

2023 Research Highlights

February 2024



Acknowledgement of Country



Canberra Health Services acknowledges the Ngunnawal people as traditional custodians of the ACT and recognises any other people or families with connection to the lands of the ACT and region. We acknowledge and respect their continuing culture and contribution to the life of this region.



Accessibility (how to get this information in other ways)

To get this information:

- in large print
- to listen to
- in any other format
- call (02) 5124 0000.



If you need the translating and interpreting service
call 131 450.

canberrahealthservices.act.gov.au/accessibility

Publication No 24/1007 | © Australian Capital Territory, Canberra February 2024

Contents

Welcome and partnerships	4
CHS 2023 research at a glance.....	6
CHS research awards.....	8
Advancing clinical trials at CHS.....	10
Our projects	12
Our people.....	14
Our impact	18
Research excellence at CHS—introducing TORU	22
Partnering with consumers: bridging the gap	23

Welcome and partnerships



Message from the Chief Executive Officer

Canberra Health Services (CHS) is proud to launch its inaugural 'Research Highlights'. This gives us the opportunity to celebrate our great and significant research achievements over the last 12 months. These 2023 Research Highlights show us the wide and varied research of Team CHS.

Since Rachel Stephen-Smith MLA, Minister for Health, launched CHS' first Research Strategy in December 2021, my team and I have been committed to strengthening and building our research credentials. With the Government's support, we have invested in building a CHS research support team to help clinicians and clinical teams pursue research opportunities, as well as strengthen our critical relationships with local academic partners.

We all know health research is instrumental to improving our patient outcomes. By creating a strong research profile, CHS becomes a beacon to attracting and retaining exceptional team members. 2023 was a cracking year for CHS research and 2024 will be even better.



Message from the Executive Director of Research and Academic Partnerships

When we launched our first CHS research strategy with its six strategic commitments in 2021, I realised our research journey would be long and filled with extraordinary research stories.

These stories, which fill the next few pages, can blow one's mind in terms of complexity, for their simplicity or for the pure doggedness of researchers to complete their research study.

Over the last year, we have built a CHS research support team, which has allowed us to launch and complete our first research mentorship program, launch a dedicated space on the [health hub](#) to help staff navigate the research landscape and strengthen our collaborations with our local academic and community partners.

More broadly across CHS: the Clinical Trials and Research Support Unit has increased its capacity; new areas have put localised research meetings in place and four CHS clinicians won the inaugural ACT Health Research and Innovation Fund Fellowships.

The Canberra Hospital Private Practice Fund, Radiation Oncology Private Practice Fund, Canberra Hospital Foundation and many other areas have continued to support our local research efforts.

Research Highlights is about celebrating and inspiring the next generation of CHS clinician researchers. We hope we can create more opportunities for our people and visibility to our partners of our research talent and opportunities. Overall, we demonstrate how building a strong inclusive research culture is integral to delivering exceptional care.

2023—academic partnerships and collaborations going from strength to strength

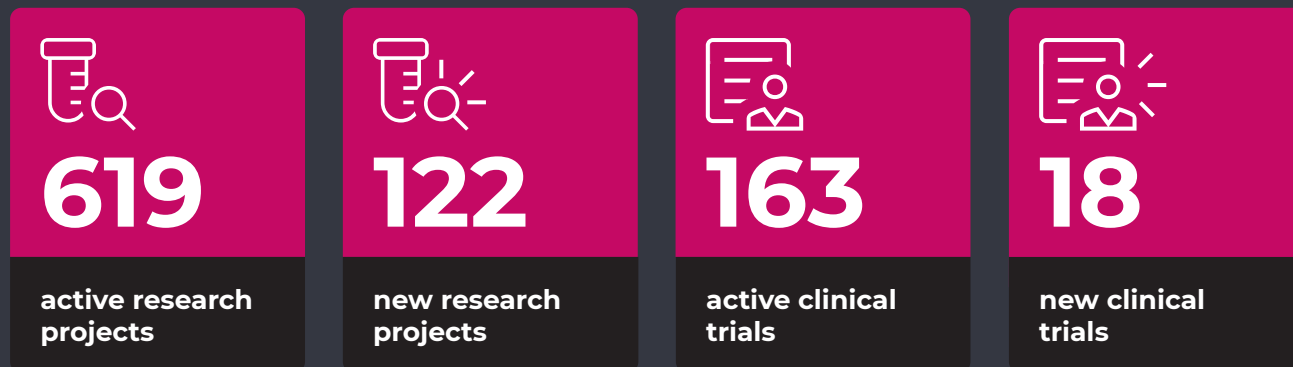
The Office of Research and Education (ORE) has provided 11 letters of support for Category one grants involving 33 CHS clinicians and collaborations with 10 academic partners (six Australian National University (ANU), two University of Canberra (UC) and two University of Sydney (USyd)) and the ACT Health Directorate (ACTHD).

These grants include 10 for the Medical Research Future Fund (MRFF) and one for the National Health and Medical Research Council (NHMRC).

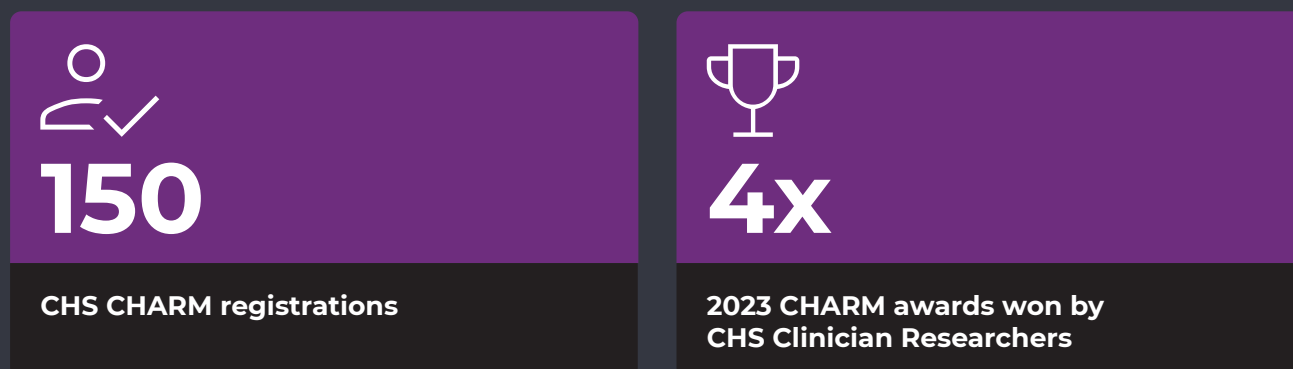
Our collaborations with our academic partners are critical to CHS building and strengthening its research culture. In 2024, we are dedicated to expanding these collaborations, aiming to further integrate CHS' research culture with academic insights and innovations.

CHS 2023 research at a glance

Research



Canberra Health Annual Research Meeting (CHARM) 2023



Research fellowships



Donations towards research initiatives



Office of Research and Education (ORE) activities



90+

ORE services introductory meetings



110+

research navigation and supports provided



178 staff

attended pre-CHARM abstract and poster presentation education sessions



18 pairs

of CHS Clinicians participated in the inaugural CHS Research Mentorship Program



3 pairs

of CHS clinicians sponsored to participate in the Franklin Women ACT Mentoring Program



6 workshops

to collaboratively design CHS Partnering with Consumers in Research resources

CHS research awards

Involving yourself in research takes dedication and time and it's wonderful when these efforts are recognised with an award. We would like to congratulate all our CHS researchers that have been recognised for their research works in 2023.

Society of Hospital Pharmacists of Australia

Clinical Pharmacist of the Year:

Karlee Johnson

(Canberra Health Services, Pharmacy)

"Karlee was recognised for her vast contributions to research, the care she delivers to her patients and genuine love for teaching"

48th Annual Scientific Meeting of the Australasian Division of International Academy of Pathology

Commendation award for a registrar (Canberra Hospital, Anatomical Pathology):

Rachel Lau

"Unusual presentation of Castleman disease—a rare case report and literature review"

Australasian College for Emergency Medicine 38th Annual Scientific Meeting

Best papers:

Drew Richardson

(Canberra Hospital, Emergency Department)

"2023 Access Block Prevalence Survey finds Highest Ever Crowding Figures"

ACT Australian Orthopaedic Association Annual Scientific Meeting

Best discussion generated paper:

Tom Staniforth

(Canberra Hospital, Orthopaedic Surgery)

"Posterior Antigliding Plating vs Lateral Neutralization Plating for Weber B Distal Fibular Fractures: A Systematic Review and Meta-analysis of Clinical and Biomechanical Studies"

PREDICT prize for best non-specialist paediatric paper:

Marita Bolic, Jamie Lew, Drew Richardson

(Canberra Hospital, Emergency Department)

"Calculating Possible Paediatric Emergency Medicine Workload"

Best laboratory paper:

Kevin Wang

(Canberra Hospital, Orthopaedic Surgery)

"Is it Safe to Reuse Pentel N50/60 Skin Markers: The Effect of Alcohol Based Ink on Common Organisms in Orthopaedics"

Best registrar paper:

Sarah Ellis

(Canberra Hospital,
Orthopaedic Surgery)

“Treatment Success of Prosthetic
Joint Infections in the Australian
Capital Territory”

Canberra Hospital Private Practice Fund
Award for the Best Clinical Research Poster:

Nicholas Goulding

(Canberra Hospital, Anaesthesia)

“Improving management of paediatric
medium and longer term intravenous
access devices.”

ACT Health Directorate

ACT Nurses and Midwives Excellence Award
for Excellence in Quality Improvement or
Research Practice:

**Shannon Woodward,
Nurse Practitioner**

(Canberra Health Services,
Canberra Sexual Health Centre)

“Shannon is the driving force behind
the quality improvement and
research activities at the Canberra
Sexual Health Centre. She promotes
a culture of evidence-based practice
and continuous clinical improvement
within the team”

Canberra Hospital Private Practice Fund
Award for the Best Clinical Oral Presentation:

Harshel Parikh

(Canberra Hospital, Intensive Care)

“A comprehensive care bundle reduces
harm in patients with Central Venous
Access Devices.”

Canberra Health Annual Research Meeting (CHARM) 2023

Australian Association of Gerontology Award
for the Best Poster Related to Ageing:

Tricia O'Connor

(Clare Holland House)

“Answering the “How long?” question
at end-of-life.”

Australian Association of Gerontology Award
for the Runner-Up Best Poster Related
to Ageing:

Alice Kennard

(Canberra Hospital, Renal Unit)

“Understanding the lived experience
of frailty in the chronic kidney disease
context: a qualitative study”

Advancing clinical trials at CHS

Expanding support for unit research operations

The CHS Clinical Trials and Research Support Unit (CTRSU) offers comprehensive support services for units initiating, conducting, and expanding their clinical trials portfolio. Their services include finance, administration and regulatory compliance support.

In addition to our ongoing support for medical oncology, haematology, and cardiology, 2023 saw the CTRSU facilitate the initiation of trials in several new units, including vascular surgery, general surgery, infectious diseases, anaesthesia and pain management, palliative care, emergency department (ED), and psychiatry.

This signifies a fresh wave of possibilities in research ready to redefine patient care at CHS. The CTRSU welcomes new units into the world of clinical trials with a robust and well tested support framework to empower ground-breaking research that shapes the future of healthcare.

Bringing clinical trials closer to home

Distance is a significant healthcare barrier for 30% of Australians living in rural, regional and remote areas. Improving access to clinical trials is a key priority of the CTRSU and in 2023 the unit continued the development of the Rural, Regional and Remote Clinical Trials Enabling Program (R3-CTEP), a MRFF grant collaboration between ACT and NSW. Its decentralised clinical trial model enables patients in remote areas to participate in trials with minimal travel.

Professor Walter Abhayaratna, Director of Research Operations and Clinical Trials, leads the Southern cluster, which includes CHS, Illawarra-Shoalhaven Local Health District (ISLHD), Murrumbidgee Local Health District (MLHD), and Southern NSW Local Health District (SNSWLHD).

Working in partnership with local consumer groups, Aboriginal Community Controlled Health Organisations (ACCHO) and industry partners, the initiative will ensure a sustainable clinical trial support service that is inclusive, effective, locally delivered and based on community needs.



Prof Walter Abhayaratna (Director of Research Operations and Clinical Trials, Canberra Health Services) and Jill Ludford (Chief Executive, Murrumbidgee Local Health District)



R3-CTEP Goulburn Hospital Site Visit

Private practice funds and CHS research

2023 has been another successful year with the Canberra Hospital Private Practice Trust Fund (TCH PPTF) supporting CHS researchers through competitive major and minor research grant rounds totalling \$600,000.

TCH PPTF is committed to supporting local research as a vital component of the hospital's education and training of hospital clinical staff. It supports local healthcare related research activity by building local research capability and allowing researchers to compete nationally in National Health and Medical Research Council (NHMRC)/ Medical Research Future Fund (MRFF) research funding. The funding also provides opportunities for busy clinicians to undertake targeted research projects which improve their understanding of research methodology and governance.

In 2024, TCH PPTF, in partnership with CHS, is set to allocate an additional \$250,000 towards new initiatives focussed on allied health/ nursing initiated research, and supporting newly appointed clinician researchers to develop local research programmes.

Thank you, private practice funds for supporting our local researchers!

Our projects

Did you ever wonder what happens to people who suffer from autoimmune disease who fail conventional therapy?

The CHS Renal Department's pioneering approach to understanding each patient on a personalised level has put Canberra on the map, with referrals to its Personalised Medicine Clinic (PMC)—run between CHS and the John Curtin School of Medical Research at ANU—coming from across Australia and abroad.

With three prestigious MRFF grants* and a significant philanthropic donation under their belts, A/Prof Simon Jiang and Dr Giles Walters lead the groundbreaking research into the new frontiers of medicine.

But what exactly is 'personalised medicine'?

'When people are failing conventional treatments, we look at their genetics and immune system and are able to identify disease-causing mutations. We demonstrate how those mutations cause the immune system to dysfunction and cause disease. Using that knowledge, we're able to offer personalised treatments,' A/Prof Jiang explains.



A/Prof Simon Jiang and Azure Hermes, Deputy Director, ANU National Centre for Indigenous Genomics (NCIG) at Purple House in Alice Springs

'Within the renal department, we have developed a strong translational connection between the laboratory, where we use cutting edge technology to understand these disease processes, and the clinic, where we adapt these discoveries into treatment options.'

'The personalised medicine clinicians have developed a relatively unique and broad skillset, integrating several scientific disciplines including genomics, molecular biology and fundamental immunology.'

We integrate those technologies in a relatively rapid timeframe into our practice at the clinic. What's most exciting is that we have a new generation of clinician-scientists emerging who will be able to advance and utilise that knowledge at CHS.

This makes the program truly unique in Australia.'

A/Prof Jiang and Dr Walters have led the establishment of a multidisciplinary clinic at CHS, encompassing Rheumatology (Dr Chandi Perera/Dr Katie Morrisroe), Respiratory Medicine (Dr Stuart Schembri), Ophthalmology (Dr Jane Wells), and Immunology (A/Prof Katrina Randall). This clinic advances personalised medicine across various disciplines affected by immune diseases.

Additionally, the PMC is expanding into new areas. Collaborations with Indigenous communities, including the Tiwi Islands and Purple House in Alice Springs, are underway to investigate the genetic basis of kidney disease. Furthermore, the team is developing AI-based techniques to refine kidney disease diagnosis, with significant advancements anticipated within the next 12 – 24 months.

We can't wait to see what 2024 brings to this brilliant team!

*MRFF Grants:

- 'Improving genetic diagnosis of autoimmune and autoinflammatory disease through an integrated multi-omics approach' (\$2,950,844.17),
 - 'Personalised medicine in the treatment of complex autoimmunity and autoinflammatory disease' (\$1,553,568.84),
 - 'High throughput validation of genomic variants in Indigenous Australians and their contribution to kidney and immune disease'. (\$975,502.80).
-

Our people

2022 – 2023 Research and Innovation Fund Fellowship Program

CHS is proud to host several ACT Health Research and Innovation Fund (RIF) fellows funded by the ACT government. These competitive fellowships, awarded to early and mid-career researchers and totalling nearly \$1 million, help lead innovative change across the ACT health system.

These fellowships grant early and mid-career researchers dedicated time to focus on their research, closely involving consumers to maximise patient benefits.

In 2024, we hope there will be more fellowships and dedicated time for research opportunities available to continue to foster and embed research into our services. Stay tuned.

Dr Michael Chapman

Project: Dying, death literacy and Voluntary Assisted Dying—Educating community responses to assisted dying in the ACT.

Associate Professor Katrina Randall

Project: Improving outcomes for patients with allergy and immunodeficiency in the ACT using a phenomics and genomics-based approach.

Dr Philip Choi

Project: Unravelling immune thrombocytopenia: from diagnosis to treatment options.

Ms Melissa Parker

Project: Investigating the impact of PIPPA (Period ImPact and Pain Assessment) screening for period pain in online communities and primary health.



Dr Nathan D'Cunha (UC), Melissa Parker (CHS), Dr Jade Redfern (ACT Health), Associate Professor Katrina Randall (CHS), Dr Michael Chapman (CHS); Not Included: Dr Phil Choi (CHS)

2023 higher degree research and honours' graduates

Congratulations to all CHS 2023 research degree graduates!

2023 saw many CHS team members awarded with the highest academic degree, a PhD. We celebrate the achievements of Karlee Johnston, Tom Lea-Henry, Mia Cotan Utomo, Caitlin Coombes and Danushika Sivanathan (ANU), and Sean Dicks and Elizabeth Webb (UC).

Here's some of our "PhDone" superstars:

Elizabeth Webb

Dr Elizabeth Webb is an experienced lymphoedema physiotherapist with over 10 years of experience working within the lymphoedema and palliative care services at the North Canberra Hospital.



Elizabeth Webb

Her PhD research through the University of Canberra investigated the impact of compression therapy on recurrent cellulitis and the associated costs for patients and the healthcare system.

Some of her highlights include being published in the prestigious New England Journal of Medicine, having her research included in various multidisciplinary guidelines and clinical decision support tools, and winning the ACT Allied Health Research Excellence Award in 2023. Talk about impact!

Tom Lea-Henry

Dr Tom Lea-Henry's project in the field of personalised medicine at ANU identified a genetic variant affecting a protein involved in immune cell activation that prevents autoimmune inflammation in the kidneys of mice.



Tom Lea-Henry

He is also investigating the genetic and molecular basis of kidney disease among the Indigenous Australian inhabitants of the Tiwi Islands, who experience the highest prevalence of kidney disease in the world.

Tom's work is already having a significant impact outside the lab. In 2023, his project transitioned to drug development with the potential to create a novel therapy for autoimmune kidney disease. He will continue his research career in 2024 as a McCusker Postdoctoral Research Fellow in the ANU Personalised Medicine and Autoimmunity group, balancing this with working as a clinical nephrologist.

Karlee Johnston

Dr Karlee Johnston's PhD at the ANU Medical School focused on burnout of Australian pharmacists during the global COVID-19 pandemic. A practising clinical pharmacist for nearly two decades, her leadership has been an inspiration to numerous others, and an amazing asset to the profession.

Despite only just finishing her PhD, she already has an extensive publication record, with her article 'The burden of COVID-19 on pharmacists' being one of the 10 most downloaded papers from the Journal of the American Pharmacists Association in 2021.



Karlee Johnston

In 2023, Karlee also received the 2023 Hospital Pharmacists of Australia (SHPA) Award.

In 2024, Karlee continues to practise as a pharmacist whilst also lecturing for the ANU School of Medicine and Psychology and researching health professional burnout. Karlee hopes that this research will inform the implementation of practical solutions to optimise health professional wellbeing.

Four nursing honours students graduated from UC with first class honours. Our heartfelt congratulations to Amy O'Dea, Laura Hants, Liz Lambert and Kelly Ford, who were all supported by the Synergy Jennifer James Memorial Scholarship for Research.

In midwifery Emma Gauldron, Victoria Chard, Danielle Chenery and Lianne Halling completed their Honours supported by the Synergy Midwifery Honours Scholarship.



University of Canberra Honours students with supervisors Professor Catherine Paterson and Professor Kasia Bail

Thank you to all supervisors, everyone across CHS, and our academic partners who supported our team members with their research endeavours.

We are looking forward to featuring more CHS research graduates throughout 2024 and excited to see more non-clinical areas supporting Team CHS with higher degree research (HDR) and honours projects.

Saluting Professor Jane Dahlstrom upon her retirement from CHS in 2023

Professor Jane Dahlstrom is an exemplar role model for being an academic clinician. Over the last few decades, she has been an outstanding clinician, leader and mentor at CHS and beyond, and led significant research projects in breast cancer, perinatal and placental pathologies. She is the highest ranking female CHS researcher, with 164 peer reviewed publications and an H index of 39... no mean feat for a busy clinician!



Professor Jane Dahlstrom

In recognition of her services to medicine, particularly pathology, she was awarded the Medal of the Order of Australia in 2019. More recently, she was awarded the Distinguished Fellow Award from the Royal College of Pathologists of Australasia. Although Professor Dahlstrom retired last year, she leaves a lifelong legacy of extraordinary people at CHS. Many thanks to her wonderful mentorship!

Nursing: From research to practice

Time wounds all heels, they say, but thanks to people like Ann Marie Dunk, the wounds can also be healed.



Ann Marie Dunk, Clinical Nurse Consultant

Clinical Nurse Consultant (CNC) for the CHS Tissue Viability Unit she established some 10 years ago at CHS, PhD student at Ghent University in Belgium, member of the Skin Integrity Research Group (SKINT), former Australian representative on the International Skin Care Advisory Panel—and the list goes on—Ann Marie has been integral in making skin care at CHS the envy of the world.

‘15 years ago, no one was really prioritising skin and wound care, the choices in treatments were simplistic often ending in a “Band-Aid”! It was just something people had and mainly self-managed. We’ve brought skin and wound care to the front of the nursing practice.’

Her current research will involve the development of a categorisation tool for incontinence associated dermatitis (IAD) for newborns, infants and children—currently missing in the world of wound care.

With four PhD supervisors, including Professor Dimitri Beeckman in Belgium and Adjunct Associate Professor Margaret Broom at CHS, the project is geared towards providing real world benefits internationally.

‘A lot of research can sit on the shelves for years, but tissue viability integrates evidence really quickly into practice. Many of our international colleagues are jealous because they see that here at CHS we have that capacity to teach, learn and grow people and integrate new things, whereas they often struggle with that in bigger services. The ability to make practice changes quicker makes us unique here in the ACT.’

Working across the whole organisation in all speciality teams, Ann Marie says collaboration is the key to creating a vibrant research culture.

‘By actively learning from each other across the disciplines and geographical boundaries, we get better outcomes for our patients.’

But doing research has its challenges too, time—or lack thereof—being one of them. So what motivates someone to keep pushing forward in an already demanding and challenging environment?

‘For me it was about being strongly mentored and supported in learning brand new things,’ Ann Marie says. ‘The more you get to do it and be around with people who are excited about the same things as you are, it really is a bit addictive.’

Our impact

CHS quality improvement saves babies across the globe!

We all know that quality improvement work done by Team CHS saves lives—literally. Now it's also saving babies in Indonesia.

In 2016 our neonatal intensive care (NICU) team led by Dr Tejasvi Chaudhari in collaboration with Liverpool NICU developed and introduced the ePREM (extremely preterm-early management) framework: a systematic, evidence based, standardised, scripted, team-based approach to care of the infant in the first critical hours of life. As part of the framework, all ePREM deliveries are audited using a checklist to assess compliance and ascertain areas for continued development and improvement.

The implementation of this framework has resulted in improvement in several key outcomes such as severe brain bleeding, assisted breathing support, need for blood transfusions and mortality. The NICU team has won several state and national awards for this project.

Fast track to 2023, when a surprise email from Putri Maharani Trisanita Marsubrin, MD, PhD from the Neonatology division at Cipto Mangunkusumo Hospital in Jakarta, Indonesia showed just how impactful our everyday work is. With Indonesia ranking fifth globally in the prevalence of preterm births, the staff at the tertiary hospital with a particularly busy Neonatal Intensive Care Unit (NICU) had been exploring various strategies and approaches to reduce the mortality among these particularly vulnerable newborns.

After coming across the checklist developed by CHS staff, the team in Jakarta modified it to suit their facility—with a remarkable outcome.



According to Dr Marsubrin, since its implementation the staff have observed a 20% reduction in mortality rates among extremely premature infants.

If that doesn't give you the warm and fuzzies, we don't know what does! Well done Team CHS!

The checklist has now the potential to lead to more research and quality improvement—stay tuned for 2024 updates!

From little SHARCs, big SHARCs grow...research with real world impact

Saving lives is not exclusive to health care settings, and emergencies have an unfortunate tendency to happen in the most inconvenient places.

Take sharks and holidays for example. The warm surf and hot beach sand might be excellent for lowering stress-induced blood pressure, but they do present a huge problem in the (unlikely) event you're bitten by a shark.

While our local waters here in the ACT might be better known for the pesky pest carps, that doesn't stop Team CHS from developing lifesaving techniques for our community members more closely acquainted with our toothy friends.



Following their successful pilot study, 'Stopping Haemorrhage by Application of Rope Tourniquet or Inguinal Compression' (SHARC 1) on reducing blood loss after a shark bite using direct pressure (literally: pressing fist into the groin), Dr Nicholas Taylor and Dr David Lamond from the CHS ED have won a subsequent grant worth \$54,000 from the Emergency Medicine Foundation. SHARC 2 will continue their important mission and enable the community to utilise best practice methods to save a life.

Bleeding out is the most common cause of death following a shark bite. In ambulances and hospitals, direct pressure is commonly used to control life threatening bleeding. In the community, however, tourniquets have traditionally formed an important part of the first aid.

The research team compared the ability of non-medically trained surf lifesavers to stop or slow the bleeding using the two methods. Demonstrating great innovation, the team used infographics to educate the people, which helped translate medical jargon to those outside the field.

The team found the direct pressure method to be far superior, the success of which may have something to do with its simplicity. A tourniquet requires extra materials which most people would not have at hand when the disaster strikes. It also takes time and faced with trauma, non-medically trained people may struggle to get it tight enough for it to be effective.

With the method advocated by the emergency team, all you need is a fist—and the knowledge on how to use it. SHARC 2 will extend this vital education to general beachgoers, making our holiday adventures a lot safer in the future.

New clinic helping people to age well

Getting older is a privilege, but it often comes with medical complications. A brand-new clinic at CHS will focus on managing some of the issues associated with ageing.

But first—let's talk about the 'medical' for a second.

Haematopoiesis (noun)

"heh-ma-tuh-poy-ee-sus"

In short, blood production. Our bodies make new blood cells throughout our lives.

Our blood stem cells mutate constantly. Sometimes those mutated stem cells start dominating the blood production. This phenomenon is called clonal haematopoiesis.

The problem is that many complications of ageing, including blood cancers, infections, and heart disease, are connected to clonal haematopoiesis—which so far hasn't been able to be treated.

In good news, a new collaboration at CHS and the ANU aims to identify these mutations in at-risk individuals through a screening clinic and support them to manage their risk of complications.

This will be the first dedicated clonal haematopoiesis clinic in Australia. It will be led by Professor Mark Polizzotto and Dr Maya Latimer, together with haematology trainee and PhD scholar Dr Jun Ng. Multi-disciplinary input from psychology, cardiology and other specialist teams will support the work of the clinic.

In addition, the team has developed an MRFF-funded clinical trial called MOSAIC, with the aim of reversing the genetic mutations that accumulate in blood stem cells over time.

The five-year trial is led by the ANU in collaboration with CHS, UNSW, Cambridge University, University of Auckland and the Cleveland Clinic. It is the first trial of its kind, targeting clonal haematopoiesis regardless of the specific mutations present.

And finally, in other good news for those who hate swallowing pills, the team has developed a targeted medication, with just one tablet a week needed over a six-month period. The team hopes will stop the changes happening in the ageing bone marrow.

Now that's a spoonful
of sugar to make the
medicine go down!



The Clinical Hub for Interventional Research (CHOIR) Team

Canberra leads the way in patient-centred rehabilitation

Katie Erwin, a CHS ICU physiotherapist, and Bernie Bissett, Professor of Allied Health, teamed up with research colleagues in Brisbane and published their research studying the value of an electronic device to train and strengthen the breathing muscles in ICU patients.

The dual-centre study showed the method is both safe and acceptable to the patients.

Impressively, the Canberra team's work has now paved the way for a new multicentre research project, with 18 hospitals across Australia and New Zealand taking part in the research in 2024.

This multi-centre study will cement Canberra as a leader in this innovative patient-centred rehabilitation approach.



Katie Erwin with students



In focus: Clinician-researcher Katie Erwin

The research paper, 'Feasibility, safety, and patient acceptability of electronic inspiratory muscle training in patients who require prolonged mechanical ventilation in the intensive care unit: A dual-centre observational study' was just the second published article for Team CHS clinician, Katie Erwin.

She played a crucial element in the data collection and the analysis of the ICU patients, leading the way for future researchers.

"We are keen to engage more clinicians across disciplines in research projects such as these," says Professor Bissett.

Research excellence at CHS—introducing TORU

Building a comprehensive and high-performing research unit takes years of hard work and perseverance. The **Trauma and Orthopaedic Research Unit (TORU)**, established in 1999, had another extraordinary year in 2023. Unit Director, Professor Paul Smith was appointed Director of the Australian Orthopaedic Association National Joint Replacement Registry. This significant role enables the team to widen their research footprint on the national stage.

Furthermore, the team published over 20 journal articles and book chapters, presented at over 30 conferences and meetings, and continued working on a wide range of multi-disciplinary research projects along with their clinical work.

In collaboration with several Canberra-based orthopaedic surgeons, the team also continued recruitment for their clinical trial, which explores the variations in clinical and functional outcomes of two distinct knee realignment techniques in total knee replacement surgery.

The question is— how do they do it all?

Strong strategic leadership and years of experience is just one element. You also need strategic partnerships and access to the right facilities to support your work. In addition to its clinical research at CHS, TORU has also established a laboratory facility at the ANU's John Curtin School of Medical Research. This enables them to conduct groundbreaking research into infection, 3D printing, and joint stiffness.

TORU has also developed strong partnerships with Canberra's leading universities; UC and the ANU. They also work closely with industry to develop tools to improve surgical outcomes.



“Best practice pathway for knee osteoarthritis—
Implementing an advanced musculoskeletal
pre-surgical triage and assessment clinic”
Project Team

They also have an impressive list of HDR, honours, and medical students involved in research. The students receive extensive teaching, mentorship and support from TORU members, to encourage the next generation of orthopaedic researchers.

Supported by numerous successful grants, TORU's work is multi-disciplinary and innovative. Among other things, they are investigating 1) How 3D models in engineering can be used to improve outcomes for orthopaedic patients; 2) The best practice model-of-care for people with knee osteoarthritis through a mixed methods approach across primary, community and acute care sector; and 3) Causes of joint stiffness following knee replacement patients.

But more than anything, it takes a dedicated group of people to make it happen, and TORU has found the right mix.

In 2024, TORU is eager to build on these achievements and continue making valuable contributions to the field of musculoskeletal disease and orthopaedics—and we can't wait to see what the year brings to this group of high-achievers!

Partnering with consumers: bridging the gap

Partnering with consumers, carers, and the community in our research is fundamental to providing exceptional care at CHS.

Combining people's lived experiences with clinical research expertise generates new knowledge that keeps research relevant to our community.

In 2023, CHS Office of Research and Education (ORE) team member, Leah Mathews, became CHS' go-to person to facilitate these partnerships. She has been developing research specific resources and toolkits for Team CHS and building strong relationships between our people, local consumer and advocacy groups and the community.

In addition, Leah has been providing hands on support, ranging from reviewing grant applications to linking clinician researchers with consumers, and organising community consultation workshops.

For the "Co-Designing Voluntary Assisted Dying (VAD) Education in the ACT Project" supported by Dr Michael Chapman's RIF Fellowship, partnering with consumers has been a priority from the start. As Linda Powell, involved as a consumer in the project, points out academics and researchers have a language of their own.

"One of the challenges of this work is making sure that research design, including the questions that are being asked, is linked back to consumers and users in a way that is meaningful and easily understood by those it is designed to benefit. Bringing people's real experiences of disease and treatment into research projects, can be quite challenging."



Leah Mathews, Director (middle), pictured with Dr Pia Rowe (L) and Dr Nicole Jones de Rooy (R)

Linda believes that spending her time to inform the project is worth the effort.

"I would encourage other people to take part because it's interesting, it's rewarding and provides you with a way to use the experiences you've had to benefit others—both researchers and those the research is targeting."

Contact chs.research@act.gov.au if you would like to find out more about partnering with consumers in research.



Canberra Health Services Research Mentoring Program Celebration and Networking Event—29 November 2023



Panel discussion at the Canberra Health Services Research Mentoring Program Celebration and Networking Event—29 November 2023

