



RESEARCH WEEK
19-22 OCTOBER 2026
INSPIRED RESEARCHERS
Northern Health

OCTOBER 2026
**ABSTRACT
BOOK**



Northern Health

ACKNOWLEDGEMENT

Northern Health acknowledges the rich Aboriginal heritage of this country and acknowledges the Traditional Custodians of the lands on which our health services are built, the Wurundjeri Willum Clan and Taungurung People.

We acknowledge the waterways, the land, the sky and all who inhabit this place we call – Country.

We pay respect and acknowledge their ancestors and Elders, past, present and future, we recognise those who continue to protect and promote Aboriginal and Torres Strait Islander cultures.



Mandy Nicholson | Traditional Owner of the Wurundjeri, Dja Dja Wurrung and Ngurai Illam Wurrung, performed the smoking ceremony at the opening of the new Inpatient Psychiatric Unit at Northern Hospital.

Our Vision

Creating a healthier future by working together, innovating and delivering great care.

Our vision conveys our aspiration to lead health care and innovation for our community, drawing on the commitment and contributions of all our staff.

Our Values

Our values are integral to the culture of care, team work and collaboration at Northern Health.

Northern Health re-commits to the values of **Safe, Kind and Together** in our approach to patient care, and to each other.



Safe

We provide safe, trusted care for our patients. We are inclusive and culturally safe, celebrating the diversity of our staff and community.



Kind

We treat everyone with kindness, respect and empathy. We provide patient-centred and compassionate care.



Together

We work together with our staff, patients, consumers and health system partners.

Our Strategic Directions

These six directions have been developed in response to strategic issues identified in consultations with key stakeholders.

The directions are focused on addressing priorities for safety, sustainability, growth and innovation. They reflect our best assessment of opportunities and challenges in our current and future environment.

These directions will guide Executive and Board decisions and priorities over coming years, provide clarity of purpose for teams across Northern Health and enable progress to be measured and assessed.

1

Collaborate to deliver safe, efficient, effective and sustainable care in all our services



2

Demonstrate our commitment to the wellbeing of our valued workforce



3

Renew and strengthen our infrastructure, systems, tools and processes for financial sustainability and growth



4

Innovate to shape the future of health care in Victoria



5

Partner to keep people well and deliver the best possible care locally



6

Drive research and education to deliver excellent care and develop the next generation of clinicians and health care leaders





FOREWORD



Professor Prahlad Ho
Chief Medical Officer
Chair, Research Executive Committee



Professor Mayur Garg
Director of Research



Associate Professor Justine Ellis
Research Operations Manager,
Research Development and
Governance Unit

Welcome to Northern Health Research Week 2026!

The theme for this year is 'Research with Impact' as we place focus on the important role that Northern Health research plays in advancing clinical care for the people of Melbourne's North and beyond. Alongside showcasing the breadth and depth of research being conducted at Northern Health, we are excited to spotlight the consumer voice this year. This includes a consumer presentation as part of our Opening Keynote session on Monday 19th, as well as a special session on consumer involvement in research on Tuesday 20th October.

Research Week always provides an opportunity to stop and reflect on our progress to continue to grow and build on our research activities and research culture. This year, we received 77 abstract submissions from across the organisation. Each was reviewed and scored by at least two Northern Health researchers, and we thank all those researchers who assisted with this significant task. While authors of all accepted abstracts will have the opportunity to present their work via poster, the top ranked abstracts will present their work at a special oral session on Wednesday 21st October. Pleasingly, these top abstracts come from right across our organisation, including medical, surgical, allied health and nursing, and encompass mental health, women's and children's, and indigenous health research, to name a few.

Research Week also provides a whole-of-organisation opportunity to acknowledge and celebrate with our university partners - La Trobe University, RMIT University, and The University of Melbourne, and thank them for their ongoing support of this key Northern Health event. This year we will welcome keynote presentations from Professor Robyn O'Halloran (La Trobe University - health equity research (Tuesday 20th)) and Professor Kate Fox (RMIT University - biomedical engineering (Wednesday 21st)), simultaneously learning and strengthening these established research partnerships.

We will also welcome two exciting nationally and internationally renowned guest speakers for our opening and closing sessions. On Monday 19th October, Professor David Ashley, new CEO of the VCCC Alliance, will present his vision for equitable cancer care. Professor Ashley is a paediatric neuro-oncologist who recently returned to Australia following ten years working in the US health system. Then, to close the event, Professor Sunil Gupta from Deakin University will present his work on artificial intelligence in health research. Both sessions will be thought-provoking and of broad interest to all, and we strongly encourage you to ensure you don't miss these learning and networking opportunities.

Research Week 2026 promises to be an inspiring and insightful event, offering opportunities for researchers at all stages of their career to connect, share, and celebrate the remarkable work being undertaken at Northern Health.

We look forward to your participation as we showcase the impact of research in shaping better care for our community.



RESEARCH WEEK
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RESEARCH WEEK PROGRAM

Monday, 19th October 2026

SESSION 1: GRAND OPENING AND KEYNOTE

NCHER Lecture Theatre 1

12.00pm – 1.30pm

Chair: Professor Mayur Garg



Official Opening: Professor Debra Bourne
Chief Executive, Northern Health



Professor Mayur Garg
Director of Research, Northern Health

Welcome to Research Week 2026 – Research with Impact



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RESEARCH WEEK PROGRAM

Monday, 19th October 2026 cont'd

LECTURE SESSION 1: GRAND OPENING AND KEYNOTE

NCHER Lecture Theatre 1

12.00pm – 1.30pm

Chair: **Professor Mayur Garg**



Keynote: Professor David Ashley, MBBS (Hon), FRACP, PhD
Chief Executive Officer, VCCC Alliance
Laboratory Head, WEHI

Title: VCCC Alliance: The Evolution of Cancer Care

Synopsis:

Cancer care is being reshaped by scientific discovery, precision medicine and increasingly connected health systems. Professor David Ashley will explore how the VCCC Alliance is evolving to connect and amplify Victoria's cancer expertise, translating research into better outcomes and more equitable access. Drawing on recent Victorian initiatives and international comprehensive cancer networks, he will discuss clinical trials, workforce development, patient navigation and the role of lived experience in shaping services. The presentation will highlight opportunities for Northern Health to contribute clinical expertise and community perspectives to statewide collaboration, bringing advances in prevention, diagnosis and treatment closer to where people live.

Bio:

Dr. Ashley is a distinguished professor with a recent appointment as the new CEO of VCCC Alliance in May 2026. His career in cancer research dates more than two decades. An Australian-trained paediatric and adult neuro-oncologist, Prof Ashley was Founding Director of the Children's Cancer Centre at the Royal Children's Hospital (RCH), served as Chair of Medicine at Deakin University, and was Executive Director of the Western Alliance Academic Health Science Centre, where he integrated research and education across multiple health services.

David returns to Australia after eight years as Director of The Preston Robert Tisch Brain Tumor Center, at Duke University Medical Centre, North Carolina in the USA.

His peer-reviewed publication record focuses on CNS tumors is diverse and includes laboratory-based cancer research, clinical trials, as well as public health and psycho-oncology research. His primary research focus is on the immunology, epigenetics, and genetics of brain tumors. His achievements in research have led to change in practice in the care of both children and adults with brain tumors. He is highly regarded for his work, as evidenced by numerous national grants, awards and invitations to plenary sessions and symposia of international standing.



RESEARCH WEEK PROGRAM

Monday, 19th October 2026 cont'd

REFRESHMENTS AND NETWORKING

NCHER Level 1 Atrium

1.30pm

POSTER SESSION 1

Foyer – Northern Health, Epping.

3.00pm – 4.00pm (displayed all day)

Authors of posters will be in attendance to answer any questions regarding their research

Abstract #19: SpO₂/FiO₂ Reference Ranges for Grading Respiratory Distress Syndrome in Moderate-Late Preterm Infants

Abstract #28: Impact of the 2024 ICSH Guidelines on Interpretation of Coagulation Mixing Studies in Routine Practice

Abstract #32: Going Home with a Tube: The changing profile of a multidisciplinary Home Enteral Nutrition (HEN) program

Abstract #44: Unused ('just-in-case') Peripheral Intravenous Cannulas in the Northern Health Epping Emergency Department: A retrospective audit

Abstract #48: Multimodal vibrational spectroscopy for colorectal tumour classification: preliminary findings from a feasibility pilot

Abstract #49: Stroke survivors' experience - Cognitive Screens

Abstract #58: Sleep, wellbeing and psychosis: understanding psychological processes for people with psychosis

Abstract #60: Association between CPET parameters and surgical decision making in a contemporary cohort

Note: Posters on display may be subject to change



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RESEARCH WEEK PROGRAM

Tuesday, 20th October 2026

SESSION 2: RESEARCH CAREERS FOR NURSES AND MIDWIVES: WHERE COULD RESEARCH TAKE YOU?

NCHER Lecture Theatre 1

9.30am – 10.30am

Chairs: Dr Rachel Cardwell and Associate Professor Ken Ho, La Trobe University

A dedicated session designed for nurses and midwives interested in exploring how research can advance their clinical careers

Presenters:



Dr Rachel Cardwell

Senior Lecturer in Nursing, at La Trobe University School of Nursing and Midwifery

Bio:

Dr Rachel Cardwell is a Senior Lecturer in Nursing and Graduate Research Coordinator at La Trobe University. As Northern Health Network Coordinator, she works across the university and health service partnership to strengthen research and education opportunities for clinicians, including through the redevelopment of the Stepping into Research program. Rachel has more than 30 years of experience in healthcare, clinical nursing and nursing education. Her research interests include graduate research supervision, nursing workforce and career development, clinical leadership, and building research capability in clinical practice.



Associate Professor Ken Ho

Associate Professor for School of Nursing and Midwifery, Latrobe University

Bio:

Associate Professor Ken Hok-man Ho is a nurse researcher and gerontologist in the School of Nursing and Midwifery at La Trobe University. His research focuses on ageing, loneliness and social connection, personhood, family and caregiving relationships, and the lived experiences of people experiencing vulnerability, underpinned by expertise in hermeneutic phenomenology, mixed methods and intervention research. His work spans qualitative inquiry, evidence synthesis, psychosocial and nurse-led interventions, and community and health-system partnerships, with research collaborations across Australia and internationally. Building on this body of work, Ken is developing a Meaning-centred Nurse-led Research Programme, which seeks to understand how personhood, meaning and connection are affected by illness, ageing and care; translate this knowledge into nurse-led multidisciplinary practice; and create more inclusive and responsive health systems that enable people to live meaningful and connected lives



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RESEARCH WEEK PROGRAM

Tuesday, 20th October 2026 cont'd

SESSION 3: EQUITY DIVERSITY AND INCLUSION (WITH LA TROBE UNIVERSITY)

NCHER Lecture Theatre 1

11.00am – 12.00pm

Chair: **Professor Adam Semciw**

Allied Health Research Strategy Launch

The launch of the Northern Health Allied Health Research Strategy 2027-2031 will set a vision for clinician-led, patient-centred research that improves care for our diverse community through innovation, collaboration and translation into practice.



Keynote: Dr John Pierce

Title: *Putting people at the centre: Research, technology and better care*

Synopsis:

New technologies are creating exciting opportunities in healthcare, but meaningful innovation depends on understanding the people who will use them. Drawing on his research in aphasia rehabilitation, John Pierce will explore the promise and limitations of emerging technologies, including artificial intelligence, and the importance of involving clinicians and people with lived experience in shaping new approaches. The presentation will consider how research can help ensure that innovation is useful, accessible and relevant to real-world care.

Bio:

Dr John Pierce is a speech pathologist, researcher and NHMRC Emerging Leadership Fellow at La Trobe University. Before moving into research, John spent more than a decade working clinically in neurological rehabilitation, an experience that continues to shape his research priorities. His work focuses on improving rehabilitation for people with aphasia following stroke, with particular interests in innovative technology, artificial intelligence, telehealth, and treatment dose. John leads research developing and testing new approaches to make rehabilitation more personalised, accessible and efficient. A central focus of his work is bridging research and clinical practice by developing practical solutions with clinicians and people with lived experience.



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Tuesday, 20th October 2026 cont'd

LIGHT LUNCH AND NETWORKING

NCHER Level 1 Atrium

12.00pm – 1.00pm

SESSION 4: CONSUMER AND COMMUNITY INVOLVEMENT IN RESEARCH

NCHER Lecture Theatre 1

1.00pm - 2.30pm

Chairs:



**Associate Professor
Kerry Fitzmaurice & Dr Tilini Gunatillake**



Explore how meaningful consumer involvement can strengthen research and help ensure it remains relevant, inclusive and patient-centred. This interactive session will bring together consumers, researchers and industry perspectives to share practical experiences, explore what genuine partnership looks like, and discuss Northern Health's vision for embedding consumer involvement across the research lifecycle.

Presenter: Navneet Gill, NH Consumer Participation Coordinator

Bio:

Navneet Gill is the Consumer Participation Coordinator at Northern Health. She joined Northern Health in 2017 as an interpreter and translator working in within Northern Health's Transcultural and Language Services (TALS). In her current role, Navneet supports all consumer participation activities across Northern Health's diverse community.



RESEARCH WEEK PROGRAM

Tuesday, 20th October 2026 cont'd

SESSION 4: CONSUMER AND COMMUNITY INVOLVEMENT IN RESEARCH

NCHER Lecture Theatre 1

1.00pm - 2.30pm

Chairs: Associate Professor Kerry Fitzmaurice & Dr Tilini Gunatillake



Panel Discussion:

Rachel Nolan - Allied Health

Senior Speech Pathologist has 10 years' experience working with adults with progressive neurological diseases. She is currently principle investigator of her first research project titled *Investigating secretion management lived experience to improve care pathways in a specialist multidisciplinary MND clinic*. Rachel's project team brings together a wealth of clinical, research and lived experience.

Tina Moody – Consumer

Tina is a consumer co-investigator on Rachel's research project. Having lost her sister Sue-Ellen to Motor Neurone Disease, Tina has seen first hand the impact of MND and is contributing to the project as a member with lived experience. This is Tina's first contribution to the research world.



Carrie Bloomfield, Director of Clinical Operations, GSK

Carrie Bloomfield is Director and Head of Clinical Research for GSK Australia and New Zealand, where she leads the teams that deliver the company's clinical studies in these countries. She has over 30 years' experience in the pharmaceutical industry and chairs the Industry Research and Development Taskforce, which advocates to government on national clinical trials reform



RESEARCH WEEK PROGRAM

Tuesday, 20th October 2026 cont'd

POSTER SESSION 2

Foyer - Northern Hospital, Epping.

3.00pm – 4.00pm (displayed all day)

Authors of posters will be in attendance to answer any questions regarding their research

Abstract #2: Acetabular Polar Gaps After Cementless Total Hip Arthroplasty: Incidence, Natural History, and Clinical Significance

Abstract #10: Tomorrow's Bed Crisis, Today: Predicting ICU Strain From Everyday Data

Abstract #11: What about fibre? Audit of current practices in prescribing enteral nutrition in people living with motor neurone disease

Abstract #22: Impact of Obesity in the Healthcare Utilisation of Elective Ventral Hernia Repairs.

Abstract #23: Rebuilding the bridge to practice: how supervisors and managers are supporting early career allied health professionals post pandemic

Abstract #52: Preoperative liquid fasting times and aspiration outcomes following Sip Til Send implementation: a post-implementation audit

Abstract #59: Outcomes of a Neonatal Rapid Review Clinic: A Two-Year Retrospective Audit of Readmissions and Risk Factors

Abstract #70: Nurse practitioner led hepatitis C treatment in mental health inpatient units

Note: Posters on display may be subject to change



RESEARCH WEEK PROGRAM

Wednesday, 21st October 2026

POSTER SESSION 3

Foyer - Northern Hospital, Epping.

10.00am – 11.00am (displayed all day)

Authors of posters will be in attendance to answer any questions regarding their research

Abstract #4: Nurses need care too: Shining a light on Mental Health Nurses' daily workplace challenges

Abstract #16: Improving collaborative care planning with consumers

Abstract #20: Enteral-First Management of Neonatal Hypoglycaemia: A Retrospective Matched Cohort Study

Abstract #29: Exploring the Sustainability of Medical Procedural Skills Teaching

Abstract #45: Patterns of Healthcare utilisation and palliative care in the last 12 months of life

Abstract #65: Barriers to advance care planning in decompensated cirrhosis: a clinician survey

Abstract #67: The impact of COVID-19 on the trends in bodily restraint practices in of Northern Hospital emergency department

Abstract #72: Family, domestic, and sexual violence presentations to a virtual emergency department: a retrospective cohort study

Note: Posters on display may be subject to change



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RESEARCH WEEK PROGRAM

Wednesday, 21st October 2026 cont'd

SESSION 5: RESEARCH GRAND ROUNDS' – TRANSLATIONAL RESEARCH (WITH RMIT UNIVERSITY)

NCHER Lecture Theatre 1

12.00pm – 1.00pm

Chair: **Associate Professor Russell Hodgson**



Keynote: Professor Kate Fox

Professor of Biomedical Engineering and Deputy Dean Research for the School of Engineering at RMIT University

Title: *How can engineering work in partnership with clinical problems?*

Synopsis:

In this talk I will discuss some of the projects I have worked on combining clinically relevant problems with engineering solutions detailing the advantages of working across disciplines. In particular I will discuss the recent Mobile Stroke Unit advances for taking diagnostics to the patient, lessons learned through the Bionic Eye consortium and the AdraCard anaphylaxis treatment in a wallet technology. At the end of the presentation I hope to have given you some opportunities into how Northern Health and RMIT may collaborate further.

Bio:

Prof Kate Fox is a Professor of Biomedical Engineering and Deputy Dean Research for the School of Engineering at RMIT University. Kate completed her PhD at UniSA (2007). Beyond 15 years of experience in implant and medical device development, she has developed a research expertise in additive manufacturing of medical materials in Australia. In particular, she has worked on leading projects such as the Australian Bionic Eye Project, the Australian Stroke Alliance and multiple industry projects led by Seer, AdraCard and Nanocube Health. She has received over AUD\$15M in funding. Prof Fox was a Superstar of STEM, Engineers Australia Most Innovative Engineer and Victorian Tall Poppy.



RESEARCH WEEK PROGRAM

Wednesday, 21st October 2026 cont'd

LIGHT LUNCH AND NETWORKING

NCHER Level 1 Atrium

1.00pm – 2.00pm

SESSION 6: BEST ABSTRACT ORAL PRESENTATIONS SESSION

NCHER Lecture Theatre 1

2.00pm – 3.30pm

Chair: **Associate Professor Justine Ellis**

Abstract #76: Intestinal Obstruction as a Major Driver of Inpatient Costs in Emergency Crohn's Disease Admissions: A 10-Year Retrospective Cohort Study.
Presenter: **Dr Jacoba Van Wees**

Abstract #46: Should we adjust Group B Streptococcus screening in pregnancy? Antibiotic stewardship in intrapartum care.
Presenter: **Ms Courtney Zarucky**

Abstract #3: Improved cardiovascular risk prediction in healthy older adults using mOHP: a case-control study from ASPREE.
Presenter: **Associate Professor Hui Yin Lim**

Abstract #7: Assessment of Bereavement Risk and Feasibility of Bereavement Support Provision at an Acute Tertiary Hospital.
Presenter: **Associate Professor Jaclyn Yoong**

Abstract #24: Feasibility Trial of Acceptance and Commitment Workplace Training in Australian.
Presenter: **Dr Marilyn Cugnetto**

Abstract #26: Impact of "Sip 'til Send" on pre-operative fasting times and incidence of regurgitation and aspiration.
Presenter: **Ms Clare Walsh**

Abstract #37: Pathways Back to Hospital: Emergency Department Presentations Among Aboriginal and Torres Strait Islander Patients.
Presenter: **Andrew Morrison**

Abstract #69: Does Patient Watch reduce hospital presentations and admissions? Programme Characteristics and Impact on Hospital Resource Utilisation
Presenter: **Professor Rebecca Jessup**



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Thursday, 22nd October 2026

SESSION 7: MEDICAL GRAND ROUNDS

Northern Hospital, Ground Floor, Main Hospital Lecture Theatre

8.00am – 9.00am

Chair: Associate Professor Craig Aboltins



Keynote: Associate Professor Hui Yin Lim

Title: *NECTAR: From Discovery to Impact – Building the Future of Cardiovascular Precision Medicine at Northern Health*

Synopsis:

This presentation provides an overview of the journey of the NECTAR (Northern Clinical Diagnostics and Thrombovascular Research) program, from its establishment at Northern Health to its current research portfolio and future vision. Drawing on work in global coagulation assays, thrombosis biomarkers, and cardiovascular risk prediction, it showcases how NECTAR has generated new insights into hypercoagulability across healthy populations and high-risk groups including diabetes, chronic kidney disease and venous thrombosis. The presentation highlights the development of novel risk prediction models, the creation of unique biobank resources, and emerging multi-omics programs integrating proteomics, metabolomics, and digital health technologies.

Bio:

Yin Lim is a Clinical and Laboratory Haematologist at Northern Health, Head of Diagnostic Haematology at Northern Pathology Victoria, Clinical Thrombosis Lead and Head of Thrombovascular Research for NECTAR Research Group. She is a Melbourne Postdoctoral Fellow with a research focus on venous thrombosis and cardiovascular disease prevention. Her work centres on the development and validation of global coagulation assays and novel biomarkers for cardiovascular risk prediction, particularly in high-risk populations such as patients with diabetes and chronic kidney disease. Yin leads several investigator-led projects integrating clinical data, laboratory biomarkers, omics technologies, and digital health tools to improve cardiovascular risk stratification. She has established extensive national and international collaborations and is committed to translating research discoveries into improved patient care and health outcomes.



RESEARCH WEEK PROGRAM

Thursday, 22nd October 2026 cont'd

POSTER SESSION 4

Foyer - Northern Health, Epping.

1.00pm – 2.00pm (displayed all day)

Authors of posters will be in attendance to answer any questions regarding their research

Abstract #1: Complication Profile of Uncemented Femoral Component Revision Total Hip Arthroplasty: A Systematic Review

Abstract #25: Association between dietetic input and clinical outcomes in patients with hip or knee osteoarthritis

Abstract #27: Long-term survival following an initial diabetes-related foot ulcer: A retrospective cohort study

Abstract #34: Evaluating Northern Health's Parenteral Nutrition Guideline Against International Best Practice Standards

Abstract #38: Understanding the Characteristics of Northern Health Support at Home Participants: An Observational Descriptive Study

Abstract #50: Quality Assurance Evaluation of a Multidisciplinary Exercise Program in an Older Adult Mental Health Unit

Abstract #57: Risk factors associated with delivery of small-for-gestational-age (SGA) infants in women with gestational diabetes

Note: Posters on display may be subject to change



RESEARCH WEEK PROGRAM

Thursday, 22nd October 2026 cont'd

SESSION 8: KEYNOTE SPEAKER

Conference Room 3.1, Level 3, NCHER Building

3.30pm – 4.30pm

Chair: Dr Sing Chee Tan



Keynote: Professor Sunil Gupta

Head of AI, Optimisation, and Materials Discovery at Deakin University's Applied Artificial Intelligence Initiative

Title: *AI in Health Research - Practical Applications Across the Research Lifecycle*

Synopsis:

Artificial intelligence is rapidly changing how health research is designed, conducted and communicated. This practical session will explore how researchers can use AI across different stages of the research lifecycle, from refining research questions and searching the literature through to drafting, analysing and communicating research findings.

The session will highlight practical applications of AI and large language models that can save time and support researchers in their everyday work, while also considering important risks and limitations. Particular attention will be given to the secure, accurate, fair and ethical use of AI in health research, including considerations around sensitive data, research governance, ethics, accuracy and researcher accountability.

The session will provide practical insights to help health researchers understand where AI can add value to their research workflow, and where caution and appropriate oversight are required.

Bio:

Sunil Gupta is Professor and Head of AI, Optimisation, and Materials Discovery at Deakin University's Applied Artificial Intelligence Initiative. His research focuses on machine learning for predictive modelling, optimisation, and reinforcement learning, with applications in healthcare, including precision mental health, clinical decision-making, and adaptive interventions. He is internationally recognised for work in sample-efficient AI and Bayesian optimisation, ranked 2nd in Australia and 11th globally in this area. His research has attracted around \$30 million in competitive funding from ARC, NHMRC, Defence, Wellcome Trust and industry. He has published over 200 papers, supervised 16 PhD graduates, and mentored 15 postdoctoral researchers who now hold positions at leading universities and companies including Oxford, Johns Hopkins, Google, and Amazon.



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Thursday, 22nd October 2026 cont'd

AWARDS CEREMONY, WRAP UP CLOSE & CANAPES

Conference Room 3.1, Level 3, NCHER Building Epping

4.30-4.45pm

Chair:



Professor Prahlad Ho

Join us as we announce the award recipients for the best poster and oral presentations and celebrate the great work being done by Northern Health researchers.

*Awards presented by **Professor Prahlad Ho (CMO)** and NH Foundation Representative for Best Poster Awards, People's Choice Poster (including digital posters) and Best Oral Presentation awards including the Peter Brooks Research Award*

WRAP-UP & CLOSE

Conference Room 3.1, Level 3, NCHER Building Epping

4.45 – 5.00pm

Please join us for the formal closing of Research Week Northern Health for 2026

Canapes and refreshments sponsored by Northern Health Foundation



ABSTRACTS



RESEARCH WEEK

19-22 OCTOBER 2026

INSPIRED RESEARCHERS

Northern Health

ALLIED HEALTH

#11

Audit of current practices in prescribing enteral nutrition in people living with motor neurone disease

Authors:

Emily Davison¹, Emily Farrugia^{1,2}, Gina Trakman²

¹Northern Health, Melbourne, Victoria Australia,

²La Trobe University, Melbourne, Australia

NH Division & Department:

Allied Health, Dietetics

Background: Motor neurone disease (MND) is a progressive neurological condition which causes degeneration of nerve cells that control muscles. People living with MND (plwMND) often experience difficulty swallowing and choose to have a gastrostomy tube inserted to assist with the delivery of enteral nutrition (EN), hydration, and medication. It is the role of a dietitian to prescribe specific EN formulas, which can be categorised into two types: fibre and fibre-free. While it is recommended that plwMND maintain adequate dietary fibre to prevent and manage constipation, a common gastrointestinal symptom in this population, there are currently no clinical practice guidelines for EN formula prescription. Further, there is no research on dietitian's current prescription practices for plwMND. This study aims to describe current trends in prescribing fibre and fibre-free EN formulas in plwMND with gastrostomy tubes.

Method: A retrospective audit was conducted using routinely collected data from a statewide multidisciplinary MND clinic at Northern Health. Eligible patients with MND who have a gastrostomy tube were identified from a home enteral nutrition database (HEN) over a 9-year period (2017-2026). Demographic and clinical data was collected from electronic medical records. The data collection timepoint was defined via consensus discussion with HEN dietitians as when EN accounts for >70% of estimated energy requirements or is ≥ 3 bolus feeds of

≥ 125 ml and ≥ 1.5 kcal EN formula; fibre (>0.1 g/100ml) or fibre-free (0g/100ml).

Results: Sixty-seven of 137 patients met eligibility criteria. Overall, 40% (n=27) were prescribed fibre-free and 60% (n=40) were prescribed fibre enteral formulas. Of those prescribed fibre enteral formulas, 28% (n=19) were fibre enriched (>2 g/100g) and 15% (n=10) had both fibre and fibre-free formulas prescribed.

Conclusion: This research is a first step in understanding current EN prescription practices in plwMND and may pave the way for future research that creates an evidence-base to inform clinical practice guidelines

#14

Evaluating Post-Stroke Communication Screening Practices at Northern Health Against Stroke Foundation Guidelines

Authors:

Eamonn McGrath-Lester¹, John E. Pierce², Adam Semciw^{1,2}, Jennifer Paraskeva¹, Hazel Heng^{1,2}

¹Northern Health, Melbourne, Victoria, Australia,

²La Trobe University, Melbourne, Victoria, Australia

NH Division & Department:

Allied Health, Speech Pathology

Background: Post-stroke communication deficits are common, affecting as many as 64% of all stroke survivors during the acute phase. The Stroke Foundation's Clinical Guidelines for Stroke Management recommend that all stroke survivors are screened for communication deficits using a valid and reliable tool. This audit will evaluate Northern Health's post-stroke communication screening practices against the Stroke Foundation's Clinical Guidelines.

Method: A retrospective clinical audit is being conducted on stroke patients admitted to Northern Hospital Epping between 1 January and 31 December 2025, involving two phases. Phase 1: Data were requested from Northern Health's data warehouse to identify patients with new stroke diagnoses during the audit period. Phase 2: An audit of medical files of the patients identified in Phase 1 will determine screening completion rates, screening tools used and explore potential factors influencing screening. Demographic and audit data will be summarised using descriptive statistics. Exploratory analyses will be conducted using multivariable logistic regression models.

Results: Preliminary demographic analysis shows 568 admissions during the audit period in which there was a new stroke diagnosis. Of these, about 54% were male and the mean age was 71.5 years (SD = 14.67). Thirty primary languages were recorded, with the most common being English (68.13%), followed by Italian (4.93%). Aboriginal and/or Torres Strait Islander status was recorded as 0.71%. File audits to determine screening completion are ongoing.

Conclusion: Age and gender from the preliminary analysis are comparable to the Stroke Foundation's most recent National Stroke Audit report. Completion of file audits will compare Northern Health's current post-stroke communication screening practices against Stroke Foundation recommendations and highlight opportunities to improve service delivery and enhance outcomes for stroke survivors.

#21

Malnutrition Point Prevalence Study 2026

Authors:

Nadia Obeid¹, Jocelyn Trengove¹, Rachael Evans¹, Emily Evans¹, Taylor Harwood¹, Elise Olsen¹

¹Northern Health, Melbourne, Victoria Australia

NH Division & Department:

Allied Health, Dietetics

Background: Malnutrition is estimated to affect up to 33% of patients in Australian hospitals. This study aimed to describe malnutrition prevalence at Northern Health (NH) at a singular time-point.

Method: Auditors collected data across all adult inpatient beds at Northern Hospital Epping (NHE), Bundoora Centre (BC), Broadmeadows Hospital (BH) and Kilmore District Hospital (KDH) over a two-week period during June-July 2026. The auditors screened electronic medical records and where indicated, completed the Malnutrition Screening Tool (MST) and Subjective Global Assessment (SGA) to diagnose malnutrition and its severity. Data was analysed descriptively.

Results: Of the 420 participants included in this study 25% (n=105) were malnourished (mean age 73 years, 52% male, 48% female). Malnutrition prevalence was highest (55%) at KDH in patients admitted under the Geriatric Evaluation and Management (GEM) service. 95% of patients with a malnutrition diagnosis were receiving care from the NH Dietetics Service.

Conclusions: The overall prevalence of malnutrition at NH (25%) is lower than the national estimated prevalence (up to 33%) but prevalence in the KDH GEM cohort is higher (55%). This is the eighth year this study has been completed; the data provides comparison to past and future malnutrition prevalence studies and evaluation of malnutrition prevention and management strategies at NH.

#23

Supervisors' and manager's perceptions of early career allied health professional's skills and wellbeing post pandemic.

Authors:

Justine Slattery,¹ David Snowden,²³ Peter Brack,¹² Tameeka Robertson,¹ Stephen Quick¹²

¹Northern Health, Melbourne, Victoria, Australia,

²School of Allied Health, Human Services and Sport, La Trobe University, Bundoora, Victoria, Australia,

³Academic Unit, Peninsula Health, Frankston, Victoria, Australia

NH Division & Department:

Allied Health Education & Allied Health Research

Background: The COVID-19 pandemic significantly disrupted clinical education for early career allied health professionals (AHP's), though the lasting impacts on workforce skill development and wellbeing remain unclear. Supervisors and managers play an important role in providing professional support and clinical governance for early career AHPs and may offer valuable insights into their post-pandemic transitions to clinical practice.

The aim of this project was to explore supervisors' and managers' perceptions of early career AHP's clinical skill development and wellbeing post pandemic and initiatives to support their transition to practice.

Method: This qualitative study collected data through semi-structured interviews (ten supervisors) and focus groups (eight managers) between March 2024 and April 2025. Interviews were recorded and transcribed verbatim. Transcripts were analysed using an inductive thematic approach. The study received ethics approval from the University of Melbourne Human Research Ethics Committee and Governance Authorisation from Northern Health.

Results: Three themes were generated from the participant's responses: 1) Initial disruption to clinical learning experiences, 2) Rebuilding early career AHP support and 3) Future-proofing professional support. Participants described how the pandemic restricted clinical learning opportunities for early career professionals and negatively impacted their hands-on skill, communication and clinical reasoning. Participants also noted greater levels of stress during the early career AHP's transition to practice and responded through implementing targeted education and training initiatives including increased point-of-care supervision. However, they reported limited confidence & capability in supporting the wellbeing needs of early career AHP's.

Conclusion: Supervisors and managers perceived the pandemic had lasting impacts on clinical skill development and wellbeing of early career AHPs. Enhanced supervision practices and structured new graduate programs including discipline specific peer development/debrief groups were implemented to bridge skill gaps and support wellbeing. These initiatives born of necessity post pandemic may provide better support for the future allied health workforce.

#25

Association between dietetic input and clinical outcomes in patients with hip or knee osteoarthritis

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Background: Osteoarthritis (OA) is a leading cause of pain, morbidity and healthcare utilisation, with prevalence predicted to reach 3.11 million Australians by 2040. The Musculoskeletal Wellness (MSK-W) program is a multi-disciplinary program providing conservative management to patients with OA. Despite integration of dietetic services within the program since 2022, the contribution of dietetic input on patient outcomes remains unclear. This represents an evidence gap which limits ability to evaluate service effectiveness and justify ongoing investment.

Method: A retrospective observational audit was undertaken using routinely collected data from (n=574) participants enrolled in the MSK-W program. Demographic characteristics were extracted from medical records and linked to Patient Reported Outcome Measures (PROMs), obtained from REDCap surveys. The REDCap surveys were completed by participants at baseline, 6 weeks, 12 weeks, 6 months and 1 year. PROMS included pain, function and quality of life (QOL), using the hip and knee osteoarthritis outcome score (H/KOOS short form). Linear mixed effects models were used to describe whether dietetics exposure modified the association between PROMs and time (baseline to 12 months), after adjusting for confounders (age, sex, joint (knee/hip)).

Results: At baseline, those offered dietetics were significantly younger (-2.7 [-4.2, -1.2] years), more obese (4.9 [3.5, 6.3] kg/m²) and had worse pain (-3.2 [-6.1, -0.3]). Pain, function and QOL significantly improved over 12 months (pain: 6.4 [3.5, 9.4]; function: 4.3 [0.9, 7.7]; QOL: 7.2 [3.8, 10.6]), after adjusting for age, sex, dietitian exposure, and joint operated on. Exposure to a dietitian did not modify this effect (time by dietitian interaction: p>0.05 for pain, function and quality of life).

Conclusion: Pain, function and quality of life improved over 12 months irrespective of dietetic exposure. Further analyses are required to identify which patients derive the greatest benefit from dietetic input and to determine whether changes in diet and weight are associated with improved patient outcomes.

#27

Long-term survival following an initial diabetes-related foot ulcer: A retrospective cohort study

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Background: Diabetes-related foot ulcers (DRFUs) are a major complication of diabetes and are associated with infection, amputation, reduced quality of life, and premature mortality. Despite their significant clinical burden, Australian data on long-term survival following a first DRFU presentation remain limited. This study aims to determine 1-, 5-, and 10-year survival rates after an initial DRFU and evaluate the influence of diabetes type, hypertension, heart failure, and chronic kidney disease (CKD) on mortality.

Method: A retrospective cohort study was undertaken using data from patients presenting with an initial DRFU to the Northern Health High Risk Foot Service/ Foot Procedure Unit between 1 July 2010 and 20 July 2026. Data were obtained from the Northern Health Decision Support Unit and HMS patient booking system. Demographic characteristics and comorbidities, including diabetes status, hypertension, heart failure, and CKD stages 1–5, were collected. Survival outcomes will be estimated using Kaplan-Meier analysis, with Cox proportional hazards models used to assess associations between comorbidities and mortality.

Results: Data were retrieved for 1,813 patients, of whom 560 (32%) were female. The mean age at first presentation was 66.4 years, while the mean age at death was 75.9 years. By the census date, 775 patients (42.8%) had died, comprising 14.8% of females and 27.9% of males. The mean time to death was 1,398.9 days (SD 1,202.3), with a median survival of 1,092 days. Further

analyses examining 1-, 5-, and 10-year survival rates after an initial DRFU and the impact of co-morbidities on long-term survival are underway.

Conclusion: This study will provide important local evidence on long-term survival following an initial DRFU. Findings may help identify patients at increased risk of mortality and inform targeted management strategies, multidisciplinary care, and future service planning.

#32

Going Home with a Tube: Changing Profile of a Multidisciplinary Paediatric Home Enteral Nutrition Program

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Allied Health Speech Pathology & Dietetics Departments and Allied Health Research

Background: Complex feeding difficulties are prevalent in hospitalized infants; an increasing proportion of this cohort is discharged with a nasogastric tube (NGT) in situ, via home enteral nutrition (HEN) programs. There is a burgeoning body of evidence that supports the safety and cost effectiveness of HEN discharges. However, the success of these programs relies upon responsive outpatient follow-up with a multidisciplinary team, including speech pathology and dietetics.

Over the last five years HEN discharges have increased by 83% placing a significant strain on outpatient follow-up services.

The aims of this project were:

1. To describe the profile of infants currently accessing the HEN program
2. To identify factors associated with successful tube weaning

Method: Ethics approval was granted for a retrospective audit of infants accessing the NH HEN program between July 2024 -June 2025. Deidentified information describing patient profiles and tube weaning outcomes were extracted from the medical records of the forty-two (n=42) infants meeting the inclusion criteria. This data was analysed using descriptive statistics and survival analysis.

Results: Two in five infants were born full term and the mean age at the time of HEN initiation was 49 weeks post menstrual age (PMA). Sixty-four (64%) of infants were fully weaned from their NGT during the audit period and the median time to full oral feeding was 155 days. Family-initiated tube weans were less successful than clinician-supported weans (59% vs 100%).

Conclusion: The significant growth in the NH HEN cohort is consistent with changing practices described in international literature. Overall, the NH weaning outcomes were consistent with published studies however median days to wean was longer and likely reflects the sample heterogeneity. This data will be used to drive evidence informed service co-design in collaboration with families.

#34

Evaluating Northern Health's Parenteral Nutrition Guideline Against International Best Practice Standards

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NH Division & Department:

Division of Allied Health and Partnerships – Department of Nutrition and Dietetics

Background: Parenteral nutrition (PN) is a complex nutrition support therapy requiring evidence-based guidance to minimise complications and optimise patient outcomes. Northern Health (NH) had not previously undertaken a formal review of its PN guideline against international best-practice standards. This quality improvement audit aimed to evaluate NH's PN guideline against recommendations from the American Society for Parenteral and Enteral Nutrition (ASPEN), the European Society for Clinical Nutrition and Metabolism (ESPEN), and the National Institute for Health and Care Excellence (NICE).

Method: A mixed-methods quality improvement audit compared NH's PN guideline with 3 international best-practice guidelines. An audit tool containing 22 PN-related criteria was developed and applied across guideline domains including indications, initiation, administration, monitoring, complications, and cessation. A gap analysis assessed NH compliance as fully compliant, partially compliant, or non-compliant, and a traffic-light system evaluated the feasibility of implementing recommended changes within existing resources.

Results: NH demonstrated 18% full compliance across all three benchmarked guidelines. Compliance was greatest with ASPEN recommendations, with more than 50% of criteria rated fully or partially compliant. NH showed 23% partial compliance with NICE guidelines and 18% partial compliance with ESPEN guidelines. The gap analysis identified opportunities to strengthen guidance relating to PN initiation, monitoring, complication management, micronutrient screening, weaning, cessation, and documentation. Most identified gaps were considered addressable within existing resources, with 55% of ASPEN-aligned recommendations and 32% of ESPEN and NICE recommendations deemed achievable through service redesign.

Conclusion: This audit identified several opportunities to improve alignment of NH's PN guideline with international best practice. Implementation of the recommendations may enhance consistency of care, support clinician decision-making, and improve patient safety and nutrition outcomes. The findings provide a framework to guide future PN guideline revisions and staff education initiatives.

#37

Pathways Back to Hospital: Emergency Department Presentations Among Aboriginal and Torres Strait Islander Patients

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NH Division & Department:

Narrun Wilip-giin - Aboriginal Support Unit (ASU)

Background: Aboriginal and Torres Strait Islander peoples continue to experience barriers to culturally safe, connected and responsive healthcare, contributing to ongoing inequities in how our people access services and the outcomes they receive. Outpatient non-attendance is too often framed as a patient issue, when it can reflect deeper system-level barriers, including unsafe care, transport and access barriers, poor communication, and fragmented pathways. This Aboriginal-led study examines outpatient attendance, Aboriginal Liaison Officer (ALO) involvement, and subsequent Emergency Department (ED) presentation among Aboriginal and Torres Strait Islander patients.

Method: Retrospective analysis of routinely collected Northern Health data for Aboriginal and Torres Strait Islander patients with outpatient episodes of care between 1 January 2022 and 31 December 2025. An episode of care consisted of all outpatient appointments within a single department, with status reflecting whether the final appointment was attended. Each episode's attendance status, ALO involvement, and any ED presentation within 30 days of the final outpatient contact were examined. Associations were assessed using mixed-effects models accounting for repeated episodes per patient.

Results: Across 5,728 episodes of care for 3,168 patients, the final appointment was not attended in 23.3% of episodes. Non-attendance was highest for patients aged 18-49 years, who had nearly twice the odds of non-attendance compared to those aged 50 and over. ED presentation within 30 days followed 5.7% of episodes and was not associated with attendance status or ALO involvement.

Conclusion: Preliminary findings highlight a substantial outpatient access gap; most pronounced among patients aged 18-49. This pattern was not associated with short-term ED presentation, which may suggest challenges in access and continuity of care. With current data not capturing referral reasons, patient-identified needs, or ALO outcomes, improved documentation would strengthen further evaluation. A follow-up qualitative study is proposed to understand current experiences and identify culturally safe improvements to outpatient access.

#49

Stroke survivors' experience of feedback about their cognitive performance

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NH Division & Department:

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Background: National Stroke Guidelines recommend standardised cognitive screening or assessments for all stroke survivors. However, little is known about stroke survivors' experiences of cognitive screens and receiving feedback on their cognitive performance. At Northern Health, we have explored stroke survivors experience of this process. It is hoped that this feedback will identify areas that our service can improve in the delivery of best practice stroke identify further research opportunities.

Method: This was a descriptive study exploring stroke survivors' experience with cognitive screening. Stroke survivors completed a cognitive screen and received feedback as per usual care. Participants were asked to provide consent to take part in a survey on their experience. Information gathered included demographic information, questions rating their experience using a 5-point Likert scale, and an open-ended question about potential improvements that could be made to the assessment and feedback sessions.

Results: 100% (M=5, SD=0) of stroke survivors reported that the feedback was clearly explained, and they were able to follow the therapists' recommendations. Stroke survivors reported that the cognitive screen was related to what they were working on in therapy (M=4.82; SD=.06), they felt supported (M= 4.91; SD= 0.3) and the reason for completing the screen was clearly explained (M=4.82; SD=0.4).

Conclusion: Emerging results indicate stroke survivors felt that completing cognitive screens in Occupational Therapy was relevant to their life and they were well supported during the process.

Some limitations included the small number of participants and challenges in recruitment and participants answers may have reflected the performance rather than the process.

#50

Quality Assurance Evaluation of a Multidisciplinary Exercise Program in an Older Adult Mental Health Unit

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Mental Health – Older Adult Mental Health Unit

Background: Older adults admitted to inpatient mental health units are at increased risk of falls due to advanced age, psychotropic medication use, physical deconditioning and reduced physical activity. Despite growing evidence supporting exercise to improve physical and mental health, structured physiotherapy-led exercise programs are uncommon in older adult inpatient mental health settings. This evaluation examined the feasibility, safety, patient-reported outcomes and ward-level falls following implementation of a multidisciplinary exercise program.

Method: A weekly physiotherapist-led multidisciplinary exercise program was delivered over six months (August 2025–January 2026) in the Broadmeadows Older Adult Mental Health Unit. Consumers aged ≥65 years with severe mental illness participated in supervised exercise sessions led by a physiotherapist and supported by occupational therapists, psychologists, social workers and nursing staff. The program incorporated walking, strength, balance, functional and interactive balloon exercises. Following each exercise session, consumers were invited to complete a feedback survey assessing pre- and post-session mood, exercise enjoyment, perceived safety, overall satisfaction, future motivation to participate in exercise, and qualitative feedback. Ward-level falls were descriptively reviewed before and during implementation.

Results: Of the 54 consumers who attended the program, 28 completed the feedback surveys (52% completion rate). Median pre-session mood score was 0 (interquartile range [IQR] -1 to 0.5) compared with 2.5 (IQR 1-3) post-session. Median enjoyment and satisfaction scores were both 5 (IQR 4-5). Twenty-seven of 28 participants (96.4%) indicated they would participate again. No falls or serious adverse events occurred during exercise sessions. Further analysis of ward-level falls is underway, with falls outcomes to be presented at the conference.

Conclusion: A multidisciplinary exercise program was feasible, safe and well accepted within an older adult inpatient mental health unit. Positive patient-reported outcomes support further evaluation of structured exercise programs in older adult mental health settings.

CANCER SERVICES

#7

Assessment of Bereavement Risk and Feasibility of Bereavement Support Provision at an Acute Tertiary Hospital

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NH Division & Department:

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Background: Lack of structured models outside of Palliative Care Units (PCUs). This pilot project aimed to implement and evaluate a systematic bereavement support procedure within an acute hospital setting, and specifically compare needs across the Emergency Department (ED), Intensive Care Unit (ICU), and PCU to inform future workforce planning.

Method: We conducted a prospective study at an acute tertiary hospital in Victoria, Australia, from July 2024 to January 2025. Participants included next-of-kin (NOK) of decedents from the ED, ICU, and PCU. Risk screening was performed via decedent file reviews and clinical consultation using the Northern Health Bereavement Risk Assessment Tool. We collected routine clinical and demographic data, and information regarding healthcare services use. Other data collected included bereavement risk level (low/medium/high), bereavement support provision, and external referrals. Quantitative analysis utilized descriptive statistics, t-tests, and logistic regression to identify risk factors.

Results: There were 289 identified decedents. The highest proportion of high-risk bereavement was in the ICU (52%), followed by ED (48%) and PCU (31%). ICU deaths had 16 times higher odds of high-risk bereavement ($p < 0.001$), and ED deaths had 2.1 times higher odds ($p = 0.047$) compared to PCU. Each one-year increase in the decedent's age was associated with a 5.2% decrease in high-risk bereavement odds ($p < 0.001$). Uptake of bereavement support provision was high; over 80% of high-risk NOK across all sites engaged with support.

Conclusion: Our study confirms that high-risk bereavement is significantly more prevalent in acute areas (ICU/ED) than in the PCU; and demonstrates acceptability and feasibility of a structured bereavement support procedure in these settings. These findings provide a framework for targeted resource allocation and workforce planning; to ensure that higher risk individuals, and staff, are identified and supported.

#45

Healthcare utilisation and the economics of palliative care in the last 12 months of life

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Background: Healthcare resource demand and cost increases in the last year of life. Palliative care is associated with improved quality of end-of-life care and reduced acute healthcare utilisation. This study aimed to investigate this at the Northern Hospital

Method: Linked data on all hospital decedents from January 2018 to December 2023 was obtained from the Decision Support Unit. High resource utilizers (HRU) were defined as the top decile patients for either admissions or total bed days. Quality of end-of-life metrics were coded from the literature. Palliative care was identified via a palliative care inpatient episode, a palliative approach to care, or consultation episode. Timing of palliative care was categorised into early (90+ days before death) or late (<90 days before death). Logistic regression was used to evaluate the impact of palliative care and its timing, on end-of-life metrics.

Results: 5,431 decedents were included. The mean age at death was 77.8 years (std dev 12.9), 45.7 percent were female, 23.7 percent died of cancer. Healthcare utilisation was highly skewed; HRU decedents spent on average 75 days in hospital with inpatient cost of \$134,618 vs 13.7 days in non-HRU decedents with total cost \$36,214. 74 percent of decedents accessed palliative care but only 8.3 percent received it early. Palliative care was associated reduced ICU admission (OR 0.34, $P < 0.0001$); reduced total bed days ($P < 0.001$), fewer hospital (OR 0.64, $P = 0.01$)

and ICU admissions (OR 0.18, $P < 0.001$) and lower cost in HRU decedents ($P < 0.001$).

Conclusion: At the Northern hospital a small subgroup of HRU decedents accounted for a disproportionate share of inpatient costs and resource use. The provision of palliative care, particularly early palliative care, was associated with an improved quality of end-of-life and reduced healthcare utilisation.

#56

The Final Hurdle – Navigating Voluntary Assisted Dying and Perceived Barriers to Care in Victoria

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Background: The Voluntary Assisted Dying Navigator service in Victoria facilitates access to physicians and services for those who wish to engage in Voluntary Assisted Dying (VAD), set to become the default point of contact in April 2027. Currently, there is no literature identifying the population they serve, the barriers patients face requiring assistance, with very limited literature into the broader patient experience for those engaging in VAD. Documenting a baseline of current service utilisation, patient barriers and needs before the change is necessary to identify any changes and inform service improvement.

Method: This study is a retrospective quantitative analysis of 1882 individuals who accessed the Voluntary Assisted Dying Statewide Navigator Service from inception to January 2026. The prevalence of barriers to access and relative complexity of patient care who analysed using descriptive statistics, and comparison between groups done using Chi-squares of independence. These analyses report a baseline incidence of barriers to access while identifying how individuals within certain group experience differing complexity needs or rates of barriers to access.

Results: Barriers to access varied significantly across our group comparisons, with differences in inability to travel for non-metro cohorts (6.4% vs 12%, Kramer $V = 0.105$, $p < .001$), and mental health barriers for cancer patients (2.7% vs 1.6%, $V = 0.098$, $p < 0.001$). Scoring for these groups were also significantly different across all complexity ratings ($p < .001$), with the VAD process ($V = 0.260$) and support to VAD doctors ($V = 0.244$) having the largest effect size.

Conclusion: Location and primary diagnosis both moderate the relative complexity of care required and barriers to access experienced by patients accessing VAD. These barriers are largely addressable and require continued investment in the service addressing these needs and can now be accurately monitored over time.

DIAGNOSTIC SERVICES

#3

Improved cardiovascular risk prediction in healthy older adults using modified overall haemostatic potential (mOHP): a case-control study from ASPREE

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Background: Major adverse cardiovascular events (MACE) remain a leading cause of mortality in older adults. Traditional risk prediction models, such as SCORE2-OP and Framingham Risk Scores (FRS), have limited accuracy in this population, where age dominates risk estimates. Haemostatic imbalance is a key pathway in atherothrombosis, yet its role in risk stratification among healthy older adults is underexplored. Global coagulation assays, particularly the modified Overall Haemostatic

Potential (mOHP), which integrates fibrin generation and fibrinolysis, have shown predictive value for MACE in diabetes and kidney disease populations, and may offer incremental predictive value in healthy older adults. We aim to evaluate whether mOHP and midiCAT (thrombin generation) improve prediction of MACE in healthy community-dwelling older adults.

Method: We conducted a nested case-control study within ASPREE, a randomised placebo-controlled trial of aspirin in adults aged ≥ 70 years without prior evident cardiovascular disease. Cases ($n=389$) with incident MACE (myocardial infarction, stroke, cardiovascular death) were matched 1:1 to controls ($n=389$) by age, sex, and randomised treatment. Citrated plasma samples were analysed for mOHP and midiCAT, and correlated with other biomarkers previously performed including N-terminal pro-B-type Natriuretic Peptide (NT-proBNP) and conventional risk factors. Predictive performance was assessed using logistic regression.

Results: Baseline characteristics were similar between cases and controls except for higher rates of hypertension in cases. Median time-to-event was 2.5 years. mOHP was independently associated with MACE (adjusted HR 2.06 [95% CI 1.32-3.21], $p=0.001$). Addition of mOHP to SCORE2-OP and FRS improved discrimination (C-statistic increase from 58.4% to 61.9% for SCORE2-OP and 53.1% to 60.0% for FRS). Combined models incorporating mOHP and NT-proBNP to SCORE2-OP yielded the highest predictive accuracy (C-statistic 70.0%).

Conclusion: Global coagulation assays, particularly mOHP, enhance MACE prediction beyond conventional models in healthy older adults. Integration of these haemostatic biomarkers into risk algorithms may refine primary prevention strategies in ageing populations.

#6

Towards Quantitative FTIR-Based Plasma Lipid Profiling: A Design of Experiments Approach to Optimising Lipid Extraction

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Background: Accurate quantification of plasma lipids is fundamental to the discovery and validation of biomarkers associated with cardiometabolic, inflammatory and other chronic diseases. Fourier-transform infrared (FTIR) spectroscopy has emerged as a rapid, reagent-free and cost-effective analytical technique for lipid profiling; however, its quantitative reliability is highly dependent on efficient sample preparation and lipid extraction. Optimising lipid extraction is therefore essential for developing robust FTIR-based methods suitable for clinical and translational applications.

Method: This study employed a structured Design of Experiments (DOE) using simulated human plasma spiked with palmitic acid (C16:0), oleic acid (C18:1 cis) and elaidic acid (C18:1 trans) to systematically compare MTBE extraction and the Folch method. Single-component, binary and ternary mixtures were prepared at multiple concentration levels and analysed using ATR-FTIR spectroscopy. Quantitative performance was assessed using calibration models, lipid recovery, reproducibility and statistical analyses to examine the influence of extraction chemistry, lipid composition and concentration on analytical performance.

Results: The study demonstrated that ATR-FTIR can be successfully applied for quantitative analysis of plasma lipid extracts following solvent-based extraction. The comparative evaluation identified differences in

extraction performance across lipid classes, concentration ranges and mixture complexity, highlighting factors that influence analytical accuracy, precision and robustness. The findings establish a systematic framework for assessing extraction methods and identifying conditions suitable for quantitative method validation.

Conclusion: This work provides an evidence-based approach for optimising plasma lipid extraction for FTIR-based lipid analysis. The study establishes key analytical considerations for method development and supports the future validation of a robust, rapid and clinically applicable FTIR workflow for quantitative plasma lipid profiling and biomarker development.

#8

Plasma proteomic signatures in chronic kidney disease versus healthy controls utilising data-independent acquisition mass spectrometry

Authors:

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Background: Cardiovascular disease (CVD) is the leading cause of mortality in chronic kidney disease (CKD). We aim to characterise plasma proteomic differences between CKD patients and healthy controls to identify potential biomarkers of CVD.

Method: We conducted a comparative biomarker discovery study, comparing plasma samples of 60 CKD patients (eGFR<30ml/min/1.73m²) enrolled in a prospective observational cohort with 28 healthy controls at Northern Health. Baseline demographics and plasma was collected at recruitment. Optimised on-bead enzymatic digest protocols were applied and unbiased proteomic profiling performed using high-resolution data-independent acquisition mass spectrometry (DIA-MS) on a Bruker timsTOF HT platform. Data was processed using Spectronaut, and protein-level abundance estimates using limma. Gene ontology biological process enrichment was assessed via gene set enrichment analysis (GSEA), with normalised enrichment scores calculated.

Results: The CKD cohort and healthy controls had similar median age (64.5 vs 63.5 years, p=0.45) and sex split (65% vs 57.1% male, p=0.48). The median eGFR of the CKD cohort was 7ml/min/1.73m² with 78.3% (n=47) dialysis dependent.

GSEA was performed on 34 molecular signature database (MSigDB) pathways relevant to CVD to identify functional impacts of the proteomic differences. CKD patients demonstrated significant (FDR<0.1) enrichment in upregulation of Hp abnormal cardiovascular system physiology which is associated with cardiovascular dysfunction. Downregulation of genes associated with coagulation pathways were identified, involving intrinsic and common pathways, fibrinogen and fibrinolysis and with blood microparticles (phospholipid microvesicles) was identified. This likely reflects mechanisms of the coagulopathy seen in CKD patients contributing to their CVD risk.

Conclusion: We identified a plasma proteomic signature in the CKD cohort reflecting abnormalities of cardiovascular physiology along with altered coagulation pathways including multiple fibrin and fibrinolysis pathways. This data identifies likely mechanisms leading to the high CVD risk in CKD patients and presents future opportunities for development of risk stratifying targeted biomarkers.

#9

Mass spectrometry to identify plasma proteomic profiles associated with cardiovascular events in chronic kidney disease

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Background: Cardiovascular disease (CVD) is the leading cause of mortality in chronic kidney disease (CKD), yet accurate risk prediction remains elusive. We aim to characterise plasma proteomic differences between CKD patients who experienced a major cardiovascular adverse event (MACE) and those who did not.

Method: We conducted a case-control biomarker discovery study using plasma samples from 60 CKD patients (eGFR<30ml/min/1.73m²) enrolled in a prospective observational cohort at Northern Health. Thirty-nine patients with MACE (myocardial infarction, stroke/transient ischaemic attack, or cardiovascular death) were matched to 21 patients without events. Baseline demographics and plasma were collected at recruitment.

Optimised on-bead enzymatic digest protocols were applied to plasma samples and unbiased proteomic profiling was performed using high-resolution data-independent acquisition mass spectrometry on a Bruker timsTOF HT platform. Data were processed using Spectronaut, and protein-level abundance estimates derived using limma. Gene ontology biological process enrichment was assessed via gene set enrichment analysis (GSEA), with normalised enrichment scores calculated. Processes with false discovery rate <0.05 were considered significant.

Results: Sixty patients (median age 64.5 years; 65% males) were included. Between groups eGFR did not differ (p=0.28) but more MACE patients were dialysis-dependent (57.1% vs 89.7%, p=0.003).

To elucidate functional implications of proteomic findings, GSEA was performed on the 11 differentially expressed proteins (adj p-value <0.05). We observed significant upregulation of key biological pathways related to proteasome-mediated ubiquitin-dependent protein catabolic processes, cell cycle regulation, and mitochondrial repair pathways, suggesting heightened proteostatic and cellular stress. Conversely, lipid and cholesterol transport pathways including cholesterol efflux and HDL particle remodelling were significantly

downregulated, indicating impaired HDL functionality and dysregulated lipid metabolism.

Conclusion: CKD patients with MACE demonstrated distinct plasma proteomic signatures marked by impaired lipid metabolism, increased proteasome activity and cellular stress pathways. These findings highlight potential mechanisms of CVD and opportunities for biomarker development and targeted intervention.

#12

Optimising antiphospholipid antibody testing: Real-world performance of chemiluminescent immunoassays and revised clinical cut-offs in a hospital setting

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Background: The 2023 EULAR/ACR classification criteria recommend ELISA for antiphospholipid antibody detection; however, many laboratories now use automated chemiluminescent immunoassays (CLIA) for faster results and less manual handling. Manufacturer-defined CLIA cut-offs are derived from healthy populations and may not reflect hospital patients, risking misclassification. Current guidelines advise laboratories using non-ELISA methods to establish their own clinical decision points to ensure diagnostic accuracy. This project evaluates the Werfen AcuStar CLIA platform for anticardiolipin (aCL) IgG and anti-b2 glycoprotein 1

(B2GP) IgG and determines revised cut-offs based on the 99th centile of APS-negative hospital patients.

Method: We conducted a retrospective audit of aCL IgG and B2GP IgG tests performed on AcuStar over 12 months (August 2024 – July 2025). Positive results were adjudicated by two clinicians to confirm antiphospholipid syndrome (APS).

Results: 186/881 aCL IgG and 114/845 B2GP IgG tests showed ≥ 20 CU, with 19 meeting APS criteria. Using manufacturer ranges, aCL IgG had 89.5% sensitivity and 90.3% specificity; B2GP IgG had 100% sensitivity and 95.1% specificity. Despite strong performance metrics (Table 1), positive predictive value (PPV) was low (18.7% for aCL IgG, 33.3% for B2GP IgG), indicating a high rate of false positives. Adjusting to the 99th centile improved PPV to 66.7% for aCL IgG (≥ 65 CU) and 68.0% for B2GP IgG (≥ 90 CU), with only a modest reduction in sensitivity (84.2% for aCL and 89.5% for B2GP). Combined antibody positivity using revised cut-offs yielded 94.7% sensitivity, 98.4% specificity, and 60.0% PPV. Only one APS case was missed with the revised approach, which was still diagnosable via lupus anticoagulant testing.

Conclusion: Manufacturer cut-offs for CLIA-based APS testing may overestimate positivity in hospital populations. Revised thresholds based on the 99th centile substantially improve PPV without compromising sensitivity. We recommend adopting revised cut-offs with an “equivocal” category and confirmatory testing for new positives to enhance diagnostic accuracy.

#13

Progression of chronic kidney disease is associated with a hypercoagulable profile: insights from global coagulation assays and other coagulation proteins

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Background: The haemostatic imbalance remains an enigma in chronic kidney disease (CKD), and is associated with both bleeding and thrombotic complications, yet no reliable biomarker exists to predict individual risk. Understanding how CKD progression affects haemostasis is essential for improving risk prediction. The study aimed to evaluate the impact of CKD progression on haemostatic biomarkers and global coagulation assays (GCAs).

Method: A prospective observational study enrolled 311 participants with known cardiovascular risk factors at Northern Health, Australia. CKD stage was stratified by estimated glomerular filtration rate (eGFR: mL/min/1.73m²): Stage 1 (≥90; n=80), Stage 2 (60-89, n=84), Stage 3 (30- 59, n=55), Stage 4 (15- 29, n=28), and Stage 5 (<15, n=64). Blood samples were analysed for coagulation proteins and GCAs, including thrombin generation (CAT-TG), modified overall haemostatic potential (mOHP), plasmin generation (PG), and thromboelastography (TEG).

Results: Procoagulant markers (Factor VIII, fibrinogen, von Willebrand factor, and D-dimer) increased progressively across CKD stages, peaking in stage 5. Protein C and antithrombin remained stable through stage 4 before declining in stage 5. GCAs showed preserved thrombin, fibrin, and plasmin potential in early CKD. From stage 4 onward, fibrinolytic impairment became evident with higher OHP and delayed plasmin generation. In stage 5, increased TEG maximum amplitude indicated greater clot strength, and reduced endogenous plasmin potential contributed to net fibrin accumulation.

Conclusion: CKD progression is characterised by increasing hypercoagulability and impaired fibrinolysis at advanced stages. GCAs, particularly those measuring both fibrin formation and lysis, demonstrated stage-dependent changes and may provide personalised stratification for thrombotic and bleeding risk in patients across CKD stages.

#15

Impact of pre-analytical factors and DOAC reversal on global coagulation assays

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Background: Global coagulation assays (GCA), such as thrombin generation (CAT-TG), modified overall haemostatic potential (mOHP), and plasmin generation (PG), offer a comprehensive evaluation of haemostasis. Although these assays have demonstrated potential utility for risk stratification of thrombotic and bleeding outcomes, their adoption in clinical laboratories remains limited. Understanding the impact of preanalytical variables and anticoagulation reversal is essential for their successful clinical implementation.

Method: Laboratory-excess citrated plasma samples were used to assess the effects of freeze-thaw (FT) cycles, prolonged room-temperature (RT) storage, centrifugation protocols, and direct oral anticoagulant (DOAC)-Stop treatment on GCA performance. Twenty platelet-poor plasma (PPP) samples were evaluated across five FT cycles, and a separate twenty PPP samples were assessed after storage at RT for <2, 6, 8, 24 and 48 hours. Thirty citrated plasma samples were processed

using either single-spin or double-spin centrifugation and analysed by GCA. To evaluate the utility of DOAC removal for PG testing, 10 anticoagulated PPP (5 apixaban & 5 rivaroxaban) and 10 non-anticoagulated PPP were treated with DOAC-Stop.

Results: CAT-TG remained stable for three FT cycles and 6 hours of RT storage. Double-spin centrifugation produced the most consistent results and is therefore recommended. In contrast, mOHP and PG were more resilient to preanalytical variation, maintaining stability over five FT cycles and demonstrating comparable performance with either single- or double-spin centrifugation. mOHP parameters remained stable for 8 hours at room temperature, whereas PG remained stable for 6 hours. Both Apixaban and Rivaroxaban delayed PG, but treatment with DOAC-Stop effectively removed DOAC interference, enabling valid PG assessment in DOAC-free plasma.

Conclusion: Preanalytical variables influence GCA to varying extents, with assay-specific requirements for sample processing and handling. These findings provide practical guidance for laboratories seeking to implement GCAs and highlight the importance of local validation of preanalytical acceptance criteria prior to clinical implementation.

#28

Impact of the 2024 ICSH Guidelines on Interpretation of Coagulation Mixing Studies in Routine Practice.

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Background: Mixing studies assist in differentiating coagulation factor deficiencies from circulating inhibitors, but interpretation is complicated by intermediate or borderline results. The 2024 International Council for Standardization in Haematology (ICSH) guidelines propose a standardised use of Rosner Index (RI), percentage correction (PC), and subtraction analysis to improve interpretive consistency. Aim is to evaluate how application of the guidelines would influence interpretation of mixing studies performed at a public pathology service.

Method: A retrospective review of mixing studies performed from 2021 to 2025 at Northern Pathology Victoria, Australia, was undertaken. Results were reinterpreted according to the 2024 ICSH guidelines and correlated with lupus anticoagulant testing and intrinsic factor assays. Factor deficiency was defined by levels below reference interval.

Results: A total of 213 mixing studies were performed: 87 (41%) had RI>15% and 126 (59%) had RI≤15%, with no cases <0 by subtraction. Among RI>15%, 45/87 (51.7%) proceeded to lupus anticoagulant testing of which 25/45 (55.6%) were positive, and 8 of 19 (42.1%) which had intrinsic factor testing were deficient, all multifactor, suggesting non-specific interference. Eighty-four of RI>15% had PC<70% (96.6%). For samples with PC<70% (n=159), 29/61 (47.5%) were lupus anticoagulant positive and 13/40 (32.5%) factor deficient.

Among RI≤15% cases, 17/47 (36.2%) were factor deficient and 9/29 (31.0%) were lupus anticoagulant positive. 51 concurred with PC≥70% (40.5%). Across all PC≥70% (n=54), 12/26 (46.1%) had factor deficiencies and 5/13 (38.4%) were lupus anticoagulant positive.

Conclusion: Application of the 2024 ICSH guidelines did not resolve diagnostic ambiguity - RI>15% aligned with PC<70% (96.6%), whereas RI≤15% vs PC≥70% showed weaker concordance (40.5%) and subtraction analysis was unemployable. RI>15% and PC<70% showed good sensitivity (73.5% and 72.5% respectively) and high PPV (83.3% and 85.3% respectively) for lupus anticoagulant

but poor specificity (58.3% and 16.7% respectively). Neither RI≤15% nor PC≥70% reliably predicted factor deficiency, although multifactor deficiencies suggest non-specific interference rather than true isolated deficiency.

#30

Fourier Transform Infrared spectroscopy with multivariate analysis during anticoagulation for venous thromboembolism identifies patients at risk of future recurrence

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Background: Venous thromboembolism remains a major global health concern. Identifying patients at high risk for future VTE recurrence can inform anticoagulation therapy. We aimed to identify patients who later developed VTE recurrence by using Fourier Transform Infrared (FTIR) spectroscopy to interrogate the plasma of VTE patients collected during anticoagulation therapy.

Method: Citrated plasma was collected from VTE patients around 3 months after VTE diagnosis and whilst therapeutically anticoagulated. FTIR was performed on plasma from patients who subsequently stopped anticoagulation and were followed for up to 3 years after stopping anticoagulation. Subgroups of interest were patients who developed VTE recurrence (unprovoked or due to malignancy). FTIR spectra were acquired using a Perkin-Elmer Spectrum 3 FTIR spectrometer, examining the mid-infrared range (900–4000 cm⁻¹) at a resolution

of 4 cm⁻¹ with duplicates per sample. FTIR spectra were analysed using Partial Least Squares Discriminant Analysis (PLSDA), and the resulting model performance was assessed in terms of specificity and sensitivity.

Results: 117 VTE patients were included, of whom 2 developed VTE recurrence due to malignancy, and 7 had unprovoked VTE recurrences during the follow-up period. Spectral analysis was able to distinguish between those who recurred due to malignancy (sensitivity 75%, specificity 99%) and unprovoked recurrences (sensitivity 50%, specificity 96%) from patients without VTE recurrences.

Conclusion: FTIR spectroscopy, combined with multivariate analysis, identified patients who later developed unprovoked or malignancy-provoked recurrent VTE, suggesting the potential for spectroscopy as a tool to assist in clinical risk stratification. Further studies are necessary to expand upon these initial findings.

#61

Optimising the suspected deep vein thrombosis pathway in orthopaedic inpatients

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Background: Orthopaedic inpatients are at increased risk of deep vein thrombosis (DVT) because of trauma, surgery and postoperative immobility. Delayed ultrasound assessment can prolong uncertainty regarding anticoagulation, mobilisation and discharge. This audit evaluated the timeliness and documentation of the suspected DVT pathway.

Method: A retrospective audit included 71 consecutive orthopaedic inpatients (January 2024 to June 2025) who underwent lower-limb duplex ultrasound for suspected DVT. Electronic medical records and radiology systems were reviewed for request-to-scan time, reporting time, result acknowledgement, DVT detection, and documentation of risk assessment and anticoagulation status.

Results: Request timestamps were available for 57/71 episodes. The median request-to-scan time was 15.4 hours, with 71.9% (n=41/57), 91.2% (n=52/57) and 96.5% (n=55/57) scanned within 24, 48 and 72 hours, respectively, and n=2 exceeding 72 hours. Median scan-to-report time was 1.25 hours. DVT was confirmed in 12.7% (n=9/71) of episodes (seven below-knee and two above-knee), no patient had a documented Wells score, and 88.6% (n=62) had a management decision documented within 24 hours after the scan.

Conclusion: Ultrasound acquisition and reporting were generally timely, but clinically important delays occurred in a small number of cases. A standardised orthopaedic DVT pathway incorporating structured risk assessment, clear interim anticoagulation plans and escalation of prolonged delays may improve patient safety and flow.

DIGITAL AND VIRTUAL SERVICES

#10

Predicting intensive care unit strain 24 hours ahead using routinely collected operational data

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Background: Intensive care unit strain, defined as a mismatch between patient demand and available resources, is associated with increased mortality, delayed admissions, and staff burnout. Current management is largely reactive, limiting the time available to activate surge capacity, arrange transfers, or adjust staffing. This study aimed to develop and validate a transparent 24-hour forecast of ICU strain using routinely collected operational data.

Method: We conducted a retrospective multi-site study using operational data from Australian ICUs contributing to the Critical Health Resource Information System event-driven database. Records were resampled hourly by site and aggregated into 12-hour bins aligned with nursing shift handovers. A composite Activity Index, incorporating census-weighted patient load, ventilation, renal replacement therapy, extracorporeal membrane oxygenation, and open beds, defined high strain as the 75th percentile of the training distribution; an Optimised XGBoost classifier was trained using walk-forward temporal validation and interpreted with SHapley Additive exPlanations.

Results: Across ten temporal folds, the model achieved a receiver operating characteristic area under the curve of 0.94 ± 0.02 and precision-recall area under the curve of 0.88 ± 0.03 . On the held-out validation set, performance was receiver operating characteristic area under the curve 0.94, sensitivity 86%, precision 75%, and negative predictive value 94%; a permutation test produced receiver operating characteristic area under the curve 0.48, supporting genuine predictive signal. Performance was consistent across ICU size and weekday versus weekend periods, with 24-hour rolling census, bed availability, and short-term trend features the dominant explanatory drivers.

Conclusion: Routinely collected ICU operational data can predict high strain 24 hours ahead with high and interpretable accuracy. This approach could support proactive capacity management by giving clinical and operational teams earlier warning to mobilise beds, staffing, and inter-hospital transfer options.

#41

Converging cardiometabolic hospital burden across country-of-birth groups in Victoria, 2014–2023

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Background: Cardiometabolic diseases (CMDs) are a leading cause of hospitalisation and healthcare utilisation in Australia. However, long-term trends in cardiometabolic hospital burden across country-of-birth groups have not been well characterised in Australia. This study examined temporal trends in cardiometabolic hospital burden among Victorian residents from main English-speaking countries (MESC) and non-main English-speaking countries (Non-MESC) between 2014 and 2023.

Method: A population-based retrospective study was undertaken using the Victorian Admitted Episodes Dataset. Annual age-standardised cardiometabolic hospital separation rates, Weighted Inlier Equivalent Separation (WIES) rates and in-hospital mortality rates were calculated by MESC status. Negative binomial regression was used to model age-specific separation and WIES rates over time. Disease-specific analyses were conducted for heart failure, hypertension and type 2 diabetes (T2D).

Results: Between 2014 and 2023, age-standardised cardiometabolic hospital separation, WIES and in-hospital mortality rates remained higher among Non-MESC than MESC populations but converged substantially over time. By 2023, predicted hospital separation rates were almost identical between the two groups. Age-specific modelling indicated that the observed convergence largely reflected declining hospital separation rates among older Non-MESC adults. Heart failure remained the leading contributor to cardiometabolic hospital burden

and was the only condition demonstrating increasing resource-weighted utilisation, while hospitalisations for hypertension and T2D also increased over the study period.

Conclusion: Disparities in cardiometabolic hospital burden between MESC and Non-MESC populations narrowed substantially between 2014 and 2023. This convergence largely reflected declining hospital separation rates among older Non-MESC adults, although the underlying reasons cannot be determined from administrative hospital data alone. Continued monitoring and age-specific prevention and service planning are needed to address the changing distribution of cardiometabolic hospital burden.

EMERGENCY SERVICES

#72

Family, domestic, and sexual violence presentations to a virtual emergency department: a retrospective cohort study

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Virtual Emergency

Background: Family, domestic, and sexual violence (FDSV) is a major global health issue affecting one in four women. Emergency departments (EDs) are often the first point of healthcare contact for people experiencing FDSV. Virtual emergency departments have been introduced in Australia to improve access to care and reduce pressure on physical EDs, but little is known about FDSV presentations in this setting. This study aimed to identify and describe FDSV presentations to the Victorian Virtual Emergency Department (VVED).

Method: A retrospective cohort study examined FDSV presentations to the VVED between 1 July 2023 and 30 June 2024. Cases were identified using VVED data, injury surveillance data, and clinician documentation. Records were filtered by age, sex, and injury intent, followed by file review to confirm eligibility. Demographic and presentation characteristics were summarised using descriptive statistics.

Results: Twenty-one FDSV presentations were identified among 173,936 VVED presentations (0.012%). All were female, median age of 37 years. Most were born in Australia (86%) and lived in socioeconomically disadvantaged areas (62%). Intimate partner violence was the most common form of FDSV (81%), and injuries above the clavicle (head, face and neck injuries) were the most frequent presentation (53%). Most patients were

referred via healthcare professionals (76%). One-third were directed to physical EDs, while most were managed virtually with follow-up arranged through general practitioners or other healthcare providers.

Conclusions: FDSV presentations were rarely identified in the virtual emergency setting, suggesting under-detection. Virtual EDs offer opportunities to support people experiencing violence, but improved clinician training, documentation, and referral pathways are needed.

MEDICINE

#5

Moderate to severe thrombocytopenia in pregnancy does not negatively impact on maternal and neonatal outcomes: A single centre, retrospective study.

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Background: Thrombocytopenia is a common haematological complication in pregnancy. Data on moderate to severe cases (platelets <100 x 10⁹/L) are limited. This study aims to investigate aetiology and peripartum management in this subgroup.

Method: We performed a single-centre retrospective study conducted at Northern Health in Victoria, Australia. Pregnancies with platelets < 100 x10⁹/L between January 2019 to December 2024 were included. Relevant clinical and investigations data are collected via electronic medical record. Outcome measures were: (1) causes of thrombocytopenia, (2) peri-partum management, including mode of delivery, use of neuraxial

anaesthesia, and thrombocytopenia-targeted therapies, (3) postpartum haemorrhage (PPH) and blood products usage, (4) neonatal platelet count and bleeding in immune thrombocytopenia (ITP) pregnancies.

Results: 117 pregnancies were included in total. The most common aetiology was gestational thrombocytopenia (n=83, 70.9%) followed by ITP (n=25, 21.4%), and hypertensive disorders (n=8, 6.9%). Mean nadir platelet count was 77.1 +/- 18.1 x 10⁹/L. 61 (53.0%) pregnancies received neuraxial anaesthesia at delivery, with lowest peri-partum platelet count of 69 x10⁹/L, without bleeding complications at anaesthetic site. PPH occurred in 40 pregnancies (34.8%), and five (4.3%) required red blood cell transfusions, with no associations between thrombocytopenia severity and PPH risk. In the ITP cohort, 16 (65%) pregnancies received steroids, intravenous immunoglobulin and/or platelet transfusions, with eight (32%) achieving platelet count >70x10⁹/L peripartum. Four (16%) out of 22 neonates born to ITP pregnancies had thrombocytopenia (nadir platelet count of 44 x 10⁹/L) in the first seven days without haemorrhagic complications.

Conclusion: Moderate thrombocytopenia in pregnancy does not confer increased risk of maternal PPH and neonatal haemorrhage. Neuraxial anaesthesia can be safely administered without complications. Early treatment of ITP could improve peripartum platelet count with low risk of adverse effects, and enables safe use of neuraxial anaesthesia. Larger prospective study would be helpful to enable meaningful statistical analysis.

#18

Performing Pulmonary Embolism Thrombectomy on Venoarterial Extracorporeal Membrane Oxygenation: Practical Points

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Background: Medical, percutaneous, and surgical options exist for treating pulmonary embolism (PE). For intermediate-high-risk and high-risk PE, systemic thrombolysis is typically the first-line treatment but carries a high-risk of bleeding in patients requiring venoarterial extracorporeal membrane oxygenation (VA-ECMO). Internationally, mechanical thrombectomy is increasingly utilised in VA-ECMO, but has limited and variable uptake in Australia. This is despite having a favourable safety profile in intermediate- and high-risk PE without VA-ECMO, and emerging evidence to support its use with VA-ECMO. Indeed, there are additional risks associated with concurrent VA-ECMO use, therefore, we aim to describe strategies to reduce intra-operative risk.

Method: Ideally, VA-ECMO catheters should be placed in the left common femoral vessels and mechanical thrombectomy should be performed through the right common femoral vessels. This reduces the risk of dislodging VA-ECMO catheters during the procedure as they are isolated to one side. Secondly, the VA-ECMO intake catheters should be clamped prior to each aspiration to reduce the risk of clot aspiration into the VA-ECMO circuit. This will also reduce the risk of air embolus, however, requires efficient communication with the ICU team to minimise the disruption to cardiac output. Lastly, VA-ECMO inherently reduces pulmonary arterial pressure, therefore this cannot be used to assess procedural efficacy. Instead, digital subtraction angiography images and patient vital signs should be relied upon.

Results: We performed a case of mechanical thrombectomy on VA-ECMO in a 30-year-old female. Significant clot was retrieved with rapid stabilisation of vital signs. The patient survived past discharge with no adverse sequelae from mechanical thrombectomy.

Conclusion: Mechanical thrombectomy is increasingly utilised to treat intermediate-high-risk and high-risk PE on VA-ECMO and evidence to support improved outcomes is emerging. In patient on VA-ECMO, this procedure becomes inherently more challenging, therefore we describe technical adjustments to support the delivery of safe and effective mechanical thrombectomy.

#29

Exploring the Sustainability of Medical Procedural Skills Teaching

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Background: Despite the increasing awareness of the detrimental environmental impacts of healthcare, changes towards sustainable practice have not been simultaneously prioritised. This issue impacts both our planet and health, as modifiable environmental factors contributed to 24% of global deaths in 2016 (1). Current literature describes approaches to reducing waste in some healthcare disciplines through sustainable practices such as minimising single-use equipment (2, 3). Despite using disposable consumables in a similar manner to authentically replicate the clinical environment, there is limited understanding of how healthcare education contributes to this issue.

Within the study context of the Doctor of Medicine program at the University of Melbourne, this quality assurance project aims to quantify the volume of consumables used for teaching procedural skills, identify sustainable practices at teaching sites, identify barriers to waste reduction, and propose opportunities for reducing the environmental impact of procedural skills teaching.

Method: We designed an online survey informed by Sustainability in Quality Improvement principles, which was distributed to the Clinical Educators Group.

Results: Nine of eleven teaching sites responded to the survey. Total volume of consumables reportedly used across all teaching sites (1,368 students) in 2025 was 56,330. The repackaging of consumables for reuse worked effectively as a sustainability practice. The main barriers to waste reduction were "Time or workload". Implementation of more environmentally sustainable practices was largely perceived as feasible; however, learner safety and educational quality must be prioritised. The greatest potential for waste reduction was "Improved recycling of rigid plastics". Of all consumables, syringes were perceived to have the most opportunity for waste reduction.

Conclusion: Whilst there are some sustainable approaches in practice, implementing further waste reduction strategies appears feasible. Potential opportunities include improved reuse of syringes and recycling of hard plastics, aided through collaborative discussions among clinical educators and students.

#35

Usage patterns of the patient and carer escalation pathway (REACH) at Northern Health

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Medicine, Critical Care

Background: Medical Emergency Teams (METs) serve to avoid preventable deaths by triggering a response to derangements in vital signs (1). Following the introduction of the MET Australia-wide, there has been strong evidence to suggest a reduction in the incidence of in-hospital cardiac arrests and in-hospital mortality (2). Many health services have begun to acknowledge the role of patients and carers in recognising early clinical deterioration. Evidence supporting this is well established in the paediatric population, but remains speculative in the adult patient population due to a relative scarcity of high-quality research, despite widespread implementation (3,4). Northern Health has developed the REACH protocol as a means for patients and carers to escalate their concerns, triggering senior clinician review.

In this study, we characterise the utilisation patterns of the REACH program at Northern Health.

Method: Data was collected on every REACH call between January 2021 and December 2025, excluding the paediatric population. We characterised the reasons for each REACH review, clinical issues identified on REACH reviews, subsequent clinical actions taken, demographic features of the patient population utilising REACH, and the temporal trends of REACH use.

Results: 211 REACH calls were made between January 2021 and December 2025. Surgical patients are over-represented in the population of REACH calls compared the number of surgical admissions. The majority of REACH calls were made to address a patient's symptoms, or to address an issue with communication, including to express dissatisfaction with the staff or service, to expedite services, or to request an update or clarification from the medical team. Clinical deterioration was not identified in any REACH reviews.

Conclusion: Our study suggests that while REACH has not been demonstrated to fulfil its intended use (identifying clinical deterioration), it does provide a method for patient and carer escalation to advocate for symptom management, and facilitate communication between patients and their treating team.

#44

Unused ('just-in-case') Peripheral Intravenous Cannulas in the Northern Health Epping Emergency Department: A retrospective audit

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Background: Peripheral intravenous cannula (pIVC) insertion is one of the most commonly performed invasive procedures in the emergency department (ED), yet a substantial proportion remain unused prior to discharge. The incidence of unused pIVCs at Northern Health Epping (NHE) has not been formally quantified.

Method: A retrospective clinical audit was conducted at the NHE ED over a seven-day period (9-15 February 2026). All adult ED presentations were included, and those with a pIVC documented in the electronic medical record were identified. The primary outcome was the proportion of pIVCs unused at ED discharge, defined as no documented administration of intravenous fluids, medications or contrast. A secondary outcome assessed the proportion remaining unused at 72 hours post-admission among ward-admitted patients. Univariate analyses and multivariable logistic regression were performed.

Results: Of 1,556 presentations, 509 (32.7%) had a pIVC inserted. The primary unused pIVC rate was 33.2% (95% confidence interval [CI] 29.1-37.3%). Of 100 ward-admitted patients with an unused pIVC at ED discharge, 76 (76.0%, 95% CI 67.0-85.0%) remained unused at 72 hours. Median dwell time among unused cannulas was 12.9 hours (interquartile range 6.5-20.5). On multivariable analysis, discharge home (adjusted odds ratio [OR] 3.47, 95% CI 2.24-5.37), lower triage acuity

(Australasian Triage Scale [ATS] 3 adjusted OR 2.28, 95% CI 1.42-3.64; ATS 4 adjusted OR 3.16, 95% CI 1.58-6.31), and cardiac presenting complaint (adjusted OR 3.50, 95% CI 2.07-5.92) independently predicted unused pIVC status (all $p \leq 0.001$).

Conclusion: One in three pIVCs inserted at NHE ED were unused, consistent with Australian and international literature. Lower acuity presentations, cardiac presenting complaints and home discharge identify patients most amenable to targeted reduction strategies. These findings provide locally derived baseline data to inform quality improvement, including clinician education and formal insertion indication criteria. Reducing unnecessary insertion could lower avoidable infection risk and consumable costs.

#54

Real-world analysis of deliverability and clinical outcomes of oral decitabine-cedazuridine in patients with myeloid malignancies.

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NH Division and Department:

Northern Health Department of Haematology

Background: Oral decitabine-cedazuridine is approved for the treatment of patients with higher-risk myelodysplastic neoplasm (MDS), chronic myelomonocytic leukaemia (CMML), and acute myeloid leukaemia (AML) in Australia. Adverse events such as myelosuppression lead to dose interruption, and delays, potentially compromising clinical outcomes. Real-world data describing treatment patterns remain limited. This audit aimed to characterise the patterns of treatment delivery and clinical outcomes in patients treated with oral decitabine-cedazuridine in Northern Hospital.

Method: We evaluated the duration of cytopenia, treatment modifications, and clinical outcomes in patients treated in Northern Hospital following PBS listing. Of 10 patients, 8 patients (4 AML, 3 MDS, and 1 CMML) met the inclusion criteria of receipt of at least ≥ 1 treatment cycle. Descriptive statistics were used to analyse duration of cytopenias per cycle, treatment discontinuation, dose reductions or delays and response.

Results: Treatment-emergent grade 3 (platelet count $< 50 \times 10^9/L$) and grade 4 thrombocytopenia ($< 25 \times 10^9/L$) occurred in 12.5% (median duration 10 days) and 50% (median duration 11 days) of patients, respectively. Treatment-emergent grade 3 (neutrophil count $0.5 - < 1 \times 10^9/L$) and grade 4 neutropenia ($< 0.5 \times 10^9/L$) occurred in 25% and 25% of patients, respectively. Total number of cycles received ranged from 1 to 22, with 50% patients ceasing therapy after one cycle (2 due to non-haematologic toxicity, 2 due to disease progression). Two patients (25%) required dose reductions after cycle 1 due to neutropenia and febrile neutropenia, respectively, and a further 3 patients experienced dose delays across 5 cycles related to grade 3-4 neutropenia. Three patients achieved morphologic remission (bone marrow blasts $< 5\%$), whereas the remaining patients had no response.

Conclusion: Oral decitabine-cedazuridine was associated with frequent treatment modifications related to myelosuppression in this real-world cohort. Expansion of this audit to a multi-site study is in progress and may provide greater insight into treatment deliverability and clinical outcomes in routine practice.

#60

Association between cpet parameters and surgical decision making in a contemporary cohort

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Respiratory and Sleep Medicine

Background: Cardiopulmonary Exercise Testing (CPET) is a validated method for preoperative risk stratification using VO₂ peak, VO₂ at anaerobic threshold (VO₂@AT), and ventilatory efficiency (VE/VCO₂ slope). However, its influence on real-world surgical decision-making remains unclear. This study assessed the impact of CPET metrics on surgical decisions and outcomes

Method: Retrospective analysis was conducted on preoperative CPET referrals at Northern Health from 2023–2025. Demographic, physiological, and surgical outcome data were analysed using GraphPad Prism v10.6.1.

Results: During the observation period n=37 studies were referred for preoperative assessment (n=29 for thoracic, n=8 for gastrointestinal surgery). Subsequent to CPET, n=7 were identified as having conditions not requiring surgery and excluded. Among the remaining n=30 for analysis, mean age was 70.1±10.9 (SD), predicted FEV₁80.5±21.6% (SD), ECOG 0.5±0.6 (SD, n=27), and mean reported comorbidities were 2.5±1.5 (SD). Following CPET, n=20 proceeded to surgery ("eligible") and n=10 were declined surgery due to high perioperative risk ("ineligible"). CPET results were specifically cited in documentation for n=7 considered ineligible. Baseline characteristics did not significantly differ between groups (P>0.05). Mean VO₂ peak was

15.5±3.8ml/kg/min (SD, n=20) in the eligible group, and 13.3±2.8ml/kg/min (SD, n=10) in those ineligible. VO₂@AT was 11.9±2.8ml/kg/min (SD, n=19) in the eligible group and 10.5±1.8ml/kg/min (SD, n=8) for those ineligible. Mean VE/VCO₂ slope 36.4±5.8 (SD, n=20) in the eligible group, and 42.6±7.9 (SD, n=10) in those ineligible. No significant association was observed between individual CPET metrics and surgical decision-making (p>0.05). Among those who underwent surgery, there was no 90-day mortality, and two had ICU stays >24 hours.

Conclusion: CPET results were often referenced when patients were deemed unfit for surgery, although no single CPET metric reliably differentiated between those who proceeded with surgery and those considered unacceptably high-risk. Decisions may have integrated multiple CPET parameters alongside other clinical findings. Sample size may have limited statistical power.

#62

Meaning-centred interventions for managing loneliness among older adults: a mixed-methods systematic review

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[NCHER; Advance Care Planning; Safe Recovery Program]

Background: Loneliness is a major public health issue among older adults, contributing to poorer physical and mental health, increased mortality, and reduced quality of life. Although most interventions focus on increasing social contact, growing evidence suggests that diminished meaning in life is a key existential dimension of loneliness in later life. This first mixed-methods systematic review examined the effectiveness of meaning-centred interventions for loneliness and explored older adults' experiences of participating in these interventions.

Method: A Joanna Briggs Institute mixed-methods systematic review using a convergent segregated approach was conducted. Nine electronic databases were searched from inception to October 2025. Quantitative, qualitative and mixed-methods studies involving adults aged ≥60 years living in community or residential care settings were eligible. Quantitative findings were synthesised using meta-analysis where appropriate, qualitative findings were narratively synthesised, and both evidence strands were integrated.

Results: Seven studies met the inclusion criteria. Only two meaning-centred interventions were identified: group-based logotherapy and group-based reminiscence therapy explicitly aimed to facilitate meaning-making, purpose or existential reflection. Meta-analysis of three randomised controlled trials found no significant overall effect of reminiscence therapy on loneliness (p=0.06; I²=96%). In contrast, quasi-experimental studies consistently suggested that group-based logotherapy may reduce loneliness. Qualitative evidence indicated

that group-based delivery promoted meaningful social connection, providing a potential mechanism through which meaning-centred interventions may alleviate loneliness.

Conclusion: Meaning-centred interventions represent a promising but under-investigated approach to addressing loneliness in later life. Current evidence suggests that group-based logotherapy may reduce loneliness, although evidence remains limited and derives primarily from quasi-experimental studies. Future high-quality randomised controlled trials incorporating qualitative evaluation are needed to establish effectiveness, understand mechanisms, and inform evidence-based practice and policy for healthy ageing.

#63

Impact of 12-week Liver at Home program on liver frailty in a tertiary centre

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Background: Frailty in cirrhotic patients is increasingly acknowledged as an important predictor of mortality. Validation studies have shown a frailty score of ≥ 4.5 is associated with significant increase in healthcare utilisation and mortality. Liver at Home (L@H) is a novel 12-week program implemented on discharge for patients admitted with cirrhosis. The program involves regular visits by advanced-practice hepatology nurses to patients' homes and via telehealth to bridge the transition from hospital. The aim of this observational study was to examine the impact of L@H on liver frailty.

Method: Hospitalised adult cirrhotic patients with a liver-related event who were discharged to the L@H program between 1 Jan 2025 and 1 Feb 2026 had dominant handgrip strength, time for 5 chair stands and time holding three-position balance recorded at first and last home visit. Liver frailty index was calculated using the University of California-San Francisco frailty index.

Results: Of 64 patients enrolled into L@H, 30 had initial liver frailty data measured, and 10 patients had repeat liver frailty measured on the final L@H visit in week 12 of the program. The majority (70%) of patients with repeat frailty scores were men, with a median age of 58-years-old, median Child-Pugh score of 7 and a MELD-Na score of 16.5 on admission to the program. There was no significant difference in liver frailty on admission and discharge from the L@H program (4.14 vs 4.45, $p=0.70$) or in the sub-components of frailty.

Conclusion: In our small single-centre prospective cohort we demonstrated that a home-based liver-disease management intervention had no impact on the liver frailty scores after 12 weeks. Notably the patients in this cohort were frailer at baseline compared to those in other previously examined programs, and may require additional support to recompensate or are potentially too severe to improve.

#64

Liver frailty index as predictor of outcomes in Liver at Home program

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Background: Frailty is an important and independent predictor of mortality in cirrhosis, independent of decompensation and the model for end-stage liver-disease score (MELD). Liver at Home is an intensive 12-week home-based program designed for continued recompensation and management of liver-related issues with regular specialist nurse visits to bridge the transition from hospital. We aimed to prospectively evaluate the impact of our L@H program on morbidity and mortality in frail (score of ≥ 4.5) compared to non-frail (< 4.5) patients.

Method: Hospitalised adult patients admitted with a liver-related event and discharged to the L@H program between 1 Jan 2025 and 1 Feb 2026 had dominant hand grip strength, time for 5 chair stands and time holding three-position balance recorded at index home visit. Liver frailty index was calculated using the University of California-San Francisco frailty index. Database was reviewed at 3-months for complications and mortality.

Results: Of the 64 patients enrolled into L@H, 30 patients had frailty data recorded on index visit. The remainder did not have data recorded due to equipment availability or staffing shortages. Most patients $n=17$ (56.6%) were men with a median age of 58, Child-Pugh score of 9 and MELD-Na of 17 at enrolment. Commonest aetiologies of cirrhosis included alcohol-related liver disease (63.3%) and metabolic-associated fatty-liver disease (16.6%). Ten patients (33.3%) had readmissions at 3-months and these patients were significantly more frail compared to those without readmissions (frailty 4.51 vs. 4.03, $p=0.03$). Four patients (13.3%) died within 3-months but their frailty score was not significantly greater than those who survived (4.38 vs. 4.19, $p=0.66$).

Conclusion: In patients enrolled in the L@H program, frailty was associated with greater readmission rates at 3 months. Larger sample size and longer follow-up are required to identify subgroups most likely to benefit from more intensive frailty-targeted interventions.

#65

Barriers to advance care planning in decompensated cirrhosis: a clinician survey

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Background: Patients with decompensated cirrhosis have a limited life expectancy under 2 years unless candidates for liver transplantation. Despite the poor prognosis, many patients have not prepared an advance care plan (ACP) or appointed a Medical Treatment Decision Maker (MTDM), which have both been proven in other chronic diseases to improve quality of life and reduce unnecessary hospitalisation. We aimed to evaluate existing knowledge and perceptions on discussing prognosis, MTDM and ACP within gastroenterologists managing decompensated cirrhosis.

Method: A survey questionnaire was created using Research Electronic Data Capture (REDCap) and distributed to gastroenterologists affiliated with a large tertiary centre via email in August 2025. Data were collected anonymously, with no identifying information. Gastroenterologists were asked whether they identified as subspecialists and whether they were rostered ward service. Recorded responses used a qualitative frequency scale: rarely (<10%), occasionally (30%), sometimes (50%), frequently (70%), or usually (>90%).

Results: A total of 19 gastroenterologists completed the survey, of which the majority (84.2%) were not subspecialist hepatologists. All gastroenterologists rostered to ward service reported discussing prognosis with decompensated cirrhotic patients in an inpatient setting, with 75% of them discussing this most of the time. Prognosis discussions were less common in outpatients, with 26.7% rarely discussing it. Most clinicians (68.4%) including hepatologists rarely discussed MTDM or ACP, with reported barriers including limited time (63.2%), reduced patient insight (57.9%) and limited patient rapport (36.8%). Importantly, 31.6% of clinicians felt ill-equipped to discuss MTDM and ACP with their patients due to lack of knowledge or perceived skills.

Conclusion: We identify room for improvement in appointment of MTDM, ACP and prognostic discussions in patients with decompensated cirrhosis. Barriers that need to be addressed include both clinician factors including limited time, poor knowledge around MTDM and ACP; as well as patient factors such as perceived poor insight.

#66

NRT Prescribing for COPD Patients: Adherence to Northern Health's Tobacco Dependence Guidelines

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Background: Smoking cessation is a key intervention to slow the progression of Chronic Obstructive Pulmonary Disease (COPD) and is recommended in the Australian Commission on Safety and Quality in Health Care's COPD Clinical Care Standard. Nicotine Replacement Therapy (NRT) improves smoking cessation rates, yet adherence to structured NRT prescribing guidelines in

hospital settings is often inconsistent. Northern Health developed a Tobacco Dependence Clinical Management Form that guides NRT prescribing for admitted patients. This audit evaluated the quality of smoking cessation care for patients with COPD admitted to the respiratory ward and adherence to the form.

Method: A retrospective audit was conducted of Electronic Medical Records (EMR) for patients aged ≥18 years with a diagnosis of COPD admitted to a respiratory ward at Northern Hospital Epping between September and November 2024. Data extracted included smoking status documentation, NRT prescribing patterns, dosing regimens, and completion of the Tobacco Dependence Clinical Management Form.

Results: A total of 163 patients were audited (median age 72, range 44-93). Smoking status was documented in 68.7% of admissions and within the preceding 12 months for 86.5% of patients. 55 patients were current smokers, of whom 30 (54.5%) were prescribed NRT as an inpatient. Monotherapy with a nicotine patch was the most common regimen (n=13, 43.3%), followed by patch plus inhaler combinations (n=11, 36.7%). The Heaviness of Smoking Index (HSI) could not be calculated retrospectively for audited patients, however based on self-reported cigarette consumption, only a third were prescribed NRT concordant with guidelines. 14 patients prescribed inpatient NRT were discharged with ongoing therapy.

Conclusion: Despite availability of a structured clinical management tool, smoking status documentation and adherence to guideline-based NRT prescribing remained inconsistent. Incomplete documentation of smoking status and use likely contributed to suboptimal NRT dosing. These findings highlight opportunities for targeted education and EMR-based clinical decision support to improve smoking cessation care.

#73

Waiting for ANA: Evaluating the impact of delayed results for hospitalised patients with undifferentiated acute hepatitis

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Background: Autoimmune hepatitis (AIH) and drug-induced liver injury (DILI) commonly present with overlapping features. Anti-nuclear antibody (ANA) supports an AIH diagnosis, however delayed turnaround times (TAT) may influence inpatient investigation and management. We evaluated ANA TAT and its association with diagnosis, liver biopsy utilisation, treatment initiation, and hospital length of stay (LOS).

Method: A retrospective single-center study performed on adults admitted between January 2020 and January 2025 with undifferentiated hepatitis and ALT > 4x upper limit of normal. Comparative analyses were performed on collected data – biochemical results, ANA status and TAT, final diagnosis, liver biopsy utilisation, immunosuppression initiation, and LOS.

Results: 267 patients were initially identified through medical records, with 28 patients meeting inclusion criteria across the 5-year period. Median age was 51.3 years and 57% were female. 36% of these patients had ANA positive test with laboratory positive reporting cut-off 1:160. Of these 29 patients, the final diagnosis was DILI in 29%, AIH in 14%, other (e.g. primary sclerosing cholangitis, EBV, etc) 25%, and unknown in 32%.

The median ANA TAT was 97.4 hours (IQR 74.9-138.4). When grouped into TAT < 96 hours (n=13) versus > 96 hours (n=15), the median LOS (5 and 3 days, respectively) did not differ significantly amongst groups (p=0.06). Seven patients (25%) underwent liver biopsy. Patients

undergoing biopsy had a longer total LOS (median 5.0 vs 3.0 days, p=0.012). Patients with AIH demonstrated the longest median LOS; however, LOS did not significantly differ between final diagnosis, likely reflecting the multifactorial determinants of inpatient admission duration.

Conclusion: Hospitalised patients with undifferentiated acute hepatitis experience prolonged ANA TAT, with median delays approaching 4 days. The absence of an observed LOS difference from delayed ANA results may reflect multifactorial determinants of inpatient stay and the fact that clinical decisions and liver biopsy pathways are frequently made prior to ANA availability.

#74

ANA availability in suspected autoimmune hepatitis: Effects on scoring and liver biopsy utilisation

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Background: Autoimmune hepatitis (AIH) can be challenging to diagnose. The simplified International Autoimmune Hepatitis Group (IAIHG) criteria are commonly used to support diagnosis. However, this score may be revised once antinuclear antibody (ANA) results are available. This study evaluated the impact of the timing of ANA results on AIH scoring, provisional diagnoses, and liver biopsy utilisation in suspected AIH.

Method: A retrospective cohort study of patients with undifferentiated hepatitis was identified between January 2020 and January 2025 using ICD-10 coding and laboratory records from a tertiary health service.

Data collected included demographics, ANA status/titre, liver biopsy status, provisional and final diagnoses, and simplified AIH scores before and after ANA availability. Diagnoses were classified as “unlikely”, “probable”, or “definite” AIH. Secondary outcomes included the utilisation of liver biopsy and the initiation of immunosuppression.

Results: 267 patients were initially identified through medical records, with 28 patients meeting inclusion criteria across the 5-year period. ANA positivity was identified in 36% of the 28 patients. Prior to ANA availability, most patients were classified as “unlikely AIH” using simplified IAIHG criteria. Availability of ANA results significantly increased simplified AIH scores (Wilcoxon signed-rank p=0.0009), resulting in reclassification of several patients into probable or definite AIH categories.

Liver biopsy was performed in 7 patients (25%). Significantly, liver biopsy patients had lower albumin levels (33 vs 37 g/L, p=0.031) and were more likely to commence immunosuppressive therapy (43% vs 5%, p=0.038). AIH accounted for 43% of biopsy-confirmed diagnoses. Patients commenced on immunosuppression had significantly higher ALT, AST, bilirubin, and IgG levels than those not receiving therapy (all p<0.05). Immunosuppression initiation was strongly associated with a final diagnosis of AIH (p<0.001), liver biopsy utilisation (75% vs 17%, p=0.038), and biopsy findings compatible with AIH (p=0.011).

Conclusions: ANA testing significantly influences simplified IAIHG scoring, provisional AIH classification, and liver biopsy utilisation in suspected AIH. Earlier ANA availability may improve diagnostic efficiency and facilitate the timely initiation of immunosuppressive therapy.

#75

Changing Patterns of Crohn's Disease Complications in Emergency Admissions: A 10-Year Retrospective Cohort Study

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Background: Despite advances in Crohn's disease (CD) therapy, it is unclear whether emergency presentations related to fibrostenotic and penetrating disease have declined. We examined temporal trends in complication prevalence among emergency CD admissions over 10 years at an Australian tertiary centre.

Method: A retrospective study of emergency CD admissions between July 2014 and June 2024 was performed using an SQL-derived hospital administrative cost database. Admissions were limited to gastroenterology, surgical, and short-stay units. Complications were grouped using ICD-10-AM codes into four domains: structural (obstruction, abscess, fistula), nutritional/metabolic (malnutrition, anaemia, dehydration/electrolyte disturbance), acute systemic (sepsis, peritonitis, acute kidney injury, hypotension), and extra-intestinal (arthropathy, dermatological, ocular, hepatobiliary). Temporal trends were analysed using logistic generalised estimating equation models, accounting for repeated admissions.

Results: There were 710 admissions among 447 patients (48.7% female, median age 41 years). The proportion with at least one complication rose from 58.1% (25/43) in 2014–15 to 70.9% (73/103) in 2023–24, demonstrating a rising burden of complex emergency presentations.

Structural complications rose from 8 admissions in 2014–15 to 42 in 2023–24, a fivefold increase. Intestinal obstruction was the most prevalent structural diagnosis (n=146), making fibrostenotic disease the dominant structural driver of emergency admissions. Among penetrating complications, perianal disease predominated: 77% of abscesses were perianal (48/62) and 65% of fistulae were perianal (24/37), with intra-abdominal abscesses (n=14) and internal fistulae (n=13) less common.

Nutritional and metabolic complications rose from 19 admissions in 2014–15 to 40 in 2023–24. Acute systemic complications fluctuated without a directional trend (range 1–14 annually; p=0.80), and extra-intestinal complications remained consistently low.

Conclusion: Emergency CD admissions are increasingly complication-affected, driven by a fivefold rise in structural complications. This suggests progression of fibrostenotic and penetrating phenotypes despite available advanced therapies. Earlier identification and intervention in high-risk patients remain a key therapeutic priority.

#76

Intestinal Obstruction as a Major Driver of Inpatient Costs in Emergency Crohn's Disease Admissions: A 10-Year Retrospective Cohort Study

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Background: Despite increasing use of advanced therapies, hospitalisation for Crohn's disease (CD) remains a burden on healthcare expenditure. The contribution of CD complications to inpatient costs

is poorly characterised. We evaluated inpatient costs associated with intestinal obstruction in stricturing CD.

Method: A retrospective cohort study of emergency CD admissions between July 2014 and June 2024 was performed at a tertiary Australian centre using a hospital administrative cost database. Admissions were limited to gastroenterology, surgical, and short-stay units. ICD-10-AM codes identified complication phenotypes: structural (obstruction, abscess, fistula), nutritional/metabolic, acute systemic (sepsis/peritonitis, acute kidney injury, hypotension), and extraintestinal complications (arthropathy, dermatological, ocular, hepatobiliary). The primary outcome was admission cost, which was analysed using Gamma regression with cluster-robust standard errors, adjusting for age, sex, and financial year.

Results: There were 710 admissions from 447 patients; 48.7% female, median age 41 (IQR 29–54) years. Median costs increased stepwise with complication burden from AUD\$6,741 in the absence of complications, to AUD\$11,085 with one complication domain (259 admissions), AUD\$17,748 with two (298 admissions), and AUD\$55,574 with ≥ three (153 admissions) (p<0.001).

Structural complications were present in 235 admissions, most commonly obstruction (n=146), followed by abscess (n=62) and fistula (n=37), with some admissions having more than one structural complication type. Median admission costs were AUD\$11,304, AUD\$14,656, and AUD\$14,523 respectively. On multivariable analysis, abscess and fistula were each associated with approximately doubled admission costs (cost ratios 1.95 and 2.04, respectively), while obstruction was associated with a 30% increase (cost ratio 1.30, 95% CI 1.02–1.66).

Conclusion: Emergency CD admissions demonstrate stepwise increases in expenditure with complication burden. Although penetrating complications incur higher per-admission costs, intestinal obstruction is the most common structural complication and a major contributor to inpatient costs. Fibrostenotic CD represents a priority target for strategies to reduce inpatient costs.

#77

Trends in Emergency Crohn's Disease Admissions, Costs, and Length of Stay: A 10-Year Retrospective Cohort Study

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Background: Despite increasing use of advanced therapies in Crohn's disease (CD), the impact on acute healthcare utilisation and costs remains unclear. We examined temporal trends in emergency CD-related admissions, length of stay (LOS), and hospital costs over 10 years at an Australian tertiary centre.

Method: A retrospective review of emergency CD-related admissions was performed across the 2014–15 to 2023–24 financial years, restricted to gastroenterology, surgical, and short-stay units. Costs were derived from itemised episode-level data and inflation-adjusted using Australian Consumer Price Index values to 2023–24 dollars. Gamma generalised linear models with patient-clustered robust standard errors accounted for repeated admissions. Annual admissions, LOS, inflation-adjusted costs, and cost components were analysed.

Results: There were 710 admissions among 447 patients (48.7% female, median age 41 years). Admissions increased more than twofold, from 43 in 2014–15 to 103 in 2023–24. Of 447 patients, 303 (68%) had one admission; 144 (32%) had two or more, including one patient with 10.

Median inflation-adjusted admission costs were highest in 2021–22 (AUD\$16,420) and 2022–23 (\$AUD14,392), declining to AUD\$11,345 in 2023–24. Total inflation-adjusted costs rose from AUD\$443,756 in 2014–15 to AUD\$1,585,445 in 2023–24, a greater than threefold increase.

Nursing and medical non-surgical costs were the largest cost contributors. Median LOS remained stable at 3–4 days throughout the study period. COVID-related costs peaked in 2022–23 and resolved by 2023–24. Adjusted cost per admission day was significantly higher in 2021–22 and 2022–23 (cost ratio 1.36, 95% CI 1.25–1.48, $p < 0.001$), indicating greater care intensity rather than prolonged admission.

Conclusions: Emergency CD admissions and hospital costs increased substantially over 10 years despite stable LOS, reflecting rising care intensity rather than longer admissions. These findings highlight a growing inpatient economic burden despite increasing access to advanced therapies.

MENTAL HEALTH

#4

Nurses need care too: Shining a light on Mental Health Nurses' daily workplace challenges

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Northern Health - Mental Health Nursing Division

Background: Mental health is a critical concern for both patients and healthcare providers. Mental Health Nursing is internationally recognized as a highly demanding and stressful profession having direct exposure to violence and aggression. Despite this, the well-being of mental health nurses (MHNs) is often overlooked. A significant proportion of hospital based MHNs suffer

from depression, anxiety, psychological distress, sleep disturbances, compassion fatigue and burnouts. This review examines the psychological impact of workplace challenges on MHNs and explores strategies to enhance their well-being.

Method: A systematic review was undertaken from 17 relevant peer-reviewed research articles identified through various data bases including Pub-Med, Medline & CINAHL. PRISMA was used to refine the search. Two reviewers were selected for data synthesis and analysis.

Results: The major challenges faced by MHNs include- verbal and physical abuse, emotionally charged situations, short staffing and poor skill mix. Less studied but highly impactful challenges include- exposure to patient suicides, personal threats, and ethical/moral dilemmas. These challenges adversely affect the MHN's Professional Quality of Life (ProQOL) and, in turn, compromise the quality of care provided.

Conclusion: Improving MHN's well-being needs a systemic approach that requires coordinated efforts at both individual and organisational levels. Effective strategies such as mind-fulness, peer support, workload management, debriefing sessions, resilience programs, clinical supervision, and employee assisted trainings can be integrated into clinical practice. Prioritizing the mental health of nurses benefits not only the workforce but also the individuals they serve.

#16

Improving collaborative care planning with consumers

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NH Division & Department:

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Background: An audit of care plans on an Older Adult Mental Health Inpatient Unit (OAMHIPU) found little collaboration occurring with consumers, despite care plans being intended to identify goals and actions with the consumer in a collaborative manner. There is some research on collaborative care planning in mental health units but very few studies related to older adult mental health IPUs specifically. The aim of this study was to improve collaborative care planning practices with consumers on an OAMHIPU through an education intervention.

Method: This study used a quantitative pre-post-intervention design to evaluate the effectiveness of an education intervention for nurses in improving the quality of collaborative care planning with consumers. As no validated tool existed to assess collaboration in care planning, a 10-item checklist was developed from barriers and facilitators to collaboration identified in the literature. Retrospective data was collected on the quality-of-care plans three months pre-(n=58) and three-months post-intervention (n=52) and were compared using a Chi-square test.

Results: Pre-intervention, no care plans were considered collaborative and only 5% involved the consumer in their creation. Following the intervention, 9 out of the 10 criteria showed statistically significant improvement ($p<0.05$), and 73% of care plans involved the consumer in their creation. However, only 4% of care plans met all criteria required for collaboration due to the criteria, 'reviewed weekly by nurse and consumer', rarely being met in 96%.

Conclusion: Whilst an education intervention improved many aspects of collaborative care planning on the unit, further work is needed to embed consumer collaboration into practice. The finding that reviewing the care weekly by nurse with consumer remained largely unmet despite broad improvement suggest a new person-centred care plan template, rather than education alone, may be required. The findings from this study may inform similar quality improvement efforts on other OAMHIPUs

#24

Feasibility Trial of Acceptance and Commitment Workplace Training in Australian Healthcare Workers: Preliminary Results

Authors:

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Background: Healthcare workers are at high risk of poor wellbeing and burnout, which can compromise patient safety. As Australian healthcare organisations are responsible for patient safety and required to manage psychosocial hazards, there is growing demand for secondary prevention initiatives supporting workforce wellbeing.

This paper present the implementation and evaluation of the Acceptance and Commitment Workplace Training program. While international studies have shown improvements in healthcare workers' mental health, this is the first evaluation of the program within Australian health services, offering an innovative model for addressing psychosocial risk and workforce wellbeing. Objectives were to: 1) assess recruitment and retention rates (primary outcome); 2) evaluate acceptability (secondary outcome); 3) estimate changes in wellbeing, burnout, psychological flexibility, sleep, and perceptions of organisational practice ACTRN12625001330437.

Method: A prospective, longitudinal, multi-centre, cohort feasibility design is used. Healthcare workers enrolled in the program across four public health services in

Melbourne, Victoria, are invited to participate. Validated self-report questionnaires are administered online pre-group, post-group, and at 3 month-follow-up, alongside feasibility and acceptability indicators.

Results: Data collection began in February 2025 and continues for 18 months. Of 11 completed groups, 115 healthcare workers enrolled, 58 consented to the study, 60 completed pre-group measures and 29 completed post-group measures. Descriptive statistics, exploratory analyses, and effect size estimates will examine outcomes and inform decisions about progression to a future trial. Findings will also inform program refinement. Preliminary results will be presented.

Conclusion: If feasible, the program may offer a scalable model for implementing Acceptance and Commitment Therapy informed workforce wellbeing initiatives aligned with contemporary psychosocial governance in Australian public healthcare settings.

#50

Quality Assurance Evaluation of a Multidisciplinary Exercise Program in an Older Adult Mental Health Unit

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Background: Older adults admitted to inpatient mental health units are at increased risk of falls due to advanced age, psychotropic medication use, physical deconditioning and reduced physical activity. Despite growing evidence supporting exercise to improve physical and mental health, structured physiotherapy-led exercise programs are uncommon in older adult inpatient mental health settings. This evaluation examined the feasibility, safety,

patient-reported outcomes and ward-level falls following implementation of a multidisciplinary exercise program.

Method: A weekly physiotherapist-led multidisciplinary exercise program was delivered over six months (August 2025–January 2026) in the Broadmeadows Older Adult Mental Health Unit. Consumers aged ≥ 65 years with severe mental illness participated in supervised exercise sessions led by a physiotherapist and supported by occupational therapists, psychologists, social workers and nursing staff. The program incorporated walking, strength, balance, functional and interactive balloon exercises. Following each exercise session, consumers were invited to complete a feedback survey assessing pre- and post-session mood, exercise enjoyment, perceived safety, overall satisfaction, future motivation to participate in exercise, and qualitative feedback. Ward-level falls were descriptively reviewed before and during implementation.

Results: Of the 54 consumers who attended the program, 28 completed the feedback surveys (52% completion rate). Median pre-session mood score was 0 (interquartile range [IQR] -1 to 0.5) compared with 2.5 (IQR 1–3) post-session. Median enjoyment and satisfaction scores were both 5 (IQR 4–5). Twenty-seven of 28 participants (96.4%) indicated they would participate again. No falls or serious adverse events occurred during exercise sessions. Further analysis of ward-level falls is underway, with falls outcomes to be presented at the conference.

Conclusion: A multidisciplinary exercise program was feasible, safe and well accepted within an older adult inpatient mental health unit. Positive patient-reported outcomes support further evaluation of structured exercise programs in older adult mental health settings.

#58

Sleep, wellbeing and psychosis: understanding psychological processes for people with psychosis

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Background: Sleep disturbance is highly prevalent, and associated with poorer outcomes in people with psychotic disorders. This study investigated the psychological factors associated with sleep quality, paranoia, and wellbeing in community mental health care consumers with non-affective psychosis.

Method: This cross-sectional study used a self-report survey to recruit adults aged 18 to 72 years with a diagnosed non-affective psychotic disorder receiving care through Northern Health Community Mental Health . The final sample comprised 69 participants (mean age = 44.3 years, SD = 12.2, range = 21 to 72 years), most identified as male (60.9%), and were born in Australia (68.1%). Participants completed measures of sleep quality, insomnia, wellbeing, paranoid thinking, depression and anxiety symptoms, circadian preference, cognitive fusion, psychological inflexibility, repetitive negative thinking, and dissociation.

Results: Clinically significant poor sleep quality was reported by 60.3% of participants, while 58.0% reported at least subthreshold insomnia and 18.8% may meet criteria for clinical insomnia. Elevated depressive and anxiety symptoms were reported by 31.9%, 46.4% reported frequent persecutory beliefs, and 11.6% described significant dissociative experiences. Poorer wellbeing was predicted by cognitive fusion, insomnia symptoms, and circadian preference ($R^2 = .65$, $p < .001$). Insomnia symptoms were predicted by clinical perfectionism,

cognitive fusion, and repetitive negative thinking ($R^2 = .39$, $p < .001$). Persecutory thinking was predicted by poor sleep, depression and anxiety symptoms, dissociative experiences, psychological inflexibility ($R^2 = .37$, $p < .001$), with dissociative experiences the strongest unique predictor (Sleep disturbance is highly prevalent, and associated with poorer outcomes in people with psychotic disorders. This study investigated the psychological factors associated with sleep quality, paranoia, and wellbeing in community mental health care consumers with non-affective psychosis.

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Conclusion: Sleep disturbance was common and was associated with poorer wellbeing and greater persecutory thinking. Dissociative experiences emerged as the strongest predictor of persecutory thinking, suggesting an important mechanism linking trauma-related processes to paranoid ideation. Findings suggest that psychological interventions targeting sleep, dissociation, and inflexible responses to negative thinking may improve outcomes for people with non-affective psychosis.

#67

The impact of COVID-19 on the trends in bodily restraint practices in of Northern Hospital emergency department

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Background: Bodily restraints remain a critical ethical and clinical concern in psychiatric practice. The COVID-19 pandemic disrupted service delivery and may have influenced the use of restrictive interventions, especially in the emergency department.

Method: A retrospective study analysed electronic records of Emergency Mental Health presentations over three-month periods (August–October) in 2018, 2020, and 2023. Descriptive analyses used SPSS version 24. Ethical approval was obtained from Northern Health Human Research Ethics Committee.

Results: A total of 180 restraints (60 in each period) were assessed. Restraint rate more than doubled during the pandemic (4.38% (2018) vs 11.20% (2020) and partially recovered to 5.71% in 2023. Mean restraint duration rose from 195.98 to 311.44 minutes during COVID-19 before decreasing to 170.07 minutes post-pandemic. The mean waiting-time before restraint use increased from 206.52 minutes in 2018 to 476.02 minutes in 2023, reflecting greater de-escalation use (39.5% to 77.3%). However, repeated restraints rose from 9.3% to 29.5%. Restrained patients were predominantly male (72.1%–86.4% in 2023), unemployed (60–70%). Schizophrenia remained the commonest diagnosis (41.9–43%), followed by schizoaffective disorder (31.8%). EMH assessments decreased by 21.4% between 2018 and 2023. Indigenous representation increased from 4.9% to 16.7% (2018 vs 2023), while documentation quality remained inconsistent.

Conclusion: COVID-19 significantly influenced restraint practices. While restraint duration and de-escalation practices improved post-pandemic, overall prevalence remains elevated. Findings underscore the need for continued restraint-reduction strategies and culturally safe care

#68

Risk factors related to bodily restraint duration in the Northern Health emergency department

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NH Division and Department:

Mental Health Division

Background: Bodily restraint is a critical but ethically sensitive practice in emergency psychiatry, yet factors predicting its use and duration remain underexplored.

Method: A retrospective study of 189 psychiatric patients of the Emergency Mental Health (EMH) of Northern Hospital over nine-month periods (August–October) in 2018, 2020, and 2023 was conducted using de-identified electronic records. Variables analysed included demographic factors, clinical and systematic factors and clinical timelines such as time to EMH clinician review, medication administration, and waiting duration before restraint. Correlations and group comparisons were assessed using Pearson coefficients, t-tests, and ANOVA.

Results: Longer waiting-time before restraint application was associated with prolonged restraint duration ($r = 0.351$, $p < 0.01$). Delayed EMH clinician attendance correlated with longer restraints ($r = 0.243$, $p = 0.00$). Indigenous patients experienced almost double the restraint time compared with non-Indigenous patients (405 vs 213 min; $p = 0.07$). Stable housing was paradoxically associated with longer restraints ($p = 0.00$). Diagnoses categorised as mood and “other” disorders showed longer restraint durations than psychotic disorders ($p = 0.05$). Longer initial restraint predicted further restraint episodes during the same admission ($p = 0.01$). No significant associations were found for age, sex, forensic history, medication compliance, substance use, past history of restraints, neurodevelopmental or personality disorders.

Conclusion: Restraint duration is influenced by systemic and cultural factors more than individual demographics. Timely assessment, culturally responsive care, and early de-escalation may reduce restraint use and promote safer, patient-centred emergency mental health care.

#70

Nurse Practitioner led hepatitis c treatment in mental health inpatient units

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Mental Health Division

Background: People receiving inpatient mental health care experience disproportionately high rates of hepatitis C but may encounter substantial barriers to screening, treatment and follow-up. Although nurse practitioners can independently assess and prescribe hepatitis C treatment in Australia, evidence describing nurse practitioner-led treatment within acute mental health inpatient settings is limited. This study aimed to describe a nurse practitioner-led hepatitis C treatment pathway and examine treatment outcomes, enablers and barriers within a metropolitan mental health service.

Method: This study incorporated a retrospective medical record audit and a descriptive review of the treatment pathway. The sample comprised 12 consumers who received hepatitis C treatment from a mental health nurse practitioner at Northern Health between 2021 and 2025 and had complete follow-up data. Demographic, clinical staging, treatment and viral clearance data were analysed descriptively, alongside narrative identification of service-level enablers and barriers.

Results: Of the 12 consumers, nine (75.00%) were male, seven (58.33%) had schizophrenia and four (33.33%) had schizoaffective disorder. Ten consumers (83.33%) received an eight-week course of glecaprevir/pibrentasvir, while two (16.67%) received a 12-week course of sofosbuvir/velpatasvir. Eleven consumers (91.67%) achieved a non-detectable hepatitis C viral load following treatment; one consumer experienced treatment failure and was referred for specialist management. Inpatient

assessment, access to investigations, therapeutic rapport and provision of medication at discharge supported treatment, while post-discharge contact difficulties, itinerancy, short admissions and medication funding arrangements created barriers.

Conclusion: A nurse practitioner-led pathway can facilitate hepatitis C assessment, treatment initiation and viral clearance among consumers in acute mental health inpatient care. The findings support further evaluation and expansion of integrated models, while acknowledging the limited generalisability of this small, single-site study.

SUB-ACUTE

#38

Understanding the Characteristics of Northern Health Support at Home Participants: An Observational Descriptive Study

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Background: The Support at Home (SAH) program has reformed Australia's community aged care system, introducing new funding classifications, co-contributions and a capped care management funding model. This study aimed to describe the Northern Health Support at Home (NHSAH) participant cohort during early implementation of SAH and to explore associations between participant characteristics, service utilisation, hospital admission and care management activity.

Method: Routinely collected clinical and administrative data from NHSAH participants were analysed to describe the cohort's demographic, psychosocial and health characteristics. Care management activity, hospital admissions, funding levels and expenditure across SAH service categories were also examined, using descriptive analyses. Further multivariable linear regression modelling will examine associations between participant characteristics and care management activity.

Results: The mean age of the cohort (n=266) was 83.4 years, 64.7% of whom were female. Most (86.8%) were grandfathered Home Care Package (HCP) participants, while the remaining 13.2 % of participants entered the program under SAH. HCP funding level two (32%), level three (31.6%), and level four (31.6%) predominated, however 14.7% of participants were waiting their full assessed funding. Over half (51.15%) were from a culturally and linguistically diverse background, with 28.9% needing an interpreter. Almost half (48.1%) had significant medical complexity, while 46.6% presented with at least one significant psychosocial complexity; 26.3% had a dementia diagnosis, and 47.7% were at high falls risk. During the study period, 16.5% of participants had a hospital admission. Median recorded care management activity was 7.1 hours per participant during the study period (mean 8.9 hours; range 0–51.3 hours). Further analyses underway.

Conclusion: This study described SAH participants receiving services during early implementation of the SAH program and provides a baseline for future longitudinal analyses examining whether participant complexity influences care management activity and whether the SAH model affects patterns of service utilisation and expenditure.

#69

Does Patient Watch reduce hospital presentations and admissions? Programme Characteristics and Impact on Hospital Resource Utilisation

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Background: Background Individuals at risk of frequent hospitalisation often present with complex health and social challenges, including multimorbidity, frailty, and limited access to care. Peer health navigation programmes have emerged as a promising strategy to support these patients, improve continuity of care, and reduce preventable hospital use.

To describe the baseline characteristics of patients enrolled in the Northern Patient Watch (NPW) programme, and to assess its impact on hospital resource utilisation compared to matched controls.

Method: Two complementary studies were conducted. An observational study described 650 patients enrolled between November 2020 and October 2024, including demographics, health-related quality of life (EQ-5D-5L), and frailty (Rockwood Clinical Frailty Scale). A pragmatic propensity score matching study (Stata v18.0, nearest-neighbour matching) compared 273 matched pairs of enrolees and patients who declined participation over 3-, 6-, and 12-month follow-up.

Results: Enrolees were predominantly older adults (mean age 70 years, 56% female), with two-thirds (65%) classified as vulnerable or frail (median Rockwood score 4). The mean EQ-5D-5L index was 0.72 (SD 0.25) and mean EQ-VAS 58.9 (SD 21.3), indicating moderate quality of life, with common difficulties in mobility, pain, and mental health. One-quarter (27%) lived alone and 29% spoke a language other than English at home. In the matched analysis, enrolees had significantly fewer admissions at all time points, halving by 12 months (median 1.00 vs 2.00, $p = 0.007$). Bed-days were consistently lower, greatest at 12 months (median 2.00 vs 4.00, $p < 0.001$; mean 9.48 vs 14.08, $p = 0.021$). Outpatient non-attendance was significantly reduced (12 months: 44.6% vs 55.0%, $p = 0.023$). No significant difference in emergency presentations was observed ($p = 0.73$).

Conclusions: Embedding peer health navigators within a clinically supervised team can meaningfully reduce hospital admissions and bed-days and improve outpatient engagement, particularly for older adults with moderate health challenges facing a tipping point before further deterioration.

SURGERY

#1

Complication Profile of Uncemented Femoral Component Revision Total Hip Arthroplasty: A Systematic Review

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Background: Cementless, diaphyseal fitting femoral stems are increasingly used in femoral revision total hip arthroplasty (THA). These implants achieve fixation via distal press fit, bypassing unpredictable proximal bone stock. Despite growing adoption, the full spectrum and incidence of complications remain incompletely characterised.

Method: A PRISMA guided review of PubMed and Ovid MEDLINE identified studies reporting surgical complications after uncemented diaphyseal fitting stems (modular and nonmodular) used in revision femoral THAs. Five studies included registry derived data. Extracted variables included demographics, surgical approach, and intraoperative and postoperative complications.

Results: Thirty nine studies (34 retrospective, 5 prospective) reported 6,545 patients undergoing 6,768 uncemented femoral revision THAs. Among 36 cohorts reporting sex, 52.36% (2,975) were female; mean age was 66 years (22–98) with mean follow up of 8.45 years (0.18–30).

The overall complication rate was 20.51%. Primary indications were aseptic loosening (67.78%),

periprosthetic fracture (15.43%), prosthetic joint infection (10.59%), dislocation/instability (1.84%), mechanical failure (1.47%), and others (2.89%). Revision was most often undertaken for proximal femoral bone loss, with Paprosky type III (47.6%) and type II (30.7%) predominating; the posterolateral approach was most common (60%). Intraoperative complications were led by fractures and perforations (6.84%). Postoperative complications included subsidence >5 mm (4.85%), infection (2.81%), dislocation/instability (2.75%), aseptic loosening (2.42%), and mechanical failure (0.75%). There were 347 femoral re revisions (5.13%), most commonly for aseptic loosening (30.79%) and infection (30.46%).

Conclusion: Despite heterogeneity in reporting, about one in five patients experience an intra or postoperative complication, with fracture most common. Aseptic loosening is the leading cause of re-revision.

#2

Acetabular Polar Gaps After Cementless Total Hip Arthroplasty: Incidence, Natural History, and Clinical Significance

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Background: Acetabular polar gaps are commonly observed on early postoperative radiographs following cementless total hip arthroplasty (THA), although their incidence and clinical significance remain uncertain. This systematic review aimed to determine the pooled incidence, natural history, and clinical relevance of acetabular polar gaps following cementless THA.

Method: A systematic review was performed according to PRISMA guidelines. MEDLINE and Embase were searched from inception to April 2026, supplemented by citation screening. Studies reporting the incidence or natural history of postoperative acetabular polar/apical gaps following primary cementless THA were included. The primary outcome was the incidence of zone II polar gaps identified within 6 weeks postoperatively. Meta-analysis of proportions was performed using a random-effects model. Secondary outcomes, including natural history and revision outcomes, were synthesised narratively.

Results: Thirty-six studies comprising 6,769 hips met inclusion criteria. Twenty-two cohorts (3,405 hips) contributed to the primary meta-analysis. The pooled incidence of early postoperative polar gaps was 16.7% (95% CI 12.4–22.8). Expanded-definition sensitivity analysis demonstrated a pooled incidence of 22.0% (95% CI 16.0–28.4). Most polar gaps demonstrated spontaneous resolution, commonly within 6–12 months, with persistent gaps typically non-progressive. Limited available evidence demonstrated no consistent association between initial polar gaps and aseptic loosening, revision, or inferior clinical outcomes.

Conclusion: Acetabular polar gaps are a common radiographic finding following cementless THA and most commonly follow a benign, self-resolving course. Current evidence does not demonstrate a consistent association with implant failure or inferior clinical outcomes.

17

Diagnostic and predictive utility of peritoneal tumour DNA in gastroesophageal cancer: A prospective multicenter study

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Background: Gastric and gastroesophageal cancers (G/GEC) commonly metastasise to the peritoneum. Accurate peritoneal staging is critical for treatment planning, however staging PET, CT, and peritoneal cytology have limited sensitivity for detecting peritoneal micro-metastases. Peritoneal tumour DNA (ptDNA) may identify occult peritoneal disease missed by conventional staging. We developed a tumour-informed whole-genome sequencing (WGS) platform to detect ptDNA and evaluated its diagnostic and prognostic utility in curative-intent G/GEC.

Method: In this Australian multicentre prospective cohort study, patients undergoing curative-intent treatment for G/GEC provided tumour biopsies, blood, and peritoneal lavage fluid at staging laparoscopy and, after neoadjuvant therapy, at surgery. Tumour-informed WGS was used to detect ptDNA, which was correlated with disease-free survival (DFS), peritoneal recurrence-free survival (pRFS), non-peritoneal recurrence-free survival (npRFS), and overall survival (OS) using multivariable Cox regression. Diagnostic performance was assessed by comparing true-negative patients (>2 years disease-free after surgery alone) with an independent cohort of true-positive patients with macroscopic or cytology-positive peritoneal metastases.

Results: ptDNA was detected in 28/92 (30.4%) non-metastatic patients. After a median follow-up of 17 months, 12 (13.0%) developed peritoneal and 10 (10.9%) non-peritoneal recurrences. ptDNA positivity independently predicted poorer pRFS (HR 26.74, 95% CI 3.94–181.66), DFS (HR 4.51, 95% CI 1.77–11.47), and OS (HR 6.65, 95% CI 1.72–25.76), but not npRFS (HR 0.87, 95% CI 0.16–4.78). Following neoadjuvant therapy, 9/15 (60%) patients converted from ptDNA-positive to ptDNA-negative. Persistent ptDNA positivity was associated with significantly worse pRFS (3/6 recurrences; HR 45.4, 95% CI 3.5–595.2) than ptDNA negativity (0/25 recurrences). In the validation cohort, ptDNA achieved 100% sensitivity, specificity, positive predictive value, negative predictive value, and overall diagnostic accuracy.

Conclusions: Tumour-informed WGS-based ptDNA accurately detects peritoneal metastases and predicts peritoneal recurrence after curative-intent treatment, supporting its potential to personalize clinical management.

#22

Impact of Obesity in the Healthcare Utilisation of Elective Ventral Hernia Repairs.

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Background: Obesity is a well-established risk factor for adverse postoperative outcomes in ventral hernia repair (VHR). However, whether obesity independently drives poor outcomes or merely reflects hernia complexity remains unclear. This study aimed to quantify the independent effect of obesity on postoperative healthcare utilisation after elective VHR and secondarily explore other patient or hernia-related factors that may influence postoperative outcomes.

Method: A retrospective cohort study was conducted in adults undergoing elective VHR between January 2024 and December 2025 and were stratified by body mass index (BMI) according to the World Health Organisation (WHO) classification. Outcomes included total operative time, length of stay (LOS), postoperative complications. Univariate and multivariable regression models were employed.

Results: Of 105 patients, compared to other BMI groups, univariate analysis revealed Class II-III obesity (BMI $\geq$ 35 kg/m²; n = 34) was significantly associated with longer total operative time (MR 1.45, p < 0.001), longer LOS (IRR 1.79, p < 0.001), and greater complication severity on Clavien Dindo scoring (p = 0.05). On multivariable analysis, hernia defect size emerged as the strongest independent predictor of total operative time (MR 1.10, p < 0.001), LOS (IRR 1.14, p < 0.001), and in-hospital complications (IR 1.28, p < 0.036).

Conclusion: Class II-III obesity is associated with greater resource utilisation and complication severity, and multivariable analysis reveals these effects are further mediated by case and hernia complexity. Although obesity is an important factor influencing elective VHR, a more holistic approach addressing patient and hernia complexity should be accounted for in guiding risk stratification and appropriate perioperative planning.

#26

Impact of "Sip 'til Send" on pre-operative fasting times and incidence of regurgitation and aspiration

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Background: Fasting guidelines for anaesthesia generally recommend fasting for 2 hours from clear liquids and 6 hours from solids to minimise the risk of regurgitation and aspiration. Despite these guidelines, many patients experience prolonged fasting, which is associated with discomfort and negative patient outcomes. Sip 'til Send (STS) policies, which aim to reduce prolonged liquid fasting, are becoming increasingly popular. This study aimed to assess the impact of an STS policy on clear liquid fasting times and the incidence of regurgitation and aspiration in emergency surgical patients at Northern Health.

Method: A retrospective between-groups observational study was conducted to compare clear liquid fasting times and the incidence of regurgitation and aspiration amongst 730 adult emergency surgical patients at the Northern Hospital Epping campus, pre- (n=366) and post- (n=364) implementation of STS. Fasting times were

compared with Australian and New Zealand College of Anaesthetists (ANZCA) guidelines for clear liquids and solids. Subgroup analysis compared clear liquid fasting times across surgical units and theatre sessions.

Results: Mean clear liquid fasting times improved from 9.89 hours pre-STS to 6.60 hours post-STS, representing an improvement of 3.29 hours ($p < 0.001$). The percentage of patients fasting from clear liquids for < 2 hours improved from 3.6% pre-STS to 22.3% post-STS ($p < 0.001$). There were no aspiration events in either group. There were two regurgitation events in the post-STS group, which did not represent a statistically significant difference. There were no statistically significant differences in clear liquid fasting times between surgical units or theatre sessions. However, solid fasting times differed across theatre sessions.

Conclusion: Implementation of an STS policy resulted in significantly shorter clear liquid fasting times without an increase in aspiration events among adult patients undergoing emergency surgery. Ongoing staff and patient education measures may further improve fasting times.

#31

Surgeon ergonomics in robotic and laparoscopic bariatric surgery: A systematic review

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Background: As bariatric surgery volumes continue to rise globally, concerns regarding occupational musculoskeletal injury and surgeon wellbeing have become increasingly prominent. Minimally invasive surgery is associated with substantial ergonomic strain; however, the comparative risks of bariatric robotic and laparoscopic approaches remain incompletely characterised. This review aimed to synthesise qualitative and quantitative evidence on ergonomic risks in robotic and laparoscopic bariatric surgery.

Method: A mixed-methods systematic review without meta-analysis was conducted in accordance with PRISMA guidelines and a prospectively registered protocol (PROSPERO ID: CRD420251109094). Medline, Embase, Cochrane, CINAHL, Scopus, and Web of Science were searched from database inception to 02/08/2025.

Results: Of 5,849 records identified, 181 full-text articles were assessed, with 11 studies included, collectively representing at least 183 bariatric surgeons and 307 bariatric procedures. Objective ergonomic assessments demonstrated higher overall ergonomic risk and greater upper-extremity burden during laparoscopic bariatric surgery compared with robotic surgery. Robotic surgery was associated with region-specific trade-offs, including increased wrist loading and static trunk demands, suggesting redistribution rather than elimination of biomechanical strain. Subjective ergonomic outcomes assessed using tools such as the National Aeronautics and Space Administration Task Load Index (NASA-TLX) were heterogeneous. Cross-sectional studies consistently reported a high prevalence of work-related musculoskeletal pain among bariatric surgeons (up to 66%), most commonly affecting the back, neck, and shoulders. Qualitative findings highlighted limited ergonomics training and impacts on fatigue, practice sustainability, and career longevity.

Conclusion: To our knowledge, this is the first systematic review to specifically synthesise surgeon ergonomics in bariatric surgery. Ergonomic burden in bariatric surgery is substantial and multifactorial. Robotic bariatric surgery demonstrates a more favourable objective ergonomic

profile, particularly with respect to upper-extremity loading. Interpretation is limited by heterogeneity in study design and ergonomic measures. Future research should prioritise targeted ergonomic interventions and structured training to promote surgeon wellbeing.

#39

Patient-Reported Outcomes Following Chest-Wall Perforator Flap Reconstruction in Breast-Conserving Surgery: Systematic Review

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Background: Breast-conserving surgery (BCS), combined with adjuvant radiotherapy, remains the standard treatment for early-stage breast cancer. Although BCS preserves native breast tissue, significant tissue excision may lead to aesthetic deformities. Chest wall perforator flaps (CWPFs) emerge as an increasingly popular oncoplastic breast reconstructive option to address these defects. While oncological safety and surgical complication rates have been extensively studied, patient-reported outcome measures (PROMs) following CWPF reconstruction remain poorly characterised. This review aims to evaluate the current literature regarding PROMs following CWPF reconstruction in patients undergoing partial breast reconstruction.

Method: A systematic search of OVID Medline database was performed until April 2026. Studies were identified

using predefined search terms, and studies were screened by two authors according to predetermined inclusion and exclusion criteria. Extracted data related to study characteristics, reconstructive techniques, PROMs, and reported patient outcomes.

Results: Twenty-five studies met inclusion criteria and were included for analysis. Among 2,379 total patients identified, 1,193 underwent CWPF reconstruction and formed the primary study population. Considerable heterogeneity existed in PROM assessment methodology, with BREAST-Q and modified BREAST-Q instruments representing the most frequently utilised validated tools. Overall, patient satisfaction and physical wellbeing scores were generally favourable across studies, whereas psychosocial and sexual wellbeing outcomes demonstrated greater variability. Comparative studies showed minimal significant differences between individual flap subtypes, and most longitudinal studies demonstrated no statistically significant changes between preoperative and postoperative PROM scores.

Conclusion: Current evidence suggests that CWPF reconstruction following BCS is associated with favourable patient satisfaction and acceptable quality-of-life. However, significant heterogeneity in PROM collection, limited sample sizes, and the predominance of retrospective study designs restrict direct comparison between studies. Larger prospective studies using standardised PROMs are required to better define long-term patient-centred outcomes.

#48

Evaluating the Appropriateness of Proton Pump Inhibitor Prescribing in General Medical Inpatients

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Background: Watch-and-Wait (W&W) enables organ preservation in rectal cancer patients with clinical complete response (cCR) after neoadjuvant therapy. However, cCR does not always correspond to pathological complete response (pCR), and endoscopy, digital rectal examination, magnetic resonance imaging and biopsy may not reliably distinguish fibrosis from residual tumour. Raman spectroscopy (RS) and near-infrared spectroscopy (NIRS) provide non-destructive biochemical assessment and may enable real-time endoscopic surveillance. This pilot assessed grid-based feasibility and cancer–non-cancer discrimination in fresh colorectal resection specimens.

Method: Adults undergoing elective colorectal cancer resection were recruited. Tumour and control regions identified by pathology were mapped using a 4 × 4 grid, with RS and NIRS spectra acquired from each indexed square. Spectra were correlated with grid-aligned histopathology and labelled as cancer or non-cancer. Overall, 480 RS spectra were acquired, with 464 classified, alongside 539 NIRS spectra. Partial least-squares discriminant analysis used modality-specific preprocessing and patient-grouped cross-validation. Exploratory late fusion combined predictions for shared patients.

Results: For cancer versus non-cancer classification, models included five RS patients, six NIRS patients and four shared patients for fusion. RS achieved an area under the receiver operating characteristic curve (AUC) of 0.83, 79.0% accuracy, 66.0% sensitivity and 91.0% specificity. NIRS achieved AUC 0.97, 91.5% accuracy, 93.1% sensitivity and 89.6% specificity. Weighted late fusion achieved AUC 0.94, 92.4% accuracy, 97.1% sensitivity and 88.3% specificity.

Conclusion: NIRS showed the strongest standalone discrimination between cancer and non-cancer tissue, while RS achieved high specificity; weighted fusion yielded the highest sensitivity in the shared-patient analysis. These proof-of-concept results support progression to the main study using co-registered RS, NIRS and histopathology in post-neoadjuvant rectal cancer specimens to distinguish residual cancer, fibrosis and normal tissue. This will establish patient-level evidence required before translation to a portable endoscopic platform for W&W surveillance.

#51

Clinical and equity-focused predictors of Hartmann's reversal: A 10 year retrospective audit at a culturally diverse Australian Health Service

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Background: Hartmann's procedure is a life-saving operation performed in both emergency and elective settings. However, reversal rates vary widely, influenced by patient comorbidities, disease indication, and system-level factors. This study aimed to assess clinical and equity-focused predictors of Hartmann's reversal over a ten-year period at a culturally diverse tertiary centre in Melbourne, Victoria.

Method: A retrospective cohort study was conducted including patients who underwent Hartmann's procedure between January 2013 and December 2022, with follow-up to December 2024. Data was extracted from electronic health records. Descriptive statistics and multivariable logistic regression were used to identify significant predictors of reversal within 24 months.

Results: 146 patients underwent Hartmann's procedure (88.4% emergency; mean age 68.5 years). Diverticular disease was the most common indication (n=73), followed by malignancy (36.7%); Stoma reversal was performed in 45 patients (30.8%), with diverticular disease showing the highest reversal rate. Median time to reversal was 362 days. Non-reversal was most commonly due to death (n=26) or palliation (n=21). Most patients resided in SEIFA quintile 1 (27.4%), followed closely by quintiles 2 and 3 (25.3% each). Interpreters were required in 15.1% of patients, of whom 10 underwent reversal; no significant difference in outcomes was seen between ESB and NESB groups. On multivariable analysis, ASA grade ≥ 3 , active smoking, and higher Charlson Comorbidity Index were independent predictors of non-reversal ($p < 0.01$, 0.02, and < 0.01 , respectively).

Conclusion: 30% of Hartmann's' procedures were reversed although many non-reversals occurred in the context of death or palliation. Reversal rates are more influenced by comorbidity burden and disease severity rather than equity-based factors. These findings support systematic early assessment of reversal candidacy, smoking cessation and prehabilitation, multidisciplinary optimisation of higher-risk patients, and a standardised pathway to ensure that medically suitable patients are reconsidered for restoration of intestinal continuity. Further evaluation should distinguish unavoidable non-reversal from potentially modifiable clinical and health-system barriers.

#52

Preoperative liquid fasting times and aspiration outcomes following Sip Til Send implementation: a post-implementation audit

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Background: Preoperative fasting guidelines exist to minimise the risk of aspiration, a rare but serious complication of anaesthesia. Fasting beyond these minimums confers no additional safety benefit and may cause thirst, discomfort, and metabolic disturbance. Sip Til Send (STS), endorsed by the Australian and New Zealand College of Anaesthetists (ANZCA) and Safer Care Victoria, permits clear fluids until transfer to theatre. A pre-implementation audit of 1,077 Northern Health patients found liquid fasting well in excess of guidelines, with emergency patients fasting longer than elective patients. We assessed liquid fasting duration and the incidence of regurgitation and aspiration following STS implementation.

Method: We audited 913 elective and emergency surgical patients across two Northern Health campuses in March 2025. Clear-fluid fasting durations were extracted from the electronic medical record and assessed against the ANZCA two-hour recommendation. Comparisons used the Mann-Whitney U, Kruskal-Wallis, and chi-squared tests.

Results: Overall median clear-fluid fasting time was 5.50 hours (interquartile range 2.95-9.40), with only 14.02% of patients (95% confidence interval 11.83-16.44) consuming clear fluids within two hours of anaesthesia

and 13.80% fasting beyond 12 hours. Fasting duration for liquids did not differ significantly between emergency and elective patients (median 5.54 versus 5.50 hours, $p = 0.07$), although more emergency patients consumed clear fluids within two hours (22.11% versus 8.26%, $p < 0.001$). This proportion was greatest on morning lists ($p = 0.002$). Two regurgitation events occurred (0.22%), both in emergency patients with fasting times of 0.50 and 2.95 hours, neither progressing to aspiration.

Conclusion: Liquid fasting times were modestly reduced following STS implementation, with the greatest reduction in emergency patients, who previously fasted longest. Most patients nonetheless continue to fast well in excess of ANZCA recommendations, suggesting that elective patients need clear information about liquid fasting before surgery and should be offered sips in preoperative areas before they are called to theatre.

#53

Risk Factors for Recurrence Following Incisional Hernia Repair: A Single-Centre Nested Case-Control Study

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Background: Incisional hernia recurrence remains a significant surgical challenge. However, existing evidence regarding risk factors for recurrence remains inconsistent. Further evidence is therefore required to improve risk stratification and inform pre-operative optimisation. This study aimed to identify independent risk factors associated with incisional hernia recurrence.

Method: A nested case-control study was conducted at Northern Health, Australia. All study patients underwent index incisional hernia repair between January 2015 and December 2020. The recurrence group was comprised of patients who required re-operation for recurrence following the index incisional hernia repair. Matched controls were selected from patients who remained recurrence-free following the index incisional hernia repair with a minimum five-year follow-up. Univariately significant variables and clinically relevant covariates selected a priori were entered into conditional multivariate logistic regression to identify independent predictors of recurrence after incisional hernia repair.

Results: 42 cases and 84 controls were included. Median time to recurrence was 27.2 months among the recurrence group. Patients from the recurrence group were more likely to have higher comorbidity burden (OR 1.27 per comorbidity, 95% CI 1.03–1.57, $p=0.03$) and hypertension (OR 3.35, 95% CI 1.33–8.47, $p=0.01$). Patients who underwent emergency incisional hernia repairs were more likely to develop recurrence (OR 5.37, 95% CI 1.39–20.82, $p=0.02$). Large hernia defects (>10 cm) were more prevalent in the recurrence group than the controls (16.7% vs 9.5%).

Conclusion: In a contemporary tertiary setting with evolving surgical techniques, patient-related factors and emergency presentations were independently associated with incisional hernia recurrence. Pre-operative optimisation of patient comorbidities may therefore represent an important recurrence prevention strategy in incisional hernia management.

#61

Optimising the suspected deep vein thrombosis pathway in orthopaedic inpatients

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Background: Orthopaedic inpatients are at increased risk of deep vein thrombosis (DVT) because of trauma, surgery and postoperative immobility. Delayed ultrasound assessment can prolong uncertainty regarding anticoagulation, mobilisation and discharge. This audit evaluated the timeliness and documentation of the suspected DVT pathway.

Method: A retrospective audit included 71 consecutive orthopaedic inpatients (January 2024 to June 2025) who underwent lower-limb duplex ultrasound for suspected DVT. Electronic medical records and radiology systems were reviewed for request-to-scan time, reporting time, result acknowledgement, DVT detection, and documentation of risk assessment and anticoagulation status.

Results: Request timestamps were available for 57/71 episodes. The median request-to-scan time was 15.4 hours, with 71.9% ($n=41/57$), 91.2% ($n=52/57$) and 96.5% ($n=55/57$) scanned within 24, 48 and 72 hours, respectively, and $n=2$ exceeding 72 hours. Median scan-to-report time was 1.25 hours. DVT was confirmed in 12.7% ($n=9/71$) of episodes (seven below-knee and two above-knee), no patient had a documented Wells score, and 88.6% ($n=62$) had a management decision documented within 24 hours after the scan.

Conclusion: Ultrasound acquisition and reporting were generally timely, but clinically important delays occurred in a small number of cases. A standardised orthopaedic DVT pathway incorporating structured risk assessment, clear interim anticoagulation plans and escalation of prolonged delays may improve patient safety and flow.

WOMEN'S AND CHILDREN'S

#19

SpO₂/FiO₂ Reference Ranges for Grading Respiratory Distress Syndrome in Moderate-Late Preterm Infants

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Background: Neonatal respiratory distress syndrome (RDS) severity is determined by clinician interpretation of chest radiographs (CXR), supported by clinical signs and blood gas analysis. The SpO₂/FiO₂ ratio (SFR) is an objective, non-invasive physiological marker that may improve the consistency of RDS severity assessment. We hypothesised that SFR reference ranges matched to CXR severity grades could support RDS severity assessment in moderate-late preterm infants.

Method: Infants in the Northern Hospital Neonatal Unit born at 32+0 to 36+6 weeks gestation and receiving non-invasive respiratory support ($n=252$) were retrospectively graded according to their CXR (mild, moderate or severe), average SFR, Clinical Assessment Score (0-12) and venous/capillary blood gas metrics of pH, pCO₂ and HCO₃⁻. SFR reference ranges were derived from the 50% interquartile ranges (IQRs) for CXR-defined severity grades. This involved characterisation of mild-moderate and moderate-severe ranges (IQR overlap) and expansion of upper (mild) and lower (severe) IQR thresholds to define non-overlapping categories, followed by assessment of accuracy.

Results: Derived SFR reference ranges classified mild RDS as >455 and severe RDS as ≤346, with intermediate values representing moderate RDS. SFR reference ranges had relatively high specificity (76.8% to 95.5%) and low

sensitivity (12.2% to 56.8%) across all severity categories with complete coverage of our patient cohort. Combining SFR reference ranges with the Clinical Assessment Score improved diagnostic performance across all severity grades.

Conclusion: SpO₂/FiO₂ reference ranges provide an objective, non-invasive adjunct for grading RDS severity in moderate-late preterm infants receiving non-invasive respiratory support. Although the reference ranges demonstrated high specificity but limited sensitivity when used alone, combining them with the Clinical Assessment Score improved diagnostic performance and may enhance the consistency of RDS severity assessment.

#20

Enteral-First Management of Neonatal Hypoglycaemia: A Retrospective Matched Cohort Study

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Background: Neonatal hypoglycaemia affects up to 15% of live births and up to 50% of high-risk neonates, carrying a risk of lasting neurodevelopmental harm. Significant variation exists in thresholds for escalation to intravenous therapy (IVT) across Australian neonatal units (NNU), yet comparative evidence in matched cohorts remains limited. This study aimed to evaluate the efficacy of enteral feeds versus IVT in neonates with confirmed hypoglycaemia, comparing time to normoglycaemia, NNU stay, recurrence, and secondary morbidities.

Method: Retrospective matched cohort study of 2,119 neonates with confirmed hypoglycaemia admitted to The Northern Hospital (TNH) NNU, Victoria, Australia, December 2011-September 2023. Two 1:1 matched comparisons were performed: enteral-only (ENT, n=522) versus IVT-only (n=522) and combined enteral-and-IV (ENT+IVT, n=69) versus IVT-only (n=69), matched on gestational age, birthweight, and initial glucose level. Multivariate regression adjusted for sepsis, hyaline membrane disease, and hypothermia was performed for primary and secondary outcomes.

Results: ENT and IVT achieved similar time to normoglycaemia on unadjusted analysis (mean 8.3 vs 8.8 hours, p=0.11), but ENT was significantly faster after adjustment for illness severity (p=0.02). ENT was associated with significantly shorter NNU stay (median 4 vs 6 days, p<0.01; multivariate p<0.01), lower glucose utilisation rate (mean 3.2 vs 4.4 mg/kg/min, p<0.01), and lower rates of jaundice on unadjusted and adjusted analysis (adjusted OR 0.58 [0.44-0.76], p<0.01). Recurrence of hypoglycaemia did not differ (12.3% vs 11.4%, p=0.57). In the ENT+IVT versus IVT comparison, feeding concerns were significantly less common with combined therapy (adjusted OR 0.15 [0.03-0.76], p=0.02).

Conclusion: An enteral-first strategy for clinically stable neonates with hypoglycaemia was associated with equivalent or faster correction of hypoglycaemia, shorter neonatal unit stay, and fewer complications than intravenous therapy alone, without increasing recurrence. These findings provide real-world evidence supporting earlier use of enteral feeding before escalation to intravenous therapy in appropriately selected infants.

#46

Should we adjust Group B Streptococcus screening in pregnancy? Antibiotic stewardship in intrapartum care.

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Background: Group B Streptococcus (GBS; Streptococcus agalactiae) is a leading cause of neonatal early-onset sepsis and meningitis, transmitted primarily via maternal rectovaginal colonisation. Current guidelines (RANZCOG, Safer Care,) recommend universal antenatal screening between 35–36 weeks to guide intrapartum antibiotic prophylaxis (IAP). However, GBS colonisation is intermittent, and may change between screening and birth, reducing predictive value for postdates births. As part of the RAPID-GBS Study, we analysed routine screening alongside a repeat culture swab to assess the rate and direction of colonisation change, examining whether current screening timing remains useful. StrepSure device results are not reported in this analysis.

Method: RAPID-GBS participants study were recruited after 37 weeks, with consent to access prior results. As part of the research protocol, a concurrent culture swab was taken alongside the StrepSure sample. These rectovaginal swab cultures collected at 37-41 weeks were compared with prior clinical samples taken at 35-36 weeks (per current guidelines) to identify changes in colonisation status and their direction.

Results: Of 324 participants with both a 35-36 week clinical swab and a repeat swab at 37-41 weeks, (median interval of 26 days); 29 (8.95%) showed a discordant result. Among 48 initially GBS-positive participants, 22 (45.83%) tested negative on repeat screening; of these, 15 (68.18%) had received no oral or intrapartum antibiotics at the time of retesting. Conversely, 7 of 276 (2.54%) initially GBS-negative participants seroconverted to positive on repeat screening, representing potential missed opportunities for IAP.

Conclusion: Almost 1 in 10 participants experienced a GBS colonisation status change between recommended screening and repeat testing after 37 weeks. These findings demonstrate that current screening timing results in both missed IAP for late seroconverters and unnecessary antibiotic exposure for those who spontaneously decolonise. Further evaluation of GBS screening closer to birth is required for neonatal safety and intrapartum antibiotic stewardship.

#57

Risk factors associated with delivery of small-for-gestational-age infants in women with gestational diabetes

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Background: Small-for-gestational-age (SGA) infants among women with gestational diabetes (GDM) remains poorly characterized, although these babies have an increased risk of neonatal morbidity and mortality. Thus, the aim of this study was to determine the incidence of SGA infants and identify maternal risk factors associated with SGA among women with GDM at Northern Health.

Method: We conducted a retrospective audit of 423 consecutive GDM pregnancies resulting in live births at a single hospital between 1 February 2024 and 31 December 2024. Women with pre-existing diabetes, twin pregnancies and fetuses with congenital anomalies were excluded. Multivariable logistic regression analysis was performed to identify independent risk factors associated with the delivery of a SGA newborn.

Results: Of the 432 participants, 60% were Asian (mean body mass index or BMI 27.3), 19.3% Caucasian (mean BMI 33.3) and 19% Middle Eastern (mean BMI 29.9). 11.8% of women with GDM in this group delivered SGA infants, compared to 10% adjusted for gestational age and sex according to WHO growth standards. A prior history of SGA was strongly associated with a subsequent SGA baby (OR 17.09, $p < 0.001$, 95% CI: 4.39-66.46). The first live born of a GDM pregnancy also had a higher association with SGA (OR 10.13, $p < 0.001$, 95% CI: 2.71-37.86). Lower maternal BMI was associated with SGA in univariate analysis but not after multivariable adjustment. Gestational weight gain, smoking, anaemia and OGTT values were not associated with SGA.

Conclusion: Published data on risk factors for SGA in women with GDM is limited. In our cohort, a previous SGA birth and nulliparity were the strongest independent predictors of a SGA birth. These findings support early identification of

GDM pregnancies at increased risk of intrauterine growth retardation to facilitate closer fetal growth surveillance.

#59

Outcomes of a Neonatal Rapid Review Clinic: A Two-Year Retrospective Audit of Readmissions and Risk Factors

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Backgrounds: Unplanned neonatal readmission is associated with family distress and increased healthcare utilisation. Neonatal Rapid Review Clinic (RRC) provide targeted follow-up for infants at risk of readmission. This audit evaluated RRC outcomes and identified maternal and neonatal factors associated with readmission.

Method: Maternal and neonatal records were retrospectively reviewed for all infants referred to the Northern Health Neonatal Rapid Review Clinic between 1 January 2022 and 31 December 2023. Descriptive statistics and univariable analyses (Mann-Whitney U test) were performed.

Results: A total of 453 neonates were referred to the RRC, including 367 from the Neonatal Unit and 86 mainly from the Postnatal Ward and Domiciliary. Twenty-five percent had a birthweight ≤ 16 th percentile. Overall, 386 infants (85.2%) were managed without readmission. Of 67 readmissions, 52 (77.6%) occurred before the scheduled RRC appointment and 15 after review; the median length of stay was two days in both groups. Maternal, perinatal and neonatal health characteristics were mainly non-significant. However, positive associations (Not Readmitted vs Readmitted) included paediatric team attendance at birth (81.8% vs 63.5%, $p < 0.01$), emergency caesarean section (44.0% vs 23.9%, $p < 0.01$), pre-eclampsia (16.1% vs 6.3%, $p < 0.03$), low birthweight (46.6% vs 30.3%, $p < 0.01$), small for gestational age (19.5% vs 9.0%, $p < 0.03$), and a normal

Edinburgh Postnatal Depression Scale (EPDS) score (70.5% vs 48.9%, $p<0.01$). Readmission was associated with an at-risk EPDS score (23.4% vs 10.6%, $p=0.01$) and maternal anxiety/depression (36.8% vs 18.6%, $p<0.01$). Most pre-RRC readmissions were for recurrent conditions (71.2%), whereas post-RRC readmissions were mainly due to infection (66.7%).

Conclusion: The RRC successfully supported most high-risk infants without readmission. Most readmissions occurred before the scheduled review, suggesting earlier follow-up may reduce unplanned readmissions. Maternal mental health was strongly associated with neonatal readmission and should be incorporated into discharge planning and post-discharge care.

71

N-acetylcysteine Treatment in Paediatric Paracetamol Overdose – a retrospective audit

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Backgrounds: Hospital admission from paediatric paracetamol overdose often requires treatment with intravenous (IV) N-acetylcysteine (NAC). This retrospective audit evaluated if there was an increasing trend in IV NAC treatment (duration or dosage) for paediatric paracetamol overdose patients admitted at Northern Health from 2021 to 2025 and explored factors associated with treatment escalation.

Method: Eighty paediatric patients met the inclusion and exclusion criteria. Demographic, clinical, biochemical and NAC treatment variables were collected. NAC treatment outcomes included NAC duration, extended duration (>20 vs ≤ 20 hours), higher second dose (≥ 200

vs 100 mg/kg) and greater burden (>20 hours or ≥ 200 mg/kg vs standard treatment). Simple and multivariable linear regression assessed NAC duration, reported as regression coefficients, while binary logistic regression assessed categorical outcomes (univariable and multivariable), reported as odds ratios.

Results: There was no significant increase independently from 2021 to 2025 in NAC duration ($B=-0.11$, 95% CI $-2.29-2.07$, $p=0.92$), higher second dose (OR 1.29, 95% CI 0.84-1.97, $p=0.24$), greater burden (OR 0.06, 95% CI $-0.26-0.38$, $p=0.72$). Abnormal liver function test (LFT) results were associated with NAC duration ($B=16.06$ hours, 95% CI 7.75-24.37, $p<0.01$) and extended duration (OR 72.98, 95% CI 7.19-741.21, $p<0.01$). Increasing age was also associated with extended duration (OR 1.68, 95% CI 1.10-2.55, $p=0.02$). Admission year (OR 1.60, 95% CI 1.02-2.50, $p=0.04$) and reported paracetamol ingestion amount (OR 1.01, 95% CI 1.00-1.02, $p<0.01$) were significantly associated with of receiving a higher second dose.

Conclusion: Patients were not receiving longer or higher dosage of NAC independently from 2021 to 2025. The findings suggested that treatment escalation may be protocol-driven. Given this audit's limitations, the significance of age and admission year should be investigated further. Larger multicentre studies with clear reasoning for treatment escalation are required to provide insight into protocol adherence, overdose patterns and local practice decisions.



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