



2021 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 (Nairm). 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 Nairm (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: wahbung-ngetel

Call of Country Gunnai Language

Artist

Dixon Patten Bayila Creative Gunnai and Yorta Yorta

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.











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Cover: Mercy Hospital for Women researcher Alesia Harper; baby Flynn at Werribee Mercy Hospital; Catherine McAuley College, Bendigo, intergenerational project participant and student Lucy with Mercy Health Bethlehem Home for the Aged (Bendigo) resident Ivy **Back cover:** Mahmut, Sinem and Alara with baby Dilhan at Mercy Hospital for Women **Opposite:** Werribee Mercy Hospital Special Care Nursery midwives, Jenny (L) and Claire (R) with mum Danielle with baby Flynn

MESSAGE FROM THE GROUP CHIEF EXECUTIVE OFFICER

Mercy Health researchers strive for excellence in innovation in order to deliver better health outcomes for everyone in our care, at every stage of life.

Mercy Health has a long-held reputation in clinical research in Victoria since the establishment of leading maternity and women's health services in the early 1970s and has become a nationally awarded research centre across a number of disciplines. I am inspired to learn, since joining Mercy Health, that we are having a global impact and also pushing the boundaries across our organisation in aged care and palliative care.

The goal of our researchers is clear and purposeful – to pursue excellence in order to deliver better health outcomes for everyone in our care. Excellence in innovation is fundamental to our ability to deliver on our values of compassion, hospitality, respect, stewardship and teamwork, and execute these with excellence also.

In 2021, Mercy Perinatal made a breakthrough drug discovery that slows the progression of preeclampsia, a life-threatening complication of pregnancy. Worldwide, preeclampsia claims the lives of 500,000 unborn babies and 70,000 pregnant women. The impact of this research will be life-changing for mothers and babies, not only in Australia, but globally, particularly in developing countries where women and babies do not have access to the same level of care. This important discovery is not only bringing more mothers and babies safely home, it is providing better health and opportunities for the most disadvantaged people responding to the causes of ill-health.

In serving an ageing community, research is also fundamental so we can support and promote healthy ageing - the fundamental right to care, services and environments for people as they age. Our groundbreaking intergenerational program, iGEN, brings together residents in our aged care homes with high school students. It highlights the importance of connections between older and younger people, and the impact these relationships have on the health and wellbeing of everyone involved. With an ageing population from diverse backgrounds, research will continue to expand.



I would like to thank our academic, government and private sector research partners, and the communities we serve. The academic and translational research we do would not be possible without that ongoing collaboration.

Finally, I want to thank our Mercy Health researchers. The Founder of the Sisters of Mercy Catherine McAuley wrote, "Let us take one day only in hands at a time. Resolve to do good today and better tomorrow." Mercy Health researchers continue a great heritage of evolving innovation and discovery which is not only better but having greater impact than ever.

I look forward to supporting a program of important innovative research, outstanding care and academic training that continues to empower how we respond to the needs of everyone we serve.

Angela Nolan

Group Chief Executive Officer, Mercy Health

MESSAGE FROM THE CHIEF EXECUTIVE HEALTH SERVICES

Excellence in clinical care is underpinned by an embedded culture of innovation and research engagement. It is an integral part of our mission to care for people at all critical stages of life.

Mercy Health's role as a provider of public health is not only about providing outstanding healthcare to meet the needs of today, it is also about the future – we must ensure we continually improve healthcare and outcomes for future generations. Through innovation and world-leading research, Mercy Health advances healthcare. Ongoing research, education and up-skilling of our people enables them to implement new and improved clinical practice and respond to the changing needs of our communities.

In 2021, we welcomed Associate Professor Helena Frawley to the newly created role of Associate Professor of Allied Health Research. With nearly 30 years' experience in women's health, Associate Professor Frawley is a passionate health clinician, researcher, educator and mentor. I know that her leadership will allow our research to flourish in the vital area of allied health.

Mercy Health also welcomed Adjunct Professor Jeffrey Kirwan, who was appointed as the new Chief Medical Officer, and I thank and acknowledge the years of service of Associate Professor David Allen, who retired from the role in 2021.

The support we receive from those who partner with us makes it possible to continue our work, and we thank them for this.

Our growing and vibrant community of researchers are passionate about and committed to advancing research and improving patient care, and I look forward to future discoveries and breakthroughs.

Professor Jason Payne

Chief Executive Health Services



MESSAGE FROM THE CHIEF EXECUTIVE RESIDENTIAL AGED CARE, HOME CARE AND SENIORS LIVING

Mercy Health continues to progress research in aged care so that we can better understand what is needed to promote healthy ageing.

Mercy Health has been a quiet and assiduous leader in aged care for some years, having started in aged care after more than 80 years in healthcare. Our efforts have been driven by the changing needs and expectations of our ageing society. The Royal Commission into Aged Care Quality and Safety has also underlined a generational reckoning of the standards we want as a society for older people. Prior to the Royal Commission, Mercy Health had adopted a human rights approach in the way we provide care. The truths and lessons of the Royal Commission have underlined the importance of that approach and the need to push further with our work. This approach is based on the principles of healthy ageing, which means providing people with the places and choices to enable them to be and do what they value throughout their lives.

This is an exciting and pivotal time for research into aged care as we continue to reimagine how we can best support people as they age. Our value of innovation drives us to be a leader in healthy ageing across our aged care homes, retirement villages and for people who choose to live healthy, independent lives in their own homes.

In 2021, our research focused on two key areas – the importance of intergenerational engagement between students and older people in residential aged care and an analysis of the design and the lived experiences comparing traditional aged care living with our small household living approach.

The intergenerational research theme has become a source of prophetic insight into the support we will need to provide to healthy cross-generational relationships if we hope to have young people develop



a passion for care of the elderly and develop meaningful and sustainable careers in fields like gerontology, rehabilitation, aged care and end-of-life care.

We will seek to expand our research capability in the future so that we continue to provide the care, service and environments to support and promote healthy ageing.

Adjunct Associate Professor Felix Pintado Chief Executive

Residential Aged Care, Home Care and Seniors Living

MESSAGE FROM THE CHIEF MEDICAL OFFICER

Mercy Health promotes research throughout the organisation, with innovative projects and trials across a range of clinical areas.

It is exciting to highlight the work and achievements of our researchers in this year's Research Report. Our people choose to do research because they want to make a difference to people's lives and deliver better health outcomes. In bringing together great minds and establishing partnerships to support our work, Mercy Health will continue to expand our world-leading research programs across health and healthy ageing.

In 2021, there were two significant appointments to the Mercy Health Research Directorate - Professor Stephen Tong as the inaugural Director of Research and Dr Roxanne Hastie as the inaugural Research Manager. These appointments are fundamental in supporting research across Mercy Health into the future. Professor Tong and Dr Hastie have led one of the most successful programs of research in Australia through their leadership of Mercy Perinatal. They will bring that expertise to Mercy Health's Research Strategy.

Having joined Mercy Health in August 2021, I would like to acknowledge the work of Associate Professor David Allen, the previous Chief Medical Officer, who actively promoted research at Mercy Health, oversaw the Research Directorate and initiated the publication of this Research Report.

Thank you to our many funding bodies, donors, supporters, partners and collaborators – our research would not be possible without you.

The support from the Mercy Health Group Chief Executive Officer and the entire Executive team for our research program is greatly appreciated. I would also like to thank Tim O'Leary for his leadership of the Human Research Ethics Committee.

Finally, I sincerely thank all of the researchers in the many clinical departments for their ongoing commitment and outstanding work in their chosen fields of research.

Adjunct Professor Jeffrey Kirwan

Chief Medical Officer, Mercy Health





OUR SUPPORTERS, PARTNERS AND COLLABORATORS

We acknowledge and celebrate the partnerships we have forged in 2021 and our shared vision for a better future through research and education.

Austin Health

Australasian Gynaecological Endoscopy and Surgery Society Australia New Zealand Gynaecological Oncology Group Australian Catholic University Australian Research Council Australian Society for Colposcopy and Cervical Pathology Canadian Institutes of Health Research **Clovis Oncology** Department of Premier and Cabinet (Victoria) **Epworth HealthCare** Ferring COVID-19 Investigational Grants HealthWest Partnership Hologic Hume City Council Maternal and Child Health Service La Trobe University Medical Research Future Fund, Department of Health (Australian Government) Melbourne Academic Centre for Health Mercy Health Academic Research and Development **Committee Small Grants Mercy Health Foundation Mercy Perinatal Monash Health Monash Medical Centre Monash University** Murdoch Children's Research Institute

National Health and Medical Research Council Norman Beischer Medical Research Foundation North West Melbourne Primary Health Network Northern Health Northern Health Foundation **Perpetual Trustee** Peter MacCallum Cancer Centre Physiotherapy Research Foundation Royal Australian College of Obstetricians and **Gynaecologists Royal Children's Hospital** Royal Women's Hospital Stellenbosch University University of Cambridge University of Manchester University of Melbourne University of Newcastle University of Notre Dame (Australia) University of Sydney University of the Andes VicSEG New Futures Victorian Clinical Genetics Services Victorian Collaborative Healthcare Recovery Initiative Victorian Fetal Therapy Service Victorian Foundation for Survivors of Torture: **Foundation House** World Health Organisation Wyndham Council Maternal and Child Health Service





ACADEMIC RESEARCH AND DEVELOPMENT COMMITTEE SMALL GRANTS 2021

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

Dr Samantha Sloss

Pre-operative imaging in deep infiltrating endometriosis: predicting depth of disease in rectosigmoid specimens

Professor Christine East Induction of labour: a shared decision

Dr Samantha Mooney

The myometrial-cervical ratio: a prospective pilot study assessing the diagnostic accuracy of a novel ultrasound measurement in the diagnosis of adenomyosis

Emma Heron

Therapeutic ultrasound treatment for inflammatory conditions of the lactating breast

Bernadette Mulcahy and Professor Christine East Long COVID — is peer support part of the recovery process?

Jessica Anderson

Structured guidance in the management of secondary postpartum haemorrhage: a prospective cohort study involving women presenting to a single tertiary women's hospital

Emma McLaughlin

Assessment of telehealth clinics in the gynaecology oncology outpatient department during the COVID-19 pandemic

Mercy Hospital for Women midwife Jessica with baby Bea Frances



WOMEN'S AND CHILDREN'S SERVICES

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

Kavitha and Andy with triplets Amira, Amelia and Ariana 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

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.

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 Professor Simon Meagher Associate Professor Lisa Hui Associate Professor Alexis Shub Dr Alison Funa Dr Elizabeth McCarthy Dr George McGillivray Dr Hannah Skrzypek Dr Teresa MacDonald Dr Danielle Wilson Alison Abboud Gabrielle Pell Alexandra Roddy Mitchell Valerie Kyritsis Danica Idzes Libby Ellis Alison Thomas Esther Turner

Projects and grants

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

Funded by NHMRC Project Grant (2019-22)

Pregnancy and childhood outcomes associated with novel medication use in early pregnancy following IVFassisted conception S Walker

Funded by NHMRC Ideas Grants (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 (2020-24)

Developing new diagnostics to prevent stillbirth S Walker Funded by NHMRC Synergy Grant (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)

Centre for Research Excellence in Stillbirth S Walker Funded by NHMRC 2021 Centres of Research Excellence — clinical research (2021–26)

A single dose of antenatal corticosteroids (SNACS) non-inferiority randomized control trial for women at risk of preterm birth S Walker Funded by Canadian Institutes of Health Research (CIHR) Project Grant (2021–29) Medications to treat mental illness, which are safe for use in pregnancy S Walker Funded by Norman Beischer Medical Research

Foundation (2021)

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)

Coronavirus health outcomes in pregnancy and newborns (CHOPAN registry) L Hui 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)

Partnering with the community to co-design a comprehensive sexual and reproductive health care service in Melbourne's North

L Hui

Funded by University of Melbourne Department of Obstetrics and Gynaecology Innovation Grant (2021)

Closing the gaps in perinatal genomics L Hui

Funded by Medical Research Future Fund Emerging Leader 2 Fellowship (2021–25)

Ethical, social and regulatory issues in advanced prenatal testing

L Hui

Funded by Australian Research Council Partnership Grant (2021)

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)

Is increased fetal growth velocity during pregnancy associated with perinatal and neonatal indicators of pathological overgrowth? T MacDonald

Funded by RANZCOG Women's Health Foundation Glyn White Research Fellowship (2021–22)

Validating the cerebral-placental-uterine ratio (CPUR) as an indicator of placental dysfunction in high risk cohorts to enable better detection of fetal growth restriction T MacDonald

Funded by University of Melbourne Department of Obstetrics and Gynaecology Innovation Grant (2021)

Assessing fetal growth to identify babies at increased risk of death and developmental disability T MacDonald Funded by Norman Beischer Medical Research Foundation (2021)

Developing a screening test to identify women at risk of preeclampsia S Walker, T MacDonald Funded by NHMRC Ideas Grant (2021–23)

Collaborations

Preeclampsia therapeutics S Walker; C Cluver, Stellenbosch University South Africa; Translational Obstetrics Group

Improved detection of fetal growth restriction and pregnancies at risk of stillbirth S Walker; 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

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

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

Sleep disordered breathing and its impact on perinatal outcomes

S Walker; M Howard, Institute of Breathing and Sleep, Austin Health

Outcomes of fetal surgery S Walker; Victorian Fetal Therapy Service; Royal Women's Hospital; Monash Medical Centre

Ethical, social and regulatory issues in advanced prenatal testing

L Hui; C Mills, Monash University; Illumina; Victorian Clinical Genetics Services; University of Melbourne; Australian Research Council Partnership Grant

The changing patterns in health services use and effects of care forgone: associations between the COVID-19 pandemic restrictions and Victorians' healthcare

L Hui; H Hiscock, Murdoch Children's Research Institute; Melbourne Academic Centre for Health, Royal Children's Hospital; Victorian Collaborative Healthcare Recovery Initiative

Publications

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Uebergang J, Hiscock R, Hastie R, Middleton A, Pritchard N, Walker S, et al. Risk of obstetric anal sphincter injury among women who birth vaginally after a prior caesarean section: a state-wide cohort study. BJOG. 2021. DOI: 10.1111/1471-0528.17063.

Wong GP, Andres F, Walker SP, MacDonald TM, Cannon P, Nguyen TV, et al. Circulating activin A is elevated at 36 weeks' gestation preceding a diagnosis of preeclampsia. Pregnancy Hypertens. 202117;27:23-26. DOI: 10.1016/j.preghy.2021.11.006.

Presentations

Hui L. Non-invasive prenatal testing (NIPT): current state of the art and clinical practice. International Society for Ultrasound in Obstetrics and Gynecology 30th Anniversary Symposium, January 2021. [Invited speaker — online]

Hui L. Cytomegalovirus (CMV): is it finally time to start routine screening in pregnancy?; NIPT: what's new and what's next? Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) Virtual Annual Scientific Meeting (ASM), February 2021. [Invited speaker — online]

Hui L. Whole genome NIPT — advantages and pitfalls. World Congress in Perinatal Medicine, June 2021. [Invited speaker — online]

Hui L. CMV — are we ready for routine screening in pregnancy? Epworth Obstetrics and Gynaecology Symposium, August 2021. [Invited speaker — online]

Hui L. Increased nuchal translucency (NT) and low risk NIPT: what do we tell the patient?; NIPT: frequently asked questions. Melbourne First Trimester Symposium, August 2021. [Invited speaker — online] Hui L. Preventing congenital CMV — what is the role of the shared care GP? North Western Melbourne Primary Health Network — Shared Maternity Care Workshop, October 2021. [Invited speaker — online]

Hui L. Increased NT after negative NIPT: what to tell the patient. Australasian Society for Ultrasound in Medicine (ASUM) Webinar, October 2021. [Invited speaker — online]

Hui L. Increased NT measurement with low risk NIPT: what do we tell the pregnant patient? International Society for Prenatal Diagnosis Virtual Education Series, November 2021. [Invited speaker — online]

Hui L. NIPT and the 11–13 week ultrasound: how do they work together? Taiwanese Society for Maternal Fetal Medicine 9th Taiwan Forum on Recent Trends in Maternal Fetal Medicine, November 2021. [Invited speaker — online]

Hui L. Congenital CMV — are we making progress?; The CoMaND project — birth outcomes in the world's most locked-down city. Mercy Perinatal Global Obstetric Update, November 2021. [Co-convenor and speaker]

MacDonald T. Reduced growth velocity from the midtrimester is associated with placental insufficiency in fetuses born at a normal birthweight. RANZCOG ASM, February 2021. [Research presentation — online]

MacDonald T. Work-life balance: regional vs metropolitan debate — metropolitan team member. RANZCOG ASM, February 2021. [Invited speaker online]

MacDonald T. Vacuum/forceps/fully dilated caesarean: the risks of interventions during the second stage. Mercy Perinatal Global Obstetric Update, November 2021. [Invited speaker]

Meagher S. Detecting abnormalities in the first trimester of pregnancy. ISUOG 30th Anniversary Symposium, January 2021. [Invited speaker — online]

Meagher S. Screening and diagnosis of fetal malformations between 6–10 weeks gestation pre NIPT. Japan Society of Ultrasound in Obstetrics and Gynecology — 1st Webinar, February 2021. [Invited speaker — online]

Meagher S. Fetal skeletal dysplasias: from ultrasound to diagnosis. Latin American Federation of Ultrasound Societies in Medicine and Biology(FLAUS) with Sociedad Argentina de Ultrasonografia en Medicina y Biologia (SAUMB), February 2021. [Invited speaker – online]

Meagher S. First trimester tetralogy of fallot; Transposition of the great arteries; Fetal pulmonary stenosis. Advanced Fetal Echo Course — Paras Advanced Centre for Fetal Medicine, February 2021. [Invited speaker — online]

Meagher S. Screening for fetal malformation before 11 weeks. World Association of Perinatal Medicine WAPM), March 2021. [Invited speaker — online]

Meagher S. Screening for fetal malformation 11–14 weeks; Gastro-intestinal malformation 11–14 weeks; Screening for fetal malformation at the mid-trimester. Masterclass in Obstetrics and Gynecology, March 2021. [Invited speaker — online]

Meagher S. Good at heart: the essentials in antenatal cardiac diagnosis. Fetal Medicine at Twilight, Mercy Hospital for Women, March 2021. [Invited speaker — online]

Meagher S. Absence of the Corpus Callosum: All you need to know. Scan Academy, March 2021. [Invited speaker — online]

Meagher S. Screening at the mid-trimester for fetal cardiac malformation; Tubal ectopic pregnancy; Screening for first trimester fetal anomalies 8–13 weeks. Royal Australian and New Zealand College of Radiologists (RANZCR) — Obstetrics and Gynaecology Special Interest Group-Brisbane, March 2021. [Invited speaker — online]

Meagher S. Gynaecological ultrasound in daily practice: what everyone should know. Scan Academy, April 2021. [Invited speaker — online]

Meagher S. First trimester fetal cardiac screening and diagnosis. V Congreso Argentino De Diagnóstico Prenatal Y Tratamiento, April 2021. [Invited speaker online]

Meagher S. Gynaecology Certificate Course. 17th ISUOG International Congress, April 2021. [Program Co-Director — online]

Meagher S. Pattern recognition in gynaecology; Screening for first trimester spina bifida — making sense of so many markers. 17th ISUOG International Congress, April 2021. [Invited speaker — online]

Meagher S. Top tips from top experts. Philadelphia Prenatal Conference in association with Scan Academy, May 2021. [Convener and speaker — online] Meagher S. The role of 11–14 week scan in the setting of cell free DNA; Screening for embryo malformation 7–10 weeks; Lobar and semilobal holoprosencephaly 8–14 weeks gestation; T1 skeletal anomalies scan 13; Early fetal development as seen through the eyes of a sonologist. Society for Maternal-Fetal Medicine (SMFM) – The 7th Philadelphia Prenatal Diagnosis Conference, June 2021. [Invited speaker – online]

Meagher S. First trimester acrania; The pre NIPT scan; 4th cerebral ventricle; Encephalocele and spina bifida; Alobar and lobar holoprosencephaly. WAPM Annual Congress, June 2021. [Invited speaker — online]

Meagher S. Fetal cardiac imaging: Pearls from the masters. Scan Academy, June 2021. [Invited speaker – online]

Meagher S. The value/role of the 11–14 week scan in 2021. Latin American Federation of Ultrasound Societies in Medicine and Biology (FLAUS) International Congress 2021, July 2021. [Invited speaker — online]

Meagher S. The role of ultrasound in detecting spina bifida. Obstetric and Gynecological Society of Malaysia ASM, July 2021. [Invited speaker — online]

Meagher S. Facial clefts: a free online masterclass by top experts; The Posterior Fossa - Imaging, assessment and prognosis of abnormalities of the posterior fossa: a practical step-by-step guide how to perform a normal 12-13 week anatomy scan; The role and value of a first trimester scan 11-14 weeks in 2021; Malformation of the fetal face 11–14 weeks: clues to diagnosis; Anterior abdominal wall defects 11–14 weeks: tips and traps; Fetal genitourinary tract malformation 11-14 week gestation; Cephaloceles: tips and traps; Simplifying screening for open spina bifida at 11–14 weeks; Acrania 7–14 weeks: clues to diagnosis; Holoprosencephaly at 11–14 weeks: a practical guide to diagnosis; The cerebral 4th ventricle at 9–14 weeks: a marker of many things; Screening for fetal cardiac malformation 11-14 weeks: facts and figures; Screening for minor cardiac malformation: benefits and limitations; A practical guide to diagnosis of major fetal cardiac malformation 11-14 weeks. Scan Academy, August 2021. [Invited speaker — online]

Meagher S. Melbourne First Trimester Symposium: ISUOG approved course. Annual Monash Ultrasound for Women Symposium, August 2021. [Invited speaker — online] Meagher S. First Trimester Screening for Fetal Anomalies: All you need to know about optimizing the first trimester scan. Scan Academy, September 2021. [Invited speaker — online]

Meagher S. Ultrasound screening in the early first trimester before 11 weeks; Imaging in the first trimester — clinical cases; Utility of cfDNA in combination with first trimester ultrasound. 30th ISUOG World Virtual Congress of Ultrasound in Obstetrics and Gynecology, October 2021. [Invited speaker — online]

Meagher S. A Practical guide to the examination of the fetal heart. Africa Health — Imaging and Diagnostic Conference, October 2021. [Invited speaker — online]

Meagher S. Current and future trends on obstetric and gynecological imaging. Brazil World Forum: Trends in Diagnostic Imaging, November 2021. [Invited speaker — online]

Meagher S. Screening and diagnosis of embryonic and fetal malformations at 6–10 weeks gestation. American University of Beirut Medical Centre, November 2021. [Invited speaker — online]

Meagher S. Lobar and semilobar holoprosencephaly. St Petersburg School of Fetal Medicine: ISUOG approved advanced course in obstetrics and gynaecology, November 2021. [Invited speaker online]

Meagher S. The first trimester scan 7–14 weeks pushing the limits. Indian Federation of Ultrasound in Obstetrics and Gynaecology — USCON 2021, December 2021. [Invited speaker — online]

Meagher S. All you need to know on ultrasound in fertility: the baseline scan. Scan Academy, December 2021. [Invited speaker — online]

Walker S. Stump the Professor. RANZCOG ASM, February 2021. [Invited panelist — online]

Walker S. Cardiology at twilight. Fetal Medicine at Twilight, Mercy Hospital for Women, March 2021. [Convenor and chair — online]

Walker S. The placenta and fetal growth restriction; Melbourne Academic Centre for Health (MACH) better together; Fetal diagnosis and therapy. Perinatal Society of Australia and New Zealand (PSANZ), March 2021. [Invited speaker and session chair — online]

Walker S. Kidneys at twilight. Fetal Medicine at Twilight, Mercy Hospital for Women, April 2021. [Convenor and chair — online] Walker S. What happens next at twilight? Fetal Medicine at Twilight, Mercy Hospital for Women, May 2021. [Convenor and chair — online]

Walker S. Empathy and kindness. University of Melbourne, Melbourne Medical School, Administration and Professional Staff Network, June 2021. [Invited speaker — online]

Walker S. Contraception, conception and controversy: the history of women's health. University of Melbourne, Doctor of Medicine Student Conference, June 2021. [Invited speaker and panelist — online]

Walker S. Fetal growth restriction: confusion to consensus. Scan Academy, July 2021. [Invited speaker — online]

Walker S. Aspirin in pregnancy at twilight. Fetal Medicine at Twilight, Mercy Hospital for Women, July 2021. [Convenor and chair — online]

Walker S. The receiver operating characteristic (ROC) curve redefined: looking after ourselves and those around us. University of Melbourne, Children's Campus, Graduate Student and Supervisor Seminar, July 2021. [Invited speaker — online]

Walker S. Using big data to answer meaningful clinical questions. Grand Round, Mercy Hospital for Women, July 2021. [Chair — online]

Walker S. COVID-19 vaccination in pregnancy: a rapid response. Grand Round, Mercy Hospital for Women, August 2021. [Convenor and chair — online]

Walker S. Fetal growth restriction. Antenatal Study Day, Mercy Hospital for Women, August 2021. [Invited speaker]

Walker S. Career talk. Pre-Vocational Obstetrics and Gynaecology Society career afternoon, September 2021. [Invited speaker and panelist — online]

Walker S. Management of COVID-19 in pregnancy at twilight; Secure your own oxygen mask first: a bit on self-care and maintaining morale. Fetal Medicine at Twilight, Mercy Hospital for Women, September 2021. [Convenor, speaker and chair — online]

Walker S. Pregnancy, child health and COVID-19 vaccine. RANZCOG/Migrant and Refugee Health Partnership webinar, September 2021. [Chair and invited speaker — online]

Walker S. COVID-19 and vaccination in pregnancy webinar. The Pink Elephants Support Network, October 2021. [Invited speaker — online]

Walker S. The pla-centre of gravity at twilight. Fetal Medicine at Twilight, Mercy Hospital for Women, October 2021. [Convenor and chair — online]

Walker S. Impacts of COVID-19 on private practice: legal considerations, ethical considerations and limitations. Australian College of Midwives, October 2021. [Panelist — online]

Walker S. Discovery 1: detecting the at risk baby; Abstract session 13 — stillbirth prediction and risk factors. International Stillbirth Alliance-International Society for the Study and Prevention of Perinatal and Infant Stillbirth 2021 Digital Conference, November 2021. [Invited speaker and panelist — online]

Walker S. Improving maternal and infant outcomes in low and middle income countries; Elective birth at term; COVID-19 in pregnancy update. Mercy Perinatal Global Obstetric Update, November 2021. [Convenor, speaker and chair]

Walker S. COVID-19: caring for our patients, caring for ourselves. Cool Topics in Neonatology 2021, The Royal Women's Hospital, November 2021. [Invited speaker online]

Wilson D. A trial of a position modification device for the prevention of supine sleep during pregnancy. Australian Sleep Association Sleep DownUnder 2021, October 2021. [Abstract presentation — online]

Awards and academic achievements

Dr Teresa MacDonald, Early Career Researcher Award, RANZCOG ASM

Associate Professor Lisa Hui, Aldo Vacca Award — Best Oral Presentation, RANZCOG ASM

Perinatal Epidemiology and Clinical Translation

Led by Professor Stephen Tong, Dr Roxanne Hastie and Dr Anthea Lindquist, the perinatal epidemiology team continued to grow during 2021. Their vision is to use population health data to improve maternal and childhood health globally.

This year the team deepened international collaborations. They are now engaged in research activities spanning the world including Sweden, South Africa and Scotland, and across many low and middle income countries. They have active collaborations with Uppsala University, Sweden; Stellenbosch University, South Africa; National Referral Hospital, Solomon Islands; Fatima Memorial Hospital, Pakistan; University of Edinburgh, Scotland; Murdoch Children's Research Institute, Australia; Assiut University, Egypt; Burnet Institute, Australia; and Royal Children's Hospital, Australia.

The group produced 31 publications during 2021, had four new members join (two PhD students and two staff), launched a multi-national cohort study and two national linkage studies, and presented at 19 national and international conferences or seminars.

Professor Tong also undertakes clinical translational research projects. Working with others in the department, he continues to co-lead a large program of research to develop biomarkers to help reduce the risk of stillbirth. He also continues to lead clinical trials in South Africa that evaluate potential drug treatments for preeclampsia.

Research team

Professor Stephen Tong Dr Roxanne Hastie Dr Anthea Lindquist Professor Sue Walker AO Dr Richard Hiscock Alesia Harper Anna Middleton Dr Manarangi De Silva Dr Amber Kennedy Dr Natasha Pritchard Alexandra Roddy Mitchell Jessica Atkinson

Projects and grants

Translating new therapeutics and diagnostics for major pregnancy complications S Tong Funded by NHMRC Practitioners Fellowship (2018–22)

Pregnancy and childhood outcomes associated with novel medication use in early pregnancy following IVFassisted conception A Lindquist, R Hastie 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, S Walker, T Kaitu'u-Lino, F Brownfoot Funded by NHMRC Synergy Grant (2020–24)

Medications to treat mental illness, which are safe for use in pregnancy?

R Hastie, A Lindquist, S Walker, S Tong Funded by Norman Beischer Medical Research Grant (2021)

Offspring outcomes following gestational exposure to common medications and maternal health events; from perinatal health to childhood education R Hastie, A Lindquist, S Walker, S Tong Funded by Department of Obstetrics and Gynaecology Strategic Grant for Outstanding Women (2021)

A peptide therapeutic for preeclampsia: a new age treatment for an age-old disease R Hastie, S Tong Funded by Trevor B Kilvington Bequest, University of Melbourne

Improved characterisation of eclampsia study R Hastie, S Walker, S Tong Funded by RANZCOG

Publications

Bergman L, Bergman K, Langenegger E, Moodley A, Griffith-Richards S, Wikström J, et al. PROVE-Pre-Eclampsia Obstetric Adverse Events: establishment of a biobank and database for pre-eclampsia. Cells. 2021;10(4):959. DOI: 10.3390/cells10040959.

Bergman L, Hastie R, Zetterberg H, Blennow K, Schell S, Langenegger E, et al. Evidence of neuroinflammation and blood–brain barrier disruption in women with preeclampsia and eclampsia. Cells. 2021;10(11):3045. DOI: https://doi.org/10.3390/cells10113045.

Binder NK, MacDonald TM, Beard SA, de Alwis N, Tong S, et al. Pre-clinical investigation of cardioprotective beta-blockers as a therapeutic strategy for preeclampsia. J Clin Med. 2021;10(15):3384. DOI: 10.3390/jcm10153384.

Brownfoot F, Binder N, Hastie R, Harper A, Beard S, Tuohey L, et al. Nicotinamide and its effects on endothelial dysfunction and secretion of antiangiogenic factors by primary human placental cells and tissues. Placenta. 2021;109:28-31. DOI: 10.1016/j. placenta.2021.04.007.

Chappell LC, Cluver CA, Kingdom J, Tong S. Preeclampsia. Lancet. 2021;398(10297):341-354. DOI: 10.1016/S0140-6736(20)32335-7.

Chappell LC, Tong S. Improving knowledge on safety is key to enabling drug access for pregnant and breastfeeding women. Clin Pharmacol Ther. 2021;110(4):866-868. DOI: 10.1002/cpt.2325.

Cluver C, Hiscock R, Decloedt EH, Hall DR, Schell S, Mol B, et al. Metformin to treat preterm pre-eclampsia (PI-2): a randomised, double blind, placebo-controlled trial. Am J Obstet Gynecol. 2021;224(2). DOI: https:// doi.org/10.1016/j.ajog.2020.12.041.

Cluver CA, Hiscock R, Decloedt EH, Hall DR, Schell S, Mol BW, et al. Use of metformin to prolong gestation in preterm pre-eclampsia: randomised, double blind, placebo controlled trial. BMJ. 2021;374:n2103. DOI: 10.1136/bmj.n2103.

Cluver C, Tong S. Revisiting blood pressure thresholds to define hypertension during pregnancy: is 140/90 mmHg too high? Lancet Glob Health. 2021;9(8):e1041-e1042. DOI: 10.1016/S2214-109X(21)00285-0.

Cruickshank T, MacDonald T, Walker S, Keenan E, Dane K, Middleton A, et al. Circulating growth differentiation factor 15 is increased preceding

preeclampsia diagnosis: implications as a disease biomarker. J Am Heart Assoc. 2021;10(16):e020302. DOI: 10.1161/JAHA.120.020302.

de Alwis N, Beard S, Binder NK, Kaitu'u-Lino TJ, Walker SP, Stock O, et al. LOX-1 expression is reduced in placenta from pregnancies complicated by preeclampsia and in hypoxic cytotrophoblast. Pregnancy Hypertens. 2021;25:255-261. DOI: 10.1016/j.preghy.2021.07.243.

de Alwis N, Beard S, Binder NK, Pritchard P, Kaitu'u-Lino TJ, Walker SP, et al. DAAM2 is elevated in the circulation and placenta in pregnancies complicated by fetal growth restriction and is regulated by hypoxia. Sci Rep. 2021;11:5540. DOI: https://doi.org/10.1038/ s41598-021-84785-7.

de Alwis N, Beard S, Binder NK, Pritchard N, Kaitu'u-Lino TJ, Walker SP, et al. NR4A2 expression is not altered in placentas from cases of growth restriction or preeclampsia, but is reduced in hypoxic cytotrophoblast. Sci Rep. 2021;11:20670. DOI: https://doi.org/10.1038/s41598-021-00192-y.

De Silva M, Panisi L, Lindquist A, Cluver C, Middleton A, Koete B, et al. Severe maternal morbidity in the Asia Pacific: A systematic review and meta-analysis. Lancet Reg Health West Pac. 2021;14:100217. DOI: 10.1016/j.lanwpc.2021.100217.

Garcha D, Walker SP, MacDonald TM, Hyett J, Jellins J, Myers J, et al. Circulating syndecan-1 is reduced in pregnancies with poor fetal growth and its secretion regulated by matrix metalloproteinases and the mitochondria. Sci Rep. 2021;11:16595. DOI: https://doi.org/10.1038/s41598-021-96077-1.

Hastie R, Tong S, Hiscock R, Lindquist A, Lindström L, Wikström AK, et al. Maternal lithium use and the risk of adverse pregnancy and neonatal outcomes: a Swedish population-based cohort study. BMC Med. 2021;19(1):291. DOI: 10.1186/s12916-021-02170-7.

Hesselman S, Wikman A, Hastie R, Wikström AK, Bergman L, Sandström A. Duration of labor among women with thromboembolic events: a Swedish register study. Eur J Obstet Gynecol Reprod Biol X. 2021;11:100130. DOI: 10.1016/j.eurox.2021.100130.

Hui L, Pynaker C, Bonacquisto L, Lindquist A, Poulton A, Kluckow E, et al. Reexamining the optimal nuchal translucency cutoff for diagnostic testing in the cell-free DNA and microarray era: results from the Victorian Perinatal Record Linkage study. Am J Obstet Gynecol. 2021;225(5):527. DOI: 10.1016/j.ajog.2021.03.050.

Kaitu'u-Lino TJ, Tong S, Walker SP, MacDonald TM, Cannon P, Nguyen TV, et al. Maternal circulating SPINT1 is reduced in small-for-gestational age pregnancies at 26 weeks: Growing Up in Singapore Towards Health Outcomes (GUSTO) cohort study. Placenta. 2021;110:24-28. DOI: 10.1016/j. placenta.2021.05.007.

Lindquist AC, Hastie R, Hiscock R, Pritchard N, Walker SP, Tong S. Risk of major labour-related complications for pregnancies progressing to 42 weeks or beyond. BMC Med. 2021;19:126. DOI: https://doi.org/10.1186/s12916-021-01988-5.

MacDonald TM, Robinson AJ, Hiscock RJ, Hui L, Dane KM, Middleton AL, et al. Accelerated fetal growth velocity across the third trimester is associated with increased shoulder dystocia risk among fetuses who are not large-for-gestationalage: a prospective observational cohort study. PLoS One. 2021;16(10):e0258634. DOI: 10.1371/journal. pone.0258634.

MacDonald TM, Tong S, Myers J, Cannon P, Nguyen T-V, Keenan E, et al. Circulating tissue factor pathway inhibitor (TFPI) is increased preceding diagnosis of term preeclampsia. Placenta. 2021;105:32-40. DOI: https://doi.org/10.1016/j.placenta.2021.01.018.

MacDonald TM, Walker SP, Hannan NJ, Tong S, Kaitu'u-Lino TJ. Clinical tools and biomarkers to predict preeclampsia. EBioMedicine. 2021;75:103780. DOI: 10.1016/j.ebiom.2021.103780.

McKeating DR, Fisher JJ, MacDonald T, Walker S, Tong S, Bennett WW, et al. Circulating trace elements for the prediction of preeclampsia and small for gestational age babies. Metabolomics. 2021;17(10):90. DOI: 10.1007/s11306-021-01840-0.

Murphy CN, Walker SP, MacDonald TM, Keenan E, Hannan NJ, Wlodek ME, et al. Elevated circulating and placental SPINT2 is associated with placental dysfunction. Int J Mol Sci. 2021;22(14):7467. DOI: 10.3390/ijms22147467.

Pritchard N, Kaitu'u-Lino TJ, Harris L, Tong S, Hannan N. Nanoparticles in pregnancy: the next frontier in reproductive therapeutics. Hum Reprod Update. 2021;28(2):280-304. DOI: 10.1093/humupd/dmaa049.

Tong S, Kaitu'u-Lino TJ. Measuring circulating miRNA in early pregnancy could identify fetuses destined to undergrow and be at increased risk of stillbirth. eBioMedicine. 2021;63:103172. DOI: 10.1016/j. ebiom.2020.103172. Tong S, Walker S, Cluver C, Hastie R. Aspirin to prevent pre-eclampsia. Drug Ther Bull. 2021;59(4):56-59. DOI: 10.1136/dtb.2020.000009.

Uebergang J, Hiscock R, Hastie R, Middleton A, Pritchard N, Walker S, et al. Risk of obstetric anal sphincter injury among women who birth vaginally after a prior caesarean section: a state-wide cohort study. BJOG. 2021. DOI: 10.1111/1471-0528.17063.

Whigham CA, Hastie R, Hannan NJ, Brownfoot FB, Pritchard N, Nguyen TV, et al. Placental growth factor is negatively regulated by epidermal growth factor receptor (EGFR) signaling. Placenta. 2021;114:22-8. DOI: 10.1016/j.placenta.2021.08.002.

Wong GP, Andres F, Walker SP, MacDonald TM, Cannon P, Nguyen TV, et al. Circulating activin A is elevated at 36 weeks' gestation preceding a diagnosis of preeclampsia. Pregnancy Hypertens. 2021;27:23-26. DOI: 10.1016/j.preghy.2021.11.006.

Presentations

Hastie R. Aspirin in pregnancy at twilight: aspirin and fetal growth restriction. Fetal Medicine at Twilight, Mercy Hospital for Women, July 2021. [Invited speaker — online]

Hastie R. Journal Club on the Run. Mercy Perinatal Global Obstetric Update, November 2021. [Invited speaker]

Hastie R. Angiogenic markers and preeclampsia: an update from PROVE. Preeclampsia Update, November 2021. [Invited speaker — online]

Lindquist A. Journal Club on the Run; Antenatal corticosteroids and childhood outcome. Mercy Perinatal Global Obstetric Update, November 2021. [Invited speaker]

Lindquist A. Antenatal corticosteroids and childhood outcome. RANZCOG Provincial Fellows Seminar Series, November 2021. [Invited speaker — online]

Tong S. Hunting treatments to tackle preeclampsia by chasing concepts from laboratory discovery to randomised trials. Perinatal Society of Australia and New Zealand (PSANZ), March 2021. [Invited speaker, plenary presentation — online]

Tong S. The hunt for a blood test to reduce the risk of stillbirth. Star Legacy Foundation Stillbirth Summit, United States, June 2021. [Invited speaker — online]

Tong S. Aspirin to prevent preeclampsia. RANZCOG Regional Fellows Clinical Webinar Series, July 2021. [Invited speaker — online]

Tong S. The Priscilla Kincaid-Smith Lecture (Plenary) — Drugs to prevent or treat preeclampsia: revisiting the old, discovering the new. Society of Obstetric Medicine Australia and New Zealand (SOMANZ) conference, July 2021. [Invited speaker — online]

Tong S. A translational pipeline to discover and trial drugs for preeclampsia. Mothers and Babies Research Centre Seminar, University of Newcastle, August 2021. [Invited speaker — online]

Tong S. Building bench to bedside research programs to find new therapeutics for pregnancy complications. Department of General Practice, University of Melbourne, September 2021. [Invited speaker — online]

Tong S. The hunt to find new therapeutics for pregnancy complications. Geelong University Hospital, September 2021. [Invited speaker — online]

Tong S. An update on current and emerging therapies to treat or prevent preeclampsia. International Society for the Study of Hypertension in Pregnancy (ISSHP) Conference, September 2021. [Invited speaker online]

Tong S. An update on emerging therapeutics for preeclampsia. ISUOG Hypertension in pregnancy course, September 2021. [Invited speaker — online]

Tong S. The pla-centre of gravity at twilight: an update on current and emerging therapies to treat or prevent preeclampsia. Fetal Medicine at Twilight, Mercy Hospital for Women, October 2021. [Invited speaker — online]

Tong S. Metformin: the first disease modifying drug for preeclampsia. Society for Reproductive Biology (SRB) ASM, November 2021. [Invited speaker — online]

Tong S. An update on global research to identify new treatments for preeclampsia. 2nd Asia-Pacific International Conference on Prenatal Diagnosis, November 2021. [Invited speaker — online]

Tong S. An update on global research to identify new treatments for preeclampsia. 9th Taiwanese Forum on Recent Trends in Maternal Fetal Medicine Congress, November 2021. [Invited speaker — online]

Tong S. The hunt to find new therapeutics for pregnancy complications. Women's and Children's Hospital, Adelaide, November 2021. [Invited speaker]

Diagnostics Discovery and Reverse Translation

Headed up by Professor Tu'uhevaha Kaitu'u-Lino, under the umbrella of the Translational Obstetrics Group, the focus of this group is to identify novel mRNA, miRNA or protein biomarkers that could be used to screen or diagnose serious complications of pregnancy, including preeclampsia, fetal growth restriction and macrosomia. The reverse translation studies from this team use the novel findings derived from the biomarker work, to go back into the laboratory and delve deeper into how these molecules might be involved in the pathogenesis of pregnancy complications. The ultimate goal is to not only provide a better understanding of how and why pregnancy complications occur, but to also potentially identify novel therapeutic targets.

Research team

Professor Tu'uhevaha Kaitu'u-Lino Ping Cannon Vi Nguyen Manju Kandel Joshua Masci Dr Carole-Anne Whigham Ciara Murphy Georgia Wong Faith Andres Alison Abboud Gay Pell Genevieve Christophers Rachel Murdoch Libby Ellis

Projects and grants

Developing new diagnostics to prevent stillbirth T Kaitu'u-Lino Funded by NHMRC Synergy Grant (2020–24)

Developing a screening test to identify women at risk of preeclampsia T Kaitu'u-Lino Funded by NHMRC Ideas Grant (2021–23)

Strengthening the case that SPINT1 is critical to placental development T Kaitu'u-Lino Funded by University of Melbourne Innovation Grant (2021)

Publications

Bartho LA, O'Callaghan JL, Fisher JJ, Cuffe JSM, Kaitu'u-Lino TJ, Hannan NJ, et al. Analysis of mitochondrial regulatory transcripts in publicly available datasets with validation in placentae from pre-term, post-term and fetal growth restriction pregnancies. Placenta. 2021;112:162-171. DOI: 10.1016/j. placenta.2021.07.303.

Binder NK, MacDonald TM, Beard SA, de Alwis N, Tong S, Kaitu'u-Lino TJ, et al. Pre-clinical investigation of cardioprotective beta-blockers as a therapeutic strategy for preeclampsia. J Clin Med. 2021;10(15):3384. DOI: 10.3390/jcm10153384.

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Cruickshank T, MacDonald T, Walker S, Keenan E, Dane K, Middleton A, et al. Circulating growth differentiation factor 15 is increased preceding preeclampsia diagnosis: implications as a disease biomarker. J Am Heart Assoc. 2021;10(16):e020302. DOI: 10.1161/JAHA.120.020302.

de Alwis N, Beard S, Binder NK, Kaitu'u-Lino TJ, Walker SP, Stock O, et al. LOX-1 expression is reduced in placenta from pregnancies complicated by preeclampsia and in hypoxic cytotrophoblast. Pregnancy Hypertens. 2021;25:255-261. DOI: 10.1016/j.preghy.2021.07.243.

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Garcha D, Walker SP, MacDonald TM, Hyett J, Jellins J, Myers J, et al. Circulating syndecan-1 is reduced in pregnancies with poor fetal growth and its secretion regulated by matrix metalloproteinases and the mitochondria. Sci Rep. 2021;11:16595. DOI: https://doi.org/10.1038/s41598-021-96077-1.

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Wong GP, Andres F, Walker SP, MacDonald TM, Cannon P, Nguyen TV, et al. Circulating activin A is elevated at 36 weeks' gestation preceding a diagnosis of preeclampsia. Pregnancy Hypertens. 2021;27:23-26. DOI: 10.1016/j.preghy.2021.11.006.

Presentations

Kaitu'u-Lino T. Identifying novel biomarkers for placental insufficiency and stillbirth. National Institute of Child Health and Human Development (NICHD): Human Placental Project Meeting, May 2021. [Invited speaker — online] Kaitu'u-Lino T. Developing novel blood tests for serious pregnancy complications. Peter MacCallum Cancer Centre, September 2021. [Invited speaker — online]

Kaitu'u-Lino T. Diagnostics discovery for pregnancy complications. University of Newcastle, October 2021. [Invited speaker — online]

Kaitu'u-Lino T. Detecting the at-risk baby. International Stillbirth Alliance and the International Society for the Study and Prevention of Perinatal and Infant Death Conference, November 2021. [Invited speaker online]

Kaitu'u-Lino T. Discussing career interruptions and how to best capture this information for grant/promotion applications. University of Melbourne Supporting Women in Faculty of Medicine, Dentistry and Health Sciences (SwiM) initiative, November 2021. [Panelist – online]

Kaitu'u-Lino T. How big is my baby? Studying FGR. University of Melbourne, Honours program, November 2021. [Invited speaker — online]

Awards and academic achievements

Associate Professor Tu'uhevaha Kaitu'u-Lino appointed Professor, University of Melbourne

Obstetric Diagnostics and Therapeutics Group

The Obstetric Diagnostics and Therapeutics Group is a multidisciplinary group focused on developing treatments and diagnostics to improve pregnancy outcomes. The group's main projects are about developing treatments for preeclampsia and fetal growth restriction, and devices to better diagnose fetal wellbeing to reduce stillbirth in pregnancy and during labour.

Research team

Dr Fiona Brownfoot Dr Emerson Keenan Dr Elif Kadife Dr Prathima Chowdary Alesia Harper Whitney Grace Kaitlin Constable Alison Abboud Gay Pell Genevieve Christophers Rachel Murdoch

Projects and grants

Bench to beside 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)

Developing new diagnostics to prevent stillbirth F Brownfoot Funded by NHMRC Synergy Grant (2020–24)

Developing a novel device to reduce stillbirth; Developing a pH sensor to better detect fetal hypoxia in labour; Developing treatments for preeclampsia F Brownfoot Funded by Norman Beischer Medical Research

Funded by Norman Beischer Medical Research Foundation Research Fellowship (2021–23)

Publications

Brownfoot F. Uncovering the molecular cause of preeclampsia — the role of glutathionylation of the Na+/K+ ATPase transporter. J Clin Endocrinol Metab. 2021;106(7):e2830-e2832. DOI: 10.1210/clinem/ dgab117.

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Galibert S, Keenan E, Hastie R, Brownfoot FC. Management of late preterm preeclampsia: a comparison of maternal and fetal indications for delivery. J Matern Fetal Neonatal Med. 2021;1-10. DOI: 10.1080/14767058.2021.1882980.

Garcha D, Walker SP, MacDonald TM, Hyett J, Jellins J, Myers J, et al. Circulating syndecan-1 is reduced in pregnancies with poor fetal growth and its secretion regulated by matrix metalloproteinases and the mitochondria. Sci Rep. 2021;11(1):16595. DOI: https://doi.org/10.1038/s41598-021-96077-1.

Keenan E, Karmakar C, Brownfoot F, Palaniswami M. Personalized anatomic modeling for noninvasive fetal ECG: methodology and applications. IEEE Transactions on Instrumentation and Measurement. 2021;70:1-12.

Molony CL, Hiscock R, Kaufman J, Keenan E, Hastie R, Brownfoot FC. Growth trajectory of preterm small-for-gestational-age neonates. J Matern Fetal Neonatal Med. 2021;9:1-7. DOI: 10.1080/14767058.2021.1974835.

Whigham CA, Hastie R, Hannan NJ, Brownfoot F, Pritchard N, Cannon P, et al. Placental growth factor is negatively regulated by epidermal growth factor receptor (EGFR) signalling. Placenta. 2021;114:22-28. DOI: 10.1016/j.placenta.2021.08.002.

Presentations

Brownfoot F. Placental growth factor: translation to practice; Fetal monitoring in complex pregnancies; Difficult deliveries and the aftermath. RANZCOG ASM, February 2021. [Invited speaker — online]

Awards and academic achievements

Dr Emerson Keenan awarded PhD

Therapeutics Discovery and Vascular Function Group

The Therapeutics Discovery and Vascular Function Group is focused on improving women's health by gaining an understanding of serious pregnancy complications and identifying and developing novel treatment strategies for these conditions, particularly preeclampsia, hypertension in pregnancy, fetal growth restriction and preterm birth. The research program focuses on understanding placental development and how inappropriate development can lead to dangerous consequences for both the mother and fetus.

Research team

Professor Natalie Hannan Dr Natalie Binder Sally Beard Natasha de Alwis Bianca Fato Bridget Arman Alison Abboud Gay Pell Genevieve Christophers Rachel Murdoch Libby Ellis

Publications

Bartho LA, O'Callaghan JL, Fisher JJ, Cuffe JSM, Kaitu'u-Lino TJ, Hannan NJ, et al. Analysis of mitochondrial regulatory transcripts in publicly available datasets with validation in placentae from pre-term, post-term and fetal growth restriction pregnancies. Placenta. 2021;112:162-171. DOI: 10.1016/j.placenta.2021.07.303.

Binder NK, MacDonald TM, Beard SA, de Alwis N, Tong S, Kaitu'u-Lino TJ, et al. Pre-clinical investigation of cardioprotective beta-blockers as a therapeutic strategy for preeclampsia. J Clin Med. 2021;10(15):3384. DOI: 10.3390/jcm10153384.

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de Alwis N, Beard S, Binder NK, Pritchard N, Kaitu'u-Lino TJ, Walker SP, et al. LOX-1 expression is reduced in placenta from pregnancies complicated by preeclampsia and in hypoxic cytotrophoblast. Pregnancy Hypertens. 2021;25:255-261. DOI: 10.1016/j.preghy.2021.07.243.

de Alwis N, Beard S, Binder NK, Pritchard N, Kaitu'u-Lino TJ, Walker SP, et al. NR4A2 expression is not altered in placentas from cases of growth restriction or preeclampsia, but is reduced in hypoxic cytotrophoblast. Sci Rep. 2021;11:20670. DOI: https://doi.org/10.1038/s41598-021-00192-y. Garcha D, Walker SP, MacDonald TM, Hyett J, Jellins J, Myers J, et al. Circulating syndecan-1 is reduced in pregnancies with poor fetal growth and its secretion regulated by matrix metalloproteinases and the mitochondria. Sci Rep. 2021;11:16595. DOI: https://doi.org/10.1038/s41598-021-96077-1.

MacDonald TM, Tong S, Myers J, Cannon P, Nguyen T-V, Keenan E, et al. Circulating tissue factor pathway inhibitor (TFPI) is increased preceding diagnosis of term preeclampsia. Placenta. 2021;105:32-40. DOI: https://doi.org/10.1016/j.placenta.2021.01.018.

MacDonald TM, Walker SP, Hannan NJ, Tong S, Kaitu'u-Lino TJ. Clinical tools and biomarkers to predict preeclampsia. EBioMedicine. 2021;75:103780. DOI: 10.1016/j.ebiom.2021.103780.

Murphy CN, Walker SP, MacDonald TM, Keenan E, Hannan NJ, Wlodek ME, et al. Elevated circulating and placental SPINT2 is associated with placental dysfunction. Int J Mol Sci. 2021;22(14):7467. DOI: 10.3390/ijms22147467.

Pritchard N, Kaitu'u-Lino TJ, Harris L, Tong S, Hannan N. Nanoparticles in pregnancy: the next frontier in reproductive therapeutics. Hum Reprod Update. 2021;28(2):280-304. DOI: 10.1093/humupd/dmaa049.

Whigham CA, Hastie R, Hannan NJ, Brownfoot FB, Pritchard N, Nguyen TV, et al. Placental growth factor is negatively regulated by epidermal growth factor receptor (EGFR) signaling. Placenta. 2021;114:22-8. DOI: 10.1016/j.placenta.2021.08.002.

Wong GP, Andres F, Walker SP, MacDonald TM, Cannon P, Nguyen TV, et al. Circulating activin A is elevated at 36 weeks' gestation preceding a diagnosis of preeclampsia. Pregnancy Hypertens. 2021;27:23-26. DOI: 10.1016/j.preghy.2021.11.006.

Awards and academic achievements

Associate Professor Natalie Hannan appointed Professor, University of Melbourne

A BREAKTHROUGH DRUG DISCOVERY TO COMBAT PREECLAMPSIA

Worldwide, preeclampsia claims the lives of 500,000 unborn babies and 70,000 pregnant mothers. Until now, no drug has been discovered that slows preeclampsia from progressing to cause life-threatening injuries to major organs in the mother — her kidneys, liver, lungs and brain.

A joint team of researchers in Cape Town, South Africa, and at Mercy Hospital for Women and the University of Melbourne found that the diabetes drug, metformin, may be the first ever disease-modifying drug discovered that slows preeclampsia in its tracks.

The idea of testing metformin as a treatment for preeclampsia came from laboratory studies conducted by the research team at Mercy Hospital for Women. The team took the concept to colleagues in South Africa, where the disease is far more severe and common, where clinical trials were conducted.

"Preeclampsia that sets in at an early gestation, called preterm preeclampsia, is a highly dangerous variant of the disease where the risks to baby and mother are particularly high," said Professor Stephen Tong, Mercy Perinatal Co-Director and joint-senior investigator of the trial.

Professor Sue Walker, Mercy Perinatal Co-Director and joint-senior trial investigator, added: "When preterm preeclampsia sets in, we are often forced to deliver the baby prematurely as this is the only way to reverse the disease process and cure preeclampsia. Early delivery saves the mum from becoming gravely sick. But by doing this, we birth babies that are not fully developed and not ready to leave the womb. Babies born too early are at risk of developing permanent disability or even death".

Finding a drug that can curb the severity of the disease could enable pregnancies affected by preeclampsia to safely continue for longer. The babies can be delivered at a less premature gestation, which may mean fewer disabilities and better lifelong health outcomes. Previous efforts to find drugs to treat preeclampsia have not succeeded.

Laboratory studies by research teams at Mercy Hospital for Women and the University of Melbourne identified metformin as a promising treatment for preeclampsia. This led onto testing the idea in humans.

In the trial, conducted at Tygerberg Hospital in South Africa, the researchers recruited 180 women with preterm preeclampsia between 26 and 31 weeks of pregnancy. Half the women received metformin tablets while the other half were given a placebo. The participants were not told whether they were taking the active drug or the placebo.

Associate Professor Cathy Cluver (University of Stellenbosch), who is the lead investigator working in South Africa, said: "What is really exciting is that the women who took metformin stayed pregnant for 7–8 days longer compared to those who took a placebo. Furthermore, their babies spent 12 days less in hospital. When we are dealing with this level of prematurity, an extra week in the mother's womb is likely to be a really important gain that could translate into lifelong health benefits for the baby.

"It is the first time that a treatment given to mums with preterm preeclampsia to keep them pregnant for a week longer might have worked. It could mean that preterm preeclampsia can now be treated and that we can slow disease progression right down."

The group is now gearing up to start a larger trial involving 500 participants to confirm its exciting discovery.

"If our findings are confirmed, it may mean that metformin could be used to save the lives of thousands of mothers and their infants"

Professor Stephen Tong, Mercy Perinatal Co-Director

The results have been reported in the *British Medical Journal.*

MERCY HEALTH OBSTETRICIANS SHINE AT RANZCOG ANNUAL SCIENTIFIC MEETING

Associate Professor Lisa Hui and Dr Teresa McDonald were both recognised for their research endeavours at the 2021 Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) Annual Scientific Meeting.

Mercy Health obstetrician Associate Professor Lisa Hui won the top prize at the 2021 Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) Annual Scientific Meeting (ASM) for her research on obstetric and newborn outcomes during Melbourne's COVID-19 pandemic lockdown.

Associate Professor Lisa Hui's research showed that public hospitals across Melbourne observed increases in infant birth weights over the 90th percentile, as well as increases in rates of maternal obesity during the first Melbourne lockdown period. She also found there was a decline in exclusive breastmilk feeding during Stage 3 and Stage 4 restrictions.

Associate Professor Hui was awarded the prestigious Aldo Vacca Award for her talk on the 'Collaborative Maternity and Newborn Dashboard (CoMaND) for the COVID-19 pandemic: real-time monitoring of perinatal services performance indicators in Victoria'.

The CoMaND project collects a wide range of maternal and newborn outcomes from public hospitals each month and produces a report that is circulated to health services, the COVID-19 expert obstetric advisory group to Safer Care Victoria, and the Chair of the Consultative Council of Obstetric and Paediatric Morbidity and Mortality.

The collaboration was supported by grants from the Norman Beischer Research Foundation and the University of Melbourne Department of Obstetrics and Gynaecology.

"The support of our funders was crucial to this work. Without this resource, we would not know if we were doing more harm than good with our pandemic response," Associate Professor Hui said.

"It has been incredibly gratifying to have 100 per cent of public maternity hospitals in Melbourne signing up to the collaboration so that we can rapidly detect any concerning safety signals in perinatal outcomes such as stillbirth or preterm birth."



Associate Professor Lisa Hui



Dr Teresa McDonald

The CoMaND project will continue to report on the impacts of the pandemic on mothers and babies until the end of 2024.

Another Mercy Health obstetrician Dr Teresa MacDonald was awarded the RANZCOG ASM's Early Career Researcher Award for her presentation 'Reduced growth velocity from the mid-trimester is associated with placental insufficiency in fetuses born at a normal birthweight'.

Dr MacDonald, supervised medical student Lucy

Kennedy in the project, and collaborated with other coauthors, to analyse the changes in estimated fetal weight and babies' abdominal circumference measurements between the routine 20-week scan and a 36-week growth scan. They found those who showed slowing growth — even if their final birthweight was in the normal range — demonstrated outcomes associated with a more poorly performing placenta.

These findings are important because they could help clinicians better identify normal sized babies who might be at increased risk of stillbirth. Future studies to confirm these findings are currently underway.

The research done by both Associate Professor Hui and Dr MacDonald is an important part of Mercy Health's goal of improving the lives of women and babies. "It has been incredibly valuable for our clinical leaders to be able to monitor the impacts of changes to maternity care during the pandemic."

Associate Professor Lisa Hui

DEPARTMENT OF GYNAECOLOGICAL ONCOLOGY, MERCY HOSPITAL FOR WOMEN

The department is committed to progressing and continuing research, 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 improvement 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 Dr Kristen Moloney Dr Rhett Morton Dr Monica McGuaran Professor Linda Mileshkin Dr George Au-Yeung Dr Serene Foo Dr Rachael Delahunty Dr Nikki Burdett Janiece Williams Dr Anna Morton Dr Carolin Poon Dr Gene Ngian Associate Professor Kerryn 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

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 Mileshkin, 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 Mileshkin, 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 Mileshkin, 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 Mileshkin, G Au-Yeung, P Grant, S Hyde, S Foo, J Lamont, A Pendlebury

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

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

Funded by ANZGOG National Gynaecological Oncology Registry

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. Chemotherapy response score after neoadjuvant chemotherapy and interval debulking surgery in extrauterine high-grade serous carcinoma: prognostic value and predictors

M McGauran, M Newman, S Hyde

Outcomes in patients with metastatic or recurrent cervical cancer treated with first-line chemotherapy and bevacizumab followed by maintenance bevacizumab M Naidoo, M McGauran, I Tung, S Hyde, L Mileshkin L In collaboration with Peter MacCallum Cancer Centre.

External validation of prediction models for early relapse in advanced epithelial ovarian cancer using Australian population-based data E S A Said, H Koffijberg, M A van der Aa, J A de Hullu, S Hyde, A M van Altena

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

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

Measuring adherence to best practice guidelines for the management of ovarian cancer in Australia to determine the extent to which variation in care influences clinical and patient-reported outcomes S Hyde

Funded by Medical Research Future Fund Ovarian Cancer Research Grant

Publications

Al Ramadhani RM, Nagle CM, Ibiebele TI, Grant P, Friedlander M, DeFazio A, et al. Pre- and postdiagnosis diet quality and ovarian cancer survival. Cancer Epidemiol Biomarkers Prev. 2021;30(1):229-232. DOI: 10.1158/1055-9965.EPI-20-1036.

Banerjee SN, Tang M, O'Connell RL, Sjoquist K, Clamp AR, Milan D, et al. A phase 2 study of anastrozole in patients with oestrogen receptor and/ progesterone receptor positive recurrent/metastatic granulosa cell tumours/sex-cord stromal tumours of the ovary: the PARAGON/ANZGOG 0903 trial. Gynecol Oncol. 2021;163(1):72-78. DOI: 10.1016/j.ygyno.2021.07.024.

Jones APM, McGauran MFG, Jagasia N, Hiscock RJ, Hyde S, Grant P. Efficacy of dexamethasone in the management of malignant small bowel obstruction in advanced epithelial ovarian cancer. Support Care Cancer. 2021; 30(3):2821-2827. DOI: 10.1007/s00520-021-06694-9.

McGauran MF, Manolitsas T, Tawfik B, Joshi D, Lamont JM. Poroid hidradenocarcinoma and atypical hidradenoma papilliferum of the vulva–two cases. Gynecol Oncol Rep. 2021;38:100886. DOI: 10.1016/j. gore.2021.100886.

McGauran MF, Pendlebury AB, Hiscock RJ, Lamont JM, Jones AP, Grant P, et al. Possible high-grade squamous intraepithelial lesion (pHSIL) in the new cervical screening paradigm: the outcomes and the role of clinicopathological review. Aust N Z J Obstet Gynaecol. 2021 ;61(4):569-575. DOI: 10.1111/ajo.13348.

Moloney K, Janda M, Frumovitz M, Leitao M, Abu-Rustum NR, Rossi E, et al. Development of a surgical competency assessment tool for sentinel lymph node dissection by minimally invasive surgery for endometrial cancer. International Journal of Gynecologic Cancer. 2021;31(5):647-655. DOI: 10.1136/ijgc-2020-002315.

Pendlebury A, Radeva M, Rose PG. Surgical lymph node assessment influences adjuvant therapy in clinically apparent stage I endometrioid endometrial carcinoma, meeting Mayo criteria for lymphadenectomy. J Surg Oncol. 2021;123(5):1292-1298. DOI: 10.1002/ jso.26265. Pujari R, Newman MR, Talia KL, Pendlebury A, Hawkes D, Ireland-Jenkin K, et al. Seborrhoeic keratosislike lesion of the cervix: first report of the cytological features of a low-risk HPV 42-associated lesion. Acta Cytol. 2021;65(5):448-452. DOI: 10.1159/000517479.

Xie H, Morton R, Balendran J, Philp S, Saidi S, Farrell R, Anderson L, et al. The impact of primary human papillomavirus screening on negative loop excision histology following biopsy-proven high-grade cervical intra-epithelial lesions: A review from a large tertiary colposcopy unit. Aust N Z J Obstet Gynaecol. 2021;61(6):941-8. DOI: 10.1111/ajo.13426.

Presentations

Hyde S. Changes to the intermediate pathway. Australian Society for Colposcopy and Cervical Pathology (ASCCP) in conjunction with RANZCOG, February 2021. [Invited speaker and panelist — online]

Hyde S. Management of oncogenic positive patient with normal cytology. ASCCP in conjunction with RANZCOG/RACGP, August 2021. [Invited speaker and panelist — online]

Hyde S. Pre and post-test presentations: tumour board and panel case presentations and discussion.

ASCCP Update Course April 2021. [Invited speaker and panelist — online]

Hyde S. Overview of the New National Cervical Screening Program. ANZVS Vulvar education day, November 2021. [Invited speaker]

McGauran M, Manolitsas T, Tawfik B, Joshi D, Lamont J. Hidradenocarcinoma of the vulva. Australian Society of Gynaecological Oncology (ASGO) ASM, May 2021. [Invited speakers]

McGauran M, Pendlebury A, Hiscock R, Jones A, Lamont J, Grant P, Newman M, Ireland-Jenkin K, McGrath S, Pham K, Hyde S. Possible high-grade squamous intraepithelial lesion (pHSIL) in the new cervical screening paradigm: the outcomes and the role of clinicopathological review. ASGO ASM, May 2021. [Invited speakers]

MERCY HEALTH SURGEON RECOGNISED WITH QUEEN'S BIRTHDAY HONOUR

Setting the highest of standards and then achieving them has been a hallmark of the career of Mercy Health surgeon Associate Professor Peter Grant.

Recognised in the Queen's Birthday Honours with an Order of Australia Medal (OAM), Associate Professor Peter Grant's citation reads: For services to gynaecological oncology.

Associate Professor Grant received tributes such as a doyen and giant of his field, and his endeavours and achievements are both nationally and internationally recognised.

Associate Professor Grant did his Gynaecological Oncology Fellowship in Halifax, Canada (1985-87) after completing his obstetrics and gynaecology specialist training at Mercy Hospital for Women. He returned to Melbourne from 1989-94 but then opted to work for five years at Sydney Royal Women's Hospital before rejoining Mercy Health in 1999.

Dr Simon Hyde, a colleague of Associate Professor Grant and current head of the Gynaecological Oncology Department at Mercy Hospital for Women, said that Associate Professor Grant has always demonstrated an unwavering dedication and commitment to caring for those that are forced to navigate the immense challenges of dealing with gynaecological cancer.

"My time at Mercy Health and the work I did was rewarding, but what was most important to me was to advocate for and offer help to those in my care and their families."

Associate Professor Peter Grant



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

Associate Professor Grant retired from his Mercy Health position in 2021 — undeniably he will be missed by his close colleagues but more significantly by his patients and their families.

While his clinical role has ceased, Associate Professor Grant continues to do research and is involved in several National Health and Medical Research Council and Medical Research Future Fund projects.

In Dr Hyde's words: "The standards set by Associate Professor Peter Grant are extremely high, they will live on and we will always strive to maintain them."

DEPARTMENT OF ENDOSURGERY, MERCY HOSPITAL FOR WOMEN

The department specialises in providing advanced laparoscopic surgery to women. The research focuses of the team include pelvic pain, endometriosis, abnormal uterine bleeding and improving surgical techniques.

Research team

Associate Professor Emma Readman Dr Lenore Ellett Dr Samantha Mooney Dr Kate Stone Dr Natalie Yang Dr Lauren Hicks Dr Keryn Harlow Dr Charlotte Reddington Jennifer Porter Michal Zelcer Dr Hannah Gordon Dr Evangeline Shalou Dr Madeleine Smith Dr Helen McNamara Dr Samantha Sloss Dr Emma McGloughlin

Projects and grants

What lies beneath: umbilical adhesions following abdomino-pelvic surgery L Ellett Funded by Australasian Gynaecological Endoscopy and Surgery Society (AGES) Research Grant

Pelvic floor muscle tenderness in women undergoing surgery for endometriosis: a reliability study K Harlow Funded by NHMRC Medical Research Future Fund grant

Outpatient hysteroscopy prediction tool L Hicks Funded by Hologic

Vaginal Diazepam following Mirena IUD insertion M Smith

Funded by Mercy Health Academic Research and Development Committee Small Grants

Assessing uterosacral thickness on ultrasound as a soft marker for peritoneal endometriosis K Stone Funded by AGES Research Grant

Structured guidance in the management of secondary post-partum haemorrhage: a prospective cohort study S Mooney

Sexual function in women undergoing surgery for severe endometriosis: a prospective cohort H McNamara

Patient satisfaction following surgery for severe endometriosis: a retrospective cohort study S Mooney

Hysteroscopic morcellation vs bipolar resection for retained products of conception: a pilot RCT S Mooney

Pelvic pain clinic: the design and implementation of a shared care model E Readman

Gas bubbles during hysteroscopy: a descriptive cohort pilot study A Wong

Collaborations

Pelvic floor muscle tenderness in women undergoing surgery for endometriosis H Frawley: C Cheng; Mercy Health; Royal Women's Hospital; University of Melbourne Department of Obstetrics and Gynaecology Medical Research Future Fund grant for endometriosis research Treatment with PEA/PLD for endometriosis-related pain: a randomised controlled trial

M Amir; Mercy Health; Royal Women's Hospital; University of Melbourne Department of Obstetrics and Gynaecology

Medical Research Future Fund grant for endometriosis research

Screening for the absence vs presence of endometriosis in women with pelvic pain C Reddington; Mercy Health; Royal Women's Hospital; University of Melbourne Department of Obstetrics and Gynaecology

Medical Research Future Fund grant for endometriosis research

Endometriosis Longitudinal Fertility Study S Mooney; V Ross; Mercy Health; Royal Women's Hospital; University of Melbourne Department of Obstetrics and Gynaecology

Medical Research Future Fund grant for endometriosis research

Publications

Conroy I, Mooney SS, Kavanagh S, Duff M, Jakab I, Robertson K, et al. Pelvic pain: What are the symptoms and predictors for surgery, endometriosis and endometriosis severity. Aust N Z J Obstet Gynaecol. 2021;61(5):765-772. DOI: 10.1111/ajo.13379.

Mooney SS, Grover SR. The persistent pelvic pain study: factors that influence outcomes in women referred to a public hospital with chronic pelvic pain — a study protocol. Aust N Z J Obstet Gynaecol. 2021;61(2):E6-E11. DOI: 10.1111/ajo.13289.

Mooney SS, Readman E, Hiscock RJ, Francis A, Fraser E, Ellett L. Botulinum toxin A (botox) injection into muscles of pelvic floor as a treatment for persistent pelvic pain secondary to pelvic floor muscular spasm: a pilot study. Aust N Z J Obstet Gynaecol. 2021;61(5):777-784. DOI: 10.1111/ajo.13396.

Mooney S, Roberts R, McGinnes D, Ellett L, Maher P, Ireland-Jenkin K, et al. The myometrial-cervical ratio (MCR): Assessing the diagnostic accuracy of a novel ultrasound measurement in the diagnosis of adenomyosis. Aust N Z J Obstet Gynaecol. 2021. DOI: 10.1111/ajo.13434. Paul TD, Readman E, Mooney S. Tubal interruption and subsequent surgery for pain after endometrial ablation: a retrospective cohort study. Aust N Z J Obstet Gynaecol. 2021;61(6):934-940. DOI: 10.1111/ ajo.13425.

Stewart MJ, Richmond D, Mooney S, Esler S, Churilov L, Israelsohn N, et al. Diagnostic utility of MRI features of placental adhesion disorder for abnormal placentation and massive postpartum hemorrhage. AJR Am J Roentgenol. 2021;217(2):378-388. DOI: 10.2214/ AJR.19.22661.

Taylor C, Ellett L, Hiscock R, Mooney S. Hysteroscopic management of retained products of conception: a systematic review. Aust N Z J Obstet Gynaecol. 2021. DOI: 10.1111/ajo.13455.

Presentations

Hui L. Non-invasive prenatal testing (NIPT): current state of the art and clinical practice. International Society for Ultrasound in Obstetrics and Gynecology 30th Anniversary Symposium, January 2021. [Invited speaker — online]

Davenport M. Laparoscopic excision of an accessory cavitated uterine malformation (ACUM). AGES ASM Virtual Meeting, October 2021. [Speaker — online]

Harlow K. Laparoscopic excision of a pregnant, noncommunicating rudimentary horn: the case of the super sperm. AGES ASM Virtual Meeting, October 2021. [Speaker — online]

Paul T. Tubal interruption and subsequent surgery for pain after endometrial ablation: a retrospective cohort study. RANZCOG ASM, February 2021. [Speaker]

Sloss S. Ureteric injury at hysterectomy: a retrospective review of patient and operative factors that may contribute to risk; Ten years of caesarean scar pregnancies at the Mercy Hospital for Women. RANZCOG ASM, February 2021. [Poster presentation]

Awards and academic achievements

Dr Emma Readman appointed Associate Professor, University of Melbourne

DEPARTMENT OF PAEDIATRICS, MERCY HOSPITAL FOR WOMEN

The department conducts research into respiratory management and preventing chronic lung disease, nutrition, brain injury, infection and immunity, and long-term neurodevelopment outcomes.

As part of the Department of Paediatrics, the Neonatal Intensive Care Unit (NICU) is actively committed to research, with a focus on clinical projects. The NICU participates in large scale, multi-centred national and international studies alongside local projects led by Mercy Health clinicians.

Research team

Dr Dan Casalaz Dr Gillian Opie Dr Ajit Aiyappan Emily Bourke Dr Tammy Brinsmead Dr Julia Charlton Dr Noni Davis Dr Natalie Duffy Dr Phillip Henschke Dr Jim Holberton Elisha Josev Dr Martina Moorkamp Dr Gemma Nesbitt Elizabeth Noble Bronwyn Novella Kerry-Ann O'Connor Dr Arun Sasi Dr Katie Van Schilfgaarde Dr Andrew Watkins Dr Melissa Weber

Projects and grants

CHD LIFE+ family-centred care models supporting long-term neurodevelopment S McPhail, R Justo, B Auld, K Ealeson, N Alphonso,

KL Webb, S Bora, M Cheung, J Charlton, G Scholler, N Kasparian, A Kelly, H Williams, S Shipton, B Remenyi Funded by Medical Research Future Fund Research Grant (2020–24)

Publications

Burnett AC, Gunn-Charlton JK, Malarbi S, Hutchinson E, Tan TY, King S, et al. Cognitive, Academic and behavioural functioning in school-aged children born with oesophageal atresia. J Pediatr Surg. 2021; 56(10):1737-1744. DOI: 10.1016/j. jpedsurg.2021.01.014.

Cheong JLY, Olsen JE, Lee KJ, Spittle AJ, Opie GF, Clark M, et al. Temporal trends in neurodevelopmental outcomes to 2 years after extremely preterm birth. JAMA Pediatr. 2021;175(10):1035-1042. DOI:10.1001/ jamapediatrics.2021.2052.

Dargaville PA, Kamlin CO, Orsini F, Wang X, De Paoli AG, Kutman HG, et al. Effect of minimally invasive surfactant therapy vs sham treatment on death or bronchopulmonary dysplasia in preterm infants with respiratory distress syndrome: the OPTIMIST-A randomized clinical trial. JAMA. 2021;326(24):2478-87. DOI:10.1001/jama.2021.21892.

Doyle LW, Spittle AJ, Olsen JE, Kwong A, Boland RA, Lee KJ, et al. Translating antenatal magnesium sulphate neuroprotection for infants born <28 weeks' gestation into practice: a geographical cohort study. Aust N Z J Obstet Gynaecol. 2021;61(4):513-518. DOI: 10.1111/ ajo.13301.

Gould JF, Makrides M, Sullivan TR, Anderson PJ, Gibson RA, Best KP, et al. Protocol for assessing whether cognition of preterm infants <29 weeks' gestation can be improved by an intervention with the omega-3 long-chain polyunsaturated fatty acid docosahexaenoic acid (DHA): a follow-up of a randomised controlled trial. BMJ Open. 2021;11:e041597. DOI: 10.1136/ bmjopen-2020-041597.

Gould JF, Roberts RM, Anderson PJ, Makrides M, Sullivan TR, Gibson RA, et al. Protocol for assessing if behavioural functioning of infants born< 29 weeks' gestation is improved by omega-3 long-chain polyunsaturated fatty acids: follow-up of a randomised controlled trial. BMJ Open. 2021;11(5):e044740. DOI: 10.1136/bmjopen-2020-044740.



Mercy Hospital for Women Neonatal Intensive Care Unit staff (L-R) Elizabeth Noble, Dr Ajit Aiyappan, Bronwyn Novella

Hickey L, Burnett A, Spittle AJ, Roberts G, Anderson P, Lee K, et al. Extreme prematurity, growth and neurodevelopment at 8 years: a cohort study. Archives of Disease in Childhood. 2021;106(2):160-6. DOI: 10.1136/archdischild-2019-318139.

Howell KB, Freeman JL, Mackay MT, Fahey MC, Archer J, Berkovic SF, et al. The severe epilepsy syndromes of infancy: a population-based study. Epilepsia. 2021;62(2):358-370. DOI: 10.1111/epi.16810.

Long S, Eagleson K, Charlton J. Commentary on 'Motor development in children with a critical congenital heart defect: a systematic review and meta-analysis'. Pediatr Phys Ther. 2021;33(4):198-199. DOI: 10.1097/ PEP.000000000000839.

Messina NL, Pittet LF, Gardiner K, Freyne B, Francis KL, Zufferey C, et al. Neonatal Bacille Calmette-Guerin vaccination and infections in the first year of life: the MIS BAIR randomised controlled trial. J Infect Dis. 2021;224(7):1115-1127. DOI: 10.1093/infdis/jiab306.

Peart S, Cheong JL, Roberts G, Davis N, Anderson PJ, Doyle LW, et al. Changes over time in quality of life of school-aged children born extremely preterm: 1991–05. Archives of Disease in Childhood. 2021;106(4):425-429. DOI: 10.1136/archdischild-2020-320582.

Pittet LF, Messina NL, Gardiner K, Freyne B, Abruzzo V, Francis KL, et al. Prevention of infant eczema by neonatal Bacille Calmette-Guerin vaccination: the MIS BAIR randomized controlled trial. Allergy. 2021. DOI: 10.1111/all.15022.

Pittet LF, Tebruegge M, Dutta B, Donath S, Messina N, Casalaz D, et al. Mycobacterium ulceransspecific immune-response after immunisation with bacillus Calmette-Guerin (BCG) vaccine. Vaccine. 2021;39(4):652-657. DOI: 10.1016/j. vaccine.2020.11.045.

Rodrigo R, Amir LH, Forster DA, McEgan K, Opie G, Dowling D, et al. Human milk expression, storage, and transport by women whose infants are inpatients at a tertiary neonatal unit in Melbourne, Australia: an exploratory study. Adv Neonatal Care. 2021;21(6):E199-208. DOI: 10.1097/ANC.0000000000825.

Seaton SE, Draper ES, Adams M, Kusuda S, Håkansson S, Helenius K, et al. Variations in neonatal length of stay of babies born extremely preterm: an international comparison between iNeo networks. J Pediatr. 2021;233:26-32. DOI: 10.1016/j. jpeds.2021.02.015.

Sett A, Noble EJ, Forster DE, Collins CL. Cerebral oxygenation is stable in preterm infants transitioning to heated humidified high-flow nasal cannula therapy. Acta Paediatrica. 2021;110(7):2059-64. DOI: 10.1111/ apa.15811.

Presentations

Charlton J. Neonatal brain injury: timing is everything. Austin Mercy Paediatric Seminar, April 2021. [invited speaker]

Charlton J. Thriving beyond surviving. Children's Health Queensland Cardiac Neurodevelopmental Symposium, November 2021. [Invited speaker]

Moorkamp M, Ahlqvist-Björkroth S. Prematurity and high-risk infants: E-learning module for NICU staff on early parenting support. World Association for Infant Mental Health Virtual Conference, June 2021. [Invited workshop — online]

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 Lorelle Martin Mary McCarthy Adjunct Professor Sue McDonald Natalija Nesvabda Magdalena Pliszka Dr Wendy Pollock Dr Kritika Poudel Dr Laura Whitburn Brooke Owen Deborah Pidd

Projects and grants

Induction of labour: a shared decision — a pilot project to develop surveys for women before and after their induction of labour C East, L Martin Fund by Mercy Health Academic Research and Development Committee Small Grants (2021–22)

Long COVID: is peer support part of the recovery process? B Mulcahy, L Martin, C East Funded by Mercy Health Academic Research and Development Committee Small Grants (2021–22)

Risk factors for severe perineal trauma during childbirth C East, M Pliszka, S Hellard, G Costa, T Culvenor

Risk factors for postpartum haemorrhage C East, C Carr, S Hellard, T Culvenor, K Poudel

Perceived barriers to physiological birth among midwives and obstetricians: an investigation into shared decision-making, medical intervention in birth and clinical practices B Owen, J Davis J, C East Finding a pathway to reduce maternal anxiety in pregnancy following a previous psychologically traumatic birth D Pidd, M Newton, I Wilson, C East Centre for Research Excellence in Stillbirth V Flenady, D Ellwood, P Middleton, J Morris, EM Wallace, S Kumar, F Boyle, A Gordon, C 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, C East, V Glover Funded by NHMRC Project Grant (2018–22)

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

N Nesvadba, M Pliszka, C East. Funded by Mercy Health Academic Research and Development Committee Small Grants (2020–21)

Labour pain assessment: pilot evaluation of a new woman-centred approach L Whitburn, C East, M-A Davey, L Jones Funded by Mercy Health Academic Research and Development Committee Small Grants (2020–21)

Generation Victoria: cohort of Victorian children born in 2021 and 2022 and their parents S Walker, C East, M Wake

PrEggNut: maternal diet rich in eggs and peanuts to reduce food allergies — randomised controlled trial D Palmer, M Makrides, M Gold, T Sullivan, S Prescott, D Campbell, R Nunan, J Koplin, C East

Care co-ordination interventions to improve outcomes during pregnancy and early childhood (up to five years) N Strobel, C Kelly, C Adams, C East, E Schultz M Kelaher, S Edmond, S Eades, C Chamberlain

Publications

Blazek EV, East CE, Jauncey-Cooke J, Bogossian F, Grant CA, Hough J. Lung recruitment manoeuvres for reducing respiratory morbidity in mechanically ventilated neonates. Cochrane Database Syst Rev. 2021;3(3):CD009969. DOI: 10.1002/14651858. CD009969.pub2.

East CE, Davey MA, Kamlin COF, Davis PG, Sheehan PM, Kane SC, et al. The addition of fetal scalp blood lactate measurement as an adjunct to cardiotocography to reduce caesarean sections during labour: the Flamingo randomised controlled trial. Aust N Z J Obstet Gynaecol. 2021;61(5):684-692. DOI: 10.1111/ajo.13327.

Gomersall J, Berber S, Middleton P, McDonald SJ, Niermeyer S, El-Naggar W, et al. Umbilical cord management at term and late preterm birth: a metaanalysis. Pediatrics. 2021;147(3):e2020015404. DOI: 10.1542/peds.2020-015404.

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. 2021;34(5):e520-525. DOI: 10.1016/j.wombi.2020.10.001.

McCarthy MF, Pollock WE, McDonald SJ. Implementation of an obstetric triage decision aid into a maternity assessment unit and emergency department. Women Birth 2021. S1871-5192. DOI: 10.1016/j. wombi.2021.06.001. Mesbah M, Khlif M, Layeghy S, East C, Dong S, Brodtmann A, et al. Automatic fetal movement recognition from multi-channel accelerometry data. Comput Methods Programs Biomed. 2021:210:06377. DOI: 10.1016/J.CMPB.2021.106377.

Riggs E, Yelland R, Mensa FK, Gold L, Szwarc J, Kaplan I, et al. Group pregnancy care for refugee background women: a co-designed, multi-method evaluation protocol applying a community engagement framework and an interrupted time series design. BMJ Open. 2021;11(7):e048271. DOI: 10.1136/ bmjopen-2020-048271.

Snow G, Melvin G, Boyle J, Gibson-Helm M, East CE, McBride J, et al. Perinatal psychosocial assessment of women of refugee background. Women Birth. 2021;34(3):e302-8. DOI: https://doi.org/10.1016/j. wombi.2020.05.009.

Whitburn LY, Jones LE. Looking for meaning in labour pain: are current pain measurement tools adequate? Pain Med. 2021;22(5):1023-1028. DOI: 10.1093/pm/pnaa380.



Mercy Hospital for Women midwife Siobhan with patient Nicole



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.

Werribee Mercy Hospital patient Bernie

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.

Projects and grants

Impact of health literacy initiatives on consumers: has Mercy Health's Healthy Eating for Gestational Diabetes information sheet helped you? N Moshonas, N Nesvadba, L Naccarella

Perceptions of carers of paediatric and neonatal inpatients about information on child development E Moore, A Harrison

Trans-tibial and sacral nerve stimulation for overactive bladder: pilot study A Steventon

Pelvic floor muscle tenderness in women having investigative laparoscopy for pelvic pain: a prospective cohort study H Frawley, A Ravi, J Kostos

Funded by Medical Research Future Fund (2020–25)

Natural history of pelvic floor dysfunction in women with gynaecological cancer H Frawley, R Brennen

Funded by Physiotherapy Research Foundation Project Grant

The feasibility of pelvic floor therapies to treat urinary and/or faecal incontinence in women following surgery for gynaecological cancer: a telehealth intervention trial H Frawley, R Brennen

Funded by Physiotherapy Research Foundation Seeding Grant

Victorian Infant Collaborative Study Group projects E Josev Family experience with Critical Care Unit communication during the crisis hours of COVID-19 era: a multi-centre survey involving Australian hospitals T McPhail, S Spencer

Publications

Cheong JLY, Olsen JE, Lee KJ, Spittle AJ, Opie GF, Clark M, et al. Temporal trends in neurodevelopmental outcomes to 2 years after extremely preterm birth. JAMA Pediatr. 2021;175(10):1035–1042. DOI:10.1001/jamapediatrics.2021.2052.

Dakic JG, Cook J, Hay-Smith J, Lin KY, Ekegren C, Frawley HC. Pelvic floor symptoms are an overlooked barrier to exercise participation: a cross-sectional online survey of 4556 women who are symptomatic. Phys Ther. 2021:pzab284. DOI: 10.1093/ptj/pzab284.

Doyle LW, Spittle AJ, Olsen JE, Kwong,A, Boland RA, Lee KJ, et al. Translating antenatal magnesium sulphate neuroprotection for infants born <28 weeks' gestation into practice: a geographical cohort study. Aust N Z J Obstet Gynaecol. 2021;61:513-518. DOI: https://doi. org/10.1111/ajo.13301.

McLeod G, Farrent S, Gilroy M, Page D, Oliver CJ, Richmond F, et al. Variation in neonatal nutrition practice and implications: a survey of Australia and New Zealand neonatal units. Front Nutr. 2021;8:642474. DOI: https://www.frontiersin.org/articles/10.3389/ fnut.2021.642474/full.

McNamara HC, Frawley HC, Donoghue JF, Readman E, Healey M, Ellett L, et al. Peripheral, central, and cross sensitization in endometriosis-associated pain and comorbid pain syndromes. Front Reprod Health. 2021;3(56). DOI: https://doi.org/10.3389/frph.2021.729642.

Mastwyk S, McClelland J, Cooper MM, Frawley HC. Pelvic floor muscle function in the standing position in women with pelvic floor dysfunction. Int Urogynecol J. 2021; 33(9):2435-2444. DOI: 10.1007/s00192-021-05003-6.

Presentations

Harrison A, Taylor N, Frawley H, Shields N. A consumer co-created infographic improves exercise knowledge and self-efficacy in women with GDM: a randomised trial. National Allied Health Conference, August 2021. [Speaker — online]

Harrison A, Taylor N, Frawley H, Shields N. A consumer co-created infographic improves exercise knowledge and self-efficacy in women with GDM: a randomised trial. Austin Health ResearchFest, October 2021. [Speaker — online]

Klasen M. Loss, grief and bereavement in maternity practice. La Trobe University Third Year Bachelor of Nursing/Bachelor of Midwifery, August 2021. [Speaker — online] Klasen M, Taylor M. Pastoral care presentation. Mercy Health Board, May 2021. [Speakers]

Olsson A. Caring for the patient and family: heart, soul and mind — assessing the spiritual care encounter. Spiritual Health Association Professional Development, December 2021. [Speaker — online]

Spaseska C, Lynch C, Joosten A. Addressing sexuality with clients: Experiences of recently graduated Australian Occupational Therapists'. Oral presentation. Occupational Therapy 29th National Conference and Exhibition 2021.

Awards and academic achievements

Anne Harrison awarded Doctor of Physiotherapy

MULTICULTURAL SERVICES

Mercy Health provides care and support for people from more than 200 countries, who speak 170 different languages and follow 88 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.

Projects

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

N Nesvadba, M Pliszka, C East

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

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

Project in partnership with Werribee Mercy Hospital Outpatients Department, Murdoch Children's Research Institute, Victorian Foundation for Survivors of Torture: Foundation House, Wyndham Council Maternal and Child Health Service, VicSEG New Futures, Northern Health, Hume City Council Maternal and Child Health Service. Funded by the Victorian Department of Premier and Cabinet and North West Melbourne Primary Health Network

A walk through health: program evaluation B McCann, E Poyner, N Nesvadba Funded by Commonwealth Department of Health

Publications

Riggs E, Brown S, Szwarc J, Nesvadba N, Yelland J. Teach-back in interpreter-mediated consultations: reflections from a case study. Health Lit Res Pract. 2021;5(3):256-261. DOI: 10.3928/24748307-20210811-01.

Riggs E, Yelland J, Mensah FK, Gold L, Szwarc J, Kaplan I, et al. Group pregnancy care for refugee background women: a codesigned, multimethod evaluation protocol applying a community engagement framework and an interrupted time series design. BMJ Open. 2021;11:e048271. DOI: 10.1136/ bmjopen-2020-048271.

ASSOCIATE PROFESSOR OF ALLIED HEALTH RESEARCH TO LEAD IMPROVEMENT IN WOMEN'S AND NEONATAL HEALTH

Bringing a wealth of clinical and research experience to this position, Associate Professor Helena Frawley will work closely with women's health, neonatal and allied health researchers and clinicians to deliver health improvements for women and babies.

Associate Professor Helena Frawley commenced in the newly created role of Associate Professor of Allied Health Research in June 2021. This role is part of a joint appointment between the University of Melbourne School of Health Sciences, Mercy Hospital for Women (MHW) and the Royal Women's Hospital (the Women's) to lead and support allied health research and to strengthen women's and newborn health research between these partners.

Associate Professor Frawley will provide leadership to support high-quality clinical research with the aim of identifying effective, evidence-led allied health interventions for women and babies in the fields of physiotherapy, pharmacy, social work, nutrition, speech therapy, radiology, psychology and more.

An experienced and passionate health clinician, educator, researcher and mentor, Associate Professor Frawley has worked in women's health for nearly 30 years. She became a Clinical Specialist in women's health physiotherapy in 2011. She currently holds a Victorian Cancer Agency Mid-Career Fellowship to improve pelvic floor outcomes in women following gynaecological cancer treatment, and is a Chief Investigator in a Medical Research Future Fund research project on endometriosis and pelvic floor pain being undertaken at the Women's and MHW.

Her vision as Associate Professor of Allied Health Research is to improve the health of women and babies through clinical mentorship and research.

"When I started my research career in 2001, my area of research was in its infancy in Australia, and I did not have an allied health supervisor or mentor in women's health," Associate Professor Frawley said.

Associate Professor Frawley will divide her time between the Women's and MHW and is looking forward to cementing the relationship across the university and partner hospitals.



Associate Professor Helena Frawley

"I strive to leave a legacy of research supervision and mentorship in women's and babies' health, so that my students will lead future generations of clinicians and researchers in allied health and contribute to improved outcomes in the health of women and babies in society."

Associate Professor Helena Frawley



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 2021, the area of focus continued to be the development of enhanced recovery after surgery (ERAS) protocols. This project involved the graded implementation of a sustainable and efficient protocol for women having an elective caesarean section at Mercy Hospital for Women and Werribee Mercy Hospital. The major audit involved in the project was the routine recovery after caesarean section (RRECS) audit. This is a novel audit which reviews the patient's entire journey throughout their hospital stay until discharge from domiciliary care. One important initiative from this project was the development of a pain medication tracker for patients to use at home, which has significantly contributed to better pain management overall, and which has now been presented externally. As part of the Clinical Research and Audit Program, a number of internal departmental audits were also completed in several areas, including peri-operative paracetamol usage.

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

Projects

Prospective observation study on quality of post caesarean section recovery S Simmons, S Ilyas, R Hiscock, V Nicholson, G Gormley

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

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

Perioperative Paracetamol Audit A Robinson, S Watson, R Hiscock

Audit of blood transfusion practice before and after institution of rotem H Loane, H Nathan, R Hiscock



Werribee Mercy Hospital anaesthetist Andres

Publications

Evans J, Sisk L, Chi K, Brown S, To H. Concurrent granulomatous mastitis and invasive ductal cancer in contralateral breasts-a case report and review. J Surg Case Rep. 2021;2021(12):rjab519. DOI:10.1093/jscr/ rjab519

Presentations

Gormley G, Ilyas S, Hiscock R, Simmons S. Effectiveness of an enhanced recovery after surgery for caesarean section program assessment of compliance using protocol-determined factor. Obstetric Anaesthesia ASM, June 2021. [Poster presentation]

Gormley G, Ilyas S. Pain medication tracker: an ERAS quality-improvement initiative to improve analgesia compliance at home following caesarean section. Obstetric Anaesthesia ASM, June 2021. [Poster presentation]



MEDICAL, SUBACUTE AND PALLIATIVE CARE SERVICES

This program provides specialist clinical services to optimise health outcomes and support patient care.

INTENSIVE CARE UNIT, WERRIBEE MERCY HOSPITAL

The Intensive Care Unit (ICU) at Werribee Mercy Hospital (WMH) provides specialised treatment to patients who are acutely unwell and require critical medical care.

The WMH ICU cares for a range of patients, from those who need close monitoring after complex surgery through to people who need support for life-threatening conditions. The state-of-the-art unit has eight beds, can ventilate up to six patients at any given time and provides multi-organ support to critically ill patients.

Research team

Umesh Kadam Mainak Majumdar Marlene Gojonavic

Projects

Sprint SARI: Short period incidence study of severe acute respiratory infection (COVID-19)

REMAP CAP: randomised, embedded, multifactorial, adaptive, platform trial for community acquired pneumonia

Family experience with Critical Care Unit communication during the crisis hours of COVID-19 era: a multi-centre survey involving Australian hospitals

SODa BIC Pilot RCT: sodium bicarbonate for metabolic acidosis in the ICU — a pilot multi-centre randomised double-blind clinical trial

InPUT study: international point prevalence study of ICU transfusion practices

SPICE IV study: early sedation with dexmedetomidine vs placebo in older ventilated critically ill patients — a prospective multi-centre double-blind randomised controlled trial

Impacts of tailored nutrition bundle on adequate provision of enteral nutrition in critically ill patients: a prospective pre-post study design

Atrial fibrillation and continuous ECG monitoring in stroke: quality and safety study, review of current practices in ECG monitoring for stroke patients in Victoria and audit of Mercy Health data

The significance of MET call activation within 24 hours of hospital admission: quality and safety study examining impact of MET call activation within 24 hours of admission on hospital outcomes

ICU COVID-19 data: quality and safety audit comparing ICU workload in Mercy Health compared to state-wide COVID-19 related ICU activity in Victoria

WERRIBEE MERCY HOSPITAL, UNIVERSITY OF NOTRE DAME AUSTRALIA MELBOURNE CLINICAL SCHOOL

The University of Notre Dame Australia, Melbourne Clinical School is colocated at Werribee Mercy Hospital and has an ongoing collaborative relationship with Mercy Health.

The relationship between Mercy Health and the University of Notre Dame Australia Melbourne Clinical School provides opportunities for staff and students to undertake research. The University was involved in a number of staff and student research projects that were conducted in 2021. Dr Michael Lograsso (Mercy Health) acted as a tutor for students working on an MD (Doctor of Medicine) project in 2021.

Research team

Associate Dean and Professor Moyez Jiwa Dr Tafadzwa Nyanhanda Dr Catherine Krejany Kaitlyn Smith Epi Kanjo Anwyn Hocking Jocelyn Dixon

Projects

A qualitative systematic literature review on the experiential and mental health challenges experienced by fathers in their first year of fatherhood with a focus on new fathers

M Jiwa, T Nyanhanda, M Lograsso

What factors impact on the effect of digital tools to promote lifestyle modification: a preliminary observational study? M Jiwa, T Nyanhanda, K Smith, C Krejany, E Kanjo, A Hocking, M Dodson



AGED CARE

Mercy Health partners with universities, health services, community, government, advocacy organisations and industry sectors to promote and support healthy ageing to improve the lives of older people.

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

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.

Residential Aged Care, Home Care and Seniors Living support and promote healthy ageing so people in our care can live the life they choose. Research allows us to better understand how we can achieve this. It informs what type of care, services and environments we need to provide - 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.

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

Collaborations

Expressions of Interest: Interventions to Address Ageism. World Health Organisation Health Workforce Department, Geneva, CH (shortlisted) K Radford, A Fitzgerald, S Jarrott, J Carme, D Butts, N Henkin, B Laging, R Scrivano, G Barbery, J Kosiol, S Eckberg

Presentations

Laging, B, Radford K, Le H, Meissner E. Intergenerational engagement between adolescents and older people in a residential care facility in regional Australia: a pre-post mixed methods study. 55th Australian Association of Gerontology Conference, November 2021. [Speakers]



PROJECTS APPROVED BY MERCY HEALTH HUMAN RESEARCH ETHICS COMMITTEE 2021

Mercy Hospital for Women researcher Ping Cannon

Project title	Principal investigator(s) (include title, name, organization)
Understanding the role of deferred cord clamping in reducing need for neonatal red cell transfusion: what can be learned from the Australian Placental Transfusion Study?	Dr Jim Holberton, Mercy Hospital for Women
WHEAT (withholding or continuing enteral feeds around blood transfusion) Australia	Dr Andra Malikiwi, Mercy Hospital for Women
Palmitoylethanolamide and polydatin effect on pain and dysmenorrhea in women scheduled for laparoscopic treatment of possible endometriosis: a double-blind randomised controlled trial	Associate Professor Emma Readman, Mercy Hospital for Women
Retinopathy of prematurity: risk factors, incidence, treatment and outcomes among at-risk babies at Mercy Hospital for Women between October 2018 — October 2020	Dr Gemma Nesbitt, Mercy Hospital for Women
Retrospective audit of infants diagnosed with necrotising enterocolitis (NEC) at neonatal services Mercy Hospital for Women	Dr Lauren Nisbet, Mercy Hospital for Women
Intergenerational engagement between adolescents and older people in a residential care facility in regional Australia: a quasi-experimental mixed methods study	Associate Professor Stephen Cornelissen, Mercy Health
Survey of sonographers about consent of adolescents when performing a transvaginal ultrasound	Braidy Davies, Mercy Hospital for Women
My-Neuro-Palliative-Care: My-NP-Care — an integrated approach for people living with a progressive neurological disease	Deanne Layton, Mercy Palliative Care
Using artificial intelligence to interpret fetal cardiotocography to better detect hypoxic and small for gestational age babies	Dr Fiona Brownfoot, Mercy Hospital for Women
Neurodevelopmental outcomes of extremely premature neonates with severe intraventricular haemorrhage using new radiological measurements: a retrospective chart review	Dr Annabel Barton, Mercy Hospital for Women
Perioperative paracetamol audit	Dr Andrew Robinson, Mercy Hospital for Women
Families' experience of the use of the Advance Care Plan to guide end- of-life care in a regional NSW inpatient setting	Kathryn Vickers, Mercy Health Albury
Therapeutic ultrasound treatment for inflammatory conditions of the lactating breast	Emma Heron, Mercy Hospital for Women
Observational studies of demoralisation in the medically ill	Dr Marc Lanteri, Werribee Mercy Hospital
Is there equity in telehealth? Experience of telehealth services by patients with limited or no English proficiency	Natalija Nesvadba, Mercy Hospital for Women
NONA- Newborn Obstetrics Network Australasia: a clinical quality registry for high risk pregnancies	Professor Sue Walker, Mercy Hospital for Women
Maternal health, method of delivery and neonatal outcomes in Victoria: a data linkage study	Dr Jim Holberton, Mercy Hospital for Women
Understanding the physical-chemical changes in colostrum and milk during digestion	Dr Gillian Opie, Mercy Hospital for Women
Outcomes of women with pre-pregnancy diabetes at Mercy Hospital for Women	Associate Professor Alexis Shub, Mercy Hospital for Women
Is high-sensitivity troponin used as a screening test rather than a diagnostic test in patients admitted under general medicine at Werribee Mercy Hospital?	Dr Sarah Brazel, Werribee Mercy Hospital

Project title	Principal investigator(s) (include title, name, organization)
Prevention of adverse child behavioural development following maternal depression in pregnancy	Professor Christine East, Mercy Hospital for Women
Pelvic floor muscle tenderness in women having investigative laparoscopy for pelvic pain: a prospective cohort study	Associate Professor Emma Readman, Mercy Hospital for Women
Generation Victoria Cohort 2020s. A longitudinal birth-cohort of babies born in Victoria between 2020 and 2022, and their parents	Professor Christine East, Mercy Hospital for Women
Developing and evaluating a screening tool to improve pre-operative prediction of absence of endometriosis in people with pelvic pain	Dr Charlotte Reddington, 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
Measuring occupational burnout of employees in two Melbourne hospitals following the second wave of the COVID-19 pandemic	Dr Patricia Newell, Mercy Hospital for Women
Victorian Emergency Minimal Dataset (VEMD) Injury Surveillance Data Quality Evaluation	Dr Andrew Blunt, Werribee Mercy Hospital
A walk through health: program evaluation	Natalija Nesvadba, Mercy Hospital for Women
Utility of HPV RNA in situ hybridisation in the diagnosis of cervical cancer	Dr Simon Hyde, Mercy Hospital for Women
Evaluation of usage of dose error reduction software on smart infusion pumps	Rachel Vorlander, Werribee Mercy Hospital
GDM screening rates in Aboriginal and Torres Strait Islander women in a metropolitan setting	Associate Professor Alexis Shub, Mercy Hospital for Women
Improving the documentation of venous thromboembolism (VTE) risk assessments for perioperative aatients — a quality improvement project	Rachel Vorlander, Werribee Mercy Hospital
Defining optimal growth — which growth standard, and which centile, best defines aberrant growth associated with adverse obstetric and perinatal outcomes?	Natasha Pritchard, Mercy Hospital for Women
Continuous fetal heart rate monitoring using non-invasive fetal electrocardiographY 2 (COMFY 2)	Dr Fiona Brownfoot, Mercy Hospital for Women
The SODa BIC Pilot RCT- SODium BICarbonate for metabolic acidosis in the intensive care unit: a pilot, multi-centre, randomised, double-blind clinical trial	Dr Umesh Kadam, Werribee Mercy Hospital
Family experience with Critical Care Unit communication during the crisis hours of COVID-19 era: a multi-centre survey involving Australian hospitals	Dr Umesh Kadam, Werribee Mercy Hospital
Prospective analysis of POLE testing in endometrial cancer	Dr Simon Hyde, Mercy Hospital for Women
Improving women's knowledge of modifiable cardiovascular risk factors following the diagnosis of a hypertensive disorder of pregnancy	Dr Anthea Lindquist, Mercy Hospital for Women
Perceptions of carers of paediatric and neonatal inpatients about information on child development	Emily Moore, Werribee Mercy Hospital
Review of MET calls within 24 hours of admission to Werribee Mercy Hospital	Dr Mainak Majumdar, Werribee Mercy Hospital

Project title	Principal investigator(s) (include title, name, organization)
Australasian Pelvic Floor Procedure Registry	Dr Alison De Souza, Mercy Hospital for Women
Impacts of a tailored nutrition bundle on adequate provision of enteral nutrition in critically ill patients	Marlene Gojanovic, Werribee Mercy Hospital
The experiences of intensive care nurses during the COVID-19 wave of 2020	Dr Joanne Finn, Mercy Place Albury
Audit of blood transfusion practice before and after institution of rotem	Dr Heather Loane, Mercy Hospital for Women
Does palliative care involvement affect the way people die from COVID-19?	Dr Maria Pisasale, Mercy Palliative Care
Outcomes after inpatient and outpatient intradetrusor onabotulinum toxin A (Botox)	Dr Monica McGauran, Mercy Hospital for Women
Projects utilising samples collected under the Mercy Tissue Bank — University of Technology Sydney Collaborative Study	Associate Professor Tu'uhevaha Kaitu'u- Lino, Mercy Hospital for Women
Projects utilising samples collected under the Mercy Tissue Bank — novel studies to better understand diseases of placental insufficiency	Associate Professor Tu'uhevaha Kaitu'u- Lino, Mercy Hospital for Women
Projects utilising samples collected under the Mercy Tissue Bank — Westmead Hospital Collaborative Study	Associate Professor Tu'uhevaha Kaitu'u- Lino, Mercy Hospital for Women
Comparison of insulin requirement in women diagnosed with gestational diabetes on fasting blood glucose level versus one and two hour readings on oral glucose tolerance test	Dr Vanessa Heron, Mercy Hospital for Women
The experiences of intensive care nurses contributing to Nurse Led Special Interest Groups	Dr Joanne Finn, Mercy Place Albury
Chemotherapy Response Score (CRS) after neoadjuvant chemotherapy and interval debulking surgery in extra-uterine high-grade serous carcinoma: prognostic value and predictors	Dr Monica McGauran, Mercy Hospital for Women
Piloting a surveillance system for the prospective collection and HPV typing of cervical cancers in Australia: a critical next step in documenting Australia's progress to elimination	Dr Simon Hyde, Mercy Hospital for Women
Gas bubbles during hysteroscopy: a descriptive cohort study	Dr Karen Harlow, Mercy Hospital for Women
PreGen: filling the gap — antenatal genomics and newborn Care. The Translational PreGen Consortium	Dr George McGillivray, Mercy Hospital for Women
Natural history of pelvic floor dysfunction in women with gynaecological cancer	Associate Professor Helena Frawley, Mercy Hospital for Women
The feasibility of pelvic floor therapies to treat urinary and/or faecal incontinence in women following surgery for gynaecological cancer: a telehealth intervention trial	Associate Professor Helena Frawley, Mercy Hospital for Women
Assessing the appropriateness of thromboprophylaxis for hospital inpatients	Rachel Vorlander, Werribee Mercy Hospital
Determining the prevalence of penicillin allergy and obstetric indications for antimicrobials in pregnant women at Mercy Hospital for Women	Dr Natasha Holmes, Mercy Hospital for Women
Towards the perfect blood culture in neonates: a multi-modality quality improvement initiative to reduce contamination and false positive rates	Dr Arun Sasi, Mercy Hospital for Women

Project title	Principal investigator(s) (include title, name, organization)
Critical thinking development in undergraduate midwifery students: an Australasian validation study	Professor Christine East, Mercy Hospital for Women
Feasibility of the COVID-19 Care Pathway: a collaboration between community care and metropolitan hospitals in western metropolitan suburbs of Melbourne, Victoria (COCollab)	Associate Professor Thomas Chan, Werribee Mercy Hospital
A randomised controlled trial evaluating the use of a multimedia video to improve consent in patients undergoing total laparoscopic hysterectomy	Associate Professor Emma Readman, Mercy Hospital for Women
Victorian Cerebral Palsy Register	Professor Sue Walker, Mercy Hospital for Women
Endometrial RNA and proteins in human embryo implantation and their relevance to infertility	Associate Professor Emma Readman, Mercy Hospital for Women
Predicting outcome and patient satisfaction in outpatient hysteroscopy	Dr Lauren Hicks, Mercy Hospital for Women
CMV serological screening at the first antenatal visit: an audit of general practitioner referrals to the Mercy Hospital for Women	Associate Professor Lisa Hui, Mercy Hospital for Women
Effectiveness of telehealth-delivered pelvic floor muscle training incorporating novel biofeedback versus usual care, to treat incontinence in women following gynaecological cancer: a co-designed pragmatic randomised controlled trial	Associate Professor Helena Frawley, Mercy Hospital for Women
A prospective observational study of chronic non-malignant pain in patients referred to a palliative care service	Dr Lucy Kernick, Werribee Mercy Hospital
SUpporting Mothers Milk Intervention Trial (SUMMIT): a randomised controlled trial comparing different doses of domperidone for treating lactation insufficiency in mothers of preterm infants	Dr Gillian Opie, Mercy Hospital for Women
Post-SUpporting Mothers Milk Intervention Trial (Post-SUMMIT) — follow-up of a randomised controlled trial comparing different doses of domperidone for treating lactation insufficiency in mothers of preterm infants	
Vaginal diazepam following Mirena IUD insertion/analgesia following LNG-IUS insertion, a randomised controlled trial: vaginal diazepam vs placebo	Associate Professor Emma Readman, Mercy Hospital for Women
MRI evaluation of fibroids — differentiating malignant from benign uterine tumours	Dr Katrina Harris, Mercy Hospital for Women
Multi-site My Neuro-Palliative Care: the pilot study phase 3 implementation and evaluation	Deanne Layton, Mercy Palliative Care
An examination of the use of acute sedation in adult mental health inpatients	Anexsha Kalirajah, Werribee Mercy Health
Audit on documentation of consent before instrumental deliveries	Dr Kanchana Wansapurak, Werribee Mercy Health
Impact of Be Tear Aware (#betearaware) project on obstetric anal sphincter injuries (OASI) at Werribee Mercy Hospital	Dr Prasad Marasinghe, Werribee Mercy Health
Retrospective assessment of bowel and sexual function after surgery for deep endometriosis	Dr Laurence Jacuzzi, Mercy Hospital for Women
Investigating the long-term impacts of surgically corrected congenital heart disease on childhood development and educational attainment	Dr Roxanne Hastie, Mercy Hospital for Women



Florio, Amy and baby Frank getting ready to leave Mercy Hospital for Women after 150 days in the Neonatal Intensive Care Unit



Werribee Mercy Hospital midwife Sarah with mum Gowthami and her baby



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





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 and present. This report was produced on Wurundjeri Country.