

Research and Discovery at Western Health 2011/12

research action collaboration innovation action
a future quality
breakthrough medical
community approach to change
research and knowledge
learning innovation health
empathy
teach
vision Medical
collaboration research treat
future is about
exploring
the "why"
purpose



Western Health



OUR VISION

Together, caring for the West

Our patients, staff, community and environment

OUR PURPOSE

Working collaboratively to provide quality health and wellbeing services for the people of the West

OUR VALUES

Compassion – consistently acting with empathy and integrity

Accountability – taking responsibility for our decisions and actions

Respect – for the rights, beliefs and choice of every individual

Excellence – inspiring and motivating, innovation and achievement

Safety – working in an open, honest and safe environment

OUR PRIORITIES

Safe and effective patient care

People and culture

Community and partnerships

Research and learning

Self-sufficiency and sustainability

Acknowledgement of traditional owners

Western Health respectfully acknowledges the traditional owners of the land on which its sites stand as the Boon Wurrung and the Wurundjeri people of the greater Kulin Nation.



Contents

Foreword.....	2
Research Highlights.....	3
A Centre for collaboration and discovery.....	4
Fostering research at Western Health	5
Research and Discovery at Western Health.....	6
The Australian Institute for Musculoskeletal Science.....	8
A Patient's Perspective.....	10
The Joseph Epstein Centre for Emergency Medicine Research at Western Health	12
Emerging Western Health Researchers.....	14
Care in the community: Chronic Kidney Disease.....	19
Collaboration is key.....	20
A focus for the future.....	22
Support our Research.....	24



Foreword

Western Health enjoyed another successful year for research in 2011, with a number of exciting developments coming to fruition during the period covered in this Report.

The innovative, \$51.6 million Western Centre for Health Research and Education building at Sunshine Hospital is leading the way with a breakthrough approach to research and learning. Officially opened in June 2011, it is the first purpose-built research and training facility for medicine and the health sciences in Melbourne's West.

The new Centre is a partnership between Western Health, Victoria University and the University of Melbourne, and also houses The Australian Institute for Musculoskeletal Science (AIMSS), established in 2011. The Institute's establishment has particular significance to the population in the Western suburbs of Melbourne, where conditions such as osteoporosis, arthritis and diabetes are widespread and where chronic disease presents major challenges.

The Western Health vision is to cement a strong foundation for the organisation's own investigator led research, and as we continue to implement and grow the Western Health Research Strategy this will drive the research effort, sustain our research capacity in priority areas, and support the development and management of patient-focused research at Western Health.

During 2011, Western Health researchers had over 200 published journal articles and delivered 112 seminar and conference presentations, both in Australia and overseas. Together

with our collaborators, we were awarded or held a total of 36 research grants of \$14.51 million for the duration of the grants. This is a remarkable achievement and we congratulate our researchers on their success.

In 2011 there were an unprecedented five prizes of \$1,000 awarded during Research Week, in the following areas: Best Poster presentation; Best Nursing Research presentation; Best Allied Health Research presentation; Best Medical Registrar Research presentation (Neville D Yeomans Prize) and Best Surgical Registrar Research presentation (Kendall Francis Prize).

We would like to convey our gratitude to all our prize sponsors and supporters for their ongoing loyalty and support of research at Western Health.

The research we carry out at Western Health is cutting edge practical research with direct patient outcomes involved. To accompany the Western Health Research Report 2011 we have produced Research and Discovery at Western Health, which provides a fascinating insight into what drives our researchers and also highlights some of the challenges they have overcome.

We look forward to the continual growth and expansion of Western Health's research capabilities and output, and to build upon the progress that we have made during 2011.

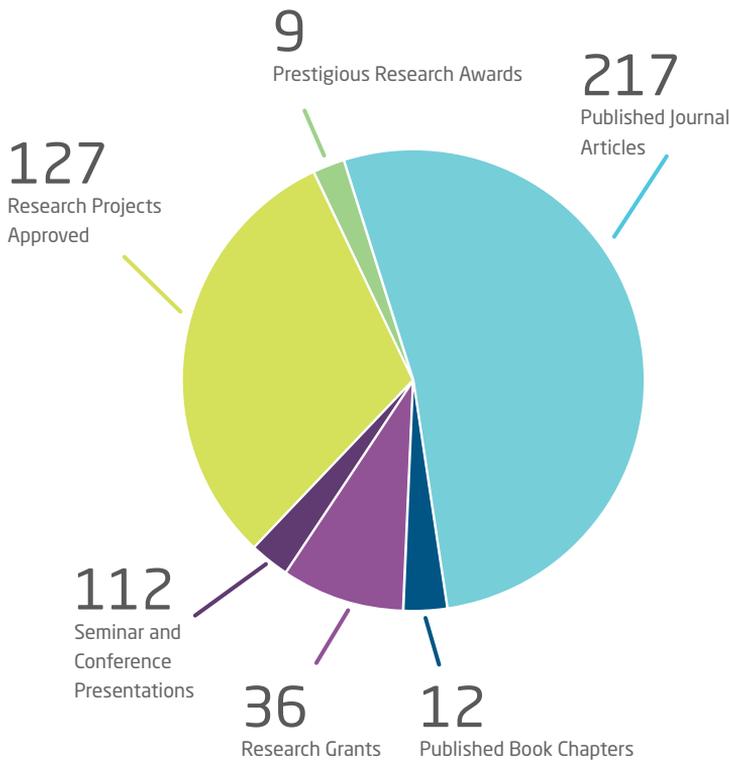



Kathryn Cook
Chief Executive



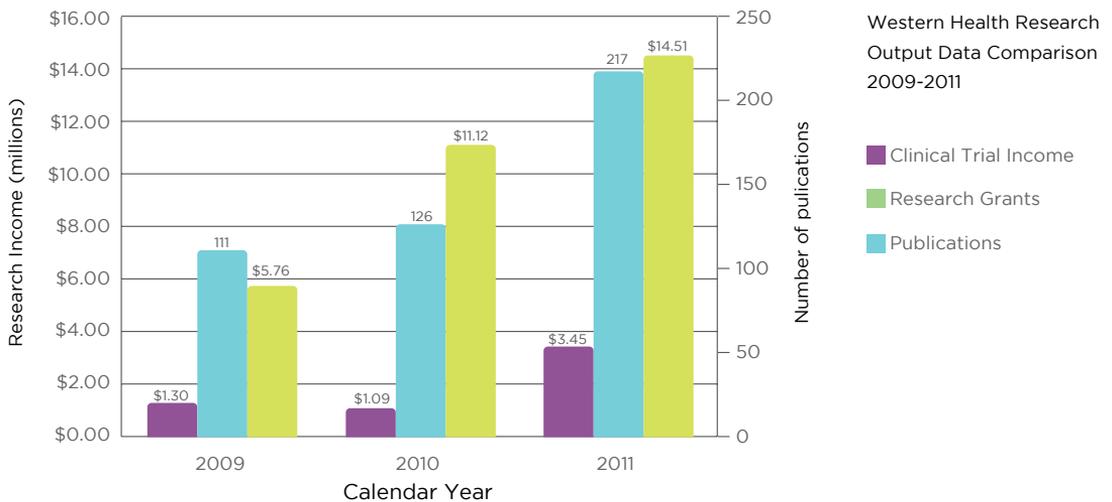

Dr David Newman
Director, Office for Research

Research Highlights *



\$3.45M
Income from Commercially Sponsored Clinical Trials

\$14.51M
awarded or held for Research Grants during 2011**



* These figures relate to the 12 month period of 2011

** Total awarded for the duration of the grants to our researchers and their collaborators.

A Centre for collaboration and discovery

The innovative Western Centre for Health Research and Education at Sunshine Hospital is leading the way with a breakthrough approach to research and learning.

The \$51.6 million building, officially opened in June 2011, is the first purpose-built research and training facility for medicine and the health sciences in Melbourne's West and is a partnership between Western Health, Victoria University and the University of Melbourne.

The state-of-the-art Centre aims to attract local students to train as doctors, nurses and allied health professionals and remain in the West - one of the fastest growing areas in Victoria and Australia in terms of population.

The Western Medical School and Western Clinical School for Physiotherapy of the University of Melbourne are housed in the building, along with training and research facilities for all clinical and non-clinical staff and students based at Western Health.

The building houses several high-tech simulation areas, enabling Western Health clinicians (and students) to receive the highest standard of training and immediately apply what they have learnt, on the wards and in the theatres, including critical care areas.

The Victorian Government contributed \$28.6 million to the cost of the Centre, with a contribution of \$7 million from the Australian Government and \$8 million each from Victoria University and the University of Melbourne.

Victoria University will undertake research in the areas of mental health nursing, e-health nursing, muscle and exercise science and exercise rehabilitation.

The Centre is believed to be the first in Victoria to bring together three major partners in one centre with no delineation between the three organisations, in a facility built to reflect full and open collaboration.

The Centre reflects the importance of a focus on the health workforce and the critical need to build capacity in different settings to train health professionals for a challenging future. The Centre will enable Western Health to use the best technologies, the best teaching spaces, the best approaches to respond to those workforce challenges.

Associate Professor Stephen Lew, Head of the Western Clinical School, the University of Melbourne, said the Centre provided a superb base for its medical students to undergo their studies in medical, surgical, obstetric, emergency, paediatric and aged care training.

"We have excellent simulation and clinical training environments for all levels of hospital training, which will provide facilities typically only found in inner Melbourne," he said.

"The facility and its medical staff and students will assist people living in the growing Western communities to access a broader range of health care services within their local region. The improvement in the standard of clinical and non-clinical training which the Centre enabled would lead to enhanced patient care for years to come."

[Student in the library at the Western Centre for Health Research and Education at Sunshine Hospital](#)



“When I started out I had a very academically minded mentor, who inspired me very much. Had it not been for him, I might have taken a different path.”

PROFESSOR STEVEN CHAN



Fostering research at Western Health

Professor Steven Chan

For the past 10 years Professor Steven Chan has been fostering the research environment at Western Health and ensuring the next generation of surgeons stay passionate about research.

As Western Health’s Head of Academic Surgery he supervises the research projects of the steadily increasing number of surgical registrars choosing Western Health to further their careers as surgeons.

Professor Chan sees part of his role as fostering the research environment and passing on his passion for surgical research to the next generation.

Each year the Department of Surgery presents about a dozen projects competing for the Kendall Francis Prize during Research Week.

“There is a misconception that surgery is mostly art and not much science. It is indeed a craft, but it is not all about cutting,” says Professor Chan.

“I tell Registrars they need to question. Always ask ‘why are we doing this?’ ‘Could we do this better?’ ‘What would happen if we didn’t do the surgery?’ Surgery isn’t always the answer.”

Professor Chan is no stranger to some of the obstacles that early career researchers face and he continually strives to help them find ways to become more involved in research.

“It’s hard to get published. Journals are competitive and subject to space and peer review. Western Health surgical registrars conducted two randomised controlled trials last year which were published and we have three on the go at the moment. Being involved in research like this and getting published can help launch the career of a young surgeon.

“Time is a real issue for surgeons – when they aren’t in theatre, they are seeing patients in Outpatients or on the Wards. When is there time to research? You have to make time.

“Academic surgery is at risk. Not a lot of people choose to take a research focused career path in the surgical field. If I can spur just one person to further their study or research that helps foster the next generation, to ensure that surgical research will continue.

“Research helps put the spark back into surgery.”

Research and Discovery at Western Health

Professor Edward Janus and Dr Harin Karunajeewa

Like any organisation striving for recognition as a leader in research and learning, and for excellence and innovation, Western Health has a number of goals to achieve. Attracting and developing the best health care professionals to conduct that research is just one of those goals. Ensuring that we retain them and that they stay passionate about research is another.

"If you attract and retain these people, many of them will then make very great contributions both to clinical care, or to teaching and training further researchers, so it lifts the whole game of the organisation," says Professor Edward Janus, Western Health's Head of General Medicine and a member of the Research Advisory Committee.

"You get an immense sense of satisfaction and achievement. You've contributed to knowledge that will always be there. You've achieved something permanent, substantive, tangible."

DR HARIN KARUNAJEEWA

"How can we excite people about research? You can look at research in terms of its intrinsic value—the contribution to human learning, and satisfying curiosity. You can look at it in terms of its utilitarian impact, and how it actually helps people. You can also look at it in terms of how it adds value to this organisation and its value for education, for training and for career development," says the Division of Medicine's Director of Clinical Research, Dr Harin Karunajeewa, also a member of the Research Advisory Committee.

The communities served by Western Health are among the most diverse in Australia, with a high proportion of the population from culturally and linguistically diverse backgrounds, with high levels of socio-economic disadvantage. The population also has levels of chronic disease and co-morbidities.

"There are a lot of reasons why people might be relatively disadvantaged – socioeconomic, language barriers, poor education. We often try to look at the reasons why particular patient groups might be disadvantaged—the burden of the chronic, degenerative lifestyle diseases that are going to be the major priorities for Australia, are as great here as anywhere. We have one of the highest rates of diabetes here in Brimbank," says Dr Karunajeewa.

Both clinicians believe that Western Health is in a strong position to play a leading role in ensuring that there are systems in place where we can measure the patient outcomes that matter most.

"There has been a philosophical shift away from what you could call more pure research, and really we are looking in a very critical way in terms of how well our health system functions. Rather than studying the patients, we are studying the system we have and what can make it work better for the patients," Dr Karunajeewa explains.

"We've got an opportunity here to make a real difference, because of our large population and because we're still relatively new to research across this region. Our General Medicine patients are mostly elderly. The median age is close to 80 years old and they have a range of health problems which we spend a lot of time and energy addressing. In a large proportion, what matters to these patients isn't 'what is my cholesterol or what type of antibiotics am I on?' it's living the last few years of their life independently and with dignity. That often gets lost in the detail."



Professor Edward Janus and
Dr Harin Karunajeewa

“In a few years’ time, we hope to have some models for caring for people that will be relevant to other areas of Australia, particularly in terms of continuity of care—the patient going from their home to their GP to the hospital and back to the community. We are working on how we can do this sequence better,” adds Professor Janus.

“Our vision is to improve the care of the individual patients and the community in which they come from by making continuous improvements in systems and applying what we know.

“Research has to be translational. In the real world there are a range of social, economic, demographic and psychological aspects to research, as well as just test tubes. It has many dimensions and that’s something that has to be addressed both in the hospital and in the broader community.”

“There’s an enormous reward from discovery. When you discover something for the first time you get a buzz out of it, and at the same time as getting a personal buzz you are also contributing towards knowledge, and potentially to improve health outcomes, provided you can translate it.”

PROFESSOR EDWARD JANUS

The Australian Institute for Musculoskeletal Science

The Australian Institute for Musculoskeletal Science (AIMSS), established in 2011, is a national reference centre for research into disorders of bone, muscle and joint based at the Western Centre for Health Research and Education, Sunshine Hospital.

AIMSS is a formal partnership between Western Health, the University of Melbourne and Victoria University. Collaboration with two of the world's great centres of learning – Oxford University in the UK and the Mayo Clinic in the US – will further strengthen the Institute and enhance its international contribution.

Director of AIMSS is Head of Endocrinology, Western Health and Chair, NorthWest Academic Centre, University of Melbourne, Professor Peter Ebeling.

Professor Ebeling is a nationally and internationally recognised researcher in musculoskeletal science.

The Institute's establishment has particular significance to the population in the Western suburbs of Melbourne, where conditions such as osteoporosis, arthritis and sarcopaenia are widespread and where chronic disease presents major challenges.

- › Osteoporosis affects 2.2 million people in Australia and is expected to increase to 3 million by 2021, as the population ages. Of people over the age of 60 years, one in two postmenopausal women, and one in three men, will suffer an osteoporosis-related fracture.
- › Arthritis is the major cause of disability and chronic pain in Australia, with 3.9 million Australians affected at a cost to our economy of more than \$23.9 billion each year in medical care and indirect costs such as loss of earnings and lost production.

There is a very substantial ageing population in the Western suburbs of Melbourne and as a result rates of sarcopaenia (degenerative muscle loss associated with ageing which causes weakness and frailty) are increasing.

The Institute is providing an innovative and collaborative environment for clinicians and researchers to translate laboratory and public health research into direct health outcomes.

AIMSS provides innovation in disease prevention through the establishment of community-based programs based on disease-specific interventions, including a strong contribution from exercise and nutritional aspects.

From 2012, University of Melbourne medical students have been training to prescribe exercise as they would drugs, in the new postgraduate MD curriculum. The new AIMSS is providing support for the MD curriculum through inclusion of exercise in a range of community-based projects.

The Institute has liaised with local and international collaborators to establish a state-of-the-art facility for bone and joint imaging.

www.aimss.org.au





Professor Peter Ebeling and colleagues

OSTEONECROSIS OF THE JAW

Osteonecrosis (ONJ) is a debilitating side-effect of some chemotherapy causing an area of exposed bone (not covered by gum) in the jaw region that does not heal. Western Health Professor of Medicine and Head of Endocrinology, Professor Peter Ebeling, is conducting a randomised controlled trial of teriparatide injections to determine whether there is stimulation of bone remodelling and resolution of ONJ. Professor Ebeling received a \$346,175 National Health and Medical Research Council (NHMRC) Project grant.

BORN SMALL

It is widely recognized that if a baby is 'born small' for gestational age or born prematurely, there is an increased risk of diseases such as diabetes, heart disease and osteoporosis later in life. Professor Peter Ebeling, together with Professor Glenn McConell from Victoria University have come together with a common goal after a number of years of examining this medical condition from

different angles. A post-doctoral Research Fellow, Dr. Gunveen Kaur, is working with them on this project.

VITAMIN D DOSE-RANGING STUDY

Vitamin D deficiency is emerging as a public health issue for Australians. Severe Vitamin D deficiency results in osteomalacia in adults (a softening of the bones) and rickets in children. Less well known is the impact of Vitamin D deficiency on depression, immunity and autoimmunity, obesity, and the progression of type 2 diabetes.

Many clinicians recommend high doses of Vitamin D to rapidly increase levels, however recent trials have linked this with increased falls and fractures in older women.

Associate Professor Kerrie Sanders from Western Health and the NorthWest Academic Centre at the University of Melbourne is leading a project addressing the question mark over whether high annual doses of vitamin D should be used.

A Patient's Perspective

Carl Dittloff

When Western Health patient, Carl Dittloff, was offered the chance to participate in a ground breaking study to improve cancer detection rates he didn't need to think twice before he agreed.

In October 2011 Carl was diagnosed with bowel cancer and surgery to remove part of his bowel followed swiftly. The diagnosis came as a shock to the healthy 26 year old, who is now determined to play a role in the development of a test which could save thousands of lives by identifying minute cancer cells remaining in the body.

Associate Professor Peter Gibbs, a colorectal oncologist at Western Health, is taking the lead in an innovative new study which aims to confirm the value of a promising new blood test.

"This is a particularly significant piece of research with the potential to improve outcomes for bowel cancer patients across Victoria and beyond," Associate Professor Gibbs says.

"Currently we are not as effective as we would like to be in predicting which patients, after initial successful surgery to remove the cancer from the bowel, are at risk of developing secondary cancers. Spread of this type of tumour, the second most common type of tumour in the Victorian population, to other organs, particularly the liver, is the major cause of death in this disease.

"It's about making a difference and improving treatments for patients, and particularly being selective about what we do, individualising treatment, and trying to define patients that don't need treatment at all," he said.

After recovering from surgery Carl commenced weekly chemotherapy in January 2012, in a bid to ensure that any remaining cancer cells would be destroyed. In Carl's case there is just a 10% chance that he needed this gruelling treatment.

For Carl, who has already had a reduction in the treatment due to suffering significant side effects, including chest pains which resulted

in an Emergency Department presentation, chemotherapy isn't something he would wish upon a soul.

"I can feel my body protesting 'no', as I sit in the chair during treatment," Carl says.

"There is the agitation afterwards, the tiredness - I didn't expect to feel that until I was 60 years old - the chest pains, the diarrhoea. I have considered giving up chemotherapy a few times, it is that bad.

"By participating in this study I can help researchers identify who needs chemotherapy after surgery and who doesn't. Taking part in medical research is important. They need a wide range of people for research - you are basically helping everyone else. I look at it as a form of volunteering."

Participants in the study undergo blood tests every three months for the first year, then at intervals for the next five years thereafter.

John Hopkins University in the United States is analysing the first set of results collected through Associate Professor Gibbs' study.

Carl has his eye firmly on the future now.

"I was due to move from Melbourne to Brisbane when all this happened, to be with my girlfriend," he said.

"I am pretty calm about it all now - it bothered me for a while, but I took the positive route. That is the one thing I can control. Most people my age don't have this kind of life experience. I can choose my perception," says Carl.



“Taking part in medical research is important. They need a wide range of people for research - you are basically helping everyone else. I look at it as a form of volunteering.”

CARL DITTLUFF
PATIENT AT WESTERN HEALTH.



Professor Anne-Maree Kelly
with a Western Health patient

The Joseph Epstein Centre for Emergency Medicine Research at Western Health

Professor Anne-Maree Kelly established the Joseph Epstein Centre for Emergency Medicine Research at Western Health some 10 years ago with a vision of performing high quality clinical research in the areas of emergency medicine and pre-hospital care.

Emergency medicine research has advanced in leaps and bounds, with Western Health patients playing a vital role in enabling researchers to identify new and better ways of responding to the needs of patients presenting at Emergency Departments.

“For emergency medicine research, 2011 was a year of consolidation,” said Professor Kelly.

“We made significant advancement around being able to identify heart attacks more quickly and accurately, after analysing the data of over a thousand patients who had presented at Emergency Departments with chest pain.”

“Western Health alone sees over 5,000 presentations to its Emergency Departments for chest pain each year, so it is crucial that we are able to identify who is at greater risk of suffering heart disease and how we best manage their treatment.”

There are a number of ethnicities in Melbourne’s Western suburbs which are at a higher risk of heart disease, including Sri Lankans, Indians and Maltese.

Professor Kelly is also appointed as a Senior Clinical Advisor to the Emergency Care Clinical Network at the Department of Health, Victoria. She is the only emergency department physician to have contributed towards the 2011 Addendum to the National Heart Foundation of Australia/ Cardiac Society of Australia and New Zealand Guidelines for the Management of Acute Coronary Syndromes (ACS) 2006.

Clinicians at Western Health have also been responsible for influencing best practice in establishing the weight of children presenting in Emergency Departments.

Paediatric emergency physician at Sunshine Hospital's Emergency Department, Dr David Krieser, along with Professor Kelly, has worked closely with University of Melbourne student, Kevin Nguyen, to examine the accuracy of existing formulae and the Broselow tape, which are available for estimating a child's weight.

410 paediatric patients at Sunshine Hospital were weighed and measured and the results were compared to the weight estimated by the application of several widely used formulae and the Broselow tape. Parents were also asked to estimate the weight of their child, with some surprise results.

Paediatric emergency physician Dr David Krieser with a patient and her mother at Sunshine Hospital

"All of our ideas come out of our practice. The Emergency Department is our laboratory."

PROFESSOR ANNE-MAREE KELLY, FOUNDING DIRECTOR OF THE JOSEPH EPSTEIN CENTRE FOR EMERGENCY MEDICINE RESEARCH.

The project results suggested that even where a parent was not certain of their child's weight, their estimate was more accurate than the figures suggested through use of existing formulae and the Broselow tape.

Dr Krieser said that it was of enormous assistance to doctors when parents knew their child's weight.

"When a child presents at the Emergency Department, time is often crucial and we need to ascertain weight quickly in order to administer the correct dose of drugs or fluids," Dr Krieser said.

Sunshine Hospital treats around 20,000 paediatric emergency patients each year.



Emerging Western Health Researchers

Dr Tracey Lam

Surgical Registrar at Western Health. Early Career Researcher.

Now in her fifth year as a Surgical Registrar at Western Health, Tracey Lam is no stranger to the challenges involved in pursuing her dream of becoming a surgeon.

With the prize now finally within sight, Tracey will soon finish her final exams before facing the next hurdle - making decisions around a fellowship and an eventual speciality.

“The problem is - and it is not even a problem really - is that every time I do a different sub-specialty rotation at Western Health I really enjoy it and I think, “Oh, I want to do that. It is interesting and I really like it,”” Tracey explained.

Assigned to Western Health through the College of Surgeons, the placement has a research requirement attached to it.

“The College feels it is an important part of training and being a doctor because although surgery is a skill also it is important to have evidence based work,” Tracey said.

“Last year I undertook a rotation in the colorectal unit, which is particularly pro-research. They provided you with the impetus to get things

done, which is good, because it can be hard to find a project and sustain it when you move on from that unit to another one.”

Tracey was awarded the Kendall Francis Prize for the Best Surgical Registrar Research presentation during Western Health Research Week 2011, for her research on the determinants of complete pathological response to chemo-radiation for rectal cancer.

One of the main challenges for any researcher is finding the time to dedicate to a project and Tracey is no exception.

“It can be really hard to work full time, study and do valuable research as well. But it is a great thing to do. I have chosen to keep going, even though I have fulfilled my research requirements.

“Research is highly rewarding - to be able to come out with something meaningful at the end and think “I have done all of this.”

“The research environment at Western Health is fantastic and the surgical consultants are highly supportive, whether it be troubleshooting or pointing you in the right direction to find your answers. The clinical staff are genuinely interested in research here.”



“That’s one of the things about Western Health - in terms of the clinical staff, they are not just interested in their clinical work. They are interested in research and in making sure it happens here.”

DR TRACEY LAM
SURGICAL REGISTRAR AT WESTERN HEALTH.



“People are doing research every day – they just don’t realise they are doing it. Research is questioning what you are doing in everyday practice and trying to find an answer to a problem, or finding a better way to do what you do every day.”

NARELLE WATSON
PHYSIOTHERAPIST

Narelle Watson

Grade 4 Physiotherapist and Physiotherapy Research Coordinator. Emerging Research Leader.

For the past two years physiotherapist Narelle Watson has taken a leading role in advancing research in the field of physiotherapy at Western Health.

Her research into the reliability of X-ray anatomic parameters for classifying distal radius fractures in adults saw her win the best Allied Health & Nursing Research presentation during Western Health Research Week in 2011. Distal radius fractures are one of the most commonly occurring fractures, accounting for 16% of skeletal and 74% of forearm fractures.

“I am currently at the start of a randomised controlled trial, looking at the optimal time of immobilising wrist fractures, following open reduction and internal fixation. I think we actually do a lot of things simply because that is the way we have always done them. So traditionally, we immobilised wrist fractures for 4-6 weeks because it is what we have always done. But there has only been one previous study that has actually looked at what is the best time period for immobilisation. This is new. Finding the optimal time for immobilising these fractures following surgery should have a significant impact on the care we provide given they are one of the most common fractures presenting to our health system,” Narelle said.

“I constantly question how we do things – and I think that is how everyone should be in practice. I am not content to do something just because someone else says that is the best way to do

it. I want to see evidence, and in the absence of that I want to find some evidence as to why we do things. That is the whole premise behind the research I am doing.”

Part of Narelle’s role is to coordinate the advanced practice clinics several of which she has set up in her time at Western Health, taking patients off surgical waiting lists (neurosurgery, rheumatology, paediatrics, and Emergency Department) and getting them into physiotherapy where appropriate.

“Clinicians come up with great ideas. Clinician-led research is seeing what we do in everyday practice and then investigating it further; finding out how we can do better. I think some of the best questions come from seeing how things don’t work, or asking how can we do this better in clinical practice. There is a role for both – certainly you need some things to be lab-based, but a lot of our research isn’t.

“We are doing research in a setting that is relevant to the outcomes, looking at patients, not in an artificial environment, but in hospitals like this.”

Dr Alan Moss

Director of Endoscopic Services. Emerging Research Leader.

Since joining the organisation in September 2011 Dr Alan Moss has initiated an endoscopic research program at Western Health.

A gastroenterologist with a focus on interventional endoscopy, Dr Moss is firmly committed to pushing the boundaries of therapeutic endoscopy.

“Endoscopy has moved from the realm of diagnosis to a major therapeutic modality,” Dr Moss explains.

“Previously endoscopy was mainly a diagnostic speciality where one would diagnose a serious pathology of the gastrointestinal tract, such as a large colon polyp or early cancer of the oesophagus, but nothing could be done endoscopically to treat the problem. Major surgery was often required. Recently we have developed the techniques to treat these lesions endoscopically.

“For example, patients with large flat colonic polyps were traditionally treated with surgical removal of part of their colon (partial colectomy). Depending on the location of the polyp, they may have been left with a permanent colostomy (stoma). Using the latest endoscopic equipment and techniques that have been pioneered in Australia, lesions as large as 120 mm in size can be removed via instruments passed via the 3 mm wide working channel of the colonoscope. Best of all, patients are left with no abdominal wound and no scar, as the procedure is all done via the colonoscope. Most cases can be

performed as day-stay only procedures, resulting in significant cost savings and enhanced hospital bed availability.”

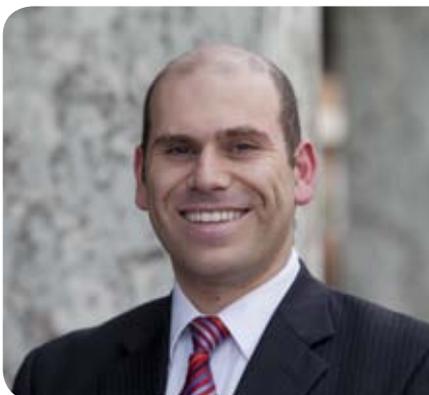
Much of Dr Moss’s research has revolved around the large bowel (colon). With bowel cancer the second biggest cancer killer in Australia this is particularly significant.

“My most substantial research has been in the effectiveness and safety of using colonoscopy to remove large or advanced polyps and pre-cancerous lesions of the bowel. Our prospective, multicentre Australian study proved that endoscopy is an effective and safe treatment. We have continued to study various ways to further improve the outcomes of the procedure.

“The population is increasingly realising the importance of bowel cancer screening. With increased uptake of screening, more large or advanced polyps are being found, and we are noticing an increase in referrals for endoscopic resection of these lesions.

In joining Western Health, Dr Moss brings with him significant experience and knowledge. Having undertaken fellowships at two of the world’s leading hospitals in the field (Westmead Hospital in Sydney and St Michael’s Hospital in Toronto, Canada), patients in Melbourne’s West are benefiting from his innovative approach to treatment.

“The surgical unit at Western Health is one of the busiest in Victoria – particularly in terms of surgery for bowel cancer. We are fortunate that our surgeons are very progressive and supportive of the emerging and expanding role of therapeutic endoscopy, and so the potential for growth in the endoscopy service and the



“Endoscopy has moved from the realm of diagnosis to a major therapeutic modality. We’re now pushing the boundaries in terms of what we can do with endoscopy.”

DR ALAN MOSS
DIRECTOR OF ENDOSCOPIC SERVICES

ability to make a difference to a large number of patients is what drew me here. Cases are discussed in multi-disciplinary meetings involving surgeons, oncologists and gastroenterologists, so a consensus is reached regarding the optimal management for each individual patient.

“We service a very large population with a high pathology burden, and I believe that many can benefit from advanced endoscopic services. I’m passionate about patients and helping them achieve the best health outcome. It’s really

important that patients understand that more and more can be done endoscopically and that with the surgical support that we have at Western Health, this option is increasingly available to them,” Dr Moss said.



“I was born in the West and have always had affiliations with it. I was born and raised in Footscray, a Bulldogs fan, I’ve known the Western suburbs since I was a kid. It’s about giving back to the community I’ve known my whole life”

ASSOCIATE PROFESSOR NIGEL TOUSSAINT
NEPHROLOGIST

Associate Professor Nigel Toussaint

Nephrologist at Western Health. Emerging Research Leader.

Nephrologist Associate Professor Nigel Toussaint splits his time between Western Health and The Royal Melbourne Hospital. His specialty revolves around the field of chronic kidney disease (CKD) and mineral and bone disorders, with a particular focus on cardiovascular disease and vascular calcification in CKD.

For Associate Professor Toussaint, research is about to get more interesting than ever.

“I’ve been involved in setting up a large randomised controlled trial which will recruit around 500 patients, a number of those from Western Health. It is a multicentre, national study called the IMPROVE-CKD study and is being conducted through the Australasian Kidney Trials Network. My Royal Melbourne colleague, Associate Professor Genie Pedagogos, and I

designed the trial. . It’s been three years in the making so it’s very exciting that it is now up and running,” Associate Professor Toussaint said.

“We know so little about the potential effects of phosphate on cardiovascular health. We have no idea whether using phosphate binders or other methods to lower phosphate makes any difference at all to improve clinical outcomes. Over the next few years I am hopeful that our study will shed some light on an area that I believe may impact significantly on cardiovascular problems. At the moment up to 50% of patients with CKD die from cardiovascular disease and controlling phosphate may help to reduce that complication.

“Approximately two and a half million Australians have CKD, the majority being linked to high blood pressure and diabetes. The prevalence of this problem is increasing with an ageing population.”

Born and bred in Melbourne's Western suburbs, Associate Professor Toussaint is one of only a handful of experts in Australia on vascular calcification in CKD and its contribution to cardiovascular disease.

"Western Health as a healthcare network is up and coming and has a lot more vision and drive than other places I have worked. You feel you can make more of a difference out here in the West. It's interesting as well as challenging. There are aspects relating to multiculturalism and low socio-economic backgrounds that you see here which you perhaps might not see elsewhere."

"I can't imagine my career without a research element to it. Research is stimulating. It didn't take too long as a resident and registrar to realise that there is so much medicine that we have no idea about," he said.

"I've got ideas, projects and thoughts about what we can look in to and what we can do to further our knowledge. I often sit up at night between 11pm and 1am because I don't have the time I

need to do the work I want to do during the day. You can't do it all yourself. You need people to collaborate with.

"Previously a lot of people in nephrology undertook laboratory research, rather than clinical research. In the past five or six years clinical research in nephrology has really expanded and I think that's been of interest to an increasing number of trainees. Clinical research is something that continues on as part of clinical practice. You need to understand study methodology and statistics, especially in reading the medical literature. There's so much more we need to know," says Associate Professor Toussaint



Care in the community: Chronic Kidney Disease

Funding from the Victorian Department of Health Renal Health Clinical Network and Aboriginal Health has enabled Western Health to pilot a new early detection program targeting patients at risk of developing kidney disease in the West.

The \$450,000 pilot launched at the start of 2012 in partnership with Kidney Health Australia, General Practice Victoria (GPV) and the newly established Macedon Ranges and North Western Medicare Local.

The aim of the program is to understand the burden of Chronic Kidney Disease (CKD) in Victoria, and to facilitate the early diagnosis, assessment and management of detected CKD, in a Primary Care setting.

Dr Craig Nelson, Head of Unit at Western Health Renal Services, says that early identification of kidney disease is essential in order to ensure a chronic disease management plan can be constructed for patients as soon as possible.

“The onset of kidney disease can go unnoticed until up to 90% of kidney function is lost, resulting in very serious health problems,” said Dr Nelson.

“With 1 in 3 adult Australians at an increased risk of developing CKD, there is a real need to detect kidney disease as early as possible, as there are medications that can slow it down.

“The Department of Renal Services is excited to be involved in both local and national trials and to develop the research component of our service.

“Positioning Western Health as an adaptor of ‘electronic health’ will enable us to form closer ties with agencies like Primary Care in the future, enabling more and more people at risk of developing CKD to be identified, within a community setting and hopefully before too much kidney function has been lost.

“We are looking forward to working with the Macedon Ranges and North Western Medicare Local, GPs and practice nurses on this exciting project, and increasing the detection of CKD to improve patient outcomes.”

“A lot of our research is community based. We have a real advantage at Western Health in that we have a co-located large and growing community and we are sitting in one of Australia’s top growth corridors. This means the longevity of ‘the power of the patient’ is guaranteed for the future of Western Health.”

DR CRAIG NELSON, HEAD OF RENAL SERVICES UNIT AT WESTERN HEALTH



1 in 3 adult Australians are at an increased risk of developing CKD. People with CKD may not notice any symptoms until they reach End Stage Kidney Disease, requiring dialysis or transplant.



Collaboration is key

Associate Professor Keith Lim

Western Health's Head of Rheumatology, Associate Professor Keith Lim, believes that research and collaboration are key to achieving better outcomes for patients.

"There are two main groups of patients we deal with – those with 'mechanical' issues such as osteoarthritis, and those with 'inflammatory' issues, for example, rheumatoid arthritis. Then there are more rare autoimmune diseases like systemic lupus erythematosus which can affect every area of the body.

"A lot of diseases are chronic and if you have fewer resources then you end up with poorer overall health, as we have found in the western suburbs, where many of our patients have co-morbidities: more smokers, more drinkers, more obesity, and more diabetes. These result in worse outcomes for people with arthritis. In the west historically there has been a lot of manual labour and I think manual labour affects arthritis

in later life – your back, your knees. You see a lot of factory workers, farmers, cleaners who were unable to afford to pay attention to injury and have retired but now suffer the consequences.

One of the most common types of pain Associate Professor Lim deals with is knee pain.

"Ten years ago patients with osteoarthritis and pain in the knee would be referred to an orthopaedic surgeon by their GP, regardless of the severity. But the patient would wait two years because of the huge backlog. And by the time they were seen usually there was no option but to operate."

Associate Professor Lim and his colleagues work closely with Western Health's physiotherapy and orthopaedic surgery departments to ensure patients receive the right treatment, at the right time.



Associate Professor Keith Lim (second from right), with colleagues from the Department of Rheumatology at Western Hospital

“Over the last five or six years we have been finding that around 90% of patients with osteoarthritis of the knee, who are referred to see a surgeon, do not need surgery. Only 10% do and that group tend to be older with co-morbidities. We deal with all those issues and maximise conservative therapy, such as physiotherapy, say, for three months and then we bring them back to re-evaluate. Some may still require surgery but are more medically and psychologically prepared for it.

“My surgical colleagues are happy with this because the patients they do see are better prepared, which we believe leads to better outcomes. This is major surgery and some patients aren’t ready for it. I think if they were medically and psychologically ready and they had exhausted other options, the surgery would have a higher success rate.”

“Patient care drives me to do research. Osteoarthritis has always been seen as an old person’s disease. Eventually everyone who lives long enough gets it, it’s just ageing, why worry? I argue the case that a lot more can be done. It’s obvious. And if you can make a small beneficial change in a common disease it can be very significant.”

ASSOCIATE PROFESSOR KEITH LIM

A focus for the future

Associate Professor Glyn Teale:
Clinical Services Director, Women's and Children's Services

The Western Health Research Strategy has identified Obstetrics and Gynaecology as one of the areas of significance to Western Health, in which research activities should be developed and fostered.

Sunshine Hospital is currently the third largest maternity site in Victoria, with the communities served by Western Health forming the fastest growing population in Australia.

Associate Professor Glyn Teale joined Western Health in 2011. With a keen interest in research around the significance of body mass index during pregnancy, both for mother and baby, Associate Professor Teale is hoping to build upon his existing research, through further work at Sunshine Hospital.

"Extensive research tells us that being overweight or obese during pregnancy has major implications and increases the likelihood of a range of adverse health conditions such as preeclampsia and gestational diabetes," Associate Professor Teale said.

"We also know that being overweight or obese can have an impact on the birth process itself, and on neonatal health, with the possibility of

babies being born smaller or larger than is usual, or with shoulder dystocia, or requiring specialist care or lengthy hospital stays.

"Although we know there is a link between maternal BMI and perinatal complications, more research is required around the extent of that link. Similarly, we are yet to fully understand the link between being underweight during pregnancy and the effect this has on perinatal outcomes."

"As the prevalence of obesity and being overweight continues to increase in Australia and with the birth rates in the western suburbs of Melbourne increasing, this will be a significant issue for Western Health, and one in which further research is required."

ASSOCIATE PROFESSOR GLYN TEALE





Sam Wills: Paediatric physiotherapist and Hip Dysplasia Clinic coordinator

During his time at Sunshine Hospital, Sam Wills has pioneered one of only a handful of children's hip dysplasia clinics in Victoria.

The paediatric physiotherapist said the clinic, which has been operating for around 12 months, provides a way of tracking population health in one of the fastest growing regions in the state.

Sam said the clinic's work offers much potential for research.

"Hip dysplasia is the main thing we see. We also see club foot and a lot of normal postural variations. We are looking to begin to collate data on the risk factors for hip dysplasia."

Sam said he hoped the research would show whether certain attributes predisposed a child to hip dysplasia.

"Hip dysplasia is where the socket of the hip doesn't develop properly. It doesn't affect babies too much, but it tends to start affecting them in their teens. In the more severe cases they will need a hip replacement by the time they are 40 years old. It is about catching it and treating it early so we don't get adverse outcomes down the track.

"There are still a lot of things we don't know about. Hip dysplasia is fairly well documented but there is always more you can learn about

bracing and adverse outcomes in the long term. Club foot is a really good one for future research as well. We probably see 15 children a year with club foot."

The children's hip clinic has eased the strain on surgeons and saved patients from long waiting times.

"My position was initially created to take the workload off surgeons as they had huge waiting lists. A lot of the time someone will go and see a surgeon, only to be referred to a physio. So we cut out the middle man and say come and see us. We can do a lot for most of the patients, and those that do need surgery, we can send on. It frees up everyone's time, basically."

"Our clinic is really sensitive to the population in general, because the more babies are born, the more babies come through our clinic. We see the growth in the Western suburbs."

SAM WILLS



Western Health locations

WESTERN HOSPITAL

Gordon Street
Footscray VIC 3011
Locked Bag 2, Footscray VIC 3011
(03) 8345 6666

SUNSHINE HOSPITAL

Furlong Road
St Albans VIC 3021
PO Box 294, St Albans VIC 3021
(03) 8345 1333

WESTERN CENTRE FOR HEALTH RESEARCH AND EDUCATION

Sunshine Hospital
Furlong Road
St Albans VIC 3021
(03) 8345 1333

SUNBURY DAY HOSPITAL

7 Macedon St
Sunbury VIC 3429
(03) 9732 8600

WILLIAMSTOWN HOSPITAL

Railway Crescent
Williamstown VIC 3016
(03) 9393 0100

DRUG AND ALCOHOL SERVICES

3-7 Eleanor Street
Footscray VIC 3011
(03) 8345 6682

HAZELDEAN TRANSITION CARE

211-215 Osborne Street
Williamstown VIC 3016
(03) 9397 3167

REG GEARY HOUSE

54 Pinnacle Crescent
Melton South VIC 3338
(03) 9747 0533

