DNA screening for fetal chromosomal abnormalities. *Prenat Diagn.* 2020;40(11):1439-1446. DOI: 10.1002/pd.5788.

Chitty LS, Ghidini A, Deprest J, Van Mieghem T, Levy B, Hui L, et al. Right or wrong? Looking through the retrospectroscope to analyse predictions made a decade ago in prenatal diagnosis and fetal surgery. *Prenat Diagn.* 2020;40(13):1627-1635. DOI: 10.1002/pd.5870.

De Silva M, Panisi L, Manubuasa L, Honimae C, Taragwanu S, Burggraaf S, et al. Preventable stillbirths in the Solomon Islands — a hidden tragedy. *Lancet Reg Health West Pac.* 2020;5:100050. DOI: 10.1016/j.lanwpc.2020.100050.

Green B, Howat P, Hui L. The predicted clinical workload associated with early post-term surveillance and inductions of labour in south Asian women in a non-tertiary hospital setting. *Aust N Z J Obstet Gynaecol.* 2020;61(2):244-249. DOI: 10.1111/ajog.13268.

Green B, Hui L, Hastie R, Tong S, Brownfoot FC. Accuracy of clinical suspicion of growth restriction at term despite a normal growth ultrasound: A retrospective cohort study. *Aust N Z J Obstet Gynaecol.* 2020;60(4):568-573. DOI: 10.1111/ajog.13111.

Hannan NJ, Stock O, Spencer R, Whitehead C, David AL, Groom K, et al. Circulating mRNAs are differentially expressed in pregnancies with severe placental insufficiency and at high risk of stillbirth. *BMC Med.* 2020;18(1):145. DOI: 10.1186/s12916-020-01605-x.

Heland S, De Chellis A, Rieder W, Sleeman M, Johns J, Lancefield T, et al. Good at heart: developing a tertiary perinatal cardiac service; the first eight years' experience. *Aust N Z J Obstet Gynaecol.* 2020;60(5):760-765. DOI: 10.1111/ajog.13160.

Hui L. The intimate connection between maternal health and fetal development. *Prenat Diagn.* 2020;40(9):1045-1046. DOI: 10.1002/pd.5775.

Hui L, Bianchi DW. Fetal fraction and noninvasive prenatal testing: What clinicians need to know. *Prenat Diagn.* 2020;40(2):155-163. DOI: 10.1002/pd.5620.

Hui L, Ghidini A. 40 years of prenatal diagnosis in 2020. *Prenat Diagn.* 2020;40(13):1623-1626. DOI: 10.1002/pd.5867.

Hui L, Meagher S. Evolution of fetal acrania from 7 to 10 weeks gestation. *Prenat Diagn.* 2020;40(12):1515-1516. DOI: 10.1002/pd.5688.

Hui L, Meagher S, Gardener G. Lumbosacral myelomeningocele before and after in utero repair. *Am J Obstet Gynecol.* 2021;224(1):108-109. DOI: 10.1016/j.ajog.2020.06.046.

Hui L, Poulton A, Kluckow E, Lindquist A, Hutchinson B, Pertile MD, et al. A minimum estimate of the prevalence of 22q11 deletion syndrome and other chromosome abnormalities in a combined prenatal and

postnatal cohort. *Hum Reprod.* 2020;35(3):694-704. DOI: 10.1093/humrep/dez286.

Hui L, Szepe E, Halliday J, Lewis C. Maternity health care professionals' views and experiences of fetal genomic uncertainty: a review. *Prenat Diagn.* 2020;40(6):652-660. DOI: 10.1002/pd.5673.

Ishkova A, Wilson DL, Howard ME, Walker SP, Barnes M, Nicholas CL, et al. The effect of body position on maternal cardiovascular function during sleep and wakefulness in late pregnancy. *J Matern Fetal Neonatal Med.* 2020;1-10. DOI: 10.1080/14767058.2020.1789583.

Kaitu'u-Lino T, MacDonald TM, Cannon P, Nguyen T, Hiscock R, Haan N, et al. Circulating SPINT1 is a biomarker of pregnancies with poor placental function and fetal growth restriction. *Nat Commun.* 2020;11(1):2411. DOI: 10.1038/s41467-020-16346-x.

Kennedy LM, Tong S, Robinson AJ, Hiscock RJ, Hui L, Dane KM, et al. Reduced growth velocity from the mid-trimester is associated with placental insufficiency in fetuses born at a normal birthweight. *BMC Med.* 2020;18(395):1-14. DOI: <https://doi.org/10.1186/s12916-020-01869-3>.

Mackin DW, Walker SP. The historical aspects of vaccination in pregnancy. *Best Pract Res Clin Obstet Gynaecol.* 2020;S1521-6934(20)30158-9. DOI: 10.1016/j.bpobgyn.2020.09.005.

Macdonald TM, Walker SP, Hiscock R, Cannon P, Harper, A, Murray E, et al. Circulating Delta-like homolog 1 (DLK1) at 36 weeks is correlated with birthweight and is of placental origin. *Placenta.* 2020;91:24-30. DOI: 10.1016/j.placenta.2020.01.003.

McLaughlin EJ, Hiscock RJ, Robinson AJ, Hui L, Tong S, Dane KM, et al. Appropriate-for-gestational-age infants who exhibit reduced antenatal growth velocity display postnatal catch-up growth. *PLoS One.* 2020;15(9):e0238700. DOI: <https://doi.org/10.1371/journal.pone.0238700>.

Ong AGJ, Rolnik DL, Menezes M, Meagher S. Early diagnosis and differences in progression of fetal encephalocele. *J Ultrasound Med.* 2020;39(7):1435-1440. DOI: 10.1002/jum.15217.

Pratt A, Howat P, Hui L. Maternal and perinatal outcomes for women with body mass index ≥ 50 kg/m² in a non-tertiary hospital setting. *Aust N Z J*

Obstet Gynaecol. 2020;60(3):361-368. DOI: 10.1111/ajo.13064.

Rolnik DL, Wertaschnigg D, Benoit B, Meagher S. Sonographic detection of fetal abnormalities before 11 weeks of gestation. *Ultrasound Obstet Gynecol.* 2020;55(5):565-74. DOI: 10.1002/uog.21921.

Sekhon J, Lee E, Lo G, Woolcock J, Ramkrishnan J, Menezes M, et al. Lipiodol flush under ultrasound guidance in Australia. *Aust N Z J Obstet Gynaecol.* 2020;60(6):965. DOI: 10.1111/ajo.13244.

Sepulveda W, Bornstein E, Andreeva E, Montano I, Gutierrez J, Martinez-Ten P, et al. First-trimester sonographic diagnosis of sirenomelia: a multi-centre series of 12 cases and review of the literature. *Prenat Diagn.* 2020;40(5):626-634. DOI: 10.1002/pd.5667.

Sepulveda W, De La Maza F, Meagher S. An unusual first-trimester ultrasound presentation of the acrania-anencephaly sequence: the "Turkish turban" sign. *J Ultrasound Med.* 2020;39(4):829-832. DOI: 10.1002/jum.15161.

Truong A, Ellett L, Hicks L, Pell G, Walker SP. Multimedia in improving informed consent for caesarean section: a randomised controlled trial. *Aust N Z J Obstet Gynaecol.* 2020. DOI: 10.1111/ajo.13124.

Wertaschnigg D, Ramkrishna J, Ganesan S, Tse C, Scheier M, Volpe N, et al. Cranial sonographic markers of fetal open spina bifida at 11 to 13 weeks of gestation. *Prenat Diagn.* 2020;40(3):365-372. DOI: 10.1002/pd.5614.

Wertaschnigg D, Reddy M, Ramkrishna J, da Silva Costa F, Sepulveda W, Rolnik DL, et al. Ultrasound appearances of the acrania-anencephaly sequence at 10 to 14 weeks' gestation. *J Ultrasound Med.* 2020;39(9):1695-1700. DOI: 10.1002/jum.15267.

Whigham C-A, MacDonald TM, Walker SP, Hiscock R, Hannan NJ, Pritchard N, et al. MicroRNAs 363 and 149 are differentially expressed in the maternal circulation preceding a diagnosis of preeclampsia. *Sci Rep.* 2020;10(18077). DOI: <https://doi.org/10.1038/s41598-020-73783-w>.

Whitehead CL, Walker SP. Consider pregnancy in COVID-19 therapeutic drug and vaccine trials. *The Lancet.* 2020;395(10237):e92. DOI: 10.1016/S0140-6736(20)31029-1.

Wilkins-Haug L, Veltman JA, Hui L. Opportunities and challenges for international societies in the COVID-19 era. *Prenat Diagn.* 2020;40(13):1753-1754. DOI: 10.1002/pd.5843.

Wilson DL, Howard ME, Fung AM, O'Donoghue FJ, Barnes M, Lappas M, et al. The presence of coexisting sleep-disordered breathing among women with hypertensive disorders of pregnancy does not worsen perinatal outcome. *PLoS One.* 2020;15(2):e0229568. DOI: 10.1371/journal.pone.0229568.

Wilson DL, Howard ME, Fung AM, O'Donoghue FJ, Barnes M, Lappas M, et al. Sleep-disordered breathing does not impact maternal outcomes in women with hypertensive disorders of pregnancy. *PLoS One.* 2020;27;15(4):e0232287. DOI: 10.1371/journal.pone.0232287.

Wong AB, Hui L, Hong J. Potential medication interactions with paroxetine use for cough in cancer patients. *J Oncol Pharm Pract.* 2020;26(5):1296. DOI: 10.1177/1078155220915941.

Presentations

Hui L. Building translational research in women's and children's health in Melbourne's North: the Northern Centre for Health Education and Research Reproductive Health Biobank. Grand Round, Northern Health, October 2020 [Invited speaker — online]

Hui L. How good are we at prenatal screening in Victoria? Pearls from the PeRL study. Grand Round, Mercy Hospital for Women, Melbourne, June 2020 [Invited speaker — online]

Hui L. Reproductive carrier screening: when, how and for what? Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, February 2020 [Invited speaker]

Hui L. RNA sequencing of amniotic fluid reveals activation of the innate immune response and differential expression of neurodevelopmental transcripts in mid-trimester human fetuses with cytomegalovirus infection. European Congenital Cytomegalovirus Initiative, November 2020 [Invited speaker — online]

Hui L. The expanding scope of non-invasive prenatal testing (NIPT) in Victoria: a population-based study of prenatal diagnosis after NIPT. Human Genetics Society of Australasia, November 2020 [Invited speaker — online]

Hui L. Throwing the baby out with the bath water? Monitoring the impact of lockdown on maternal and newborn outcomes in Melbourne. Research Week, Northern Health, October 2020 [Invited speaker — online]

Hui L. Update on prenatal diagnosis in Victoria and the PALM study. Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, October 2020 [Invited speaker — online]

McCarthy E. Early pregnancy loss care (miscarriage management) updates. Grand Round, Mercy Hospital for Women, Melbourne, August 2020 [Invited speaker — online]

McCarthy E. First trimester pregnancy problems. MRANZCOG revision course, July 2020 [Invited speaker — online]

McCarthy E. Research integrity training. Grand Round, Mercy Hospital for Women, Melbourne, March 2020 [Invited speaker]

McCarthy E. Vasa praevia. Grand Round, Mercy Hospital for Women, Melbourne, April 2020 [Invited speaker]

Walker S. COVID-19 and pregnancy maternal and fetal outcomes. Medical Education Program, Caboolture Hospital, Caboolture, April 2020 [Invited speaker — online]

Walker S. Equality, equity and justice. Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, June 2020 [Convenor and Chair — online]

Walker S. International Women's Day assembly. Strathcona Baptist Girls Grammar, Melbourne, March 2020 [Invited speaker]

Walker S. Knowledge is power and enthusiasm pulls the switch. Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, March 2020 [Convenor and Chair — online]

Walker S. Mercy Perinatal Genomics. Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, October 2020 [Convenor and Chair — online]

Walker S. Mercy Perinatal Global Obstetric Update. Mercy Hospital for Women, Melbourne, November 2020 [Co-convenor — online]

Walker S. Mercy Perinatal 'journal club on the run'. Fetal Medicine at Twilight, Mercy Hospital for Women, December 2020 [Invited speaker — online]

Walker S. Obstetrics: what is the best chart to predict perinatal outcome? ASA2020 Virtual Conference, October 2020 [Invited speaker — online]

Walker S. Obstetrics and gynaecology perspective. University of Melbourne, Melbourne Medical School 'Meet the O&G's', June 2020 [Invited speaker — online]

Walker S. PPE 'physical protective equipment' and 'psychological protective equipment'. Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, July 2020 [Convenor and Chair — online]

Walker S. Preterm birth prevention. Cerebral Palsy Alliance Victorian Research Forum, November 2020 [Invited speaker]

Walker S. Progressing research careers while negotiating the challenges. University of Melbourne, Department of Rural Health Planning Day, August 2020 [Invited speaker — online]

Walker S. Research integrity training. Grand Round, Mercy Hospital for Women, Melbourne, March 2020 [Invited speaker]

Walker S. Screening: brilliant idea or a waste of time? Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, February 2020 [Convenor and Chair]

Walker S. The ultimate equaliser. University of Melbourne, Melbourne Medical School Student Conference, May 2020 [Invited speaker and panellist — online]

Walker S. Tomorrow: what's new in fetal growth restriction? Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, September 2020 [Convenor and Chair — online]

Walker S. What's new in obstetrics in COVID-19? Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, April 2020 [Convenor and Chair — online]

Wilson D. The effect of body position on maternal cardiovascular function during sleep and wakefulness in late pregnancy. Austin ResearchFest, October 2020 [Invited speaker — online]

Wilson D. The effect of body position on maternal cardiovascular function during sleep and wakefulness in late pregnancy. Australasian Sleep Association 32nd Annual Scientific Meeting — 'Sleep Week', October 2020 [Invited speaker — online]

Meagher S. Annual Monash Ultrasound Women's Imaging Symposium. The International Society of Ultrasound in Obstetrics and Gynecology (ISUOG) approved advanced course in Gynaecological Ultrasound, Melbourne, March 2020 [Organiser]

Meagher S. Early screening and diagnosis of fetal malformation 6–10 weeks gestation. The ISUOG approved Dublin First Trimester Symposium, National Maternity Hospital, Dublin, January 2020 [Invited speaker — online]

Meagher S. Embryo and fetal malformation 6–10 weeks gestation. The ISUOG approved advanced course in obstetrics and gynaecology, St. Petersburg, October 2020 [Invited speaker — online]

Meagher S. Embryo and fetal malformation 11–14 weeks. 56th Annual Congress of Japan Society of Perinatal and Neonatal Medicine, Tokyo, November 2020 [Invited speaker — online]

Meagher S. Festive special: three legends of ultrasound, three special lectures and a surprise! Scan Academy, London, December 2020 [Invited speaker — online]

Meagher S. First-trimester diagnosis of congenital heart defects. 16th Asia Pacific Congress in Maternal Fetal Medicine, Tu Du Hospital, Ho Chi Minh City, May 2020 [Invited speaker — online]

Meagher S. First trimester evaluation of fetal skeletal anomalies. The ISUOG approved Dublin First Trimester Symposium, National Maternity Hospital, Dublin, January 2020 [Invited speaker — online]

Meagher S. First trimester fetal central nervous system. The ISUOG approved advanced course in obstetrics and gynaecology, St. Petersburg, October 2020 [Invited speaker — online]

Meagher S. First trimester fetal central nervous system malformation. The ISUOG approved Dublin First Trimester Symposium, National Maternity Hospital, Dublin, January 2020 [Invited speaker — online]

Meagher S. Frontiers of ultrasound: malformations detected at 7–10 weeks. 16th Asia Pacific Congress in Maternal Fetal Medicine, Tu Du Hospital, Ho Chi Minh City, May 2020 [Invited speaker — online]

Meagher S. Live demonstration. The ISUOG approved Dublin First Trimester Symposium, National Maternity Hospital, Dublin, January 2020 [Invited speaker — online]

Meagher S. Masterclass. The ISUOG World Congress of Ultrasound in Obstetrics and Gynaecology, Glasgow, October 2020 [Invited speaker — online]

Meagher S. Practical tips in cardiac imaging. 1st International Web Symposium on Fetal Heart Screening and Diagnosis, New Delhi, May 2020 [Invited speaker — online]

Meagher S. Screening and diagnosis of fetal cardiac malformation in the first trimester. Australian Society for Ultrasound in Medicine annual scientific meeting, Pre Congress — Advanced Fetal Echo Course, Christchurch, July 2020 [Invited speaker — online]

Meagher S. Screening for major fetal cardiac malformation 11–14 weeks. The ISUOG approved Dublin First Trimester Symposium, National Maternity Hospital, Dublin, January 2020 [Invited speaker — online]

Meagher S. Single ventricle heart: diagnosis and management. 16th Asia Pacific Congress in Maternal Fetal Medicine, Tu Du Hospital, Ho Chi Minh City, May 2020 [Invited speaker — online]

Meagher S. The normal PRE-NIPT scan before 11 weeks. 56th Annual Congress of Japan Society of Perinatal and Neonatal Medicine, Tokyo, November 2020 [Invited speaker — online]

Meagher S. Third early fetal scan 2020. London School of Ultrasound, London, September 2020 [Invited speaker — online]

Meagher S. What is the value of first trimester scan in 2019? The ISUOG approved Dublin First Trimester Symposium, National Maternity Hospital, Dublin, January 2020 [Invited speaker — online]

Meagher S. What is the value of a scan at 11–14 weeks in 2020? 56th Annual Congress of Japan Society of Perinatal and Neonatal Medicine, Tokyo, November 2020 [Invited speaker — online]

Awards and academic achievements

Associate Professor Lisa Hui, University of Melbourne Medical Dentistry and Health Services Faculty Research Fellowship

Translational Obstetrics Group (Professor Stephen Tong)

In 2020, the Translational Obstetrics Group (TOG), led by Professor Stephen Tong, continued their vision of developing new therapeutics and diagnostics to treat major pregnancy complications.

The group successfully secured \$6.5 million in funding, where a member of the group was either the Chief Investigator or Sole Investigator. Most notably, \$5 million of this amount was a NHMRC Synergy Grant for developing new diagnostics to prevent stillbirth, secured by Professor Tong. The group also produced 21 publications, either as lead or contributing author, and presented at 11 conferences/seminars, mostly online due to COVID-19.

Research team

Professor Stephen Tong
Associate Professor Tu'uhevaha Kaitu'u-Lino
Associate Professor Natalie Hannan
Dr Fiona Brownfoot
Dr Roxanne Hastie
Dr Anthea Lindquist
Dr Carole-Anne Whigham
Dr Natasha Pritchard
Dr Rangi de Silva
Dr Amber Kennedy
Dr Prathima Chowdary
Dr Cathy Cluver
Dr Natalie Binder
Ping Cannon
Natasha de Alwis
Vi Nguyen
Sally Beard
Alesia Harper
Emerson Keenan
Anna Middleton
Manju Kandel
Bianca Fato
Ciara Murphy

Projects and grants

Can esomeprazole improve outcomes in women at high risk of preeclampsia? A Phase II placebo-controlled randomised, multi-centre clinical trial

S Tong, N Hannan, S Walker

Funded by NHMRC Project Grant (2018–20)

Translating new therapeutics and diagnostics for major pregnancy complications

S Tong

Funded by NHMRC Practitioners Fellowship (2018–22)

Bench to bedside translational studies to develop treatments for preeclampsia

F Brownfoot

Funded by NHMRC Early Career Fellowship (2018–22)

Developing a novel device to accurately assess fetal distress in labour

F Brownfoot

Funded by NHMRC Project Grant (2019–22)

Pregnancy and childhood outcomes associated with novel medication use in early pregnancy following IVF-assisted conception

A Lindquist, R Hastie, S Walker

Funded by NHMRC Ideas Grants (2020–22)

Synergising laboratory and epidemiological research to improve maternal and neonatal health

R Hastie

Funded by NHMRC Emerging Leader-1 Fellowship (2020–24)

Developing new diagnostics to prevent stillbirth

S Tong, T Kaitu'u-Lino, F Brownfoot, S Walker

Funded by NHMRC Synergy Grant (2020–24)

Pregnancy and childhood outcomes associated with unregulated, adjunct medication use in IVF pregnancy

A Lindquist, R Hastie, A Kennedy

Funded by Norman Beischer Medical Research Foundation (2020)

Improving the safety of drugs used to treat mental illness during pregnancy

R Hastie, S Tong

Funded by University of Melbourne Department of Obstetrics and Gynaecology Innovation Grant (2020)

Developing a screening test to identify women at risk of preeclampsia

T Kaitu'u-Lino

Funded by University of Melbourne Medical, Dentistry and Health Sciences Research Grant Support Scheme (2020)

Validation of a blood test to predict macrosomia

T Kaitu'u-Lino, S Tong, R Hiscock

Funded by Norman Beischer Medical Research Foundation (2020)

Developing an animal model of fetal growth restriction

T Kaitu'u-Lino, N Hannan, S Tong

Funded by University of Melbourne, Department of Obstetrics and Gynaecology Innovation Grant (2020)

Publications

Beard S, Pritchard N, Binder N, Schindler K, de Alwis N, Kaitu'u-Lino TJ, et al. Aurora kinase mRNA expression is reduced with increasing gestational age and in severe early onset fetal growth restriction. *Placenta* 2020;95:53-61. DOI: 10.1016/j.placenta.2020.04.012

Binder NK, Brownfoot FC, Beard S, Cannon P, Nguyen TV, Tong S, et al. Esomeprazole and sulfasalazine in combination additively reduce sFlt-1 secretion and diminish endothelial dysfunction: potential for a combination treatment for preeclampsia. *Pregnancy Hypertens.* 2020;22:86-92. DOI: 10.1016/j.preghy.2020.07.013.

Brownfoot FC, Hastie R, Hannan NJ, Cannon P, Nguyen TV, Tuohey L, et al. Combination metformin and sulfasalazine additively reduce the secretion of antiangiogenic factors from the placenta: implications for the treatment of preeclampsia. *Placenta.* 2020;95:78-83. DOI: 10.1016/j.placenta.2020.04.010.

de Alwis N, Beard S, Mangwiro YT, Binder NK, Kaitu'u-Lino TJ, Brownfoot FC, et al. Pravastatin as the statin of choice for reducing preeclampsia-associated endothelial dysfunction. *Pregnancy Hypertens.* 2020;20:83-91. DOI: 10.1016/j.preghy.2020.03.004

de Alwis N, Binder NK, Beard S, Kaitu'u-Lino TJ, Tong S, Brownfoot F, et al. Novel approaches to combat preeclampsia: from new drugs to innovative delivery. *Placenta* 2020;102:10-16. DOI: 10.1016/j.placenta.2020.08.022.

De Silva R, Panisi L, Maepioh A, Iser R, Lindquist A, Tong S, et al. Maternal mortality at the National Referral Hospital in Honiara, Solomon Islands over a 5-year period. *Aust N Z J Obstet Gynaecol.* 2020;60(2):183-187. DOI: 10.1111/ajo.13050.

De Silva M, Panisi L, Manubuasa L, Honimae C, Taragwanu S, Burggraaf S, et al. Preventable stillbirths in the Solomon Islands — a hidden tragedy. *Lancet Reg Health West Pac* 2020;5:100050. DOI: 10.1016/j.lanwpc.2020.100050.

Green B, Hui L, Hastie R, Tong S, Brownfoot FC. Accuracy of clinical suspicion of growth restriction at term despite a normal growth ultrasound: a retrospective cohort study. *Aust N Z J Obstet Gynaecol.* 2020;60(4):568-573. DOI: 10.1111/ajo.13111.

Hannan NJ, Stock I, Spenser R, Whitehead C, David AL, Groom K, et al. Circulating mRNAs are differentially expressed in pregnancies with severe placental insufficiency at high risk of stillbirth. *BMC Medicine.* 2020;18(1):145. DOI: 10.1186/s12916-020-01605-x.

Hastie R, Bergman L, Akhter T, Sandström A, Wikström AK, Hesselman S. Duration of labor among women with hypertensive disorders of pregnancy; a Swedish register cohort study. *Eur J Obstet Gynaecol.* 2020;251:114-118. DOI: 10.1016/j.ejogrb.2020.05.024.

Hastie R, Mol BW, Tong S. Acupuncture in pregnancy; primum non nocere. *BJOG.* 2020;127(1):87. DOI: 10.1111/1471-0528.15976.

Italiano S, Tong S, Readman E, Tassone M, Hastie R, Pritchard N. Combination methotrexate and gefitinib: a potential medical treatment for inoperable nontubal ectopic pregnancy. *J Obstet Gynaecol Res.* 2020 Mar;46(3):531-5. DOI: <https://doi.org/10.1111/jog.14169>.

Kaitu'u-Lino TJ*, MacDonald TM*, Cannon P, Nguyen TV, Hiscock R, Haan N, et al. Circulating SPINT1 is a biomarker of pregnancies with poor placental function and fetal growth restriction. *Nat Commun.* 2020;15;11(1):241. DOI: 10.1038/s41467-020-16346-x. * Equal contribution

Kennedy LM, Tong S, Robinson AJ, Hiscock RJ, Hui L, Dane KM, et al. Reduced growth velocity from the mid-trimester is associated with placental insufficiency in fetuses born at a normal birthweight. *BMC Med* 2020;18:395. DOI: 10.1186/s12916-020-01869-3.

Macdonald TM, Walker SP, Hiscock R, Cannon P, Harper A, Murray E, et al. Circulating Delta-like homolog 1 (DLK1) at 36 weeks is correlated with birthweight and is of placental origin. *Placenta.* 2020;91:21-30. DOI: 10.1016/j.placenta.2020.01.003.

McLaughlin EJ, Hiscock RJ, Robinson AJ, Hui L, Tong S, Dane KM, et al. Appropriate-for-gestational-age infants who exhibit reduced antenatal growth velocity display postnatal catch-up growth. *PloS One* 2020;15(9):e238700. DOI: <https://doi.org/10.1371/journal.pone.0238700>.

Tong S, Kaitu'u-Lino TJ, Hastie R, Brownfoot FC, Cluver C, Hannan NJ. Pravastatin, proton pump inhibitors, metformin, micronutrients, and biologics: new horizons for the prevention or treatment of preeclampsia. *Am J Obstet Gynaecol.* 2020;S0002-9378(20)31071-1. DOI: 10.1016/j.ajog.2020.09.014.

Whigham CA, MacDonald TM, Walker SP, Hiscock R, Hannan NJ, Pritchard N, et al. MicroRNAs 363 and 149 are differentially expressed in the maternal circulation preceding a diagnosis of preeclampsia. *Sci Rep.* 2020;10(18077). DOI: <https://doi.org/10.1038/s41598-020-73783-w>.

Presentations

Hastie R. Aspirin to prevent preeclampsia. Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, December 2020 [Invited speaker — online]

Hastie R. Insider story. University of Melbourne Open Day, August 2020 [Invited speaker — online]

Kaitu'u-Lino T. Academic advising at Melbourne. University of Melbourne, Faculty of Medicine, Dentistry and Health Sciences student live stream, [Invited speaker — online, video promotion and podcast]

Kaitu'u-Lino T. Can a blood test at term identify the small baby? Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, February 2020 [Invited speaker — online]

Kaitu'u-Lino T. Reverse translation — from the clinic back to the laboratory. Grand Round, Mercy Hospital for Women, Melbourne, July 2020 [Invited speaker — online]

Tong S. Aspirin to prevent preeclampsia. Fetal Medicine at Twilight, Mercy Hospital for Women, Melbourne, December 2020 [Invited speaker — online]

Tong S. Current and future medical management of ectopic pregnancies. Gynaecological Ultrasound Symposium, University of Melbourne, March 2020 [Invited speaker]

Tong S. Mercy Perinatal Global Obstetric Update. Mercy Hospital for Women, Melbourne, November 2020 [Co-convenor — online]

Tong S. My approach to writing the Synergy Grant. University of Melbourne, Synergy Grant Town Hall event, February 2020 [Invited speaker — online]

Tong S. The hunt for new diagnostics and therapeutics to prevent stillbirth and to treat preterm preeclampsia. IEEE Engineering in Medicine and Biology Society Seminar, October 2020 [Invited speaker — online]

Tong S. Update of recent trials that may change your practice. RANZCOG Regional Fellows Clinical Webinar Series, October 2020 [Invited speaker — online]

Awards and academic achievements

Associate Professor Tu'uhevaha Kaitu'u-Lino, University of Melbourne Dame Kate Campbell Fellowship

Biomarker Discovery Group (Associate Professor Harry Georgiou)

The Biomarker Discovery Group continues to study perinatal morbidity and mortality, with the aim of identifying better prognostic biomarkers of preterm labour and other pregnancy complications and bringing these discoveries to commercial production and clinical application.

In 2020, Associate Professor Harry Georgiou, together with Carmentix and University of Melbourne research teams, obtained an international patent (Patent Cooperation Treaty) for their work on biomarkers predictive of preterm birth.

Preterm birth

Preterm birth is a major pregnancy complication and the cause of perinatal mortality and morbidity. In most countries, including Australia, the preterm birth rate has increased over the past 20 years. The lack of a rapid and reliable screening test to identify women who are at risk of experiencing preterm birth limits the early detection of disease onset and the implementation of preventative and therapeutic treatments.

Gestational diabetes

Approximately 15 per cent of women develop gestational diabetes mellitus (GDM) during their pregnancy, and about half of these women will subsequently develop type 2 diabetes later in life. Research in this area aims to understand why and predict which women are at risk of developing type 2 diabetes.

Mesenchymal stem cells

Research into the area of mesenchymal stem cells is increasing. Mesenchymal stem cells (MSCs), also known as mesenchymal stromal cells or medicinal signaling cells, are multipotent stromal cells that can differentiate into a variety of cell types. Unleashing the potential of MSCs derived from gestational tissues to prevent or reverse various pregnancy complications, such as preterm labour and preeclampsia, is being explored.

Research team

Associate Professor Harry Georgiou
Associate Professor Megan Di Quinzio
Professor Shaun Brennecke
Dr Nir Arbel
Professor Moshe Hod
Tal Amitay
Claire Grant
Gabrielle Pell
Belinda Bozykowski
Alison Abboud
Genevieve Christophers
Rachel Murdoch
Dr Ramin Khanabdali
Ruth Escalona
Shixuan Zheng
Joan Wijaya
Manal Alshabibi

Projects and grants

Prognostic biomarkers of preterm labour: Development of a predictive test kit for preterm labour
H Georgiou, M Di Quinzio, S Brennecke, N Arbel
Funded by Carmentix

Predicting future type 2 diabetes in women with previous gestational diabetes
M Lappas, H Georgiou, A Shub
Funded by Norman Beischer Medical Research Foundation

Human placental stem cells and their role in pregnancy complications
B Kalionis, S Brennecke, H Georgiou, J Wijaya, R Khanabdali
Funded by University of Melbourne, Trevor Basil Kilvington Bequest

Publications

Leow SM, Di Quinzio MKW, Ng ZL, Grant C, Amitay T, Wei Y, et al. Preterm birth prediction in asymptomatic women at mid-gestation using a panel of novel protein biomarkers: the Prediction of PreTerm Labor (PPeTaL) study. *Am J Obstet Gynecol MFM*. 2020;2(2):100084. DOI: 10.1016/j.ajogmf.2019.100084.

Wijaya JC, Khanabdali R, Georgiou HM, Kalionis B. Ageing in human parturition: impetus of the gestational clock in the decidua. *Biol Reprod*. 2020;103(4):695–710. DOI: 10.1093/biolre/ioaa113.

Wijaya JC, Khanabdali R, Georgiou HM, Kokkinos MI, Brennecke SP, Kalionis B. Functional changes in decidual mesenchymal stem/stromal cells associated with spontaneous onset of labour. *Mol Hum Reprod*. 2020;26(8):636-651. DOI: 10.1093/molehr/gaaa045.

Zheng S, Aiwu S, Hill S, Grant C, Kokkinos M, Georgiou HM, et al. Decidual mesenchymal stem/stromal cell-derived extracellular vesicles restore endothelial cell function in a cell culture model of preeclampsia. *Pregnancy Hypertens*. 2020;22:37-46. DOI: doi.org/10.1016/j.preghy.2020.07.003.

DEPARTMENT OF GYNAECOLOGICAL ONCOLOGY, MERCY HOSPITAL FOR WOMEN

The department is committed to progressing and continuing research in the field, and to the education of the medical community, patients, families and carers.

The Department of Gynaecological Oncology is a quaternary referral service, providing comprehensive holistic and patient centred gynaecological cancer care in a multidisciplinary setting. Team members are involved in many international and national collaborative trials. They also participate in an extensive array of national cancer and pre-invasive organisation committees for the betterment of the care of women and their families with gynaecological pre-invasive and invasive disease.

Research team

Dr Simon Hyde
Associate Professor Peter Grant
Dr Julie Lamont
Dr Adam Pendlebury
Dr Antonio Jones
Professor Linda Mileshekin
Dr George Au-Yeung
Dr Serene Foo
Dr Shaun McGrath
Dr Anna Morton
Dr Carolin Poon
Dr Rachael Delahunty
Dr Nikki Burdett
Janiece Williams
Dr Kristen Moloney,
Associate Professor Kerry Ireland-Jenkin
Dr Marsali Newman
Dr Alison Skene

Projects and grants

Ovarian Cancer Prognosis and Lifestyle Study (OPAL)
P Webb, M Friedlander, P Grant, A Obermair, A DeFazio
Funded by NHMRC

PARAGON — Phase 2 study of aromatase inhibitors in women with potentially hormone responsive recurrent/metastatic gynaecological neoplasms
P Grant, S Hyde, L Mileshekin
Funded by ANZGOG

ARIEL 2. Phase 2, open-label study of rucaparib in patients with platinum-sensitive, relapsed, high-grade epithelial ovarian, fallopian tube or primary peritoneal cancer
P Grant, L Mileshekin, D Rischin, S Hyde, J Lamont, D Allen, S Foo
Funded by Clovis Oncology

Cascade. A cancer tissue collection after death (cascade) programme to improve our understanding of the progression from primary stage cancer to metastatic disease
D Bowtell, P Grant, J Lamont, S Hyde, L Mileshekin, G Au-Yeung

ICON8 — An international phase III randomised trial of dose-fractionated chemotherapy compared to standard three-weekly chemotherapy, following immediate primary surgery or as part of delayed primary surgery, for women with newly diagnosed epithelial ovarian, fallopian tube or primary peritoneal cancer
L Mileshekin, G Au Yeung, P Grant, S Hyde, S Foo, J Lamont

Ovarian ctDNA study: Circulating tumour DNA as a marker of residual disease and response to adjuvant chemotherapy in stage I-III optimally debulked epithelial ovarian, fallopian tube and primary peritoneal cancer
S Ananda, L Mileshekin, G Au-Yeung, P Grant, S Hyde, S Foo, J Lamont, A Pendlebury



(L-R) Dr Simon Hyde and Associate Professor Peter Grant

Phaedra. A phase 2 trial of durvalumab in advanced endometrial cancer

L Mileshtkin, G Au-Yeung, P Grant, S Hyde, S Foo, J Lamont

Funded by ANZGOG

National Gynaecological Oncology Registry (NGOR): Ovarian registry pilot project

P Grant, S Hyde, J Lamont, A Pendlebury

In collaboration with Monash University, the Royal Women's Hospital, Monash Health and Epworth HealthCare.

The OVARIAN study: Ovarian cancer — investigating variation in care and survival, aetiology and risk factors to improve outcomes in Australia via national data linkage.

P Webb, P Cohen, S Jordan, L Gordon, K Spilsbury, J Codde, A Powell, P Grant, C Steer, C Stewart

Funded by the Medical Research Future Fund (2020 — three year grant)

CATCH-E — Conservative approach to treatment of carcinoma and atypical hyperplasia of the endometrium

K Ireland-Jenkin, K Moloney, M Newman, P Grant, S Hyde, J Lamont, A Pendlebury

Funded Norman Beischer Medical Research Foundation

Outcomes and management of those referred with pHSIL at the time of cervical screening test

M McGauran, S Hyde, K Pham

Funded by Mercy Health Academic Research and Development Committee Small Grants (2020)

Utility of HPV RNA in-situ hybridisation in the diagnosis of cervical cancer

M Newman, S Hyde

Funded by Australian Society for Colposcopy and Cervical Pathology (ASCCP) Research Grant

DEPARTMENT OF UROGYNAECOLOGY, MERCY HOSPITAL FOR WOMEN

The department provides specialist care to women with disorders of the bladder and pelvic floors.

Research team

Professor Peter Dwyer OAM
Dr Deb Karmakar
Dr Payam Nikpoor
Dr Anna Rosamilia
Dr Ariel Zilberlicht
Christine Murray
Dr Lore Schierlitz
Dr Yik Lim
Dr Alison DeSouza
Elizabeth Thomas
Dr Lin Li Ow

Publications

Dykes N, Dwyer P, Rosamilia A, Zilberlicht A. Video and review of the surgical management of recurrent urethral diverticulum. *Int Urogynecol J*. 2020;31(12):2679-2681. DOI: 10.1007/s00192-020-04357-7.

Karmakar D, Dwyer PL, Nikpoor P. Mid-urethral sling revision for mesh exposure — long-term outcomes of two surgical techniques from a comparative clinical retrospective cohort study. *BJOG*. 2020;127(8):1027-1033. DOI: 10.1111/1471-0528.16149.

Lee J, Dwyer PL. Selection of mid-urethral slings for women with stress urinary incontinence. In P. Santoro, C. Wieczorek, AH Bartram & AH Sultan (eds.) *Pelvic floor disorders: a multidisciplinary textbook*. Springer-Verlag Italia 2020.

Nikpoor N, Dwyer PL. Recurrent urinary tract infections. Management in women. *Medicine Today*. 2020;21(9):14-19.

Zilberlicht A, Dwyer PL, Karmakar D, Carswell F, Schierlitz L. Extraperitoneal high vaginal cuff suspension at the time of vaginal hysterectomy for advanced uterovaginal prolapse: results of a modified McCall technique from a longitudinal clinical study. *Aust N Z J Obstet Gynaecol*. 2020. DOI: 10.1111/ajo.13288.

Zilberlicht A, Dwyer PL, Rajamaheswari N, Dykes N, Karmakar D. Video of uterovaginal procidentia repair incorporating a high extraperitoneal uterosacral vault suspension. *Int Urogynecol J*. 2020;31(10):2173-2175. DOI: 10.1007/s00192-020-04300-w.

DEPARTMENT OF PAEDIATRICS AND SPECIAL CARE NURSERY, WERRIBEE MERCY HOSPITAL

The Paediatrics Ward at Werribee Mercy Hospital was opened in August 2019. Research in this field is gaining momentum and will help drive improvements to the care and services we provide.

Research team

Dr Kathy McMahon
Dr Alison Ryan
Lianne Cox

Publications

Ryan A, McMahon K, Cox L. Early onset sepsis risk calculator: application in an outer metropolitan hospital. *Journal of Health Design*. 2020;5(3):329-343.

Presentations

Ryan A. Early onset sepsis risk calculator: application in an outer metropolitan hospital. Children's Inpatient Research Collaborative of Australia and New Zealand (CIRCAN) virtual Symposium, October 2020 [Invited speaker]



Baby Aurora, the first patient at Werribee Mercy Hospital Paediatrics Ward, with mum Bronwen

NURSING AND MIDWIFERY PROFESSORIATE

The Nursing and Midwifery Professoriate is a joint venture between Mercy Health and La Trobe University, to promote research and evidence-based practice.

Research team

Professor Christine East
Caroline Carr
Dr Jenny Davis
Dr Maggie Flood
Stephanie Hellard
Natalija Nesvadba
Magdalena Pliszka
Dr Wendy Pollock
Mary McCarthy
Adjunct Professor Sue McDonald
John Stafford
Dr Laura Whitburn
Tegan Culvenor
Christine Murray
Brooke Owen
Deborah Pidd

Projects and grants

Perineal repair: midwives
T Culvenor, S McDonald

Clinical credibility and nurse education in Australia
J Davis, R Cardwell, R Gray, SA Hillel, L McKenna

Midwifery education and practice in MENA (Middle East and North Africa) countries
J Davis, K Safari, L McKenna

Nursing skill mix and patient safety
J Davis, D Kushemererwa, N Moyo, S Gilbert, R Gray

Birth after caesarean: antenatal clinical pathway
R Drysdale, S McDonald

Risk factors for severe perineal trauma during childbirth
CE East, M Pliszka, S Hellard

Risk factors for postpartum haemorrhage
CE East, C Carr, S Hellard

Local cooling for relief of pain from perineal trauma sustained during childbirth, Cochrane systematic review invited update
CE East, E Dorward, E Whale, J Liu

An evidence-based practice program at Mercy Health, partnering with La Trobe University
CE East, G Malik

Centre for Research Excellence in Stillbirth
V Flenady, D Ellwood, P Middleton, J Morris, EM Wallace, S Kumar, F Boyle, A Gordon, CE East, D Horey
Funded by NHMRC (2017–21)

Obstetric Triage Decision Aid
M McCarthy, S McDonald

Prevention of adverse child behavioural development following maternal depression in pregnancy
J Milgrom, H Skouteris, M Galbally, CE East, V Glover
Funded by NHMRC (2018–22)

Health literacy in women attending gynaecology outpatients
C Murray, S McDonald, R Gray

Exploring the benefits of the peanut ball, for its effect on the management of pain during labour and on birth outcomes
M Pliszka

Strategic partnerships for refugee and asylum seeker health: improving access, health literacy and social inclusion
E Riggs, J Yelland, J Szwarc, S Brown and the Group Pregnancy Care Partnership (F Mensah, P Middleton, I Kaplan, CE East, J Oats, L Gold)
Funded by Victorian Department of Premier and Cabinet, Office of Multicultural Affairs and Citizenship (2016–20)

Residential Aged Care Facility Decision Making Tool
J Stafford, CE East

Funded by Mercy Health Academic Research and Development Committee Small Grants (2020)

Exploratory mapping of the characteristics of women undergoing induction of labour to clinical outcomes and the potential implications for women, maternity and neonatal services

CE East, B Owen

Funded by Mercy Health Academic Research and Development Committee Small Grants (2020)

Stillbirth Centre for Research Excellence Safer Baby Bundle/Safer Care Victoria, Safer Baby Collaborative

Developed by the Stillbirth Centre for Research Excellence and endorsed by Safer Care Victoria for supported implementation across several Victorian maternity services, including Mercy Health.

Labour pain assessment: pilot evaluation of a new woman-centred approach

L Whitburn, CE East, M-A Davey, L Jones

Funded by Mercy Health Academic Research and Development Committee Small Grants (2020–21)

Cross-country ultrasound study (CROCUS) analysis

CE East, I Mogren, K Edvardsson for the CROCUS researchers (Victoria)

Publications

Ayala Quintanilla BP, Pollock WE, McDonald SJ, Taft AJ. Intimate partner violence and severe acute maternal morbidity in the intensive care unit: a case-control study in Peru. *Birth*. 2020;47(1):29-38. DOI: 10.1111/birt.12461.

Cardwell R, Davis J, Gray R, Hillel SA, McKenna L. How is clinical credibility defined in nursing? A systematic review. *Collegian*. 2020;27(1):23-33. DOI:10.1016/j.colegn.2019.05.007.

Davey MA, Flood M, Pollock W, Cullinane F, McDonald S. Risk factors for severe postpartum haemorrhage: a population-based retrospective cohort study. *Aust N Z J Obstet Gynaecol*. 2020;60(4):522-532. DOI: 10.1111/ajo.13099.

East CE, Dorward ED, Whale RE, Liu J. Local cooling for relieving pain from perineal trauma sustained during childbirth. *Cochrane Database Syst Rev*. 2020;10:CD006304. DOI: 10.1002/14651858.CD006304.pub4.

Frawley N, East C, Brennecke S. Women's experiences of preeclampsia: a prospective survey of preeclamptic women at a single tertiary centre. *J Obstet Gynaecol*. 2020;40(1):65-69. DOI: 10.1080/01443615.2019.1615040.

Johnson J, Carr C, McDonald SJ, Flood MM. Talking testing: impact of a training intervention on midwives' antenatal HIV, hepatitis B and hepatitis C screening practice. *Women Birth*. 2020:S1871-5192(20)30358-9. DOI: 10.1016/j.wombi.2020.10.001.

Kushemererwa D, Davis J, Moyo N, Gilbert S, Gray R. The association between nursing skill mix and mortality for adult medical and surgical patients: protocol for a systematic review. *Int J Environ Res Public Health*. 2020;17(22):1-9. DOI: 10.3390/ijerph17228604.

Lasica M, Sparrow RL, Tacey M, Pollock WE, Wood EM, McQuilten ZK; members of the Australian and New Zealand Massive Transfusion Registry Steering Committee. Haematological features, transfusion management and outcomes of massive obstetric haemorrhage: findings from the Australian and New Zealand Massive Transfusion Registry. *Br J Haematol*. 2020;190(4):618-628. DOI: 10.1111/bjh.

Nunan D, Lindblad A, Widyahening IS, Bernardo WM, Chi CC, Cowdell F, et al. Ten papers for teachers of evidence-based medicine and health care: Sicily workshop 2019. *BMJ Evid Based Med*. 2020;bmjebm-2020-111479. DOI: 10.1136/bmjebm-2020-111479.

Patterson HR, Pollock W. A comparison of moderate to late preterm neonates receiving nasal continuous positive airway pressure in Australian tertiary and nontertiary centers. *Neonatal Netw*. 2020;39(4):189-199. DOI: 10.1891/0730-0832.39.4.189.

Pollock W, Peek MJ, Wang A, Li Z, Ellwood D, Homer CSE, et al. Eclampsia in Australia and New Zealand: a prospective population-based study. *Aust N Z J Obstet Gynaecol*. 2020;60(4):533-540. DOI: 10.1111/ajo.13100.

Safari K, McKenna L, Davis J. Midwifery in Middle Eastern and North African countries: a scoping review. *Women Birth*. 2020. DOI: 10.1016/j.wombi.2020.11.002.

Snow G, Melvin GA, Boyle JA, Gibson-Helm M, East CE, et al. Perinatal psychosocial assessment of women of refugee background. *Women Birth*. 2020;S1871-5192(20)30248-1. DOI: 10.1016/j.wombi.2020.05.009.

Wild K, Gomes L, Fernandes A, de Araujo G, McDonald S, Taft A. Security from above and below: a critical ethnography of the health response to violence against women in Timor-Leste. *Soc Sci Med.* 2020;260:113191. DOI: 10.1016/j.socscimed.2020.113191.

Willey SM, Gibson-Helm ME, Finch TL, East CE, Khan NN, Boyd LM, et al. Implementing innovative evidence-based perinatal mental health screening for women of refugee background. *Women*

Birth. 2020;33(3):e245-e255. DOI: 10.1016/j.wombi.2019.05.007.

Yelland J, Mensah F, Riggs E, McDonald E, Szwarc J, Dawson W, et al. Evaluation of systems reform in public hospitals, Victoria, Australia, to improve access to antenatal care for women of refugee background: an interrupted time series design. *PLoS Med.* 2020;17(7):e1003089. DOI: 10.1371/journal.pmed.1003089.

MERCY HEALTH SCIENTISTS AWARDED \$1.1M TO DEVELOP A PREECLAMPSIA BLOOD TEST

Mercy Perinatal Associate Professor Tu'uhevaha Kaitu'u-Lino and her team received funding from the National Health and Medical Research Council (NHMRC) to develop a new blood test which could identify women at risk of preeclampsia.

In December 2020, Federal Minister for Health Greg Hunt attended Mercy Hospital for Women to announce \$1.1 million in funding from the National Health and Medical Research Council (NHMRC). The funding was awarded to the Mercy Health team of researchers from the Mercy Perinatal centre, led by Associate Professor Tu'uhevaha Kaitu'u-Lino. It will be used towards research to screen for novel proteins within a mother's bloodstream which could flag whether she is likely to develop preeclampsia — one of the most significant complications of pregnancy.

"We are grateful and honoured to receive such significant funding," Associate Professor Kaitu'u-Lino said.

The blood test could save the lives of women and babies in Australia and around the world. Early identification of preeclampsia would lead to improved surveillance and

personalised care to reduce serious adverse outcomes for both mother and baby.

"It takes us one step closer to our ultimate goal of improving pregnancy outcomes for all women, particularly in low and middle-income countries, where the burden of preeclampsia is particularly devastating," Associate Professor Kaitu'u-Lino said.

Preeclampsia originates from a failing placenta and it is estimated that it causes more than half a million perinatal deaths globally every year and 60,000 maternal deaths. Pregnant women who battle preeclampsia have raised blood pressure and can suffer from significant organ damage, including neurological impairment or stroke. Their babies are more likely to be born preterm, sick and small.

Associate Professor Kaitu'u-Lino says while women are checked at each of their antenatal visits for signs and symptoms, at times the disease can even develop between appointments. "A simple blood test which could identify women at greatest risk would transform clinical care," Associate Professor Kaitu'u-Lino said. "We plan to measure proteins that spill out of the placenta into the mother's bloodstream, so that we can identify which pregnancies need the closest monitoring."

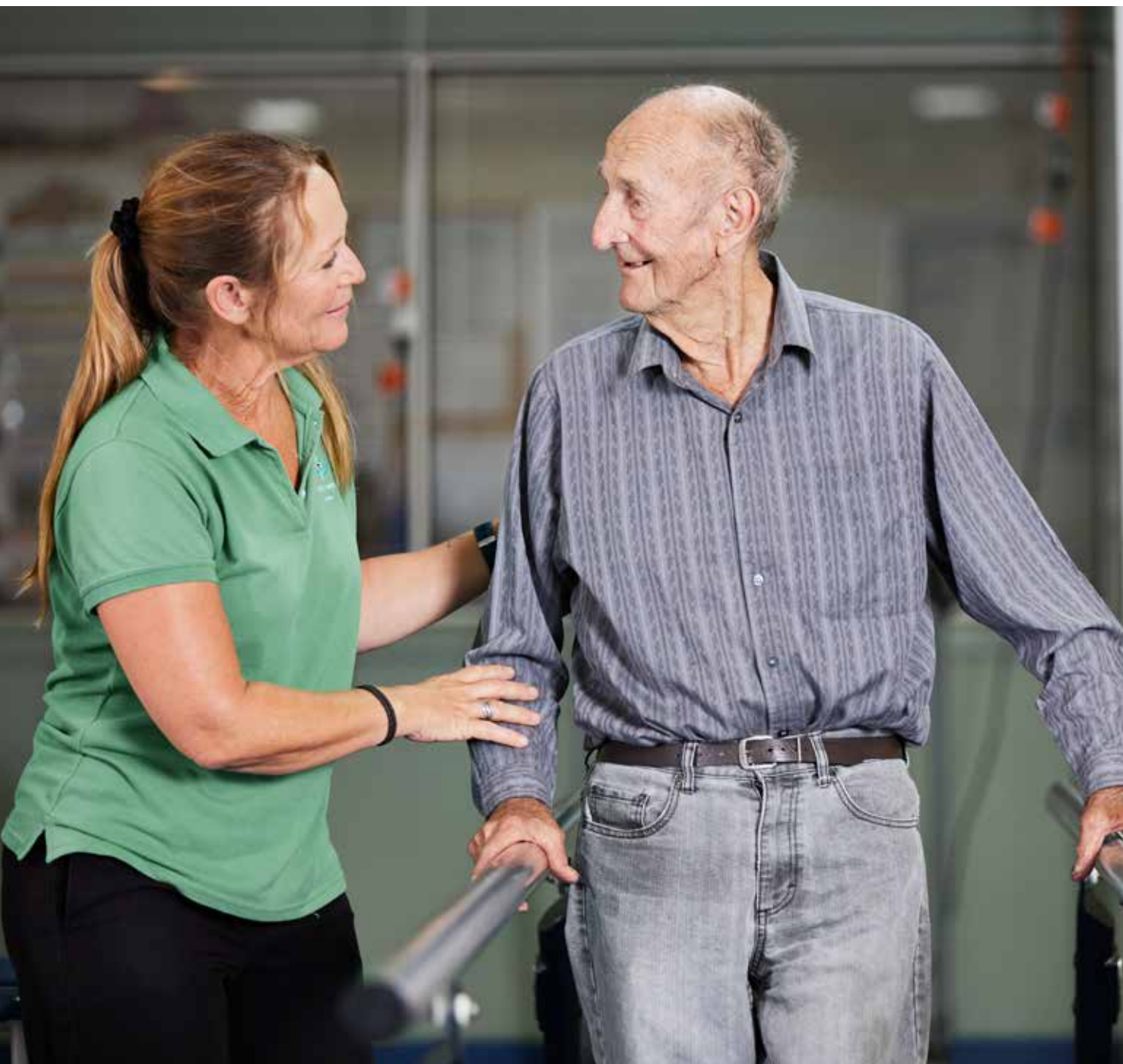
A medical treatment that fights against the disease process without requiring early delivery of the baby would be a major advance.

"It takes us one step closer to our ultimate goal of improving pregnancy outcomes for all women, particularly in low and middle-income countries, where the burden of preeclampsia is particularly devastating."

Associate Professor Tu'uhevaha Kaitu'u-Lino



(L-R) Professor James McCluskey (Deputy Vice-Chancellor (Research) University of Melbourne), Professor Stephen Tong (Mercy Perinatal), Associate Professor Tu'uhevaha Kaitu'u-Lino (Mercy Perinatal), Professor Sue Walker AO (Mercy Perinatal), Adjunct Professor Jason Payne (Chief Executive Health Services), Professor Anne Kelso (NHMRC), Hon Greg Hunt MP (Minister for Health and Aged Care), Adjunct Professor Stephen Cornelissen (Group Chief Executive Officer Mercy Health)



AMBULATORY, COMMUNITY AND ALLIED HEALTH SERVICES

The program includes dietetics, occupational therapy, pastoral care, multicultural services, pharmacy, physiotherapy, radiography, social work, sonography and speech pathology.

Mercy Care Centre Young Allied Health Assistant Samantha with patient Greg

ALLIED HEALTH SERVICES

Mercy Health Allied Health Services provides specialist clinical services to support patient care and optimise patient health outcomes.

Allied Health staff work within multidisciplinary teams and across a range of departments and clinical specialty areas, with inpatients and outpatients. Allied Health Services is committed to improving patient care through research and projects focused on evaluating current practice and implementing new service initiatives. This work is achieved through collaboration with our internal partners, and with external organisations such as universities.

Research team

Dr Anne Harrison
Marlene Gojanovic
Elise Fraser
Amy Steventon
Monica Lobo
Andrew Beveridge
Ashan De Silva

Projects and grants

Impacts of a tailored nutrition bundle on adequate provision of enteral nutrition in critically ill patients

M Gojanovic
Funded by Mercy Health Academic Research and Development Committee Small Grants (2020)

Does a consumer co-created infographic improve knowledge and self-efficacy about physical activity for women during a GDM pregnancy?

A Harrison
Funded by Mercy Health Academic Research and Development Committee Small Grants (2019–2020)

Non-invasive transcutaneous tibial and sacral nerve stimulation as a treatment for overactive bladder — a pilot study

E Fraser, A Steventon, L Schierlitz

Exploration of factors influencing physiotherapy outpatient clinic non-attendance and effective strategies to improve efficiency

M Lobo

Improving communication processes to assist patient awareness and readiness for physiotherapy sessions in the Geriatric Evaluation Management and Rehabilitation ward.

A Beveridge, A De Silva

Publications

Leo J, Clark R. Creating solutions to the common problems in health professional workforce learning through human-centred design. *Journal of Continuing Education for the Health Professions*. 2020;40(4):279–282. DOI: 10.1097/CEH.0000000000000314.

Harrison AL, Taylor NF, Frawley HC, Shields N. A consumer co-created infographic improves short-term knowledge about physical activity and self-efficacy to exercise in women with gestational diabetes mellitus: a randomised trial. *Journal of Physiotherapy*. 2020;66(4):243–248. DOI: 10.1016/j.jphys.2020.09.010.

Presentations

Harrison A. Physical activity in women diagnosed with gestational diabetes mellitus. La Trobe University Sport and Exercise Medicine Research Centre Presentation Series, Melbourne, October 2020 [Invited speaker]

MULTICULTURAL SERVICES

Mercy Health welcomes patients, clients, families and carers from a wide variety of countries, cultures and backgrounds.

Mercy Health provides care and support for people from more than 180 countries, who speak 165 different languages and follow 90 religious faiths.

The Multicultural Services Unit assists culturally and linguistically diverse (CALD) consumers to overcome barriers in accessing services, supports staff to provide culturally responsive care and leads CALD service improvement initiatives.

Research team

Natalija Nesvadba

Projects

Is there equity in telehealth? Exploring the experience of telehealth services by patients with limited or no English proficiency

N Nesvadba, M Pliszka, CE East

Funded by Mercy Health Academic Research and Development Committee Small Grants (2020)

Evaluation of group antenatal and postnatal care for refugee background women: Group Pregnancy Care Study

Funded by the Victorian Department of Premier and Cabinet and North West Melbourne Primary Health Network

Understanding the impact of organisational health literacy initiatives on consumers: Have Mercy Health's Healthy Eating for Gestational Diabetes information sheets helped you?

Funded by HealthWest Partnership



Linette and baby Marcella at Mercy Hospital for Women

IMPROVING THE HEALTH AND WELLBEING OF EVERYONE WHO ACCESSES OUR SERVICES

Mercy Health seeks to partner with culturally and linguistically diverse (CALD) communities so that we can develop more effective, meaningful and culturally responsive services.

Ms Natalija Nesvadba is passionate about the needs of migrant and refugee communities. Motivated by her own lived experience as a first generation migrant and former refugee, Natalija wants to make sure equitable access to care is provided. She understands how barriers, such as language, cultural understanding and health literacy, impact people's experiences, and wants to find ways to overcome them.

Joining Mercy Health in 2009, Natalija is the Manager of Multicultural Services for Mercy Hospital for Women (MHW) and Werribee Mercy Hospital. Her team delivers a range of direct services to patients, such as interpreting and African Liaison services, and has other strategic functions, including cultural responsiveness planning and service development, cultural awareness training for staff and health literacy.

"Research is an important part of continuing to improve our response to people from migrant and refugee backgrounds to ensure equitable access to care,"

Natalija says. "This group, especially those who have limited English proficiency, are under-represented in most research.

"The people who access our services come from 188 countries, speak 165 languages and follow 90 religious faiths. It is really important that we understand what their needs are and how we can provide appropriate care and services to meet their needs," she says.

Natalija undertakes research that highlights the needs of migrant and refugee communities and explores how to improve health equity. Often, the research themes are informed by the operational work and the experiences of the Multicultural Services staff and patients who access those services.

For example, Mercy Health's *Healthy Eating for Gestational Diabetes* information sheets were developed by MHW dietitians in collaboration with women from Arabic, Chinese, Persian and Vietnamese communities and MHW



"The feedback received demonstrates the value of developing culturally adapted health information and education resources and not just translations of mainstream concepts, resources and information."

Natalija Nesvadba

Natalija Nesvadba, Manager Multicultural Services

in-house interpreters. These culturally adapted, plain language, bilingual information sheets are provided to women during language-specific education sessions.

A study conducted in partnership with MHW Dietetics Department, the University of Melbourne, HealthWest Partnership and the Centre for Culture, Ethnicity and Health showed that these information sheets, combined with education sessions, have made a significant difference in helping women from these backgrounds manage their gestational diabetes. The study looked at the impact of organisational health literacy on consumers and aimed to learn about migrant women's experiences of Mercy Health's culturally adapted *Healthy Eating for Gestational Diabetes* information sheets.

The women reported (through a certified interpreter), multiple impacts that include:

- reduced anxiety — *"Reduced worry in me and my family and it helped me eating food — proper portions — as I did not know it."* (Persian participant)
- increased confidence — *"My confidence has increased as the information is very useful; by following the information I divide meals into six times a day and my sugar levels have reduced."* (Vietnamese participant)
- changed food portions, choices and meal plans — *"Meal plans are very useful — has lot of info — sample menu is very specific and I can copy meal plan."* (Chinese participant)
- increased knowledge and skills — *"The information we received will help us to manage gestational diabetes and not turn into type 2 diabetes, and if I decide to have another child it will still be in my mind."* (Arabic participant)
- positive flow-on effect to family and friends — *"Shared it with lots of my friends as a way to reduce weight — a diet guide."* (Chinese participant)

Overall, these findings reveal that the women felt informed, supported and listened to, and understood their care.

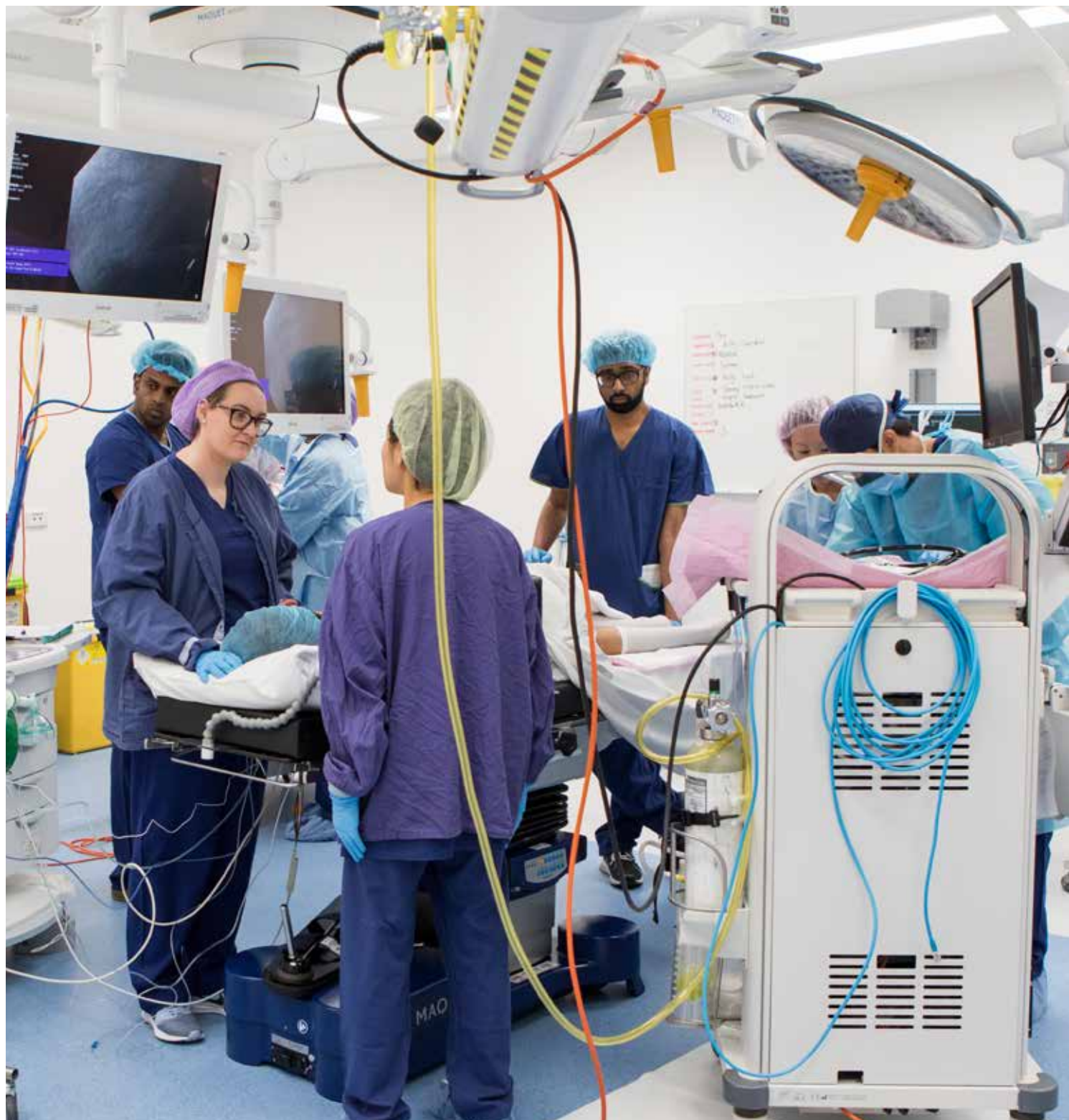
The staff focus group identified six key principles as contributing to the positive impacts of these information sheets on women:

1. Relevance of the information sheets
2. Relatable in linguistic and cultural terms
3. Practical nature
4. Realistic nature
5. Client informed and co-designed
6. Supported by the system of care.

This study shows that migrants and refugees are willing and able to engage with the health sector if there are relevant and appropriate structures in place.

Natalija concludes, "The feedback received demonstrates the value of developing culturally adapted health information and education resources and not just translations of mainstream concepts, resources and information."

The findings have been published in the report *Understanding the Impact of Organisational Health Literacy Initiatives on Clients — full report* (www.healthwest.org.au/projects/health-literacy/)



SURGICAL AND SPECIALIST SERVICES

The program involves general surgical and surgical sub-specialist services, including anaesthetic services.

Werribee Mercy Hospital surgical team

DEPARTMENT OF ANAESTHESIA, PERIOPERATIVE AND PAIN MEDICINE, MERCY HOSPITAL FOR WOMEN AND WERRIBEE MERCY HOSPITAL

The department is committed to evidence-based best practice, continuous quality improvement, research and teaching.

In 2020, the major area of focus was on enhanced recovery after surgery (ERAS) for caesarean section.

This project involved a major audit of the routine recovery after caesarean section (PRECS) audit. This is a novel audit which reviews the patient's entire journey throughout their hospital stay until discharge from domiciliary care. As part of the Clinical Research and Audit Program, a number of internal departmental audits were also completed in several areas, including pain protocol compliance and perioperative management of anaemia in pregnant women.

Research team

Associate Professor Scott Simmons

Associate Professor Lisa Hui

Dr Arshad Barmare

Dr Leandro Cardoso

Dr Eoin Casey

Dr Joe Clair

Dr Tabara Dione

Dr Greta Gormley

Dr Kathryn Hersbach

Dr Richard Hiscock

Dr Sajidah Ilyas

Dr Nick Jegathesan

Dr Matthew Mathieson

Dr Stephen Murphy

Dr Verity Nicholson

Dr Andrew Robinson

Angela Cook

Jacklyn DeGabriele

Dr Elizabeth Goodall

Dr Chris Hogan

Dr Allison Mo



Werribee Mercy Hospital anaesthetist Andres

Projects

Prospective observation study on quality of post caesarean section recovery

S Simmons, S Ilyas, R Hiscock, V Nicholson, G Gormley

Caesarean section analgesia protocol compliance audit

S Simmons, S Ilyas, R Hiscock, T Dione

Management of iron deficiency anaemia in pregnancy at a tertiary obstetric centre

S Simmons, S Ilyas, R Hiscock, M Mathieson, L Hui

Transthoracic echocardiographic assessment of cardiac output in healthy women at elective caesarean section under spinal anaesthesia with ephedrine and metaraminol hypotension prophylaxis: An observational cohort study

S Simmons, R Hiscock, S Ilyas, E Casey, L Cardoso

Retrospective qualitative assurance audit of obstetric bleeding ('Code Whites') at Mercy Hospital for Women from December 2016 to December 2019

N Jegathesan, A Mo, E Goodall, C Hogan

Tranexamic acid to reduce infection after gastrointestinal surgery: the TRIGS Trial — multi-centre

E Casey, J De Gabriele, S Murphy

Australian and New Zealand Hip Fracture Registry (ANZHFR) — multi-centre

A Barmare, A Cook, J Clair

Presentations

Ilyas S. ERAS for caesarean section. Anaesthesia Department meeting, Mercy Hospital for Women, Melbourne, October 2020 [Invited speaker]



AGED CARE

Mercy Health partners with universities, health services, community, government, advocacy organisations and industry sectors to improve the lives of older people by providing appropriate care and services.

Mercy Place Abbotsford resident Nellie with student Emily

IMPROVING THE LIVES OF OLDER PEOPLE

Mercy Health recognises that every person has their own life story and we support them to continue their journey, their way.

Mercy Health Residential Aged Care, Seniors Living and Home Care support older people to live the life they choose, whether that be in a residential aged care home, an independent living village, or by providing community aged care and disability services to assist people to live independently at home.

Throughout Victoria, New South Wales, Western Australia, Queensland and the Australian Capital Territory, there are more than 7,000 people in our care across 34 residential aged care homes, 10 retirement villages (known as Seniors Living communities or villages) and home care services.

Research team

Dr Bridget Laging
Dr Katrina Radford
Dr Huong Le
Dr Ellie Meissner
Ms Ellen Francis

Projects and grants

Intergenerational engagement between adolescents and older people in a residential care facility in regional Australia: a quasi-experimental mixed methods study
Funded by Perpetual Trustee IMPACT grant, Australian Catholic University and Mercy Health Foundation (2020–21)

Socio-spatial analysis of the design and lived experiences of residential aged care models: a qualitative study of traditional and small household typologies
Collaboration with the University of Notre Dame (Western Australia)
Funded by Mercy Health Foundation and the University of Notre Dame



Resident Adele and Care Companion Traci at Mercy Place Montrose (small household living)



PROJECTS APPROVED BY MERCY HEALTH HUMAN RESEARCH ETHICS COMMITTEE 2020

Mercy Hospital for Women researcher Dr Roxanne Hastie

Project title	Principal investigator(s)
Induction cost of using single-balloon catheter versus double-balloon catheter: is it worth it?	Dr Tessita Pritchard, Werribee Mercy Hospital
Vaginal birth after caesarean at an outer metropolitan hospital: spontaneous versus induced labour	Dr Nathasha Wijesiriwardena, Werribee Mercy Hospital
Experiences in a support group of women with type 1 diabetes in pregnancy	Dr Alexis Shub, Mercy Hospital for Women
Victorian ICUs' Nutrition Practices Survey	Rubina Raja, Monash Health and Bridget Moore, Werribee Mercy Hospital
Caring to the end: linking palliative care to support aged care and disability support services	Fran Gore, Mercy Palliative Care
Non-malignant disease palliative care symptom management clinic	Dr Annie (Fan-en) Chiu, Werribee Mercy Hospital and Mercy Palliative Care
Single high sensitive troponin to rule out cardiac chest pain in low risk chest pain patient	Dr Hamed Akhlaghi, Werribee Mercy Hospital
A multi-centre, blinded, randomised, controlled trial to determine whether fluid resuscitation and therapy with a 'balanced' crystalloid solution (Plasma-Lyte 148®) compared with 0.9% sodium chloride (saline) decreases 90-day mortality in critically ill patients requiring fluid resuscitation	Dr Umesh Kadam, Werribee Mercy Hospital
A trial of a position modification device for the prevention of supine sleep during pregnancy	Dr Danielle Wilson, Austin Hospital and Professor Sue Walker, Mercy Hospital for Women
Mackenzie's Mission: the Australian Reproductive Carrier Screening Project	Professor Sue Walker, Mercy Hospital for Women
Prospective registry outcomes for pregnant women exposed to SARS-COV-2	Dr Kirsten Palmer, Monash Health and Associate Professor Lisa Hui, Mercy Hospital for Women
Exploratory mapping of the characteristics of women undergoing induction of labour to clinical outcomes and the potential implications for women, maternity and neonatal services	Professor Christine East, Mercy Hospital for Women
Clinical and economic benefits of a Neonatal Sepsis Calculator: a retrospective analysis of blood test rates and costs, in an Australian tertiary perinatal centre	Dr Alexandra Cussen, Mercy Hospital for Women
Neonatal early onset sepsis at a metropolitan hospital; a retrospective audit and application of clinical decision-making tool to guide therapy	Alice Ryan, University of Notre Dame and Dr Kathy McMahon, Werribee Mercy Hospital
Investigating the ability of algorithms and machine learning to predict emergency wait times for patients	Professor Katie Walker, Mercy Hospital for Women
Single cell RNA sequencing of amniotic fluid: a novel approach to understanding fetal development	Associate Professor Lisa Hui, Mercy Hospital for Women

Retrospective qualitative assurance audit of obstetric bleeding (Code Whites) at Mercy Hospital for Women from December 2016 to December 2019	Dr Nick Jegathasan, Mercy Hospital for Women
DINER — differences in neonatal nutrition: an exploration in real-time	Fiona Richmond, Werribee Mercy Hospital
Persistent pelvic pain study: prospective assessment of women with moderate or severe endometriosis	Professor Sonia Grover and Dr Samantha Mooney, Mercy Hospital for Women
A randomised Trial of URsodeoxycholic acid versus RIFampicin in severe early onset Intrahepatic Cholestasis of pregnancy: the TURRIFIC study	Professor Sue Walker AO, Mercy Hospital for Women
Improving patient understanding of health risks following a diagnosis of gestational hypertension or preeclampsia	Dr Stephanie Potenza, Mercy Hospital for Women
Endometrial ablation and pelvic pain: does tubal interruption increase the risk of subsequent pelvic surgery	Dr Samantha Mooney, Mercy Hospital for Women
Co-design of best practice strategies to support high school students' engagement with older people in the residential aged care setting: a research proposal	Dr Bridget Laging, Australia Catholic University and Ellen Francis, Mercy Health Bethlehem Home for the Aged (Bendigo)
Retrospective analysis of symptomatic change post palliative ascites paracentesis over the past three years (2017–2020)	Dr Kiran Gopinath Iyer, Mercy Hospital for Women
Short period incidence study of severe acute respiratory infection (SPRINT-SARI)	Dr Umesh Kadam, Werribee Mercy Hospital
The development of an eLearning module for improving health care professionals' skills to support parenting in neonatal intensive care — an acceptability and feasibility study	Dr Martina Moorkamp, Mercy Hospital for Women
Five centres maternity dashboard for COVID-19 pandemic	Associate Professor Lisa Hui, Mercy Hospital for Women
Assessment of telehealth clinics in the Gynaecology Outpatient Department during COVID-19	Dr Samantha Mooney, Mercy Hospital for Women
Risk prediction in endocervical adenocarcinoma: International Society of Gynaecological Pathologists (ISGyp) multi-centre retrospective observational study	Dr Simon Hyde, Mercy Hospital for Women and Dr Marsali Newman, Austin Health
Restacking the odds	Caitlin Macmillan, Murdoch Children's Research Institute and Dr Kathy McMahon, Werribee Mercy Hospital
Childhood outcome of fetal genomic variants: the Prenatal Microarray (PALM) cohort	Dr George McGilivray and Associate Professor Lisa Hui, Mercy Hospital for Women
Structured guidance in the management of secondary post-partum haemorrhage: a prospective cohort study involving women presenting to a single tertiary women's hospital	Dr Samantha Mooney, Mercy Hospital for Women

Assessing fetal growth to identify babies at increased risk of death and developmental disability	Dr Teresa McDonald, Mercy Hospital for Women
The use and misuse of fetal fibronectin testing in a tertiary women's hospital: a retrospective audit	Dr Alexis Shub, Mercy Hospital for Women
Ureteric injury at hysterectomy: a retrospective analysis of patient and operative factors that may contribute to risk	Dr Samantha Sloss, Werribee Mercy Hospital
Developing therapeutics for preventing preterm birth	Associate Professor Natalie Hannan, University of Melbourne and Dr Fiona Brownfoot, Mercy Hospital for Women
Pelvic floor muscle tenderness in women undergoing surgery for endometriosis: a reliability study	Dr Keryn Harlow, University of Melbourne and Dr Emma Readman, Mercy Hospital for Women
Australian and New Zealand Hip Fracture Registry (ANZHFR)	Dr Arshad Barmare, Werribee Mercy Hospital
Intravesical Microdox versus normal saline bladder instillation for recurrent urinary tract infections: a randomised controlled trial	Dr Frida Carswell, Mercy Hospital for Women
Tranexamic acid to reduce infection after gastrointestinal surgery: the TRIGS Trial	Dr Eoin Casey, Werribee Mercy Hospital
Maternal diet rich in eggs and peanuts to reduce food allergies: a randomised controlled trial (PrEggNut Study)	Professor Christine East, Mercy Hospital for Women
REMAP-CAP Werribee Mercy Hospital	Dr Umesh Kadam, Werribee Mercy Hospital
AuSCR (Mercy)	Sharon Green, Werribee Mercy Hospital
Audit of Microdox bladder rinse as an adjunct in the treatment of recurrent urinary tract infection (UTI) in women	Dr Frida Carswell, Mercy Hospital for Women
Pre-operative imaging in deep infiltrating endometriosis	Dr Samantha Mooney, Mercy Hospital for Women
Perinatal, neonatal and school-aged educational and developmental outcomes for children exposed to different, common classes of medication during pregnancy	Dr Anthea Lindquist, Mercy Hospital for Women
The role of the microbiome in pelvic pain and endometriosis	Professor Sonia Grover, Mercy Hospital for Women
A prospective longitudinal cohort study of the effect of conservative and surgical management for moderate to severe endometriosis on future fertility	Dr Samantha Mooney, Mercy Hospital for Women
Correlation of sonographic and histopathological findings in women undergoing surgical management of retained products of conception	Dr Nathasha Wijesiriwardana, Werribee Mercy Hospital
The experience of Somali-Australian women caring for individuals diagnosed with severe mental illness	Dr Gayelene Boardman, Victoria University and Mulki Said, Saltwater Clinic, Mercy Mental Health
Goals of care status at emergency codes (Medical Emergency Team (MET) calls/Code Blues)	Dr Fiona Chen, Werribee Mercy Hospital
Association between duration of active labour and risk of postpartum haemorrhage	Dr Deepthi Bankiti, Werribee Mercy Hospital

Socio-spatial analysis of the design and lived experience of residential aged care models: a qualitative study of traditional and small household typologies	Professor Sarah McGann and Dr Holly Farley, Notre Dame University and Kathryn McNulty, Werribee Mercy Hospital
Evaluation of pandemic planning, response and experience during the COVID-19 pandemic. An organisational case study	Karen McKenna, Mercy Hospital for Women
Women's postnatal care experiences during COVID-19 visitation restrictions: a cross sectional survey	Professor Christine East, Mercy Hospital for Women
Below ten thousand: a noise reduction and safety implementation for the operating suite	Dr Paula Foran, Werribee Mercy Hospital
Comparison of vaginal birth rates in singleton pregnancies of women with higher BMI compared to normal BMI in a metropolitan referral hospital in Melbourne	Dr Jithendri Weerasingha, Werribee Mercy Hospital
Projects utilising samples collected under the Mercy Tissue Bank, Gen V collaborative study 2021	Associate Professor Tu'uhevaha Kaitu'u-Lino, University of Melbourne and Professor Stephen Tong, Mercy Hospital for Women
Projects utilising samples collected under the Mercy Tissue Bank, Mercy studies 2021	Associate Professor Tu'uhevaha Kaitu'u-Lino, Mercy Hospital for Women and Dr Fiona Brownfoot, Mercy Hospital for Women
Projects utilising samples collected under the Mercy Tissue Bank, RMIT collaborative study	Associate Professor Tu'uhevaha Kaitu'u-Lino, Mercy Hospital for Women and Professor Stephen Tong, Mercy Hospital for Women
Retrospective observational study: outcomes in patients with metastatic or recurrent cervical cancer treated with first-line chemotherapy and bevacizumab followed by maintenance bevacizumab	Dr Mahendra Naidoo, Peter MacCallum Cancer Centre and Dr Simon Hyde, Mercy Hospital for Women



Baby Meleane in the neonatal intensive care unit at Mercy Hospital for Women

About the artist: Dixon Patten

Dixon Patten is a proud Yorta Yorta and Gunnai man.

Dixon has over 13 years' experience in the arts and design space as an artist, curator and graphic designer and is now the lead storyteller for Bayila Creative.

Art has always given Dixon a platform for interpreting and understanding the world through many lenses; his experiences and learnings have given him cultural and personal liberation that has

allowed him to embrace his role as storyteller with honour and pride.

Dixon is passionate about storytelling in all its forms and loves the information, wisdom, knowledge and energy exchange that unites us as people(s).

His motivation is to Indigenise and humanise spaces that may seem otherwise clinical and hopefully influence conversations, instil a sense of understanding and for people to simply connect.





Mercy Health

Care first



Mercy Health

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Mercy Health acknowledges Aboriginal and Torres Strait Islander Peoples as the first Australians. We acknowledge the diversity of Indigenous Australia. We respectfully recognise Elders past, present and emerging. This report was produced on Wurundjeri Country.