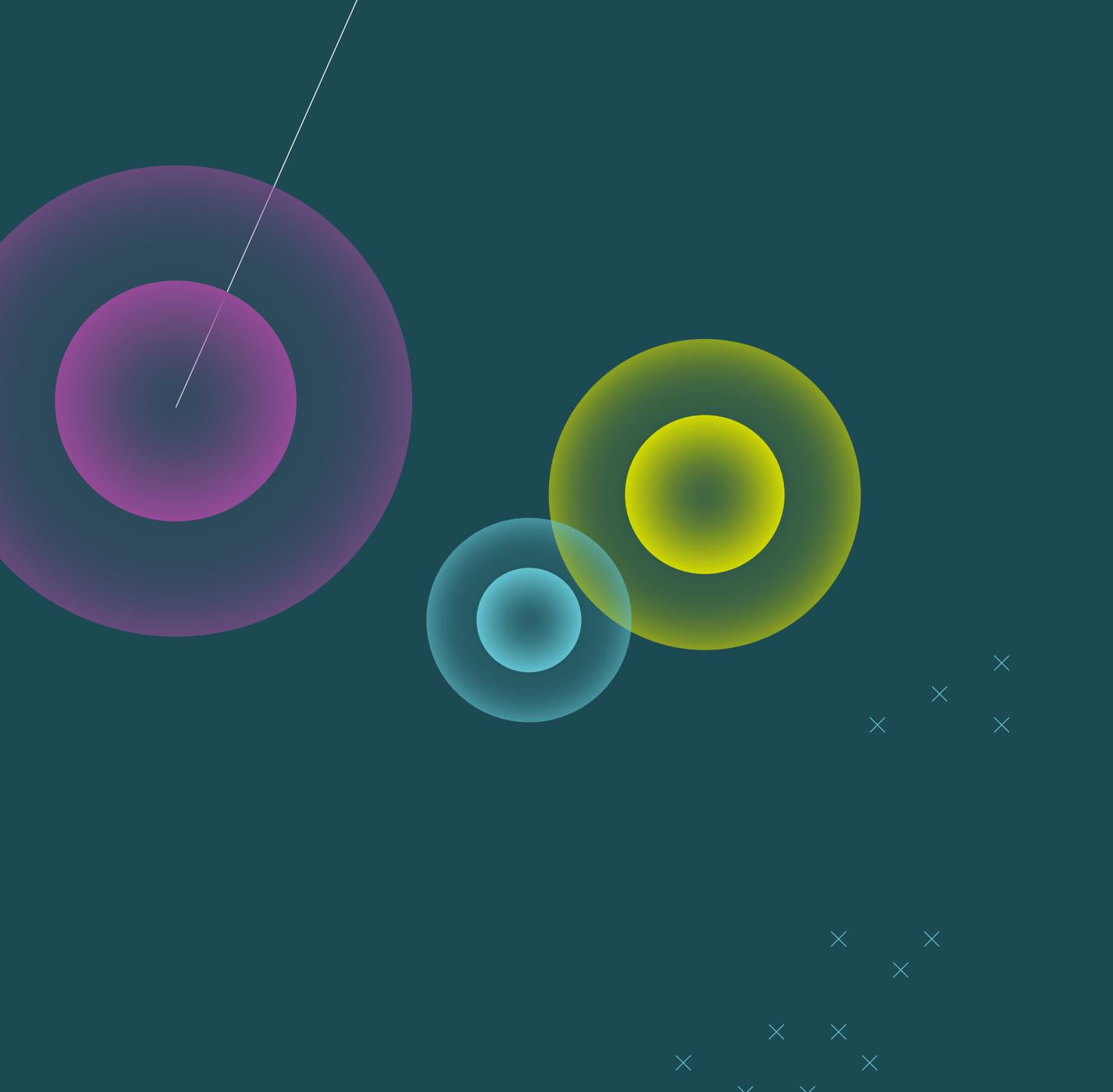


Western Health Research

Advancing best care through research, innovation and invention



Western Health



Acknowledgement of Country

Western Health acknowledges the Traditional Custodians of the land on which our sites stand, the Wurundjeri Woi-Wurrung, Boon Wurrung and Bunurong peoples of the greater Kulin Nation. We pay respects to Elders past, present and emerging.

We are committed to the healing of country, working towards equity in health outcomes, and the ongoing journey of reconciliation.

Western Health is committed to respectfully listening and learning from Aboriginal and Torres Strait Islander people and wholeheartedly supports their journey to self-determination.

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Life changing research for the west and beyond

Western Health is one of the largest providers of healthcare in Victoria, caring for a vibrant, diverse and rapidly growing community of almost one million people.

Our experience at the coalface of healthcare delivery for some of Australia's most culturally and socioeconomically diverse and vulnerable populations provides us with unique insights into the most pressing health challenges.

While our research lens is local, with our community always at the forefront of our efforts, our innovations and inventions have a global impact.

We have remarkable strengths in chronic disease, complex care and developing innovative and sustainable healthcare solutions.

Our talented team— including doctors, nurses, midwives, allied health professionals and support teams – partner with universities, industry, research institutes, patients, fellow staff and our incredibly supportive donor community to improve health outcomes for the west, from the west and beyond.

The support of our philanthropic, corporate and community partners is crucial to ensure life-changing discoveries are translated from the bedside to the bedside, improving health equity for all.

Western Health research – at a glance



186

projects approved
(July 2022–2023)



1,108

publications
(2018–July 2023)



3

on-site academic
research partners
(University of Melbourne, Deakin
University and Victoria University)



4

acute hospitals, plus multiple
day and community-based
services



24,000+

elective and emergency
surgeries per year



1 million

people in our
community



150

different languages
and dialects spoken
in our community



1,700

individual donors and 35
organisational supporters
(2021–2022)



Providing the best start to life

We want to ensure that every one of the 6,700 babies we help welcome into the world each year has the brightest future possible.

It's why our clinicians and researchers have pivoted their research efforts towards improving the health outcomes that impact our community in their earliest years.

As one of the largest and leading healthcare providers in Victoria, we are in a powerful position to uncover and implement life-transforming changes that set the next generation up for success.

We are building new knowledge, improving current care and developing treatments that will enhance child and maternal health.

Boosting survival for premature babies

Giving a pregnant woman a steroid injection when their baby is at risk of arriving early is proven to prevent breathing problems in preterm newborns.

The medication helps the baby's lung develop faster, reducing the risk of serious health complications.

But evidence gaps exist in the use of the common pregnancy drug—called corticosteroids—in mums-to-be with diabetes, and women who have planned caesareans, closer to full term.

With rising rates of caesarean sections and gestational diabetes, closing this critical knowledge gap is of global importance, and Joan Kirner Women's and Children's at Sunshine Hospital (JKWC) is at the forefront of research in this field.

Associate Professor Joanne Said, Head of Maternal and Fetal Medicine, is leading three clinical trials to ascertain how corticosteroids could be better tailored to individual women.

"We simply do not know whether they would also be effective in other situations where babies have higher rates of breathing problems," A/Prof Said says.

"Despite this, we have seen the practice of prescribing corticosteroids in these situations. These are exciting trials and demonstrate that Western Health has the skills and expertise to lead international clinical trials that will make a difference to pregnancy care."

Innovation enhances support

The soaring rates of diabetes in pregnancy is concerning. In Melbourne's west up to one in four women are diagnosed with the disease.

One of the health implications is that women with diabetes are less likely to breastfeed, or do so for a shorter period than other mothers.

Access to trusted information has never been more important, which is why our staff developed an online innovation to support patients and their families. The new website is providing advice tailored specifically to new mothers with type 1 and 2 diabetes, helping to improve their access to evidence-based information.

Academic partnerships underpin midwifery care

One of the ways Western Health is boosting its commitment to first-class research is upskilling existing staff and making new appointments to support research excellence.

We recently established an innovative new midwifery research role.

Homebirths, obesity in pregnancy, breastfeeding rates, and postpartum haemorrhage are just some of the 20 midwifery research projects underway at our health service.

Professor Linda Sweet, the inaugural Chair of Midwifery in the Deakin University Western Health Partnership said one of the projects she's most proud of is the adoption of a UK-based triage system for women attending the Maternity Assessment Centre.

Since introducing the triage system, the waiting times for women to be assessed have dropped from 96 minutes to 35 minutes and Prof Sweet says it has made "a huge difference."

"Women are being triaged appropriately rather than on a first-come, first-serve basis," Prof Sweet says.



Accelerating innovations for newborns

We believe that the people closest to the problems are best placed to solve them. That's why we provide all our staff with the opportunity and support to conduct research.

Even the smallest innovations can have a big impact.

Western Health and the University of Melbourne's Innovation Acceleration Program allows clinicians and staff to identify an unmet need in the health system that requires an innovative solution.

The program links compelling problems and unmet needs from the health sector with world-class research and commercialisation expertise.

It has supported a range of exciting projects, from the creation of reusable hospital gowns to exploring technological solutions to preventing falls.

It is also helping to ensure that our staff can deliver the highest standard of care to our smallest patients.

Lactation Consultant Jessica Huynh saw an opportunity to prevent repetitive strain injury to nursing staff in Newborn Services.

Currently feeding babies in intensive care can require nurses to stand beside the baby waiting for the liquid from a syringe to drain. With the support of the Innovation Acceleration Program, a new device was created to help feed unwell newborns via nasogastric tube.

The initial trial demonstrated significant workplace efficiencies, and with further development, it offers a promising future.

Game-changing study to support families

One of the most ambitious projects that holds the greatest potential to revolutionise the lives of families is called GenV, or Generation Victoria. This is the world's largest-ever birth and parent cohort study.

Thousands of families in the west will help solve some of the biggest global health puzzles through this study, which was launched at JKWC in 2020.

The Murdoch Children's Research Institute project will capture data, samples and information from birth through to old age, to help answer questions about preterm birth, mental health and illness, obesity, learning and allergies.

More than 60,000 babies, mothers and fathers have been recruited since it launched in 2021.

Associate Professor Joanne Said, the JKWC site lead for GenV, member of the GenV Investigator Committee and Chair of the GenV Pregnancy working group, said that being chosen as the vanguard site was the ultimate show of faith.

"This is a huge opportunity for Western Health, especially when you think two decades ago, we didn't have the research infrastructure in place to do this," she says.

"But we couldn't do it without the women who are helping change the future for generations to come by signing up to clinical trials and research projects during pregnancy, labour and beyond."



Improving health outcomes at every age and stage

Changing the west's status as one of Australia's chronic disease hotspots is no easy feat, but it's one our staff are determined to achieve.

With pockets of extreme disadvantage, the diverse communities in Western Health's catchment are prone to higher-than-average rates of deadly conditions including: cancer, diabetes, kidney disease, heart disease and stroke.

But the story is beginning to change as our staff study the worst affected communities in a bid to revolutionise treatment, management, diagnosis and prevention of many of these chronic diseases.

Our efforts are gaining traction with a range of promising research and innovation underway, ranging from world-first cancer trials to digital tools in GP clinics and grassroots initiatives to prevent falls.

Western Health Chronic Disease Alliance Director Associate Professor Craig Nelson and a Western Health patient.



Western Health Chronic Disease Alliance's Director, Associate Professor Craig Nelson, says the health service is in a unique position to turn the biggest challenges of patients into the largest opportunities for improved health outcomes.

"Rates of chronic disease in the west will far outstrip hospital capacity in future, unless we do something now," A/Prof Nelson says.

"We need to do our best to stop people from coming to hospital by improving health outcomes for those populations carrying the greatest burden of disease."

One of the best ways to improve or extend lives is to prevent disease from developing in the first place.

Western Health is working closely with GP practices to improve detection, early treatment and management of chronic diseases at the community coalface.

One flagship program, Future Health Today, has led to the development of a digital tool that uses medical records to warn GPs when a patient is at risk of cancer, chronic kidney disease, diabetes, heart disease and stroke.

The technology, a collaboration between University of Melbourne and Western Health, automates the detection of disease, so it can be picked up earlier, and ultimately, improve health outcomes.

A/Prof Nelson, Western Health's Director of Nephrology, says the innovation was initially developed in response to soaring rates of chronic kidney disease.

About 30 per cent of people with the disease in the west go on dialysis within three months of diagnosis – one of the highest rates in Australia. The digital tool has since expanded to other diseases and will be rolled out to further clinics in 2023.

"This is a very exciting step and has the potential to save many more lives," A/Prof Nelson says.



World-first cancer trial

It's a confronting statistic to face. The number of prostate cancer cases is predicted to soar from 240,000 a year to a staggering 372,000 in 2040 – an increase of 55 per cent.

But new research is finding as many as half of those treated may not need to go ahead with life-altering surgery or radiation.

A world-first trial led by Western Health is examining if studying a patient's genes can pinpoint how likely their cancer is to spread, helping them to make more informed decisions about treatment.

It will be the largest genomically informed trial in intermediate-risk patients ever undertaken.

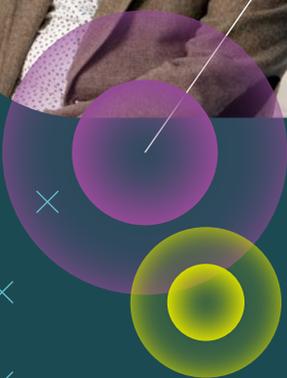
In Victoria alone, 80 per cent of men undergo treatment after diagnosis for prostate cancer, the most commonly diagnosed cancer in Australian males.

Urology Unit head Associate Professor Niall Corcoran says side effects of treatment can be debilitating for men, including erectile dysfunction, urinary incontinence, bowel issues, anxiety around accessing toilets and reduced quality of life.

"For the vast majority prostate cancer is reasonably slow growing and doesn't pose a threat to men's wellbeing or life," A/Prof Corcoran says.

"But we can't tell for sure, so we end up treating a lot more cancers than we need to, where the risk of it spreading is low."

"The research could not only revolutionise care in Australia but internationally, with men able to opt to 'actively monitor' progression instead of undergoing treatment," he says.



Preventing falls key to reducing hospital admissions

It's not just chronic diseases where lives can be changed—and saved—as we age.

"Falls are the leading cause of injury-related hospital admissions; even greater than the number of people admitted due to car accidents," says Cathy Said, the inaugural Associate Professor Physiotherapy, Western Health and University of Melbourne.

A/Prof Said is an international expert in optimising health and helping people stay independent, strong and mobile.

Each year in Australia, one in three people aged over 65 will fall, and 243,000 people will be admitted to hospital with serious injuries such as head injuries and fractures.

A comprehensive new exercise and falls prevention program will focus on older people from culturally and linguistically diverse (CALD) backgrounds.

One in four older Australians were born overseas. They can face additional challenges in managing their health, including language and cultural barriers. There is strong

evidence to show that specific exercises reduce the risk of falls by at least 25 per cent – and up to 42 per cent.

Italian, Chinese and Arabic-speaking communities will be engaged to design the program to encourage more people to exercise. Fellow Western Health collaborators include: physiotherapist Dr Emily Ramage, Consultant Geriatrician Dr Jesse Zanker and Manager of Language Services Lyn Bongiovanni.

"We want to provide Western Health's multicultural community with a program that helps reduce their risk of falling," A/Prof Said says.

The project has also benefited from the valuable input of the Consumer Representative Rosa Cursio-Barcham, who provides insights from her lived experience to the researchers and clinicians.

"I am pleased to contribute and represent the older Italian community as a consumer of this vital and important research and I hope we can make a difference," Mrs Cursio-Barcham said.

Cathy Said inaugural Associate Professor Physiotherapy, Western Health and University of Melbourne, Rosa Cursio-Barcham and Physiotherapist Dr Emily Ramage.



Professor Tissa Wijeratne, the Director of
Neurology and Stroke Services at Western Health.



At the forefront of responding to the challenges of COVID-19

In the darkest days of COVID-19, Western Health was Australia's pandemic 'ground zero'.

Western Health provided inpatient care for almost half (46 per cent) of all COVID-19 cases in Australia and 24 per cent of all ICU cases during the first and second waves of the pandemic.

Our community was heavily impacted by the pandemic, due to the cultural, social and economic diversity in Melbourne's west.

In an incredible show of strength and agility, our staff rose to the challenge of caring for patients, researching the virus and its impacts, and devising innovative new approaches to treatment.

Staff rallied like never before, switching focus across allied health to infectious diseases, neurology, respiratory medicine and anaesthetics to deliver the best possible care for patients.

Western Health was thrust onto the global stage thanks to staff ingenuity, headlined by the world's first identification of long COVID and an award-winning safety hood.

We are now in a unique position to investigate and solve the health challenges COVID-19 continues to present as they emerge.

World-leading clinician coins long COVID

Every week, Professor Tissa Wijeratne's inbox flashes with new messages from around the world seeking advice on long COVID.

After all, the leading neurologist was the first in the world to identify and name the scientific term for the virus' impact on the brain in early 2020 with researchers from La Trobe University.

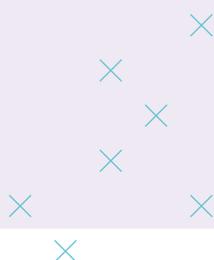
As the list of symptoms grows, he believes as many as 40 per cent of people could develop long COVID symptoms, coined post COVID-19 neurological syndrome (PCNS).

But he says the medical community is only on the threshold of understanding the long-term impacts of COVID-19 on the brain, and more research is desperately needed.

"This disorder is challenging us – it's not something you or I have ever seen before. There is still so much we don't understand about the virus," says Prof Wijeratne, the Director of Neurology and Stroke Services at Western Health.

"Australia has a remarkable opportunity to be a global leader, and find solutions given the rich diversity of our communities."

Prof Wijeratne was spurred to investigate what would later become known as long COVID after seeing more than 100 COVID-19 patients develop symptoms including: fatigue, brain fog, headaches and dizziness.



He says these are similar symptoms to those experienced post-stroke – another of his key research priorities – and ongoing research into the neurological impact of the virus could have implications for treating stroke survivors.

Half of the patients he sees with PCNS recover within 6–9 months, but in rare cases symptoms can linger for as long as two years. Every person responds in different ways, he says, with one woman even having trouble texting.

He believes Western Health is well-placed to host a collaborative long COVID medical hub, and lead ongoing neurological and cognitive monitoring of all cases of COVID-19 for PCNS.

Innovation in the face of uncertainty

As clinicians worked day and night treating patients during the peak of the COVID pandemic, finding ways to reduce the spread of the virus in hospitals among front-line staff and uninfected patients was front of mind.

But it was on a rare break that one of Western Health's doctors conceived our most innovative response to the pandemic.

A personal ventilation hood called McMonty was the brainchild of intensive care physician Forbes McGain, inspired by the design of a pram.

Dr McGain contacted the head of Mechanical Engineering at the University of Melbourne, Professor Jason Monty. A collaboration with engineers, scientists, Western Health clinicians and the ICU research team ensued, and the result was an award-winning invention adopted by healthcare teams around the world.

The transparent hood allowed clinicians to treat COVID-19 patients safely by filtering air from around them and providing a barrier to virus-carrying droplets.

Dr McGain says it is now being used for other diseases including measles and tuberculosis.

"This is an extra layer of protection beyond masks that didn't exist before, and to see it picked up in places like Fiji and Nauru has been really exciting," he says.



World-leading research helps staff and patients

When the COVID-19 pandemic began, Western Health quickly realised that rising to the challenge of serving our community could impact on staff wellbeing.

Western Health and Deakin University conducted a number of Australian-first trials, the findings of which resulted in improved support for staff, and workforce planning that will be adapted for future adverse events and pandemics.

Our allied health team is also pioneering world-leading research, with disadvantaged communities hard hit by the virus being a particular focus for the team.

A dedicated group of clinicians, consumers and researchers has mobilised to investigate the social determinants of COVID-19, in an effort to better tailor healthcare responses to individual needs.

"People with long COVID from disadvantaged backgrounds have unique and complex needs and we want to give them a greater voice for improved health outcomes," says Dr Danielle Hitch, Senior Research Fellow, Western Health COVID-19 Recovery Collaboration.



Nurse Carol attends to a COVID-19 patient at the ICU at Sunshine Hospital during the COVID-19 pandemic.





Wayne is a Western Health patient who attends the Aboriginal and Torres Strait Islander Outpatient Clinic.

Partnering with our First Nations community to improve care

It takes changes of all shapes and sizes to address health inequities.

There are welcoming gestures that help make our health service culturally safe – beanies lovingly knitted by Western Health volunteers in the red, black and yellow of the Aboriginal flag for newborns – and scrubs with an Indigenous design.

There are also major, game-changing solutions to improve access to medical care, such as setting up a dedicated Aboriginal and Torres Strait Islander Outpatients Clinic.

Through research, innovation and collaboration, we can collectively improve health outcomes for our Aboriginal communities. Victoria's Aboriginal population is growing at a much faster rate than the non-Indigenous population and Melbourne's west is one of the fastest growth areas.

Award-winning clinic improves healthcare access

Western Health is helping to break down barriers to Aboriginal and Torres Strait Islander people receiving healthcare as outpatients, as part of its commitment to Closing the Gap.

Research has found Aboriginal and Torres Strait Islander people were more likely to be referred to its outpatient clinics than non-Indigenous Australians, but were less likely to attend.

This potentially leads to preventable hospital admissions, higher rates of chronic disease and poorer health outcomes.

A leading Western Health and Deakin University study asked Aboriginal patients and their families, as well as community healthcare workers, about the barriers and enablers to attending our outpatient clinics.

The findings have led to a new model of care that is transforming healthcare delivery.

The research revealed that a range of logistic, cultural and quality of care barriers led to missed appointments. Barriers included: problems accessing transport, enduring long waiting times, a lack of cultural awareness among staff and limited appointment flexibility.



Aboriginal and Torres Strait Islander patients had a long list of solutions to these barriers and this formed the foundation of the Aboriginal and Torres Strait Islander Outpatients Clinic, established in 2021.

Adults with chronic conditions attending the clinic link in with Aboriginal Hospital Liaison Officers and an Aboriginal Care Coordinator, and have longer and tailored appointments, and ready access to a range of medical specialists.

Western Health Research Fellow in Aboriginal Health and proud Wiradjuri woman (western NSW), Tanya Druce says even small initiatives such as free parking, providing food for long visits, and a welcoming environment with Aboriginal artwork make a difference.

“Our data found that Aboriginal patients in the past were attending only 65 per cent of their scheduled appointments, which was not good in terms of improving health outcomes,” says Ms Druce.

“We listened to our Aboriginal patients, their families and healthcare staff working in the community. Our patients told us what was working well and what wasn’t working in our hospital system, which meant we could make meaningful changes. For example, we only schedule three to four appointments in a morning, which is very different to traditional outpatient clinics and this means there is time to really listen and provide holistic health care.”

“We are improving equity of access to health services for Aboriginal people through translational research that results in meaningful and sustained changes to healthcare delivery,” she says.

The initiative was awarded a Victorian Public Healthcare Award for Improving Aboriginal Health in 2022.

One patient, aged 59, provided feedback that they felt respected and supported: “The clinic means that nobody falls through the cracks.

“It’s different to other hospital appointments. It’s like VIP treatment.”

Another patient, aged 62, appreciated that the doctors and nurses understood and supported their Aboriginal culture, making patients feel more comfortable.

“I feel so safe because the Aboriginal workers are there and I know them, and they know me,” they said.



(L-R) Director of Nursing and Midwifery Rohan Vaughn, Western Health Research Fellow in Aboriginal Health Tanya Druce, Adjunct Professor Shane Crowe, Executive Director of Nursing and Midwifery and Wilim Berrbang Manager Jordan Casey.



Harete Te Are with her baby Harley Te Are Hemopo, who was born at Joan Kirner Women's and Children's at Sunshine Hospital.



Pioneering new approaches to culturally sensitive care

From the waiting rooms to the wards, Western Health serves one of the fastest growing and most culturally and linguistically diverse areas in Australia.

Our patients speak more than 150 different languages and dialects with Vietnamese, Arabic, Greek, Macedonian, Chinese, Burmese, Serbian, Croatian, Spanish and Italian the most requested languages for translation.

Our insights into the barriers and enablers to healthcare for our community, particularly our patients from culturally and linguistically diverse (CALD) backgrounds, means we are uniquely positioned to find new ways to improve health access and equity.

We are proud to care for our vibrant refugee and migrant communities, many of whom are forging new futures in Melbourne's west and require additional supports to stay safe and well.

Our inclusive and responsive approach to research involves partnering with the people who we serve, to ensure our services meet their needs.

Director of Paediatric Emergency Medicine at Sunshine Hospital Associate Professor David Krieser interacting with a patient and their loved one.



We can engage to improve care

Western Health is proud to be playing a key role in the Macquarie University's CanEngage research project, funded by Cancer Australia and National Health and Medical Research Council grants.

The project, led by Associate Professor Reema Harrison from the Australian Institute of Health Innovation at Macquarie University, aims to improve consumer engagement and patient safety for cancer patients from culturally and linguistically diverse (CALD) backgrounds.

The research found one in three people from CALD backgrounds experience a safety event during cancer care. In almost a third of cases this is to do with medications.

Western Health is keen to ensure every patient receives culturally appropriate, safe and high-quality care.

As a CanEngage research site, staff and patients provided valuable data and insights. We participated in focus groups and the co-design process, which involves collaborating with the CALD community to create positive change.

The research has led to new innovations, including a medication discharge tool to improve safety and an auditing tool that helps health services review the effectiveness of their consumer engagement.

Better asthma control

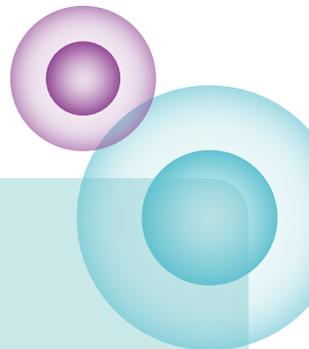
An innovative research project aims to help people in Melbourne's west gain greater control over their asthma.

It's estimated that around 2.7 million Australians have asthma, a lung condition caused by the narrowing of the airways, which can cause breathlessness, wheezing and coughing.

Asthma can usually be managed through treatment, such as medication use and a healthy lifestyle, however poor asthma control also often results in frequent hospital visits, and time away from work and school.

Deaths from asthma are twice as high in people from areas of disadvantage, in younger patients and people from culturally and linguistically diverse (CALD) communities.

Research, led by Western Health Respiratory Physician Associate Professor Lata Jayaram and Western Health Chronic Disease Alliance (WHCDA) investigators, is examining whether the introduction of a nurse-led asthma education program can help people control the condition and reduce the risk of flare-ups.



Professor Phong Tran, Western Health's Head of Orthopaedics who is working on an innovative e-health platform.

Staying well on the wait list

Being stuck on a waiting list can be tough for patients experiencing chronic pain.

But what if an app on your mobile could provide you with access to a health professional? And even better, what if that wait time could be used to optimise your health ahead of the operation?

That's the vision of Professor Phong Tran, Western Health's Head of Orthopaedics, who is working on an e-health platform to help thousands of osteoarthritis patients.

The digital intervention is part of the Waitlist Project, which aims to address the physical, mental, social and health challenges of osteoarthritis patients, while they wait to see a specialist. Simultaneously, the wait time is used to improve health outcomes.

The project is designed to address the needs of the community in Melbourne's west, which is why Vietnamese-speaking patients are the first group to take part in the research.

Prof Tran said the app they are developing will offer multilingual modules on physical activity, healthy eating and weight management, pain management, mental wellbeing, medical self-management and social support and community engagement.



The transformational power of philanthropy

Imagine if your risk of heart attack could be better predicted by a simple CT scan. Or if a smartphone could be used to monitor women with gestational diabetes, replacing regular hospital visits.

These are the innovations being researched at Western Health thanks to visionary donors who are deeply committed to improving healthcare outcomes in the west.



The inaugural Arlene Wake Fellowships were awarded to two of Western Health's brightest clinician-researchers in 2022, providing funds to probe critical areas of chronic disease.

The Arlene Wake Chronic Disease Fellowships are named in honour of Dr Arlene Wake (pictured left), a former Chief Medical Officer and Executive who was instrumental in the genesis of Western Health's research institutes.

Philanthropic contributions like these to the Western Health Foundation are truly transformative. They allow us to investigate pressing health challenges of today and support the best and brightest medical researchers into the future.

Uncovering hidden heart disease

When heart attacks strike without warning, it is a shock to the patient and their family.

For Dr Neville Tan (pictured below), it also highlights a gap in early detection and prevention.

Despite medical advances in cardiovascular health, Dr Tan says too many lives are being lost to heart attack – something he wants to change.

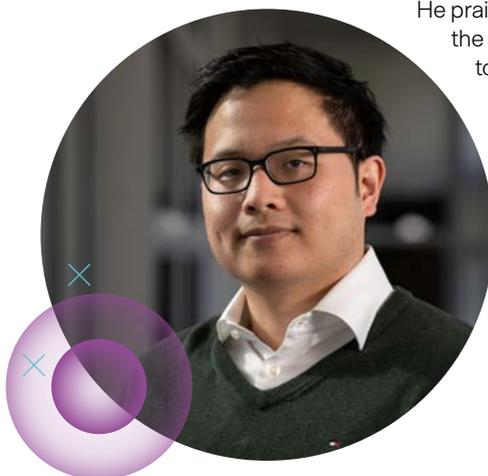
Dr Tan's research involves a novel strategy to detect vulnerable patients with atherosclerosis — the build-up of fat in the arteries — by mapping inflammation using a CT scan of the heart.

He says a growing body of research is pointing to the inflammation of the fatty tissue, or pericoronary adipose tissue (PCAT), as a warning sign of heart attack risk.

"Even with the best available standard risk scoring systems incorporating factors such as smoking, diabetes and cholesterol, we are unable to fully predict who will have a heart attack," says Dr Tan, a PhD candidate at Western Health and Baker Heart and Diabetes Institute.

"Inflammation has recently been shown to be an increasingly important and key contributor to the development of plaque formation and a risk factor for heart attacks."

Dr Tan says bridging the gap in cardiovascular risk detection could pay dividends for high-risk groups who could be treated earlier with targeted medication.



He praised donors for the opportunity, saying the funding had provided the opportunity to present the initial findings at the prestigious American College of Cardiology Conference.

"Their generous support has played a crucial role in my research. My hope is that our findings offer deeper insights into chronic cardiovascular disease and potential avenues for improved patient outcomes," Dr Tan said.



Dr Rinky Giri, Consultant Endocrinologist at Western Health.

Digital health offers hope of remote monitoring

Coming from Nepal, endocrinologist Dr Rinky Giri has always been passionate about improving the health of people from diverse backgrounds.

So much so that when she arrived in Australia in 2000, she studied a Bachelor of Nursing degree, worked as a nurse for seven years and then went on to pursue a Bachelor of Medicine and Surgery. And she's not finished yet.

Rinky is now researching a way to support women experiencing one of the most common pregnancy complications, gestational diabetes mellitus (GDM), for her Masters degree. GDM affects almost one quarter (23 per cent) of women engaged in maternity services at Western Health and it can be up to 45 per of women from some populations.

The Arlene Wake Chronic Disease Fellowship has allowed Dr Giri to evaluate mobile technology, developed by CSIRO, for the remote monitoring of blood glucose levels in pregnant women with diabetes.

The technology aims to provide a more efficient way of collecting data by linking a blood glucose meter to the app, which transfers the readings to healthcare professionals. It also provides a platform for women to access education to promote participation in their medical management.

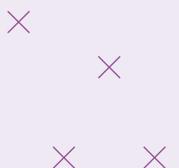
"Due to the rapid changes in a woman's body in pregnancy, it is difficult to accurately predict progression of GDM in individual women," Dr Giri says.

"In order to detect and respond to the physiological changes, women with GDM are commonly reviewed by a hospital-based maternity diabetes team every one to four weeks. This is a significant burden to pregnant women, as well as our health service which is currently struggling to keep up with this increased demand."

Dr Giri, a consultant endocrinologist, says technology integration into GDM care could help improve care coordination between women and their healthcare professionals, whilst minimising the burden and improving outcomes for mothers and their babies.

It could also help women adopt healthier lifestyles and prevent future complications such as type 2 diabetes post pregnancy.

"I am very grateful to the fellowship to be able to continue my work towards addressing issues of public health significance using technology whilst creating a safe, innovative and equitable service," she says.



Our sites

Bacchus Marsh Hospital

Bacchus Marsh Community Health Centre

Sunshine Hospital

Footscray Hospital

Williamstown Hospital

Sunbury Day Hospital

Grant Lodge Residential Aged Care

Caroline Springs Community Health Centre

Drug Health Services

Melton Health

Melton Heath & Community Services

Western Centre for Health Research
and Education (WCHRE)

Sunshine Hospital Radiation Therapy



**Western Health
FOUNDATION**

The Western Health Foundation raises, manages and invests funds to help Western Health give the best care to our community. We are dedicated to supporting our health service as it grows and transforms healthcare in Melbourne's west.

We are grateful for the generous support of individuals, staff, corporate partners, trusts and foundations and local community partners who make this possible. We couldn't do it without your support!

Every dollar we raise helps to improve healthcare in the west.

We are a registered charity with deductible gift recipient status.

To find out more about supporting research at Western Health,
email us: foundation@wh.org.au

ABN: 37 867 721 909



Western Health