CHARM
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CHARM 2026: Poster Abstract Summaries

Poster 1

TITLE: Strengthening Midwifery Governance through Evidence-Based Policy: A Critical Appraisal of 27 Australian Neonatal Hypoglycaemia Guidelines

AUTHORS: Kylie Hodges, University of Canberra & Canberra Health Services; Deborah Davis, University of Canberra; Mary Bushell, University of Canberra; Abdel-Latif Mohamed, Canberra Health Services & QLD Health; Marjorie Atchan, University of Canberra

ABSTRACT

Introduction: High-quality midwifery practice depends on strong clinical governance structures and policy frameworks that clearly articulate evidence-informed expectations for care.

Aims: This study assessed the quality of 27 Australian neonatal hypoglycaemia policies using the AGREE II instrument to understand how well current documents support midwifery governance, consistency, and workforce capability.

Methods: Three reviewers independently scored the policies across all six AGREE II domains and domain scores were generated using scaled percentages for Scope & Purpose, Stakeholder Involvement, Rigour of Development, Clarity of Presentation, Applicability, and Editorial Independence.

Results: Scope & Purpose and Clarity of Presentation demonstrated strong performance, reflecting clear articulation of clinical intent. In contrast, domains with the greatest importance for governance scored consistently low (Rigour of Development and Editorial Independence) showing limited transparency for evidenced search strategies, appraisal methods, conflict-of-interest management, and independence from organisational influence. Stakeholder Involvement was low, indicating minimal engagement with midwives, women, or multidisciplinary perinatal teams in policy development. Similarly, Applicability scored poorly, reflecting a lack of implementation tools, resource considerations, and audit criteria.

Conclusion: Poorly documented evidence pathways can undermine clinical confidence, amplify practice variation, and increase cognitive load. Inadequate implementation guidance affects workflow efficiency and consistency. Weak stakeholder involvement and governance transparency may diminish trust in organisational policies and increase medicolegal risk.

Impact: Strengthening evidence methods, embedding midwife-led consultation, and integrating practical implementation supports would enhance governance, reduce variability, and promote a sustainable, confident midwifery workforce within a learning health system.

Poster 2

TITLE: Early Implementation of the Vision Assessment, Referral, Investigation and Support (VA-RIS) Pathway: Staff Acceptability and Feasibility

AUTHORS: Serisha Naidoo, University of Canberra; Cindy Cao, University of Canberra; Kam Chun Ho, University of Canberra; Mei Ying Boon, University of Canberra; Barb Bolton, Canberra Health Services; Andrew Buttsworth; Vicki Evans, University of Canberra; Mark Feltham, University of Canberra; Chi-Hung Kuo, Canberra Health Services; Michelle Noronha, University of Canberra; Faran Sabeti, University of Canberra; Philip Gaughwin, University of Canberra Hospital

ABSTRACT

Introduction: Vision impairment (VI) is common after stroke and may contribute to fall-related fractures. VI is associated with reduced mobility, reduced rehabilitation participation and increased falls risk. Routine inpatient vision assessment is rarely embedded in rehabilitation services, often requiring off-site referral and delaying intervention. The Vision Assessment, Referral, Investigation and Support (VA-RIS) pathway was co-designed to improve inpatient access to structured vision assessment within a rehabilitation hospital.

Aims: To evaluate the acceptability and feasibility of implementing the VA-RIS pathway for inpatients with stroke or fall-related fractures among clinicians and supervised students involved in rehabilitation care.

Methods: A single-site mixed-methods early implementation evaluation was conducted over twelve weeks in an Australian Capital Territory rehabilitation hospital. Following pathway stabilisation, hospital and university optometry clinicians and supervised students completed role-specific questionnaires assessing engagement, feasibility and usefulness over a four-week period. Descriptive data from inpatients assessed through the pathway were analysed to contextualise findings.

Results: Fifty clinicians and supervised students completed questionnaires. Of these, 58% reviewed a vision assessment report and 48% interacted directly with the in-reach team. Most respondents (90–97%) rated the pathway as feasible, practical and easy to integrate into routine care. Thirty inpatients were assessed; common impairments included reduced visual acuity, contrast sensitivity and visual field loss, prompting referrals to optometry, occupational therapy and orientation and mobility services.

Conclusion: Implementation of the co-designed VA-RIS pathway within routine rehabilitation care was feasible and acceptable.

Impact: This scalable ACT-based model supports earlier detection of VI, enhances rehabilitation safety, and informs refinement and progression to a randomised controlled trial.

Poster 3

TITLE: Can Screening Go Digital? Assessing Patient and Provider Acceptability of Telehealth STI & BBV Screening

AUTHORS: Elise Venrooy, Canberra Health Services; Shannon Woodward, Canberra Health Services; Justine Shuck, Canberra Health Services

ABSTRACT

Introduction: Sexually transmitted infections (STIs) and blood-borne viruses (BBVs) remain significant public health concerns. Service accessibility issues include appointment shortages, clinic hours, transport and competing priorities. Telehealth offers an alternative screening model to improve access, reduce service pressures, and enhance patient experiences. Evaluating its effectiveness and acceptability is essential to guide future service delivery.

Aim: To evaluate the acceptability and feasibility of rapid telehealth-delivered STI and BBV screening at Canberra Sexual Health Centre (CSHC).

Methods: Data collection encompassed analysis of appointment wait times and surveys of clinical, administrative staff, and patients. Telehealth uptake and testing completion at ACT Pathology were reviewed.

Results: Baseline surveys demonstrated strong support for a telehealth model, with 100% (18/18) of staff and 85% (44/52) of patients expressing interest. In the three-month trial period 166 telehealth screens were conducted with 85% (141/166) of patients completing testing within 2 weeks.

Following the telehealth trial, 93% (13/14) of staff reported satisfaction, with 78% (7/9) of nurses agreeing telehealth reduced triage stress. Patients also reported improved accessibility: 83% (19/23) cited reduced travel time, 74% (17/23) said telehealth accommodated work or study commitments, and 70% (16/23) found it more convenient than in-person attendance. Interest has been sustained, with 199 screens in the subsequent 3 months and 95% (189/199) completing testing.

Conclusion: Telehealth demonstrated an acceptable and effective model of STI and BBV screening for both patients and staff, supporting its ongoing use at CSHC.

Impact: Telehealth has improved accessibility and efficiency by providing flexible screening options. Continued integration may support earlier detection of STIs and BBVs while optimising clinic resources.

Poster 4

TITLE: “It Needs to Fit into Life”: Experiences of Home-Based Inspiratory Muscle Training in People with Parkinson’s Disease. A Qualitative Study

AUTHORS: Juliana Mendonca, University of Canberra; Macey Barratt, University of Canberra; Allyson Flynn, University of Canberra; Elisabeth Preston, University of Canberra; Bernie Bissett, University of Canberra

ABSTRACT

Background: Inspiratory muscle weakness is a recognised impairment in Parkinson’s disease. Although inspiratory muscle training has shown benefits in other chronic and neurological conditions, evidence of Parkinson’s remains limited, and little is known about how people experience and engage with inspiratory muscle training.

Aim: To explore the experiences of people with Parkinson’s disease who have completed home-based inspiratory muscle training.

Methods: Qualitative data were collected from participants who completed an 8-week home-based inspiratory muscle training programme. Semi-structured interviews were conducted with six participants, while two provided written reflections on their training experience. Interviews were recorded and transcribed verbatim. Data were analysed using reflexive thematic analysis.

Results: Three key themes were generated: ‘Guided and reassured: the importance of interpersonal connection, feedback, and structure in home-based training’, highlighting the importance of interpersonal connection, feedback, and manageable training structure; ‘Navigating the physical effort, emotional responses, and variable benefits of training’; capturing participants’ bodily awareness, training-related discomfort, and personal interpretations of progress; and 178 ‘Fitting it in, letting it go: realistic expectations about long-term continuation’, illustrating the challenges of sustaining inspiratory muscle training beyond the structured training period.

Conclusion: For people with Parkinson’s disease, home-based inspiratory muscle training is manageable when supported through regular contact. However, sustaining training over time depends on how well it can be incorporated into daily life.

Impact: The findings suggest the need for flexible, person-centred delivery models that consider not only the demands of training but also the emotional and practical factors influencing long-term adherence and engagement.

Poster 5

TITLE: Developing a Multimodal Training Program to Enhance Junior Doctor Competence in Ultrasound Guided Cannulation

AUTHORS: Darcy Row, Canberra Health Services

ABSTRACT

Introduction: Ultrasound guided cannulation enhances vascular access success and patient safety and is an increasingly sought after skill for Junior Medical Officers (JMOs) at The Canberra Hospital (TCH). Educational theory supports multimodal learning to improve procedural competence. This project describes the structured development and implementation of a multimodal ultrasound-guided cannulation training program grounded in contemporary medical education principles.

Aim/Question: To design, implement, and assess the feasibility of a multimodal ultrasound-guided cannulation education program for JMOs at TCH.

Methods: A blended learning program was developed, combining a detailed guide covering ultrasound physics, vascular anatomy, and procedural steps with high fidelity instructional videos demonstrating technique. An accompanying train the trainer course ensured standardised teaching. The program was introduced in 2023 at TCH, with course completion allowing access to a dedicated JMO ultrasound. Course completion data, JMO ultrasound use and participant feedback were analysed to identify factors influencing engagement, feasibility, and scalability.

Results: Since 2023, 330 JMOs have completed the program and as evidence of its popularity, in 2026 was embedded as part of intern orientation for all new starting JMOs. Post course participant feedback has been consistently positive. A nine month audit in 2025 recorded over 60 uses of a dedicated JMO ultrasound for cannulation, highlighting growing procedural independence and integration of ultrasound-guided cannulation into routine clinical care.

Conclusion: The multimodal program proved feasible, sustainable, and well engaged by learners, supporting reproducible procedural training delivery.

Impact: The success of this program provides a template for the development of other procedural training courses for JMOs at TCH.

Poster 6

TITLE: Experiences and Perceptions of Weight Stigma among Postpartum Women with a History of Eating Disorders: A Qualitative Systematic Review

AUTHORS: Madelin Hockley, University of Canberra; Kate Houghton, University of Canberra; Michelle Minehan, University of Canberra; Catherine Knight-Agarwal, University of Canberra

ABSTRACT

Introduction: Weight stigma has been linked to psychological distress, body dissatisfaction, and disordered eating. Postpartum women with eating disorder (ED) histories may be especially vulnerable to weight stigma because of cultural pressures and maternal identity transitions.

Aims/Question: To explore how postpartum women with a history of EDs experience and perceive weight stigma across various settings.

Methods: Five databases were systematically searched for English-language, peer-reviewed studies published between 2000 and 2025. Eligible studies included qualitative or the qualitative component of mixed-methods research reporting experiences of weight stigma in postpartum women with ED histories. The Joanna Briggs Institute quality appraisal tool was used, with analysis of data undertaken thematically.

Results: Nine studies were included with the following themes identified: 1) relapse risk; 2) stigma and judgement; 3) barriers to disclosure; 4) maternal identity conflict; 5) emotional burden; and 6) coping strategies. Social media amplified stigma, while healthcare interactions often reinforced weight-focused judgments. Internalised stigma heightened guilt, shame, and ability to cope. A minority of women reported resilience strategies such as peer support.

Conclusion: Weight stigma compounded postpartum vulnerability in addition to undermining ED recovery which often resulted in women having limited engagement with healthcare providers. Addressing weight stigma through a culturally appropriate, trauma-informed lens as well as advocating for public health messaging that challenge unrealistic body image is essential.

Impact: Our findings could be used to support development of up-to-date, patient-centred care pathways and/or interventions for postpartum women who experience weight stigma in the context of an ED.

Poster 7

TITLE: Stability of Sleep Quality and its Association with Cognitive Function across the Lifespan

AUTHORS: Tergel Namsrai, Australian National University; Richard Burn, Australian National University; Ananthan Ambikairajah, University of Canberra; Joseph Northey, University of Canberra; Ben Rattray, University of Canberra; Nicolas Cherbuin, Australian National University

ABSTRACT

Background: Cognitive decline is common in ageing, but individual trajectories vary. While not all develop pathological decline, protective factors are partially discovered. Sleep is a potential risk factor, although long-term impact of its stability is partially understood.

Aims: We examined the 12-year association between sleep quality stability and cognitive outcomes, and whether age, sex, physical activity (PA), and depression moderate this association.

Methods: Data were from 3,124 participants in the PATH study, spanning three age cohorts (20–24, 40–44, and 60–64 years), assessed every four years over 12 years. Cognitive outcomes included episodic memory and processing speed. Sleep quality was classified as consistently good, varying, or persistently poor. PA adherence was based on WHO guidelines, and depression history was assessed via self-report and symptomatology. Age-stratified linear regression models adjusted for covariates were used, with moderation analyses conducted.

Results: In midlife, persistent poor sleep was associated with poorer immediate ($\beta = -0.47$; 95% CI [–0.78, –0.15], $p < .01$) and delayed recall ($\beta = -0.47$; 95% CI [–0.81, –0.13], $p < .01$). Significant three- and four-way interactions emerged across age groups (sleep quality, sex, PA, and depression). Lower immediate recall was reported in younger men with depression, varying and persistently poor sleep and midlife men with depression, inconsistent PA and poor and varying sleep.

Conclusion: Depression and physical inactivity may amplify the impact of poor or inconsistent sleep on memory. Across all age groups, depression combined with inadequate sleep was linked to poorer cognition.

Impact: These findings support the importance of early screening and targeted sleep interventions in promoting cognitive health.

Poster 8

TITLE: Elevating Consumer Voice in Maternity Care: Co-Designing the ACT Maternity Experience Survey

AUTHORS: Anjali Chopra, Health and Community Services Directorate; Louise Freebairn, Health and Community Services Directorate; Alexandra Raulli, Health and Community Services Directorate; Jessie Price, Health and Community Services Directorate; George McNamara, Health and Community Services Directorate; Channel Connor, Health and Community Services Directorate

ABSTRACT

Introduction: The 2019 ACT Inquiry into Maternity Services identified the absence of systematic consumer feedback as a key barrier to improving maternity care. To address this gap, ACT Health and Community Service Directorate's Maternity in Focus (MIF) program partnered with epidemiologists, midwifery leaders and consumer representatives to develop a longitudinal Patient Reported Experience Measures (PREMs) survey capturing experiences across maternity care, aligned with the national Women-Centred Care framework.

Aims: To pilot a co-designed PREMs tool to improve visibility of consumer experiences, identify service gaps, and support person centred maternity care in the ACT.

Methods: ACT's first co-designed maternity survey was piloted from September 2024. Recruitment was opt in via QR codes in the postnatal Blue Book and social media. The survey included quantitative and qualitative questions and was accessible via app or web browser. Automated testing ensured logical flow and accuracy. Survey results are presented in a publicly accessible dashboard.

Results: As of December 2025, 506 participants partially or fully completed the survey, with high engagement in open ended questions (424 responses). Satisfaction was high across maternity stages: antenatal (86%), labour and birth (87%), and postnatal care (85%). Respondents were mostly aged 30-35 and university educated.

Conclusions: The pilot demonstrates the value of a co-designed mixed-methods survey. The tool identifies strengths and gaps not captured by quantitative data alone.

Impact: Pilot findings informed development of the MIF second action plan, supported survey redesign and can now guide service design, and clinical decision making. Results are provided to senior leadership, supporting policy discussions and continuous improvement across ACT maternity services.

Poster 9

TITLE: Trends in Melanoma Incidence in the ACT, 1985-2023

AUTHORS: Anjali Chopra, Health and Community Services Directorate; Mirka Smith, Health and Community Services Directorate; Elizabeth Chalker, Health and Community Services Directorate

ABSTRACT

Introduction: Melanoma is one of the most commonly diagnosed cancers in the ACT and poses a substantial public health burden. ACT Cancer Registry data show rising melanoma incidence over several decades, with increases among males and older adults. Tumour thickness and extent of spread at diagnosis provide important insight into early detection, prevention efforts and future health system needs, particularly because early-stage melanomas have markedly better clinical prognosis.

Aims: To describe long-term melanoma incidence trends in the ACT by age, sex, tumour thickness and extent of spread, and examine how these patterns may relate to early detection and prevention.

Methods: ACT Cancer Registry data from 1985–2023 were analysed using age standardised rates (2001 Australian Standard Population) and three-year rolling averages. Incidence trends were examined by age group, sex, Breslow thickness categories (≤1.0 mm; >1.0–<4.0 mm; ≥4.0 mm) and extent of spread (localised, regional, distant).

Results: Melanoma incidence rose steadily over the study period, with the largest increases among residents aged 50 years and over. Thin melanomas (≤1.0 mm) and localised disease accounted for most of the recent increases, reaching their highest levels in 2023. In contrast, rates of thick melanomas and regionally/distantly spread disease remained comparatively low and stable.

Conclusions: Rising melanoma incidence in the ACT is driven primarily by increased diagnosis of early-stage melanoma, alongside demographic ageing.

Impact: These findings reinforce the importance of ongoing skin cancer prevention, public awareness and primary care based early detection strategies. They provide evidence to support continued investment in prevention and surveillance initiatives to manage the melanoma burden in the ACT.

Poster 10

TITLE: Building our ACT Public Hospital Nursing Workforce - Understanding International Nursing Recruit Workplace Satisfaction and What Managers Want

AUTHORS: Biljana Zeljkovic, Canberra Health Services; Vanessa Robinson, Canberra Health Services; Kellie Lang, Canberra Health Services

ABSTRACT

Introduction: Recruitment of 95 internationally trained nurses to support expansion in the Critical Care Services Building has reached the 12-month mark. While initial orientation showed high satisfaction and strong early integration, it is important that Canberra Health Services (CHS) Nursing and Midwifery Workforce Unit evaluates longer-term recruitment outcomes, and staff and manager experiences to inform future workforce planning and maintain safe, high-quality care.

Aim: To assess retention rates, candidate satisfaction and manager perceptions of readiness and clinical performance among internationally recruited nurses at CHS.

Method: Surveys were emailed to recruited nurses and their managers. Nurse surveys assessed onboarding, work–life balance, rostering flexibility, team support, career progression and overall experience. Manager surveys captured perceptions of onboarding support, clinical skills, upskilling needs, willingness to learn and workplace integration. Retention data was obtained from recruitment records, with qualitative comments reviewed.

Results: Data show strong 12-month retention, with most nurses remaining in their clinical areas with two leaving the organisation. Onboarding satisfaction was rated high (96%) by candidates and managers (95%). Nurses reported good work-life balance (71%), noting rostering and leave challenges. Managers highlighted strong professional attributes (94%) and clinical skills (77%) some progressing into advanced roles, and clearer expectations and skill alignment may improve outcomes.

Conclusion: International nurses strengthen workforce sustainability and capability for CHS, with ongoing process improvements supporting success despite minor challenges. Insights indicate that strengthening recruitment processes will further support workforce stability and maintaining high quality patient care.

Impact: Ongoing recruitment evaluations will support sustainable workforce planning, improve staff integration, reduce turnover, and support safer staffing and patient outcomes.

Poster 11

TITLE: Cancer Classification with Radiomics: Insights from a Highly Controlled Preclinical Study

AUTHORS: Kyle Drover, Australian National University; David Simon Davis, Australian National University; Katharine Gosling, Australian National University; Jason Price, Australian National University; Naomi Otoo, Australian National University; Ines Atmosukarto, Australian National University; Kylie Jung, Canberra Health Services; Hany Elsaleh, Alfred Health; Farhan Syed, Canberra Health Services; Ben Quah, Australian National University

ABSTRACT

Introduction: Radiomics, the high-throughput extraction of quantitative medical imaging features, holds promise for non-invasive cancer characterisation and biomarker development. However, concerns regarding confounding, reproducibility, and interpretability have limited its clinical translation. This study evaluated the ability of radiomic features extracted from contoured CT images to classify colorectal cancer (CRC) and breast cancer (BC) in highly standardised murine models designed to minimise biological and technical variability.

Aim: To assess radiomics as a cancer biomarker under conditions of maximal experimental control.

Methods: Tumour models were established in mice at uniform anatomical locations using CT26 CRC or 4T1 BC cells. Tumours were imaged using identical microCT acquisition parameters and contoured following standardised procedures. Radiomic features were extracted with PyRadiomics, filtered for redundancy, and benchmarked against blood-based biomarkers for classification performance using Random Forest models.

Results: From the 1,409 initial radiomic features, 18 key predictors were retained. Unsupervised clustering showed limited separation between CRC and BC tumours using radiomics compared with blood biomarkers. Supervised classification with radiomics alone showed modest accuracy and was outperformed by blood-based biomarkers. Combining radiomics with blood biomarkers did not enhance performance. SHAP analysis confirmed blood biomarkers as dominant predictors.

Conclusions: Under controlled conditions, designed to minimise confounding, radiomics demonstrated only moderate predictive capability and was outperformed by blood-based biomarkers for tumour classification. These findings highlight current limitations of radiomics as a biomarker and underscore the need for greater standardisation and biological validation before clinical adoption.

Impact: These findings temper expectations for radiomics as a standalone biomarker for cancer classification and support prioritising biologically grounded, multimodal approaches for clinical translation.

Poster 12

TITLE: Massive Multiplex Flow Cytometry Identifies Novel Leukocyte Signatures for Integrated Cancer Screening

AUTHORS: Katharine Gosling, Australian National University; David Simon Davis, Australian National University; Stephanie Day, Canberra Health Services; Jason Price, Australian National University; Amy Shorthouse, Canberra Health Services; Kylie Jung, Canberra Health Services; Brandon Nguyen, Canberra Health Services; Farhan Syed, Canberra Health Services; Ben Quah, Canberra Health Services

ABSTRACT

Introduction: Advances in flow cytometry have revealed complex leukocyte phenotypic states associated with cancer development. Given their reflection of cancer-specific responses, leukocyte signatures represent potential blood biomarkers for a unified cancer screen. However, identifying the most informative markers from the hundreds available remains challenging. Here, we leverage Fluorescent Target Array (FTA) barcoding technology in a massive multiplex flow cytometry screen to identify leukocyte markers specifically altered in cancer patients.

Aim: To identify cancer-specific blood leukocyte marker changes in patients attending the Canberra Region Cancer Centre using a ~40,000-plex assay, combining a 30-parameter leukocyte identification panel with a 361-plex Human LEGENDScreen assay and a 4-plex FTA technology, to inform marker selection for an integrated multi-cancer blood test.

Methods: Blood samples from prostate and colorectal cancer patients, and matched healthy controls, were FTA-barcoded, pooled, and labelled with colour-coded monoclonal antibodies and vital dyes. Samples were stained using LEGENDScreen and analysed by flow cytometry. Differential expression analysis identified cancer-specific marker profiles across 15 leukocyte subsets.

Results: Heatmap and hierarchical clustering revealed several cancer-altered, non-redundant markers. Notably, CD9, CD41, and CD97 showed distinct expression patterns across cancer/control cohorts, disease stages, and leukocyte subsets.

Conclusion: We identified cancer-specific leukocyte markers with distinct expression profiles associated with cancer status. These markers form the basis of an integrated, multi-cancer detection blood test currently being evaluated in the Blood Immune Biomarker Study (BIBS) at The Canberra Hospital.

Impact: By resolving leukocyte marker selection at scale, this study advances immune profiling from discovery toward implementation, strengthening the feasibility of a unified multi-cancer blood screening platform.

Poster 13

TITLE: Disentangling Intrinsic and Extrinsic Confounders in Cancer Classification using Blood Immune Cell Signatures

AUTHORS: Lulu Florencia, Australian National University; Katharine Gosling, Australian National University; Lamia Shams, Australian National University; David Simon Davis, Australian National University; Farhan Syed, Canberra Health Services; Ben Quah, Australian National University

ABSTRACT

Introduction: Cancer screening biomarkers have improved mortality outcomes; however, clinically effective single-parameter biomarkers remain scarce due to confounding variables. Multiparameter biomarkers may be less susceptible to confounders through independent mechanisms of expression and offer potential for multi-cancer detection. Blood immune signature biomarkers are particularly attractive given the immune system’s interaction with tumour development, though inherent confounders must be actively mitigated to advance clinical utility.

Aims: To identify, model, and mitigate biological confounders (age, sex, genetic background) and environmental influences (diet, physical activity, exposures) in developing a unified blood immune cell–based multi-cancer screening test.

Methods: Animal models of breast, colorectal, and prostate cancer were sampled during early tumour stages to assess the confounding effects of intrinsic and extrinsic variation. Blood signatures were characterised using multiparameter spectral flow cytometry. A phenotype-based Mixture of Experts machine learning architecture was evaluated, comparing hard versus soft expert gating to optimise predictive performance.

Results: Genetic background, sex, age, and exercise significantly influenced predictive performance. Optimal performance required adequate sample sizes encompassing phenotypic diversity and was aligned with hard-gated phenotype experts. These findings demonstrate that phenotype subpopulations occupy distinct regions of feature space and must be explicitly modelled.

Conclusion: Effective blood immune biomarker signatures for multi-cancer detection require machine learning architectures that explicitly model key phenotypic diversity variables to capture non-linear, geometry-altering confounder effects. This is critical for clinical translation, as patient populations include heterogeneous minority phenotype subgroups.

Impact: Identifying and modelling key confounding traits enables blood immune biomarkers to reliably detect multiple cancers, paving the way for minimally invasive, broadly applicable screening tests.

Poster 14

TITLE: High-Plex Proteomic Profiling for the Development of an Integrated Early-Detection Multi-Subtype Cancer Screen

AUTHORS: David Simon Davis, Australian National University; Katharine Gosling, Australian National University; Stephanie Day, Canberra Health Services; Jason Price, Australian National University; Amy Shorthouse, Canberra Health Services; Kylie Jung, Canberra Health Services; Brandon Nguyen, Canberra Health Services; Farhan Syed, Canberra Health Services; Ben Quah, Canberra Health Services

ABSTRACT

Introduction: Proteomics offers a powerful approach for generating multi-parameter biomarker signatures that capture the biological complexity and heterogeneity of cancer. This study utilised Olink technology, a proximity extension assay employing dual-antibody systems targeting specific proteins. These antibodies are attached to complementary nucleotide sequences that hybridise when in close proximity, enabling quantification of over 5,000 target proteins with high specificity via next-generation sequencing (NGS).

Aims: To identify specific plasma protein signatures in cancer patients to inform development of a candidate multi-parameter biomarker screen for malignancy detection.

Methods: Patients with newly diagnosed or recently relapsed prostate and colorectal cancer attending the Canberra Region Cancer Centre, along with age- and sex-matched healthy controls, were recruited. Fresh plasma from low-volume liquid biopsies was analysed using the Olink Explore HT platform. Data preprocessing filtered low-variance and redundant proteins. Statistical analysis utilised Student's t-tests ($\alpha = 0.05$; twofold expression change cut-off). Cohort separation was visualised using Principal Coordinate Analysis (PCoA), volcano plots, and hierarchical clustering heatmaps.

Results: Heatmap and volcano plot analyses identified statistically significant differentially expressed proteins distinguishing cancer from control groups. Clear separation between healthy controls and cancer subtypes was demonstrated by PCoA using specific protein signatures, validating the sensitivity of the high-plex platform for cancer biomarker discovery.

Conclusion: These findings demonstrate the utility of high-throughput proteomics for identifying cancer-specific protein signatures. This dataset provides a preliminary foundation for an integrated multi-cancer screening platform, with potential application in early detection to improve clinical outcomes.

Impact: These results support translation of high-plex proteomics into a clinically deployable minimally invasive multi-cancer screening tool.

Poster 15

TITLE: Blood Immune Biomarker Study (BIBS): First Results of a Novel Immune-Based Blood Test for Cancer Screening from the Canberra Region Cancer Centre

AUTHORS: Katharine Gosling, Australian National University; David Simon Davis, Australian National University; Stephanie Day, Canberra Health Services; Jason Price, Australian National University; Angela Rezo, Canberra Health Services; Amy Shorthouse, Canberra Health Services; Kylie Jung, Canberra Health Services; Brandon Nguyen, Canberra Health Services; Farhan Syed, Canberra Health Services; Ben Quah, Canberra Health Services

ABSTRACT

Introduction: Blood-based biomarker signatures offer potential for minimally invasive cancer screening. Through preclinical studies and high-dimensional marker screening in human samples, we are developing a multimodal test integrating protein, cellular, and nucleotide biomarkers to detect multiple cancer types. Here, we report preliminary findings from the initial stage of a prospective clinical study focusing on the cellular component of this screen.

Aim: To evaluate whether blood cellular signatures can differentiate cancer patients from controls, informing development of a cancer detection blood test.

Methods: Treatment-naïve cancer patients and controls were recruited through the Radiation Oncology Department, Canberra Region Cancer Centre and the John Curtin School of Medical Research, Australian National University, respectively. Peripheral blood was analysed using a 50-parameter spectral flow cytometry panel. Leukocyte subsets were identified using a semi-automated R pipeline and assessed for differential abundance and predictive capacity with Random Forest.

Results: Distinct leukocyte signatures differentiated cancer from control groups, with significant differences in T, B, NK, and neutrophil subsets. Initial analysis demonstrated Random Forest–based predictions with a sensitivity of 0.78 and specificity of 0.75.

Conclusion: These preliminary results demonstrate that cellular profiling achieves clinically relevant predictive performance for cancer detection. Ongoing analyses will evaluate performance with increasing sample size and integration of proteomics and multi-parameter digital PCR–based plasma nucleotide quantification.

Impact: This study provides proof-of-concept that immune cell profiling of blood can serve as a minimally invasive cancer detection strategy, with the potential to improve early diagnosis.

Poster 16

TITLE: Plasma Protein Biomarkers for Prostate Cancer Detection and Progression within a Translational Discovery Framework

AUTHORS: Lamia Shams, Division of Genome Sciences and Cancer, John Curtin School of Medical Research; Katharine Gosling, Australian National University; Farhan Syed, Canberra Health Services; Benjamin Quah, Australian National University; David Anak Simon Davis, Australian National University

ABSTRACT

Background: Blood contains thousands of proteins that shift with cancer onset and progression, but broad profiling is impractical. Efficient discovery approaches are needed to prioritise biomarkers that distinguish cancer, validate top candidates, and evaluate their relevance for monitoring treatment response.

Aims: To establish and evaluate a two stage framework for identifying plasma protein biomarkers of prostate cancer presence and progression, and to characterise their response to radiotherapy.

Methods: Blood was sampled longitudinally from mice with and without prostate tumours. In the discovery stage, broad protein profiling screened large panels and nominate candidates linked to tumour presence and growth. In the validation stage, targeted assays confirmed proteins that consistently differentiated cancer from healthy controls. Validated biomarkers were then assessed for changes following radiotherapy.

Results: Discovery identified plasma proteins that reliably distinguished tumour-bearing from healthy mice and tracked disease progression. Targeted validation confirmed consistent cancer-associated patterns across animals. Radiotherapy induced measurable shifts in selected proteins, but these were distinct from—and smaller than—cancer-driven alterations, allowing treatment response to be differentiated from underlying disease status.

Conclusions: This work identifies blood-based proteins signalling prostate cancer presence, progression, and treatment effects. The two-stage framework provides an efficient, scalable route to clinically meaningful biomarkers with potential for development into blood tests supporting detection and treatment monitoring alongside or beyond PSA. The strategy is broadly applicable to biomarker discovery across other cancers and diseases.

Impact: This scalable discovery-to-validation pipeline accelerates identification of clinically relevant blood biomarkers, supporting development of multi-marker strategies for cancer detection and treatment monitoring.

Poster 17

TITLE: Bayesian Analysis of Repeated Blood Biomarkers during Prostate Cancer Treatment in a Preclinical Model

AUTHORS: Lamia Shams, Australian National University; Katharine Gosling, Australian National University; Farhan Syed, Canberra Health Services; Benjamin Quah, Australian National University; David Anak Simon Davis, Australian National University

ABSTRACT

Background: Cancer treatment monitoring often relies on single time point blood test comparisons, overlooking meaningful temporal patterns and patient-to-patient variability. Bayesian statistical modelling evaluates full longitudinal trajectories, incorporating uncertainty, missing data, and individual differences to generate probability-based predictions rather than binary assessments.

Aims: To determine whether Bayesian longitudinal modelling of repeated biomarker measurements in a preclinical prostate cancer model provides more clinically informative treatment response assessments than conventional approaches.

Methods: Tumour size, PSA, blood counts, and plasma proteins were measured repeatedly in tumour-bearing mice before and after radiotherapy. Bayesian longitudinal models evaluated full biomarker trajectories per animal, estimating individual-specific trends, time-varying treatment effects, and probability-based predictions of future disease status, including from incomplete data series.

Results: Bayesian modelling revealed treatment response patterns undetectable by single time point analyses. The approach identified early indicators of treatment failure weeks before tumour regrowth, quantified individual variability in response trajectories, and highlighted periods when specific biomarkers were most predictive of outcome. Rather than fixed deterministic outputs, models generated probability-based estimates (e.g., 80% likelihood of sustained response at 4 weeks) that more accurately conveyed clinical uncertainty.

Conclusions: Bayesian modelling provided earlier and more reliable indicators of treatment response than single time-point analyses. Its ability to accommodate missed visits, biological variability, and patient-specific differences makes it well suited to real-world cancer monitoring. By analysing full biomarker trajectories, it supports personalised follow-up and earlier detection of treatment failure, even with incomplete data.

Impact: This work demonstrates how longitudinal Bayesian modelling can enable earlier, more individualised treatment decisions from routine biomarker data.

Poster 18

TITLE: Utility of Castrate-Resistant RM1 Prostate Cancer Preclinical Model

AUTHORS: David Anak Simon Davis, Australian National University; Lamia Shams, Australian National University; Brandon Nguyen, Canberra Health Services; Benjamin Quah, Australian National University; Farhan Syed, Canberra Health Services

ABSTRACT

Background: Prostate-specific antigen (PSA) is the standard blood biomarker for prostate cancer, yet it often yields false positives and can fail to detect clinically significant disease. Efforts to develop more accurate biomarkers have been limited by the lack of animal models that replicate human PSA biology, restricting investigation of PSA's shortcomings and development of superior markers.

Aims: To characterise the relationship between PSA levels and tumour presence, progression, and radiotherapy response using the RM1 (Ras/Myc-transformed 1) mouse model of castrate-resistant prostate cancer, which produces measurable circulating PSA.

Methods: Male mice with or without RM1 tumours were monitored longitudinally using a mouse-specific plasma PSA assay, and PSA values were compared with tumour burden during progression and after image-guided radiotherapy.

Results: PSA differentiated tumour-bearing from control mice and generally rose with tumour growth. The RM1 model showed marked individual variability, with PSA often misaligned with tumour size – some mice exhibited disproportionately high PSA despite small tumours, whereas others carried large tumours with comparatively low PSA – echoing clinical observations. Radiotherapy altered PSA trajectories but did not resolve this discordance, limiting PSA's reliability as a standalone indicator of treatment response.

Conclusions: The RM1 model offers a clinically relevant system for investigating why PSA can fail to track disease status. Although PSA signals tumour presence and broad progression, it shows biologically significant shortcomings paralleling those observed clinically. This model supports systematic evaluation of supplementary blood-based biomarkers to enhance diagnostic precision and treatment monitoring.

Impact: This model provides a foundation for biomarker-informed treatment monitoring strategies that may refine clinical decision-making in prostate cancer.

Poster 19

TITLE: Full Blood Counts as Biomarkers for Detecting and Monitoring Prostate Cancer Progression in a Preclinical Model

AUTHORS: Lamia Shams, Australian National University; Benjamin Quah, Australian National University; Farhan Syed, Canberra Health Services; David Anak Simon Davis, Australian National University

ABSTRACT

Background: Full blood counts (FBCs) are widely used in clinical practice, but their potential for cancer detection and monitoring remains under-investigated. Tumours induce systemic alterations in blood cell populations through inflammatory and immune processes, and characterising these shifts could transform a routine test into a useful tool for identifying and tracking cancer.

Aims: To determine whether FBCs can distinguish healthy from tumour-bearing mice, track disease progression, and detect treatment-related changes in a preclinical prostate cancer model.

Methods: Mice with and without prostate tumours were monitored longitudinally, with repeated blood sampling to quantify standard FBC parameters and inflammatory cell ratios. Tumour growth was tracked throughout the study, and a subset of animals received image-guided radiotherapy. FBC profiles were analysed in relation to tumour presence, tumour burden, and treatment exposure.

Results: Several FBC parameters reliably distinguished tumour-bearing from healthy mice and shifted with disease progression. Changes in specific white blood cell populations and inflammatory ratios tracked tumour burden and broader systemic effects. Radiotherapy introduced additional time-dependent alterations, yet these treatment-related shifts remained separable from cancer-driven patterns.

Conclusions: Routine FBC measurements differentiate tumour-bearing from healthy states and track disease progression in a preclinical mouse model. They also detect treatment-related shifts while retaining their ability to reflect cancer burden. With suitable analytical frameworks, FBCs has the potential to serve as a low-cost, widely accessible tool for cancer detection and ongoing monitoring, offering particular value where resources or access to specialised tests are limited.

Impact: This study supports repurposing a routine clinical test as a scalable biomarker platform for cancer detection and treatment monitoring.

Poster 20

TITLE: Preclinical Evaluation of Blood Leukocyte Profiles as Biomarkers for Cancer Detection and Classification

AUTHORS: Lulu Florencia, Australian National University; Katharine Gosling, Australian National University; Lamia Shams, Australian National University; David Simon Davis, Australian National University; Farhan Syed, Canberra Health Services; Benjamin Quah, Australian National University

ABSTRACT

Introduction: Effective cancer screening biomarkers are critical for early detection and improved patient outcomes. However, many current screening tools suffer from limited sensitivity and specificity. Blood-based immune biomarkers offer a promising, minimally invasive alternative by capturing systemic immune alterations induced by tumour development and progression.

Aim: To develop a single blood-based test capable of detecting both cancer presence and cancer type, with potential applicability across multiple tumour models.

Methods: Syngeneic mouse models of colorectal (CT26), breast (4T1), and prostate (RM1) cancers were established via subcutaneous tumour cell injection. Blood samples were collected at early and late stages of tumour growth. Circulating leukocyte populations were quantified using flow cytometry to characterise tumour-associated immune alterations.

Results: Heatmap analysis demonstrated that early-stage colorectal and prostate cancers exhibited immune profiles closely aligned with healthy controls, with no significant differences detected by PERMANOVA. In contrast, all late-stage tumour groups displayed distinct immune signatures. Notably, the breast cancer model showed separable immune profiles at both early and late stages, indicating potential for cancer-type discrimination even during early tumour development.

Conclusion: Multivariate analysis of circulating immune cell profiles revealed tumour-associated leukocyte changes that enable prediction of cancer presence and classification across multiple cancer types. Early-stage colorectal and prostate cancers remain challenging to detect due to immune similarity with controls, highlighting the need for further refinement to improve sensitivity.

Impact: Blood-based immune profiling offers a minimally invasive, multi-cancer detection strategy with the potential to transform early diagnosis and patient outcomes.

Poster 21

TITLE: Longitudinal Leukocyte Subset Quantification via Spectral Flow Cytometry to Optimise Immune Biomarker Precision

AUTHORS: Katharine Gosling, Australian National University; Jason Price, Australian National University; David Simon Davis, Australian National University; Farhan Syed, Australian National University & Canberra Health Services; Benjamin Quah, Australian National University & Canberra Health Services

ABSTRACT

Introduction: Spectral flow cytometry enables unprecedented immune cell quantification; however, platform complexity introduces acquisition and analytical variability that may compromise diagnostic reliability. We assessed the longitudinal stability of spectral flow cytometry–based leukocyte quantification and evaluated whether internal control normalisation improves biomarker precision.

Aim: The primary aim was to assess blood leukocyte subset composition stability over 12 months using a 47-parameter spectral flow cytometry panel, comparing invariant controls (CD-Chex Plus) with healthy human donors. The secondary aim was to determine whether post-acquisition, control-anchored normalisation improves measurement stability.

Methods: Ten healthy volunteers recruited at the Australian National University were sampled every two months over one year, with 37 leukocyte subsets quantified using a Cytek Northern Lights cytometer. Technical variance was monitored using CD-Chex Plus controls. Normalisation employed lineage anchoring to CD-Chex Plus leukocytes to assess improvements in bead- and volume-based quantification versus percentage composition metrics. Analysis was performed using an R-based pipeline incorporating harmonised subset delineation via PaCMAP-facilitated gating and stability quantification using Bray-Curtis dissimilarity.

Results: CD-Chex Plus–based normalisation reduced inter-assay technical variance while preserving biological signal. Variance decomposition showed that inter-donor differences dominated over intra-donor fluctuations, indicating that normalised measurements capture stable individual immune signatures.

Conclusion: With internal control normalisation, human leukocyte composition remains stable over extended periods. These findings validate spectral flow cytometry as a robust platform for immune biomarker discovery and demonstrate its feasibility for long-term assays.

Impact: By demonstrating longitudinal stability, this work positions spectral flow cytometry as a clinically viable platform for immune biomarker implementation in early disease detection and monitoring.

Poster 22

TITLE: Simulating Success: A Pilot Study in Strengthening IMG Preparedness for Clinical Deterioration

AUTHORS: Dianne Willis, Australian National University; Marisa Magiros, Canberra Health Services

ABSTRACT

Introduction: International Medical Graduate (IMG) doctors are a vital part of Canberra Health Services (CHS), with around 200 working in PGY1–2 roles. Their backgrounds vary: some have experience in Australian or UK systems, while others are preparing for AMC clinical exams or returning after clinical breaks. All require support to adapt to the Australian healthcare environment. CHS provides a two-day IMG education program. Alongside this, ANU Medicine delivers acutely deteriorating patient simulation training for final year students.

Aim: In 2025, a pilot initiative extended the ANU simulation program to IMG doctors at CHS to evaluate its reception and impact on confidence in managing clinical deterioration.

Methods: IMG doctors voluntarily enrolled, completed pre-reading on the ABCDE approach, and participated in a structured simulation session including pre brief, scenario, and debrief. Pre and post-session surveys assessed perceived benefits and confidence.

Results: Before the session, participants sought to improve confidence, communication, and team leadership, with most reporting limited prior simulation exposure. Post session feedback highlighted the value of practising the A–E assessment, team-based care, ISBAR handover, and reflective debriefing. Participants recommended role rotation and earlier exposure. All respondents would recommend the session. Confidence in managing deterioration increased from 15% pre-session to 50% post-session.

Conclusions: Adapting a medical school simulation program for IMG doctors is feasible and beneficial, supporting transition and performance improvement.

Impact: The program will expand in 2026 to accommodate up to 60 IMG doctors, with strong encouragement for those preparing for AMC exams or needing additional support. Future work will determine the optimal number of sessions for maximum educational impact.

Poster 24

TITLE: Assessing Quality of Dying in Renal Failure Patients in the ACT

AUTHORS: Lucy Aitken, Canberra Health Services; Alison Care, Canberra Health Services; Jessica Mather-Hillon, Canberra Health Services; Michael Chapman, Canberra Health Services; Alice Kennard, Canberra Health Services

ABSTRACT

Introduction: Renal failure is increasingly prevalent in Australia and is associated with high symptom burden at end of life. Evidence describing quality of dying in this population is limited, and no single validated tool captures all relevant domains.

Aims: Assess quality of dying among patients with advanced renal failure in the Australian Capital Territory (ACT) and evaluate the feasibility of an audit framework utilising multiple tools.

Methods: A quality dying evaluation program was implemented along with retrospective audit of outcomes for patients with chronic kidney disease (CKD) stage 4 or 5 who died over a six-month period in the ACT. Quality of dying was assessed using the Canterbury Quality of Death Instrument (CQDI), the Dialysis Quality of Dying APGAR (QOD-APGAR), and the Care of the Dying Evaluation caregiver survey (CODE). Non-parametric analyses were used.

Results: Fifty-eight patients were included. Quality-of-death scores were generally high across all instruments. CQDI scores were higher for hospice deaths ($p = 0.004$) and among patients reviewed by specialist palliative care ($p < 0.001$). Scores did not differ by dialysis status, CKD stage, age, sex, or preferred language. Moderate correlations between the CQDI and QOD-APGAR supported convergent validity and complementary domains. CODE response rate was 52%, with positive feedback from participants.

Conclusion: Quality of dying for patients with renal failure in the ACT was generally favourable, with variation by care setting and specialist palliative care involvement.

Impact: This feasible audit framework can be embedded within ACT Health clinical governance to benchmark quality of dying and support targeted, equitable quality improvement in renal end-of-life care.

Poster 25

TITLE: High-Fidelity Simulation Training to Improve the Confidence of Nursing Staff in Identifying and Assessing Delirium

AUTHORS: Shimmy Davis, Canberra Health Services; Liam Crossman, Canberra Health Services; Anna O'Rourke, Canberra Health Services; Kate Gorell, Canberra Health Services; Clare Stephenson, Canberra Health Services

ABSTRACT

Introduction: Delirium is highly prevalent in older adults, particularly during acute illness, affecting up to one-third of hospitalised older people. High-fidelity simulation is an effective tool for improving nursing knowledge and confidence in complex clinical situations and may support skill development in delirium care. Simulation enables nurses to practice high-risk, low-volume scenarios in a protected environment with no risk to patient safety. Most evidence of high-fidelity simulation in nursing relates to undergraduate education, with limited evidence exploring effectiveness in post registration nurses.

Aims/Question: To evaluate whether high fidelity simulation training improves nursing staff confidence and competence in performing delirium screening within two acute care of the elderly wards.

Methods: A post-training survey evaluated participants' experiences of high-fidelity simulation training sessions focused on delirium screening. Participants rated their experience of the session using Likert scales. Descriptive statistics were used to summaries responses, and qualitative comments were analysed using a simple thematic approach.

Results: 95% of staff reported improved understanding of cognitive conditions, confidence in identifying and implementing screening tools associated with delirium, identifying and implementing screening tools associated with delirium and an overall improved understanding of delirium and its risk factors.

Conclusions: High fidelity simulation training has been demonstrated as an effective method to address staff knowledge gaps, strengthen clinical assessment and staff confidence through the use of alternative learning models.

Impact: Improving staff confidence in the assessment of Delirium has the potential to improve overall quality of care and diagnosis of delirium, aligning with the clinical care standard to improve the early diagnosis and treatment of patients with delirium.

Poster 26

TITLE: Embedding Community Partnership in Health Research: Establishing a Consumer-Led Community Partnership Group

AUTHORS: Vicki Evans, University of Canberra; Mike McCartney, University of Canberra; Faran Sabeti, University of Canberra; Mary Bushell, University of Canberra; Macey Barratt, University of Canberra; Mei Ying Boon, University of Canberra; Bernie Bissett, University of Canberra; Jennie Scarvell, University of Canberra

ABSTRACT

Purpose: To develop and implement a Community Partnership Group (CPG) that embeds meaningful consumer involvement in research by health disciplines within the Clinical Research Rehabilitation and Translation research group (CRRT). The CPG aims to strengthen research quality and relevance by incorporating lived experience, identifying research priorities, supporting consumer-centred methodologies, and translating evidence into practice.

Methods: Established in 2024, the CPG comprises 5-8 community members with lived experience of health conditions and two academic members. Processes were co designed with the inaugural group, including Terms of Reference, a rotating co chair, submission templates, and training modules. CRRT-affiliated researchers across disciplines were invited to submit short project summaries for review, followed by structured Q&A and formalised feedback. Feedback from researchers on their experience with the CPG process was collected.

Results: Meetings occurred 4-6 times annually and included training, project presentations, structured discussion, and feedback. Training introduced members to clinical research, research processes, project development and translation. Since inception, the CPG has held ten meetings and reviewed seventeen diverse research proposals, including objective visual field-testing, biomarkers in tear lipids, AMD and augmented reality, diabetic retinopathy screening and grading. Qualitative feedback from researchers indicates the CPG helped embed consumer involvement, enhanced project relevance, and supported development of consumer centred methodologies for grant applications.

Conclusion: The CPG model provides an effective, scalable mechanism for integrating consumer perspectives into healthcare research. Future work includes expanding membership training and collaboration with faculty and community consumer groups. Our goal is to progress from review of projects to embed consumers as partners from research ideation onward.

Poster 27

TITLE: Accelerating Placement Readiness through Front-Loaded Clinical Intensives

AUTHORS: Dianne Willis, Australian National University

ABSTRACT

Introduction: Traditional medical programs often teach clinical skills over several months alongside clinical placements. This distributed model can delay students' ability to participate in patient care, as they may not have learned key skills when opportunities arise. This creates a theory–practice gap and reduces early clinical learning. Ensuring consistent teaching across urban and rural sites is an additional challenge.

Aims: To evaluate whether a front loaded, intensive clinical skills model improves student preparedness, confidence, and perceived relevance compared with the previous distributed approach.

Methods: In 2025, the Clinical Skills curriculum was redesigned into a four-week Clinical Skills Intensive (CSI). All eight foundational procedural skills were taught in the first month. Regular casual tutors taught alongside volunteer clinicians to strengthen consistency across sites. A new Skills in Context resource integrated procedural skills into realistic scenarios. Formative assessment occurred at the end of the CSI, with targeted remediation as needed. Student surveys and qualitative feedback informed evaluation.

Results: Front loading skills improved engagement and perceived clinical relevance, with higher survey ratings across all items at urban and rural sites. Students reported that learning core skills early enhanced active participation rather than passive observation. Feedback described the CSI as strong preparation for ward work. The Skills in Context resource was widely praised for clarity and real-world applicability. Students did not feel overwhelmed, several recommended teaching skills even earlier.

Conclusion: The intensive model effectively addressed the theory–practice gap and improved students' readiness for clinical placements.

Impact: This approach enhances technical competence, confidence, and equitable learning across sites, supporting enhanced preparation for future clinical practice.

Poster 28

TITLE: Glycaemic Variability Metrics, Interquartile Range, and their Relationship to GMI and Sensor Wear Time in a Real-World Diabetes Cohort

AUTHORS: Jayamalathy Mannar Mannan, Canberra Health Services; Ramalingam Sukumar, Canberra Health Services

ABSTRACT

Background: Glycaemic variability, commonly expressed as the coefficient of variation (CV) and interquartile range (IQR), provides insight beyond mean glucose levels. Continuous glucose monitoring (CGM) also produces the glycaemic management indicator (GMI), an estimate of laboratory glycaemic control. This study evaluated relationships among CV, IQR, GMI, and active sensor time in a real-world cohort.

Methods: A retrospective analysis was conducted in 51 individuals with available CGM-derived metrics. Variability measures (CV and IQR), GMI before and after the observation period, and active sensor time were extracted. Spearman correlation was used to assess associations, and differences in IQR between GMI groups were examined using the Mann–Whitney test.

Results: CV and IQR were available for 50 participants (median CV 25.1%; median IQR 3.2 mmol/L). CV showed significant positive correlations with prior GMI ($\rho=0.31$, $p=0.032$) and average glucose ($\rho=0.32$, $p=0.022$), indicating that greater variability corresponded to higher glycaemic exposure. IQR demonstrated a particularly strong association with prior GMI ($\rho=0.81$, $p\approx1.8\times10^{-12}$). Overall, GMI improved modestly (mean ΔGMI −0.22%). IQR remained strongly linked to glycaemic control: individuals with GMI <7% had substantially lower IQR than those ≥7% (median 2.2 vs 4.5 mmol/L; $p\approx1\times10^{-7}$), indicating more stable glucose profiles in better-controlled participants. Active sensor time was high (median 94.5%) and was not significantly associated with GMI before or after, nor with ΔGMI, reflecting minimal variation in adherence.

Conclusion: CV and IQR are informative measures of glycaemic variability, with IQR showing especially strong alignment with GMI. Lower IQR consistently reflected more favourable glycaemic control. Active sensor time did not influence GMI in this highly adherent cohort.

Poster 29

TITLE: Does the Quality of Breastfeeding Support Influence where Women Choose to Give Birth? : A Scoping Review

AUTHORS: Naomi Yuan Yen Yong, Australian National University; Andini Pramono, Australian National University; Julie Smith, University of Canberra; Susan Tawia, University of Canberra; Elisabeth Huynh, Australian National University

ABSTRACT

Background: The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months, yet about one-third of Australian newborns receive formula in hospital. Although breastfeeding initiation is high, many women stop earlier than intended. The WHO/UNICEF Baby Friendly Hospital Initiative (BFHI) improves breastfeeding outcomes, but uptake in Australia is low. Little evidence exists on whether BFHI practices influence Australian women's choice of maternity facility.

Aim: To synthesise literature on factors and perspectives influencing Australian women's choice of maternity facility, with a focus on breastfeeding support.

Methods: A scoping review using a PICO-informed search strategy was conducted across Scopus, Web of Science, MEDLINE and CINAHL in September 2025. Qualitative, quantitative and mixed-method studies examining women's experiences or choices in Australian maternity facilities were included. Screening was completed using Covidence. Data was extracted, appraised and thematically categorised and narratively synthesised following PRISMA guidelines.

Results: Of 753 studies identified, 47 studies met inclusion criteria. Studies used qualitative, quantitative and mixed-methods designs, commonly cross-sectional surveys and interviews. Key factors influencing maternity facility choice included continuity of care and relationships (n=36), model of care (n=35), and cultural safety and personalised care (n=32). Breastfeeding support was identified in 12 studies, typically within broader themes of postnatal support and quality of care rather than as a standalone factor.

Conclusion/Impact: Breastfeeding support was rarely considered in studies about women's preferences for maternity care in Australia. Few studies incorporated successful breastfeeding establishment, highlighting a clear research gap. This scoping review will inform a discrete choice experimental study examining women's preferences for breastfeeding-friendly maternity care practices.

Poster 30

TITLE: Evaluation of Demographic Features, Cardiac Investigations and Clinical Outcomes in Adults Aged 16–65 Years Presenting with Ischaemic Versus Non-Ischaemic OOHCA

AUTHORS: Ramalingam Sukumar, Canberra Health Services; Soraya Joseph, Canberra Health Services; Luke Pole, Canberra Health Services; SaratKrishna Menon, Canberra Health Services; Dibbendhu Khanra, Canberra Health Services

ABSTRACT

Background: Out-of-hospital cardiac arrests (OOHCA) in adults with non-ischaemic cardiac disease encompass a broad range of underlying conditions, including cardiomyopathies and inherited channelopathies. Emerging evidence suggests that non-ischaemic OOHCA may carry different clinical features and outcomes compared with ischaemic OOHCA. This study reviews presentations at The Canberra Hospital to compare patient characteristics and in-hospital outcomes between the two groups.

Aim: To evaluate demographic features, cardiac investigations and clinical outcomes in adults aged 16–65 years presenting with ischaemic versus non-ischaemic OOHCA.

Methods: A digital record search identified all OOHCA presentations between 2023 and 2025. Patients aged 16–65 years were included after excluding non-cardiac causes and in-hospital arrests. The ischaemic group was defined by the presence of significant coronary artery disease (CAD) considered causal for the arrest; all others were grouped as non-ischaemic. Data on presentations, investigations and outcomes were analysed.

Results: Among 330 presentations, 96 met inclusion criteria (46 ischaemic, 50 non-ischaemic). The non-ischaemic group was younger (median 37 vs 47 years) and had a significantly lower rate of shockable rhythm (48% vs 93.5%; $p<0.0001$). Despite similar downtime to ROSC and ICU length of stay, mortality was higher in the non-ischaemic group (58% vs 30%; $p=0.0075$). Notably, 40% had a normal ECG and 73% had a normal echocardiogram. In the ischaemic cohort, 75% underwent coronary stenting, whereas 62% of non-ischaemic patients received an implantable cardioverter-defibrillator.

Conclusion: Non-ischaemic OOHCA affects younger individuals, presents with heterogeneous underlying pathology and is associated with significantly higher mortality. Advanced imaging, particularly cardiac MRI, and genetic testing may improve diagnostic yield and guide targeted management in this group.

Poster 31

TITLE: Concerning Absence of Clinical History in Anatomical Pathology Referrals

AUTHORS: Varaidzo Mukwedeya, Canberra Health Services; Adrienne Morey, Canberra Health Services

ABSTRACT

Introduction: Provision of relevant clinical history is crucial in most referrals for histopathological examination as it determines the pathologist's approach and ensures that important issues are addressed. With the advent of electronic ordering through Epic, the quality of clinical information provided in histopathology requests to ACT Pathology has deteriorated. This may reflect factors including unfamiliarity with electronic ordering, changes in ordering workflow in the operating theatre, an unfriendly ordering interface, and an assumption that information is readily available in the Chart.

Aims: Trawling the Chart for relevant information increases pathologist workload, with potential effects on turnaround times. Risks of not finding relevant history include incomplete or inaccurate reports and unnecessary testing. Automatic retrieval of data from the chart has a limited role to play, as problem lists and pre-operative diagnoses do not necessarily encompass the relevant clinical question.

Method: A quality flag function in Epic Beaker allows pathologists to log instances where they feel the absence of clinical history affected their ability to safely report a case. This data has been retrieved and analysed.

Results: Between November 2023 and February 2025, there have been 1096 cases in which this flag was raised, submitted by 273 different clinicians, varying from 1 to 42 per clinician. The specimens originated from 261 different anatomical sites, the most common site being bladder. Since a hard stop was placed on orders without clinical history, an increasing trend to simply enter "." into the field has been noted.

Conclusion and Impact: Strategies to address this issue include redesign of pathology e-request forms and clinician education.

Poster 32

TITLE: Development of a Discrete Choice Experiment to Measure Women's Preferences for the Baby Friendly Hospital Initiative Ten Steps

AUTHORS: Elisabeth Huynh, Australian National University; Julie Smith, University of Canberra; Andini Pramono, Australian National University; Susan Tawia, University of Canberra; Nasser Bagheri, University of Canberra

ABSTRACT

Background: Optimal breastfeeding improves lifelong health by reducing infant infections and chronic disease risk and lowering reproductive cancer risk for mothers. The World Health Organization's Baby Friendly Hospital Initiative (BFHI), based on the Ten Steps to Successful Breastfeeding and the International Code of Marketing of Breastmilk Substitutes, increases exclusive and sustained breastfeeding. Although endorsed in Australia, BFHI implementation remains limited, and drivers of uptake require further examination.

Objectives: This study examines consumer preferences for BFHI-aligned maternity care and willingness to pay for breastfeeding-supportive practices. Using a Discrete Choice Experiment (DCE), it aims to quantify the economic value of the Ten Steps among Australian women of childbearing age. As the first DCE in this context, attributes, levels, and scenarios were developed and pre-tested using qualitative methods.

Methods: A semi-structured focus group guide was co-developed with breastfeeding experts, research partners, and the Australian Breastfeeding Association. Open-ended questions and BFHI-aligned attributes piloted a draft DCE task. Transcripts were analysed using deductive and inductive approaches to refine attributes and inform the final survey design.

Results: Key attributes include Code-compliant policies, staff training, skin-to-skin care, avoidance of non-breastmilk supplementation, BFHI accreditation status, other maternity care features, and cost. Early findings indicate strong consumer preference for BFHI-aligned care. Full data collection and analysis will be completed before the conference.

Conclusion: Findings will inform the DCE and support development of a streamlined "Tenth Step" resource linking mothers to breastfeeding support after discharge.

Impact: Demonstrating the consumer and economic value of BFHI practices can guide policy, strengthen implementation, and improve equity, maternal and child health, and environmental sustainability.

Poster 33

TITLE: An Integrated Deep Learning Framework: Accelerated MRI Reconstruction from Undersampled Measurement (k-space) and Image

AUTHORS: Kyar-Hsing Ma, Australian National University; Mst Mousumi Rizia, Australian National University; Hanna Suominen, Australian National University

ABSTRACT

Background: Magnetic Resonance Imaging (MRI) provides excellent soft-tissue contrast, but long acquisition times reduce throughput and increase susceptibility to motion artefacts. Accelerating MRI through k-space undersampling can shorten scan time, but it introduces aliasing and loss of anatomical detail, making accurate reconstruction essential.

Aim: To develop and analytically validate a dual-domain generative framework that improves reconstruction quality from undersampled MRI data by integrating k-space and image information.

Methods: This research used the public fastMRI single-coil knee dataset. Fully sampled scans were undersampled using Cartesian masks at 4x and 8x acceleration. Image and k-space diffusion models were integrated during inference and compared with image-only and k-space-only baselines using peak signal-to-noise ratio (PSNR) and structural similarity index measure (SSIM) against fully sampled reference images.

Results: Our integrated dual-domain model maintained the highest image quality across all accelerated scan times. It consistently outperformed the image-domain method, substantially improving visual clarity and structural accuracy during 4-fold (PSNR/SSIM: 28.80 dB/0.702 vs 26.53 dB/0.636,) and 8-fold (26.38 dB/0.636 vs 24.25 dB/0.569) scan acceleration. Best performance (30.73 dB/0.688) was achieved at 4x random undersampling, while using only k-space- reconstruction caused severe image degradation at 8x.

Conclusion: Our dual-domain framework improves reconstruction fidelity over single-domain approaches, delivering more consistent gains in image quality and greater reliability during faster scans.

Impact: The proposed Artificial Intelligence (AI) method could support more reliable accelerated MRI by combining anatomical precision with k-space consistency. This may contribute to shorter patient scan times, improved imaging efficiency, and the future translation of AI-assisted reconstruction methods into clinical workflows in the ACT.

Poster 34

TITLE: Stakeholder Perspectives on the Value of Inpatient Vision Assessments for Patients Admitted for Rehabilitation after Stroke – A World Café Co-Design Study

AUTHORS: Mei Ying Boon, University of Canberra; Terry Ho, University of Canberra; Zoe Greenstein, University of Canberra; Mitch MacMillan, University of Canberra; Barb Bolton, Canberra Health Services; Andrew Buttsworth; Vicki Evans, University of Canberra; Mark Feltham, University of Canberra; Chi-Hung Kuo, Canberra Health Services; Michelle Noronha, University of Canberra; Faran Sabeti, University of Canberra; Philip Gaughwin, University of Canberra Hospital

ABSTRACT

Introduction: Stroke survivors exhibit a high prevalence of vision impairment (VI), approximately 60%, which significantly diminishes their quality of life. Although the Stroke Foundation recommends vision assessment for all patients with stroke, systematic evaluation of vision in rehabilitation settings remains infrequent. To address this gap, a rehabilitation hospital and a university optometry school sought to establish an in-reach vision assessment pathway, as none currently existed.

Aim: To explore stakeholders' lived experiences and perspectives on post-stroke vision impairment (VI) and to co-design a proposed in-reach vision assessment, referral investigation and support (VA-RIS) pathway that reflects local values.

Methods: The World Café method was used to elicit perspectives of stakeholders from a rehabilitation hospital and university. Discussions were transcribed and thematically analysed to inform a co-designed draft pathway. Further feedback was sought in a follow-up questionnaire.

Results: All 47 stakeholders (11 health professions, inpatients, carers) supported vision assessments at admission to improve timeliness and appropriateness of planned rehabilitation, vision care and quality of life. Patients and carers emphasized the significant impact of VI on rehabilitation and quality of life, stating that vision problems should be given equal priority to physical impairments due to strong vision-related distress and decreased function. All stakeholders prioritized early vision assessment, accessible bedside testing, staff training, and effective communication.

Conclusion: Stakeholders valued the development and refinement of the VA-RIS pathway for inpatients with stroke to facilitate appropriate rehabilitation management and address patient needs.

Impact: The study outcomes influenced VA-RIS pathway development in ACT Health, shifting stroke rehabilitation to incorporate systematic vision care and enhance comprehensive patient care significantly.

Poster 35

TITLE: Embedding Indigenous Data Sovereignty and Governance in Wellbeing Research: The Where We Belong Study

AUTHORS: Sarah Bourke, Australian National University; Emma Spinks, Australian National University

ABSTRACT

Introduction (Background and Significance): Where We Belong is an Indigenous led, designed, and governed study exploring what it means to belong, be well, and live a good life for urban Indigenous peoples. As the ACT is home to Australia's fastest growing Aboriginal and Torres Strait Islander population, the study focuses on yarning with Aboriginal and Torres Strait Islander peoples in Canberra and Queanbeyan. Understanding these experiences is important because of the ongoing impacts of colonisation on lifelong health and for those who live away from their Country.

Aims/Question: Indigenous data sovereignty and governance are key to ensuring safe and meaningful research is conducted with Indigenous peoples, and Where We Belong has embedded these frameworks throughout the research design.

Methods: Following the Maiam Nayri Wingara Indigenous Data Sovereignty principles, Aboriginal and Torres Strait Islander people who share their stories with the study determine how their voices are represented and stored. The interpretation of these knowledges is then determined through a Community Governance Group.

Results: Individuals and community have direct and ongoing input into the research outcomes, and there is a data legacy plan in place to ensure ongoing community access to the knowledge gathered.

Conclusions: Where We Belong enacts Indigenous data sovereignty and governance in the research project which has been designed by, with, and for community.

Impact: Where We Belong is research currently in-progress. It aspires to reinforce what is already known by community, amplify these knowledges, and highlight pathways to finding and growing belonging in our capital city.

Poster 36

TITLE: Nearly Half of the Out-of-Hospital Cardiac Arrest Patients are Deceased – Experience from the Canberra Hospital

AUTHORS: Saratkrishna Menon, Canberra Health Services; Ramalingam Sukumar, Canberra Health Services; Luke Pole, Canberra Health Services; Soraya Joseph, Canberra Health Services; Dibbendhu Khanra, Canberra Health Services

ABSTRACT

Aim: Out-of-hospital cardiac arrest (OOHCA) is associated with significant mortality across all ages. This retrospective study is aimed to explore the differences in the patient profile between the OOHCA patients who died at the index admission and those who survived.

Method: Hospital digital records was searched for OOHCA from 2023 to 2025, restricted between 16 and 65 years of age. Non-cardiac, in-hospital cardiac arrests were excluded. Those who met inclusion criteria were analysed for demographics, cardiac investigation and implanted devices.

Results: 330 patients were screened and 100 patients were included in the study. Almost half the OOHCA patients are deceased (deceased vs alive: 45 vs 55). Median age of presentation was similar between both groups. Compared to the alive group, the deceased group had a significantly higher proportion of non-ischaemic aetiology [OR (95%CI) 3.08 (1.34, 7.05), P 0.007]. At the index presentation, deceased group had significantly lower shockable rhythms [OR (95% CI) 0.11 (0.04-0.30), P <0.0001] and higher proportion of severe left ventricular systolic dysfunction [OR (95% CI) 3.07 (1.03-9.14), P 0.04] in comparison to the alive group. Deceased patients had significantly longer downtime [MD (95% CI) 12.28 (2.88, 21.67), P =0.01] and received significantly greater number of shocks to return of spontaneous circulation [MD (95% CI) 2.48 (0.11, 4.85), P =0.02]. In the alive group 5 patients underwent electrophysiological studies and 21 patients received intracardiac defibrillators. In the deceased group 16 underwent post-mortem biopsy.

Conclusion: High proportion of deceased OOHCA patients were found to have non-ischaemic aetiology with non-shockable rhythm at presentation.

Impact: Exploring health outcomes in OOHCA patients.

Poster 37

TITLE: Real Collaboration Enabling Integrated Care: Implementation Insights from the ACT Primary Care Pilot

AUTHORS: Emily De Alvia, Health and Community Services Directorate; Natalie Zuber, Canberra Health Services; Kate Aigner, Capital Health Network; Shivana Chandra, Health Care Consumers' Association

ABSTRACT

Launched in 2023, the ACT Primary Care Pilot Project was co-designed with stakeholders across the health system to test a new model aimed at reducing demand on emergency departments and public hospitals. The initiative sought to deliver integrated, person-centred care through strong collaboration, with local experts and consumer advocates shaping the model's direction. The Pilot is funded by the Australian Government.

As part of the implementation evaluation, qualitative reflections were gathered from primary care agencies (Capital Health Network), the Local Hospital District (Canberra Health Services), existing integrated and acute care services, the ACT Health Directorate, and the Health Care Consumers' Association. These insights examined the effectiveness of cross-sector collaboration and the leadership behaviours that supported it.

Project partners worked across organisational boundaries to solve problems, share expertise and support continuous quality improvement. A key example was the co-design of the general practice funding model, developed with stakeholders to consider impacts on clinicians, business viability, equitable access for patients, sustainability, and desired outcomes. A shared approach to risk supported innovation and responsiveness, while trust and respect underpinned the partnership. The Pilot was implemented largely as planned and is now considered a leading example of genuine partnership driving integrated care. Collaboration between Capital Health Network, Canberra Health Services and the ACT Health Directorate was described as the most effective to date, progressing from co-design to joint delivery.

The ACT Primary Care Pilot shows that genuine commitment, shared goals and flexible partnerships are essential for implementing integrated care. Its collaborative approach has delivered meaningful outcomes and provides valuable lessons for future initiatives.

Poster 38

TITLE: Living on a Prayer: The Role for Chronic Antibiotic Suppressive Therapy in PJIs

AUTHORS: Sam Mischewski, Canberra Health Services & Australian National University; Joe Lynch, Canberra Health Services; Tom Ward, Canberra Health Services; Paul Smith, Canberra Health Services

ABSTRACT

Prosthetic Joint infections (PJI) remain one of the most devastating complications for arthroplasty, associated with a reduced quality of life and increased mortality. While acute PJI's have limited success with implant retention procedures, chronic or complex infection treatment options are limited to staged revision or suppressive antibiotic therapy (SAT). There is limited evidence comparing the two strategies to help guide treatment decision but often dictated by frailty, prosthesis type and preference. The aim of this pilot study is to compare infection control rates between SAT and curative revision surgery, determining clinical risk factors to help predict outcomes.

Retrospective cohort analysis of subacute and chronic hip and knee prosthetic joint infections from the regional prosthetic joint infection database was performed, comparing patients undergoing staged revision (one or 2 stage) to patients who underwent planned chronic suppression (+/- debulking procedure) as initial intended management strategy. Patient, infection, biochemical and surgical variables were collected.

77 staged revisions and 118 SAT patients were preliminarily identified. At 2 years, SAT was associated with a 36.4% failure rate and 11.0% where as Staged revision had a 45.5% failure rate, 2.6% mortality and 29.9% crossover. Index Albumin, CRP and chronicity were risk factor for success while surgical technique was not.

While staged revision remains the best option to achieve curative intent, it is still associated with a significant failure rate and mortality. SAT remains a viable strategy for those with significant risk factors for failure however larger studies are required to develop a validated scoring tool to aid in decision making in conjunction with an MDT approach.

Poster 39

TITLE: The Association of Longitudinal Trajectories of Blood Parameters with the Risk of Venous Thromboembolism in Ambulatory Patients with Lung Cancer

AUTHORS: Ann-Rong Yan, University of Canberra; Desmond Yip, Canberra Health Services; Gregory Peterson, University of Tasmania; Nasser Bagheri, University of Canberra; Mark Naunton, University of Canberra; Phillip Newman, University of Canberra; Reza Mortazavi, University of Canberra

ABSTRACT

Introduction: Some laboratory tests (parameters) such as white blood cell count, platelet count, and haemoglobin level are known predictors for cancer-associated venous thromboembolism (VTE). Existing VTE risk assessment scores (e.g. Khorana score) use lab parameters; however, they are static and used in single point in time. The dynamic nature of blood tests suggests a need for devising risk scores using longitudinal parameters to assess the risk over time.

Aims: This study aimed to explore longitudinal trajectories of key parameters and their associations with VTE in ambulatory patients with lung cancer.

Methods: Eligible participants from Canberra Region Cancer Centre were screened. Longitudinal data for routine haematological and biochemical tests were collected retrospectively. Joint models of longitudinal data and time-to-event data with adjustment for covariates were used to assess the association of parameter trajectories with VTE events.

Results: About 11.9% of 540 participants (n=64) developed VTE during the up-to-12-month follow-up. Longitudinal decline in albumin levels was significantly associated with VTE occurrence (cause-specific hazard ratio 1.16; 95% CI 1.02-1.33 after adjusting for lung resection treatment), while the longitudinal trajectories of other blood parameters were irrelevant to the VTE risk.

Conclusion: A decline in albumin levels over time after cancer diagnosis was associated with the risk of VTE in patients with lung cancer. Further investigation and validation with prospective studies are needed.

Impact: The findings suggest the usefulness of a personalised prediction model capable of dynamically monitoring the VTE risks in patients with cancer.

Poster 40

TITLE: Mind the Gap: Fixing Syphilis Follow-Up with a Nurse-Led Register

AUTHORS: Daniel Byrne, Canberra Sexual Health Centre; Anne Baynes, Canberra Sexual Health Centre

ABSTRACT

Introduction: Australian syphilis notifications have increased in recent years, representing an ongoing public health concern. Timely treatment and appropriate serological follow-up are essential to confirm adequate treatment response, detect reinfection, reduce ongoing transmission, and maximise opportunities for contract tracing.

Aims/Question: This quality improvement (QI) project aimed to increase the proportion of Canberra Sexual Health (CSHC) clients diagnosed with syphilis who complete follow-up or test of cure (TOC) serology within six months of treatment.

Methods: Since 2021, a range of strategies including staff education, procedural changes and patient consultations were implemented to improve TOC rates. Annual audits showed these proportions remained below national standards. In response, an internal Syphilis Register was developed, supported by a designated Registered Nurse (RN) responsible for monitoring and following-up clients.

Results: In 2021 38% (13/34) of patients completed a TOC within six months. In 2022 80% (20/25) and 65% (13/20) in 2023. Following implementation of the 2024 Syphilis Register, 75% (46/61) of patients completed TOCs. In 2025, 75% (41/55) had completed a TOC, with an increase expected for end of year cases.

Conclusions: Results indicate that an internal register supported by RN monitoring improves the reliability and consistency of follow-up testing for clients diagnosed with syphilis. This system has enabled a more structured, timely, and comprehensive follow-up, directly supporting increasing TOC completion within six months.

Impact: This QI improved the reliability and consistency of follow-up testing, increasing TOC completion rates at CSHC amid rising syphilis notifications. It supports earlier reinfection detection, reduces transmission and contributes to more effective public health responses with increasing demand.

Poster 42

TITLE: Patient Perspectives on a Psychiatry Clinic at the Canberra Department of Bariatric Medicine

AUTHORS: Louise Brightman, Canberra Health Services

ABSTRACT

Introduction: In 2023, the Canberra Health Services (CHS) Department of Bariatric Medicine (DBM) incorporated a psychiatry clinic into its model of care. The clinic offers specialist-level psychiatry support for DBM patients who meet eligibility criteria.1

Aims: This project aimed to obtain DBM patient perspectives regarding access to, and quality of, the psychiatry clinic.

Methods: A CHS-approved survey was adapted and emailed to patients who attended the DBM psychiatry clinic from 2023-2024. Responses were collated and de-identified by the CHS Patient Experience team.

Results: Eleven of 41 surveys were returned (response rate 27%). Most respondents (n=10, 91%) described always feeling welcome and safe, and usually or always respected. Ten (91%) felt that staff showed hope about their future, and seven (64%) believed they had access to a psychiatrist when needed. Ten respondents (91%) noted that the clinic had a positive impact on their overall well-being.

Common themes included the psychological aspects of obesity. Access to a psychologist for individual support was a key suggested improvement. Several patients commented on non-psychiatry aspects of DBM which were outside the scope of the survey.

Conclusions and Impact: Whilst the low response rate makes it difficult to interpret the findings, the DBM psychiatry clinic was generally well accepted and helped overall well-being. In future, patients may benefit from clearer explanations regarding access and limitations of the clinic. Embedding a psychologist within the psychiatry clinic for individual support could optimise care.

1. Brightman L, Inman D, Goodburn J. Establishing a psychiatry clinic within an Australian publicly funded specialist obesity service. Australasian Psychiatry 2025.

Poster 43

TITLE: Improving the Patient and Carer's Last Chapter of Life Qualitative Study

AUTHORS: Thomas Georgeson, Canberra Health Services; Erin Martin, Canberra Health Services; Pat Sangfai, Canberra Health Services; Skye Roberts, Canberra Health Services; Shubhashish Banerjee, Canberra Health Services; Nitin Jain, Canberra Health Services; Imogen Mitchell, Canberra Health Services

ABSTRACT

Introduction: There are well documented challenges to providing high quality end of life care to patients in the Australian hospital system. Some of these include barriers to good communication with patients and families, late initiation of comfort care and delayed recognition of a patient dying. Published statistical data on advanced care directives, in hospital resuscitation plans and rates of medical interventions in the last phase of life may not fully illustrate the reasons how a service is able to improve its end of life care practices.

Aims: To understand the local barriers and enablers for undertaking end of life care conversations and initiating a comfort care pathways at the Canberra Hospital using a qualitative interview methodology, looking at perspectives from different clinicians from diverse departments and professions.

Methods: Semi structured interviews were conducted with healthcare workers within Canberra Hospital to consider their own experiences and perceptions of end of life care, including understanding of barriers and enablers of safe and high quality end of life care.

Results: There were different perspectives regarding barriers to high quality end of life care between clinicians working across different departments in Canberra Hospital. Key themes included availability of information about patient and family preferences and choices, availability and timing of palliative care service interventions and challenges of communication between hospital teams. The experience of education regarding communication of goals of care also differed between clinicians.

Conclusion: There are key themes from the study that suggest ways that service provision and staff education regarding end of life care can be improved at Canberra Hospital.

Poster 44

TITLE: Exploring Quality in Paediatrics in the Emergency Department (EQUIPED)

AUTHORS: Bronwyn Kneeshaw, Australian National University; Sanath Rajakaruna, Canberra Health Services; Jamie Lew, Canberra Health Services; Anneliese Leerdam, Canberra Health Services; Alison Lally, Canberra Health Services; Austin Loke, Canberra Health Services; Thomas Georgeson, Canberra Health Services

ABSTRACT

Patient experience is considered a key aspect of healthcare quality that has been linked to improved patient outcomes. Factors influencing patient experience and satisfaction have been studied internationally in the emergency department (ED) context, but the family experience in the paediatric ED has not been investigated in Australia using these structured conceptual frameworks. We explored the experience of parents and carers of patients in the paediatric ED of Canberra Health Services based on specific domains of quality. We used mixed quantitative and qualitative methods interviewing a randomised sample (n = 90) of parents and carers whose children had presented to the paediatric ED over a two-week period in December 2025. Likert scale (ratings from 1-5) scores were given for questions relating to these domains. A saturation method was used for our qualitative component. 18 participants answered in-depth interview questions and 72 gave brief comments on their Likert scale (1-5) scores. In most domains a majority gave ratings of 5, and the domain with the highest proportion of 1 scores (n = 7, 9.5%) was information given. Content analysis of in-depth question transcripts revealed major positive themes of child-supportive care, waiting times, information explanation and management of steps medical staff took, with a main negative theme of communication of time frames. Our study identifies an overall positive response to the delivery of services at the paediatric ED at Canberra Health Services for most domains of quality, with a slight increase of a negative response for information given and negative theme of communication of time frames revealing an area for further investigation.

Poster 45

TITLE: Late Night Liver Snack and Bramino Supplement (Branch Chain Amino Acids, BCAA) Project

AUTHORS: Jemma Corrigan, Canberra Health Services

ABSTRACT

Introduction: Evidence based guidelines recommend the provision of late-night snacks with 50g of carbohydrate (CHO) and Branch Chain Amino Acids (BCAA's) to patients with Advanced Liver Disease to reduce fasting periods, improve nutritional status, prevent muscle loss and reduce the incidence of encephalopathy.

Aims: To provide all admitted patients with advanced liver disease on ward 9A with a late-night snack with 50g of CHO and the BCAA supplement, Bramino.

Methods: Bramino supplements and snacks with 50g of CHO were sourced and added to the MAR and MyMeal databases.

Patient and nursing education leaflets, ward in-services and a protocol were designed to encourage compliance with the provision and intake of late-night snacks and Bramino.

Compliance, patient and nursing satisfaction was measured via questionnaires and compliance with Bramino collated from MAR and from the patients nutrition assessment.

Results: There was 100% compliance with consumption of the late-night snacks and Bramino supplements.

66% of patients continued with the Bramino supplement throughout their hospital stay (average of 10 doses per patient).

100% of nursing staff understood the importance of the project and thought that provision of the Bramino was achievable during medication round.

Overall, patient feedback was very positive and compliance was high.

Conclusion: All patients admitted to 9A are now offered late night snacks and Bramino supplements bringing TCH practise into line with evidenced based guidelines.

Impact: Provision of late-night snacks with 50g of CHO and BCAA's have reduced periods of fasting, improved nutritional status and met the elevated BCAA requirements of patients with Advanced Liver Disease admitted to TCH.

Poster 46

TITLE: Diagnostic Scan Based VMAT Planning: Robust Dosimetry and Workflow Benefits for Palliative Patients

AUTHORS: Noha Nafei, Canberra Health Services; Taylor Hunter-Boyd, Canberra Health Services

ABSTRACT

Introduction: Radiotherapy carries a treatment burden with multiple appointments impacting patients' quality of life and increasing cost to the health service. Diagnostic scan-based planning (DSBP), which uses existing diagnostic CT (dCT) imaging, has the potential to reduce this burden by eliminating the need for a planning CT (pCT), minimising travel and supporting more quality time with loved ones without compromising treatment.

Aim: This study evaluated the safety and dosimetric robustness of DSBP for palliative Volumetric Modulated Arc Therapy (VMAT) treatments to thoracic, lumbar, and sacral spine.

Methods: A retrospective review was conducted on 13 patients who received palliative spine treatments and had suitable dCT scans within four weeks of treatment. dCT and pCT datasets were registered and the clinical target volume and spinal canal structures were contoured on the dCTs. Planning target volumes were generated according to departmental protocols. VMAT plans were created using robust optimisation, avoidance sectors, and limited modulation. These plans were then transferred to the pCTs to assess target coverage, organ-at-risk doses, and robustness to anatomical variation. Simulated anterior contour changes ranged from –3.0cm to +2.5cm, and Hounsfield unit differences between dCT and pCT scanners were compared for relevant tissue types.

Results: Across all cases, target areas consistently received the intended dose while maintaining spinal canal safety limits. Only minimal dosimetric variations were observed under simulated anatomical changes.

Conclusion: DSBP produced clinically acceptable and robust palliative VMAT plans while significantly improving patient experience by reducing travel, minimising appointments, and avoiding additional CT scans.

Impact: This workflow supports timely, patient centred palliative care while maintaining treatment quality.

Poster 47

TITLE: Dietary Acculturation and Determinants of Food Choices among Indian Immigrants in Australia

AUTHORS: Swati Bachani-Singh, University of Canberra; Catherine Knight-Agarwal, University of Canberra; Sunil George, University of Canberra; Penney Upton, University of Canberra

ABSTRACT

Introduction: Migration can influence dietary behaviours, perceptions of healthy eating, and exposure to new food environments that shape food choices and long-term health outcomes. However, research examining these factors among Indian immigrants in Australia remains limited.

Aim: To measure dietary acculturation among first-generation Indian immigrants in Australia and examine factors influencing food choices, including health perceptions, media influences, and perceived barriers.

Methods: A nationwide cross-sectional online survey was conducted among first-generation Indian immigrants aged ≥18 years residing in Australia. Participants were recruited through community networks and online platforms, and data were collected using a self-administered Qualtrics questionnaire. The survey captured socio-demographic characteristics, migration history, perceptions of food healthiness, media influences on food choices, and perceived barriers to consuming certain foods. Descriptive statistics summarised participant characteristics and responses.

Results: A total of 419 participants completed the survey. The mean age was 32.9 ± 7.7 years, with an average age at migration of 22.9 ± 7.1 years; 54.4% had lived in Australia for more than 10 years. Participants were predominantly male (53.7%), highly educated, and mostly employed full-time (72.6%). Many perceived Indian foods as healthy, while views on non-Indian foods were more varied. Nearly half reported their diet had become healthier since migration, and 44.7% reported increased awareness of nutrition information. Media exposure influenced food choices for many participants, and barriers such as health concerns, time constraints, and social influences affected both Indian and non-Indian food choices.

Conclusion: These findings highlight evolving dietary perceptions and contextual factors shaping food choices among Indian immigrants in Australia and may inform culturally appropriate nutrition interventions.

Poster 48

TITLE: Multicentre Prospective Cohort Study of Continuous Antibiotic Infusion via Peripheral Intravenous Cannula in the Hospital in the Home Setting

AUTHORS: Barbara Lee, Australian National University; Karyn Cuthbert, Canberra Health Services; Vincent Ngian, Bankstown-Lidcombe Hospital; Bin Ong, Bankstown-Lidcombe Hospital

ABSTRACT

Introduction: Continuous intravenous (IV) antibiotic infusion via peripheral intravenous cannula (PIVC) is utilised in some Hospital in the Home (HITH) services, but current Australian guidelines advise against this, due to concerns about device failure and complication risk at home, with a published 36-69% complication rate for PIVCs generally.

Aims: To evaluate the safety, efficacy, and patient experience of continuous IV antibiotic therapy delivered via PIVC in Australian HITH services.

Methods: Prospective study, recruiting adult patients from four Australian HITH services (Canberra Hospital HITH being principal site). Participants received short-term (<14 days) continuous antibiotic infusion via PIVC using an elastomeric pump. Primary outcomes were frequency and reasons for PIVC failure. Secondary outcomes included predictors of failure, PIVC dwell time, guideline adherence, patient satisfaction.

Results: 309 patients included (461 PIVCs; 1,776 catheter-days). Overall PIVC failure rate was 10.0% (46/461; 95% CI 7.4–13.1%). No PIVC-related bacteraemia or local infection. Dislodgement (2.8%), phlebitis and pain (each 2.4%) most common causes of failure. Higher final Visual Infusion Phlebitis (VIP) score predicted failure (OR 1.89 per point; 95% CI 1.06–3.18; p=0.018). Charlson Comorbidity Index was only independent predictor of failure (HR 1.26, 95% CI 1.02–1.56; p=0.030). Clinically indicated PIVC replacement (versus routine 72 hour replacement) was associated with reduced PIVC failure rate (IRR 0.26, 95% CI 0.13-0.48; p<0.001). Patient satisfaction was high (mean 9.6/10).

Conclusions/Impact: Continuous PIVC antibiotic infusion in HITH is safe, effective, and associated with excellent patient experience. The findings support clinically indicated PIVC replacement guided by VIP assessment and may inform guideline updates for short-course antibiotic therapy in HITH

Poster 49

TITLE: The Process of a Wellbeing Initiative at Canberra Health Services

AUTHORS: Megan Thorn, University of Canberra; Dimity Crisp, University of Canberra; Mel Mylek, University of Canberra

ABSTRACT

Introduction (Background and Significance): At Canberra Health Services, wellbeing initiatives have historically emerged in diverse and informal ways, creating variability in access, visibility, and sustainability. Understanding and mapping the processes behind these initiatives is essential for building a more consistent and supportive organisational framework for wellbeing initiatives.

Aims/Question: To describe the process through which a wellbeing initiative is identified, developed, implemented, and sustained within Canberra Health Services, and to highlight the organisational conditions that influence its success.

Methods: This process overview draws on staff insights, organisational observations, and emerging themes from the WorkWell Project. Key stages were mapped to illustrate how wellbeing initiatives typically evolve within teams and how organisational structures shape their development.

Results: Early insights suggest that wellbeing initiatives embed most effectively when they emerge through team-led processes, are supported by visible and engaged leadership, and are woven into everyday workflows rather than introduced as standalone activities.

Conclusion: The process of developing a wellbeing initiative at CHS is dynamic, team-led, and shaped by organisational conditions. Mapping this process clarifies how teams move from identifying a need to embedding sustainable wellbeing practices.

Impact: Understanding this process supports the development of a consistent, system-level approach to staff wellbeing at Canberra Health Services. Strengthening these processes can enhance staff experience, improve team functioning, and contribute to safer, more sustainable healthcare delivery.

Poster 50

TITLE: Emotion Regulation and Attachment: Qualitative Insights from a Mother-Infant Dialectical Behaviour Therapy (MI-DBT) Group Intervention

AUTHORS: Philip Keightley, Canberra Health Services; Angela Freeman, Canberra Health Services; Emily Jacobs, Canberra Health Services; Linda Pronk, Canberra Health Services; Rebecca Reay, Australian National University; Anne Sved Williams, Canberra Health Services

ABSTRACT

Introduction: A significant number of mothers presenting to perinatal mental health services show symptoms of Borderline Personality Disorder (BPD) and trauma-related symptoms (Yelland et al, 2015). BPD can affect interpersonal relationships, emotional regulation, mentalising, and stress tolerance — crucial skills for effective parenting. Children of mothers with BPD are at higher risk of developing emotional, behavioural, and attachment-related difficulties themselves. Despite these findings and the significant suffering of mothers with BPD, there has been little research into treatment options. Moreover, qualitative evaluation is essential to capture the experiences and outcomes that matter to clients.

Aims:

- to understand mothers' experiences and challenges of participating in a 24-week, mother-infant DBT (MI-DBT) group.
- to discover potential casual mechanisms and diverging experiences of change.

Methods: All mothers who completed MI-DBT group were invited to participate in a semi-structured phone interview with a research officer. Two researchers thematically analysed the interviews: searching for, reviewing and defining themes.

Results: Twenty women commenced treatment, while 16 completed the program (80%). Among completers, 15 participated in the interview (75%), with 35% identifying as Aboriginal. Mothers described enhanced reflective capacities, increased parenting confidence, emotion regulation, interpersonal effectiveness skills, and improved relationships with their children. Mechanisms

associated with these improvements included: the normalising effect of the group; high group cohesion; modelling, empathic and non-judgemental stance of group therapists; individual sessions /phone coaching and regular skills practice.

Conclusions/Impact: The participation and completion rate was high. Participants identified multiple components that underpinned the program's effectiveness. Mothers described the DBT and parenting skills they routinely use and ways to continuously improve MI-DBT groups.

Poster 51

TITLE: Access Block, Occupancy and Waiting Time over a Dozen Years in a Tertiary Hospital

AUTHORS: Drew Richardson, Canberra Health Services

ABSTRACT

Introduction: Emergency Departments frequently update processes to provide the best quality of service, including waiting time. Measures of reduced ED service correlate with measures of occupancy.

Aim: To describe the long-term relationship between occupancy, access block and waiting time for treatment in Canberra Hospital ED.

Methods: Study of 651 consecutive weeks of prospectively collected data from 06:00 02-Jan-2013, a period including two hospital-wide interventions targeting access block. Access Block was measured as total weekly admission delay time (ADT - decision to admit to left ED), occupancy as total patient care time (PCT - start treatment to left) and waiting time as median.

Results: Five distinct periods were identified over 12.5 years: Initial (156 weeks), First Intervention (83 weeks), High Access Block (137 weeks), Pandemic (148 weeks), Second Intervention (127 weeks). Presentations rose 37% and Admissions 41% over the study. Waiting times peaked in the high access block (1:02) and pandemic periods (1:04) and were best during second intervention (0:30). Total PCT was better correlated with median waiting time than ADT (r=0.65 vs r=0.27 during second intervention), but ADT was a reasonable correlate (r=0.52 during High Access Block) when it represented 20% or more of Total PCT.

Conclusions: Total Weekly Patient Care time is the most important predictor of weekly waiting time, but PCT is highly influenced by the component of Admission Delay Time, particularly when ADT comprises 20% or more of PCT.

Impact: This study provides insight into the effect of access block on waiting time and demonstrates the success of hospital-wide changes in improving patient flow in this ED.

Poster 52

TITLE: Is Left-Without-Care Rate Still a Good Proxy Measure for Waiting Time?

AUTHORS: Drew Richardson, Canberra Health Services

ABSTRACT

Background: ED studies have long used the Left-without-Care rate (LWC, Did-Not-Wait) as a proxy for waiting time, a measure of service. Evidence suggests there can be major changes in the relationship between LWC and waiting time over the long term.

Aim: To describe the relationship between LWC and waiting time over a stable period in Canberra Hospital ED where treatment areas have different queueing strategies.

Methods: Prospective study of 21 consecutive weeks beginning 06:00 1-Jan-2025. For each week, the LWC and median and 90th centile waits were calculated for presentations to the three major areas: Acute, Fast Track and Children's. Figures were compared with Pearson's R, slopes calculated by linear regression.

Results: There was a strong overall relationship between LWC and Median Wait: r = 0.78, slope = 1.74% LWC increase per 10 min wait increase. There was a slightly stronger relationship for 90th Centile Wait: r = 0.84, slope = 0.41% per 10 min. This latter was made up of different components dominated by the numerically larger Fast Track population which had r = 0.77, slope = 0.62% per 10 min. Acute area (r = 0.67, slope = 0.21% per 10 min) and Children's (r = 0.61, slope = 0.26% per 10 min) were similar to each other.

Conclusions: LWC remains a reasonable proxy for waiting time over the medium term, but is a measure dominated by the lower acuity population in Fast Track which has both the longest wait and the highest LWC.

Impact: This informs future Emergency Medicine research on waiting times and Left-without-care.

Poster 53

TITLE: Bridging the Gap: An Audit of AKI Discharge and Follow-Up Practices

AUTHORS: Elisha Emran, Canberra Health Services; Mitchell Hunter-Dickson, Canberra Health Services; Tom Lea-Henry, Canberra Health Services; Alice Kennard, Canberra Health Services; Girish Talaulikar, Canberra Health Services

ABSTRACT

Introduction: Acute kidney injury (AKI) is common among hospitalised patients and increases the risk of chronic kidney disease (CKD), even after recovery. Post-AKI care is important for preventing CKD development and recurrent AKI both of which have a high morbidity, mortality, and healthcare cost burden.

Aim and Objectives: To characterise the scope of AKI consults and evaluate follow-up recommendations and practices.

Methods: A retrospective audit was conducted between October 2024 to March 2025 of all inpatient renal consults for AKI. Data included AKI aetiology, severity, requirement for renal replacement therapy (RRT), discharge summary recommendations, and follow up pathology.

Results: In the study period, 118 of 292 consults were for AKI. The aetiology was predominantly pre-renal (48%), followed by sepsis-related (17%), and medication-induced (15%). 47% were severe and 14.4% required RRT. Within discharge summaries, AKI was included in 80.5% of the clinical summary but only 48% within the principal and additional diagnosis. Follow-up advice was documented for 72%, with 46% of advice being General Practitioner follow up. Medication re-initiation advice was rare at 11%. At 6 months, 27% had nephrology follow-up. Only 30% of patients had assessment for proteinuria or albuminuria. Re-admission to hospital within 1 month was observed in 8 patients (7%).

Conclusions: We discovered a substantial AKI burden of heterogeneous aetiology and severity and highlight considerable practice variation in post-AKI follow-up. Most patients received no documented follow-up; increasing their risk of future kidney disease.

Impact: We have developed a SmartPhrase to increase recognition of post-AKI care and to improve post-discharge follow-up and management.

Poster 54

TITLE: A Narrative Review of the Ethics of Using Generative AI in Outbreak Investigations

AUTHORS: Joyce Lim, Australian National University; Martyn Kirk, Australian National University; Amish Talwar, Australian National University

ABSTRACT

Introduction: Generative AI (GenAI) has been promoted as a means of significantly enhancing public health practice. However, the ethical implications of using GenAI in response to outbreak investigations have not been explored in depth.

Aim: To conduct a narrative review of ethical issues relating to the use of GenAI in outbreak investigations.

Methods: We reviewed the peer-reviewed and grey literature to identify studies related to the ethics and use of GenAI in outbreak investigations. We identified common themes relating to ethical concerns over GenAI use across the three phases of outbreak investigation – detection, investigation and response.

Results: Of the 3557 studies reviewed, 37 met criteria for inclusion. 18 of the studies examined GenAI use for outbreak detection, 14 for investigation, and 23 for response. Most ethical issues related to data privacy and security, data ownership and consent, algorithmic transparency and accountability, lack of appropriate governance, data quality, and biases and limited accessibility relative to underrepresented groups. However, no study looked at the use of GenAI in outbreak investigation preparation, including personnel or resource planning, and none evaluated GenAI during routine outbreak investigations, including relevant ethical considerations.

Conclusion: While there are substantial ethical concerns regarding the use of GenAI during the major phases of an outbreak investigation, there exists no definitive assessment of the ethics of using GenAI across the entire span of an investigation. Where discussed, ethics are relegated to secondary consideration.

Impact: These findings underscore the need for future outbreak investigation reports to not only document GenAI use but also ethical concerns regarding its use and appropriate solutions.

Poster 55

TITLE: Testing the Role of Environmental Microbial Exposure in Autoimmunity Development

AUTHORS: Shreya Roy, Australian National University; ChakYin Chan, Australian National University; Patrick Shaw, Australian National University; Jessica Pettitt, Australian National University; Raquel Hernandez, Australian National University; Nadia Roberts, Australian National University; Yanran Fan, Australian National University; Anselm Enders, Australian National University; Julia Ellyard, Australian National University

ABSTRACT

Introduction: Systemic Lupus Erythematosus (SLE) is a complex autoimmune disorder affecting one in 1000 Australians, predominantly women of childbearing age. Despite progress in defining pathological mechanisms involved in SLE (e.g. autoantibodies and elevated type-1 interferons), understanding of the crosstalk between environmental stimuli and genetic predisposition that induces disease onset remains poorly defined. Sh2b3E372K mice that carry an orthologous genetic variant found in SLE patients (SH2B3E400K) exhibit impaired immune tolerance mechanisms but do not develop autoimmunity alone (Zhang et al.,2024) and can be used to investigate this question.

Aim: To investigate whether prolonged environmental microbial exposure, modelled by co-housing with dirty mice, is sufficient to induce systemic autoimmunity in Sh2b3E372K mice.

Methods: Female Sh2b3E372K and wild-type mice were co-housed with dirty mice for 8.5 months. Immunophenotyping was performed in peripheral blood, spleen and draining lymph-nodes. Interferon-stimulated gene (ISG) expression was quantified in those organs and anti-dsDNA autoantibodies were measured by ELISA.

Results: An elevated frequency of activated T-cells was observed in peripheral blood of cohoused mice compared to SPF controls at 4 weeks. At endpoint, immune activation and elevated ISG expression were restricted to draining lymph nodes compared to spleen, confirming the localised immune activation. Anti-dsDNA autoantibody titres were comparable to SPF controls.

Conclusion: While localise immune activation was observed, prolonged microbial exposure through co-housing alone was insufficient to induce autoimmunity in Sh2b3E372K mice, suggesting that stronger microbial exposure, or specific infection might be required to drive autoimmune development in genetically predisposed hosts.

Impact: Further research to understand how immune system malfunction causes SLE may provide avenues for targeted treatment strategies.

Poster 56

TITLE: Building Capacity: Staff Readiness for an Allied Health Assistant Delivered Home-Based Dementia Rehabilitation Program

AUTHORS: Clare Stephenson, University of Canberra; Stephen Isbel, University of Canberra; Kasia Bail, University of Canberra; Diane Gibson, University of Canberra; Nathan D'Cunha, University of Canberra

ABSTRACT

Introduction: Timely access to dementia rehabilitation is essential for supporting independence and wellbeing. Group-based programs often rely on care-partner involvement, limiting opportunities for people with mild-to-moderate dementia to engage independently. Home-based models can offer more personalised support, though sustaining them within existing workforce constraints is challenging. Enabling allied health assistants (AHAs) to take a more autonomous role may offer a feasible, scalable alternative.

Aims: This study explored staff attitudes and perceived requirements for implementing a pilot home-based dementia rehabilitation program overseen by an occupational therapist and physiotherapist delivered by AHAs in the Australian Capital Territory.

Methods: A qualitative exploratory design was used. One focus group (n = 3) and two semi-structured interviews (n = 2) were conducted before program commencement. Participants were asked about feasibility, anticipated challenges, and implementation needs. Data were analysed using qualitative content analysis.

Results: Four themes and one subtheme were identified: 1) AHAs were viewed as central to program feasibility and sustainability, with staff confident in their skills, 2) Person-centred, compassionate engagement was considered essential for fostering confidence and meaningful participation, 3) Successful implementation required strong leadership and organisational support, with subtheme, robust risk-management processes were essential, 4) The model addressed a service gap for individuals unable to access group-based rehabilitation.

Conclusion: Staff believed the home-based program would be successful if key organisational and personal factors for staff readiness and engagement were met to support implementation of the AHA-delivered program.

Impact: These findings will guide a scalable approach to provide access to dementia rehabilitation for people who live independently by leveraging AHAs in the delivery.

Poster 57

TITLE: When AI Enters the Relationship: Usage, Benefits, and Concerns

AUTHORS: Michelle Adiwangsa, Australian National University; Karla Bransky, Australian National University; Anne Ozdowska, Australian National University; Josh Andres, UNSW Canberra

ABSTRACT

Introduction: Artificial Intelligence (AI) technologies play a growing role in our social lives, including romantic relationships. AI use in dating contexts has been increasingly reported, including ChatGPT for crafting breakup texts or Replika for forming relationships with digital companions (e.g., AI boyfriends). These developments raise emerging concerns about their potential impacts on interpersonal relationships, social wellbeing, and mental health.

Aims/Question: This study investigates how adults use AI technologies in romantic relationships and their perceptions of its benefits, risks, and impacts on social connection.

Methods: Participants aged 18+ were invited to complete a 15–20-minute online survey on their experience with AI in romantic relationships and associated impacts, concerns, and benefits.

Results: Preliminary results from 62 participants indicate that AI is used across all stages of romantic relationships. Participants reported using AI to find potential partners, including polishing dating profiles. In new relationships, AI is used to refine messages in a context-appropriate tone (e.g., flirty, witty, calm, or empathetic) and to understand tone or intent. Participants reported AI use to maintain ongoing relationships, including generating date ideas, planning gifts, and resolving conflicts. Participants highlighted AI's value as an accessible, objective third-party for navigating relationship nuances, particularly for socially-isolated individuals, those with difficulty regulating emotions, or facing language barriers. However, most participants expressed concerns about overreliance on AI and diminished social skills, inappropriate advice, reduced relationship authenticity, detachment from human partners in favour of AI companions, and data privacy.

Impact: Findings will contribute towards the development of future AI guardrails and increase digital mental health literacy, to promote healthy social connections and relationships.

Poster 58

TITLE: Implementing an Institutional Stereotactic Radiosurgery (SRS) Registry at the Canberra Region Cancer Centre (CRCC)

AUTHORS: Minh Tu Vo, Canberra Health Services; Helen Truong, Canberra Health Services; Kylie Jung, Canberra Health Services; Angela Rezo, Canberra Health Services; Lisa Sullivan, Canberra Health Services; Benjamin Quah, Australian National University; Farhan Syed, Canberra Health Services

ABSTRACT

Introduction: Stereotactic radiosurgery (SRS) is a highly-specialised external beam radiotherapy delivery technique that has become a standard of care for patients with brain metastases and benign intracranial tumours. At CRCC, use of SRS has expanded significantly over past decade. With increasing patient numbers, systematic collection of clinical and treatment data has become essential for ongoing service evaluation and quality improvement.

Aim: This initiative aims to enhance the care of patients receiving SRS by establishing an institutional registry that captures reliable, consistent, standardised data on treatment parameters and clinical outcomes to support quality improvement and research.

Methods: A literature review was conducted to identify best-practice principles in radiotherapy registry design. Additionally, an interview with Clinical Registry Team at Princess Margaret Cancer Centre, Toronto, Canada — an institution that has maintained a brain metastasis database for over 20 years — provided practical guidance on registry implementation, workflows, and long-term sustainability.

Results: Key principles for successful registry development were identified across international health systems, including robust quality monitoring, analytic capability, data governance, custodianship, and long-term sustainability. A pilot version of the registry has been developed in Canberra Health Service’s REDCap database and is currently undergoing testing.

Conclusion: The proposed CRCC SRS Registry is being developed using established design principles and insights from experienced international centres and is now in its final testing phase.

Impact: The institutional SRS registry is expected to be operational in late 2026. It will provide essential infrastructure for continuous improvement in care of patients with intracranial tumours by enabling systematic, high-quality data collection and meaningful use of clinical information.

Poster 59

TITLE: Exploring the Impact of a Rare ITK Variant in Autoimmunity

AUTHORS: Anju Babu, Australian National University; Maurice Stanley, Australian National University; Morgan Downes, Australian National University; Somasundhari Shanmuganandam, Australian National University; Joanne Chow, Australian National University; Jean Cappello, Australian National University; Ann-Maree Hatch, Australian National University; Giles Walters, Australian National University; Vicki Athanasopoulos, Australian National University; Simon Jiang, Australian National University

ABSTRACT

Introduction: Autoimmune diseases are genetically and phenotypically heterogeneous, leading to variable treatment efficacy among patients. Understanding the unique pathogenic mechanism helps tackle these complex conditions. Using genome sequencing, we have identified a mutation in the IL-2 inducible tyrosine kinase ITKvar in seven unrelated patients presenting various autoimmune conditions. Notably, three patients were diagnosed with sarcoidosis, a systemic granulomatous disease.

Aim: To understand the pathogenic mechanism of ITKvar in autoimmunity.

Methods: Immunophenotyping was performed on peripheral blood samples from ITKvar/+ patients to characterize cellular phenotypes. Western blot and luciferase assays were performed to assess the effect on downstream signalling molecules in vitro. A CRISPR-generated mouse model carrying the orthologous Itkvar mutation is being used to investigate the physiological impact of this variant.

Results: ITKvar/+ patients showed increased proportions of memory and terminally differentiated T-cells. Overexpression of ITKvar resulted in increased phosphorylation of its substrate PLCγ1 and elevated downstream NFAT reporter activity. Itkvar/var mice showed an increase in activated T-cells. Upon anti-CD3/CD28 ligation, there was increased calcium flux in splenic and thymic T-cells in Itkvar/var mice. Other T-cell responses, such as proliferation, apoptosis, and differentiation, are being tested in these mice.

Conclusion/Impact: These findings demonstrate that ITKvar is associated with increased T-cell activation, promoting a memory T-cell phenotype. This is consistent with the observations in patients. The manifestation of various autoimmune conditions in patients indicates that it is a common mechanism underlying autoimmune pathogenesis. This study presents a unique opportunity to uncover the consequences of ITK-mediated T-cell dysfunction. This research would be the first report to date linking ITK with sarcoidosis.

Poster 60

TITLE: Assessing Digital Readiness among Older Indonesians: Implications for WhatsApp Delivered Health Information

AUTHORS: Hartaty Sarma Sangkot, Australian National University; I Nyoman Sutarsa, Australian National University; Sally Hall Dykgraaf, Australian National University; Matthew Kelly, Australian National University

ABSTRACT

Introduction: Indonesia’s rapidly ageing population presents growing challenges equitable health services, particularly as health systems increasingly rely on digital health interventions. Understanding the digital readiness of older adults is essential for designing effective, acceptable, and scalable digital health strategies.

Aim: To assess digital readiness and explore the feasibility of delivering health-screening results digitally to older adults in Malang City, Indonesia.

Methods: A cross-sectional survey was conducted between May and June 2025 among adults aged 45 years and older attending health screenings at Integrated Health Services Posts (Posyandu) and 16 Community Health Centres (Puskesmas). Using proportional to size sampling, 400 participants were successfully recruited and interviewed. Data on device ownership, application use, and willingness to receive digital messages were collected and analysed descriptively.

Results: Although 75% (n=301) of participants owned mobile phones and WhatsApp was installed on 99% (n=289) of those devices, only 2.5% (n=10) demonstrated adequate digital readiness. Of those owning mobile phones, 73% (n=220) had no health-related applications installed. Among those who had downloaded at least one health application. About 96.2% (n=385) and 96.5% (n=386) of participants were willing to receive notifications and reminder messages, respectively. However, only 13.7% (n=55) had previously received any health-related messages from a health facility.

Conclusions: Digital readiness among older adults remains low, but widespread WhatsApp use provides a feasible platform for delivering health information.

Impacts: Leveraging WhatsApp-based communication may offer a more realistic digital health pathway than dedicated health apps. Realising this potential will require strengthened human resources, improved digital infrastructure, and supportive health policies to promote system integration and uptake.

Poster 61

TITLE: Trends in Pre-biopsy Magnetic Resonance Imaging Uptake Across Prostate Cancer Risk Groups: Findings from the ACT Prostate Cancer Outcomes Registry (PCOR ACT)

AUTHORS: Michael Odutola, Health and Community Services Directorate; Sally Naylor, ACT Health and Community Services Directorate; Mirka Smith, Health and Community Services Directorate; Elizabeth Chalker, Health and Community Services Directorate

ABSTRACT

Introduction: Prostate cancer (PCa) is the most commonly diagnosed cancer among males in the ACT. Incorporating pre biopsy magnetic resonance imaging (MRI) into diagnostic pathways has been shown to improve the detection of clinically significant disease and support more targeted biopsy approaches.

Objectives: To assess trends in pre biopsy MRI uptake across National Comprehensive Cancer Network (NCCN) risk groups among individuals diagnosed with PCa and enrolled in PCOR ACT.

Methods: Demographic and diagnosis data were extracted for PCOR ACT participants diagnosed between 2015 and 2023. Pre biopsy MRI use was recorded, and participants were assigned to low, intermediate, high/very high, or metastatic risk groups using the NCCN risk group guidelines.

Results: A total of 3,121 participants were distributed across intermediate risk (41%), high/very high risk (22%), low risk (17%), metastatic (13%), and unclassified (6%) disease groups. Median age at diagnosis was 69 years. Overall, 69% underwent pre biopsy MRI. Uptake rose from 4% in 2015 to 86% in 2019 and remained consistently high until 2023 (83%). MRI use varied by risk category: 74% of those with intermediate risk disease, 73% with high/very high risk disease, 68% with low risk disease, 55% with metastatic disease, and 46% of unclassified cases received MRI prior to biopsy.

Conclusion: PCOR-ACT data shows increase in the use of pre-biopsy MRI for PCa diagnosis over time. The introduction of Medicare Benefits Schedule funding for multiparametric MRI in July 2018 may have contributed to this shift in diagnostic practice in the ACT.

Poster 62

TITLE: A Novel NOTCH1 Variant in Dermatomyositis Associated with Cardiac Defects

AUTHORS: Dulika Sumathipala, Australian National University; Morgan Downes, Australian National University; Jiaxi Huang, Australian National University; Somasundhari Shanmuganandam, Australian National University; Joanne Chow, Australian National University; Ann-Maree Padarin, Australian National University; Eoin O Sullivan, Royal Brisbane & Women's Hospital; Giles Walters, Australian National University; Vicki Athanasopoulos, Australian National University; Simon Jiang, Australian National University

ABSTRACT

Introduction: NOTCH1 encodes a transmembrane receptor that plays an important role in cell development, differentiation and fate. Variants in NOTCH1 have been implicated in congenital heart defects and T cell malignancies, yet the impact of germline NOTCH1 variants on immune function remains poorly understood.

Aim: We sought to understand the pathophysiological mechanism in a proband with dermatomyositis from a family with autoimmunity and cardiac changes.

Methods: Whole Genome Sequencing was undertaken and bioinformatic analysis identified putative pathogenic variants, which were functionally analyzed in vitro.

Results: We report three siblings with a novel heterozygous NOTCH1 c.6044T>C (p. Ile2015Thr) variant with congenital cardiovascular anomalies and an atypical T cell immunophenotype. Patients showed skewed CD4$^+$ T cell subsets, with a bias toward a Th2 immune profile, a relative increase in naïve and central memory CD4$^+$ T cells, with fewer fully differentiated effector T cells (TEM and TEMRA). In addition, single-cell RNA sequencing suggests possible compensatory upregulation of NOTCH2, as well as genes involved in Th1 differentiation and IL-12 regulation, which may help maintain immune balance despite altered NOTCH1 signaling. Markers of early T cell activation were impaired compared to healthy controls, which was corrected ex vivo in the presence of the NFAT inhibitor tacrolimus.

Conclusions: To our knowledge, this represents the first report of a germline NOTCH1 missense variant segregating with both congenital cardiac defects and a defined T cell immunophenotype and underscores the pleiotropic effects of NOTCH1 dysfunction.

Impact: This work highlights the utility of integrative clinical and genetic approaches in elucidating the multisystem impact of rare variants in core developmental pathways.

Poster 63

TITLE: Epidemiology of Snow Sports-Related Fractures in the Australian Alpine Region: A 10-Year Retrospective Analysis

AUTHORS: Mandy Wang, Canberra Health Services; Rebecca Brown, Canberra Health Services; Joe Lynch, Canberra Health Services

ABSTRACT

Introduction: Snow-sports, including skiing, snowboarding, and tobogganing, carry a significant risk of fractures. Australian data on activity specific patterns, demographics, and fracture multiplicity remain limited. Understanding these patterns is essential for informing prevention strategies and optimising healthcare resource allocation.

Methods: We retrospectively reviewed patients presenting to The Canberra Hospital with snow sport–related fractures between 2014 and 2024. Injuries were categorised by activity, anatomical region, specific bone fractured, age group, sex, and multiplicity. Associations between age and multiple fractures were assessed using χ^2 tests.

Results: A total of 1,162 fracture events were identified: skiing 55.9%, snowboarding 36.1%, tobogganing 2.2%, and other activities 5.7%. Skiing and tobogganing predominantly involved the lower limb (tibia/fibula 37.2% and 50.0%), whereas snowboarding mainly affected the upper limb (shoulder 26.0%, radius/ulna 21.4%). Multiple fractures occurred in 19.2% of cases, most frequently in middle aged and older adults (45–54 years: 25.4%; 55–64 years: 23.4%; ≥65 years: 23.5%), while younger adults (0–18 years: 12.3%; 25–34 years: 11.1%) had fewer than expected.

Conclusion: Snow-sport–related fracture patterns are strongly influenced by activity type and participant age, with multiple fractures concentrated in middle aged and older adults. Young adults were over represented relative to population proportions, whereas children and older adults were under represented. These findings highlight the need for age specific risk mitigation strategies and improved surveillance to better characterise injury burden.

Impact: Findings support targeted prevention strategies, including sport specific protective equipment, pre season conditioning, and age tailored safety education, as well as informed hospital resource planning. Continued exposure based research is needed to better quantify risk and guide interventions.

Poster 64

TITLE: The Socio-Geographic Differences in CKD Mortality in Australia

AUTHORS: Mitchell Hunter-Dickson, Canberra Health Services; Martin Gallagher, UNSW; Sradha Kotwal, UNSW; Girish Talaulikar, Canberra Health Services

ABSTRACT

Introduction: Chronic kidney disease (CKD) contributes to 11% of deaths and 18% of hospitalisations in Australia. Social disadvantage and rurality are linked to higher CKD incidence, faster disease progression and poorer outcomes. This retrospective cohort study examines how socioeconomic disadvantage and rurality influence CKD outcomes in the Canberra region.

Methods: Data were collected for CKD patients managed by the Canberra Region Renal Services between 1 November 2012 and 30 November 2022. The catchment spans 30,000 km^2 and nearly 700,000 residents, covering all IRSAD socioeconomic deciles and all Modified Monash Model (MMM) rurality classes except very remote. Postcodes determined IRSAD and MMM classifications. Patients younger than 18 or living outside the catchment were excluded. Baseline demographics, age at referral and comorbidities were evaluated.

Results: The study included 7,152 patients with CKD stages 3a–4, 44.4% were female. Median age at registration was 69 years with a median follow up of 2.88 years. Most patients (70%) lived in metropolitan areas, and 59% resided in the two least disadvantaged IRSAD deciles. Comorbidity rates were similar across socio-geographic strata. During follow up, 2,021 patients died. Median age at death was 81 years for metropolitan residents versus 76 years for nonmetropolitan residents ($p < 0.001$). Patients with the highest SES had a median age at death of 82 years compared with 78 years among more disadvantaged groups ($p < 0.001$).

Conclusions: Socioeconomic disadvantage and rurality are associated with up to five years' reduced lifespan among CKD patients. Further research should investigate treatment patterns and resource utilisation contributing to these disparities.

Poster 65

TITLE: How Accurate are our Near Reading Charts? An Assessment of 19 Charts Against ISO 7921:2024 Standards

AUTHORS: Timothy Murphy, University of Canberra; Jingyi Chen, The University of Western Australia; Myra Leung, The University of Auckland

ABSTRACT

Introduction: Near vision assessment provides clinicians with important information about visual function, yet limited data exist on the accuracy of reading charts commonly used in community practice.

Aims: To measure near reading charts to determine how they compare to an international standard (ISO 7921:2024), and to develop a chart conforming to this standard.

Methods: Commercially and device manufacturer-provided reading charts were scanned at 600 dots per inch, and Gaussian adaptive thresholding applied to facilitate repeatable measurements. Letter x-heights were measured in pixels by three researchers and converted to millimetres. Contrast levels and line spacing were also measured. Results were compared with ISO Standards, with intraclass correlation coefficient used to assess intergrader agreement.

Results: High variability was observed between charts. Only one of the 19 tested charts (5%) had all text sizes within tolerance. Serif charts tended to have smaller text than required (μ=−9.65%) while sans-serif tended to be larger (μ=+4.96%). All charts met line spacing and minimum contrast level requirements, though some failed to comply with the matte surface requirement. Interrater agreement was high (ICC(2,1)=1.00), indicating a highly repeatable measurement technique. A new chart, the UC/UWA Reading Chart, was developed which meets all ISO 7921:2024 criteria.

Conclusions: Significant variability in text size was identified across reading charts, and none met all ISO 7921:2024 requirements. Clinicians and researchers should exercise caution when interpreting changes in near reading acuity when different charts are used, particularly in shared-care settings or when monitoring progressive conditions.

Impact: Accurate near reading acuity measurement is essential for detecting true clinical changes to vision.

Poster 66

TITLE: Piloting Improvement in Group Clinical Supervision for Senior Allied Health Professionals through Group-Led Change

AUTHORS: Tulene McCabe, Canberra Health Services; Lisa Tredinnick, Canberra Health Services; India Anderson, Canberra Health Services; Lucy Barton, Canberra Health Services; Louise Basyoni, Health and Community Services Directorate, ACT Government; Joanne Dix, Canberra Health Services; Deonie Hammond, Canberra Health Services; Kerrie Keun, Canberra Health Services; Deborah McKinney, Canberra Health Services; Rebekah O'Hare, Canberra Health Services; Michelle Sullivan, Health and Community Services Directorate; Leah Epistola, Canberra Health Services

ABSTRACT

Introduction: Clinical supervision is important for the quality and safety of health services. Senior allied health professionals are supervisors but often find it difficult to access regular supervision for themselves. Peer-led group supervision is one approach to address this, but a key challenge is to provide this within existing resources while ensuring all participants can engage in a way that will advance the quality of their practice.

Question: How can we enhance peer-led group supervision for senior allied health professionals, to better support clinical practice quality?

Methods: Group members led the process for changing the supervision format: reviewing frameworks on clinical supervision and quality to identify core elements; and meeting to develop a format to suit the group.

The new format was piloted over four sessions, with different members facilitating. The format was reviewed through discussion and evaluation is proceeding.

Results: Two core elements were identified and agreed by members: choosing a professional standard as a quality theme for each session; and a clear structure to guide critical reflection by everyone. Each facilitator showed autonomy in adjusting details of the format around the two core elements. From the first session, everyone actively participated, in different ways.

Conclusions: A more effective format for peer-led group supervision was developed for the group by the group, involving:

- standards
- structured critical reflection
- autonomy
- engagement

Impact: A group-led approach to changing the group's supervision sessions had immediate impact on engagement in reflection focused on quality outcomes. It has potential to be used more widely to give senior clinicians access to supervision, towards better client outcomes.

Poster 67

TITLE: Outcome Measures for Critical Care Survivors: Can the Acute Care Index of Function (ACIF) be Used in Place of the Functional Independence Measure (FIM)?

AUTHORS: Vincenzo Marzano, Australian National University; Frank van Haren, Australian National University; Bernie Bissett, University of Canberra; Himmel Gosh, ACT Education; Alice Richardson, Australian National University

ABSTRACT

Introduction: Outcomes for survivors of critical illness has become a focus of intensive care (ICU) research. Currently there is no gold standard outcome measure for physical function utilised in clinical practice or in research. The Functional Independence Measure (FIM) is considered gold standard in predicting admission to rehabilitation and measuring physical function in general populations. However, there is limited utility of this outcome in the ICU environment. The Acute Care Index of Function (ACIF) has previously been validated in the ICU environment and is easily administered as part of routine practice.

Aim: To determine the relationship between ACIF and FIM.

Method: Retrospective cohort study of ≥18 between July 2018-June 2019 with an ICU length of stay ≥72 hours. Data was extracted from the ANZICs database and patients clinical file. ACIF was calculated on ICU discharge, at any rehabilitation care type change and at hospital discharge. FIM was calculated by hospital coders at rehabilitation care type change, and on admission at hospital discharge prior to transfer to rehabilitation. The relationship between ACIF and FIM was determined with linear mixed modelling.

Results: 674 patients were included in the study, mean age 63 (18-94), 39% female, mean APACHE 3 62 (IQR 32), 52% requiring mechanical ventilation. Of these, 222 patients were included in ACIF/FIM analysis. Linear regression demonstrated correlation of 0.85.

Conclusion: The ACIF and FIM have significant correlation for survivors of critical illness.

Impact: The ACIF may be used for critical illness survivors to describe physical function.

Poster 68

TITLE: Falls from Height: A Multi-Mechanism Retrospective Analysis

AUTHORS: Gerard Wehbe, Australian National University; Rebecca Brown, Canberra Health Service; Joseph Lynch, Canberra Health Service

ABSTRACT

Introduction: Working from height is required in many aspects of life. However, falls from height are a leading cause of unintentional injury. There's evidence that falls from height are increasing in incidence, particularly among older adults and in non-occupational settings, but there's a paucity of studies comparing different fall mechanisms.

Aims: To describe and compare patterns in fracture-related falls from height in the ACT.

Methods: A retrospective analysis of fracture-related falls from heights that presented to TCH between 2015 and 2024 was conducted. Fractures were categorised by fall mechanism, anatomical region and treatment. Incidence rates for each fall mechanism were calculated and the trend over time was analysed. Relationships between injury pattern, sex, and fall mechanism were explored.

Results: There were 1182 falls resulting in 2315 fractures. The annual incidence of ladder falls increased by 5.7% and building falls decreased by 4.5%. Summer months averaged 3.4 more falls per month than non-summer months. Individuals who fell from ladders were older than those who fell from scaffolding or buildings. The skull/spine was the most fractured region followed by the upper limb. Individuals who fell from buildings and males sustained significantly more skull/spine fractures than those who fell from ladders and females, respectively. Approximately one-third of fractures (36%) were managed operatively.

Conclusion: Overall, ladder falls are increasing and predominantly involve older males. Building falls are decreasing and disproportionately result in skull or spine fractures.

Impact: Targeted fall prevention measures should account for the distinct demographic profile associated with different fall mechanisms and the summer peak in falls from height.

Poster 69

TITLE: Opportunistic Blood Lipid Testing as Screening for Familial Hypercholesterolaemia in Children and Adolescents

AUTHORS: Rachael Lu, Australian National University; Tony Lafferty, Canberra Health Services; Marie Salib, Canberra Health Services; Kathleen O'Brien, Australian National University

ABSTRACT

Introduction: Familial Hypercholesterolaemia (FH) is a dominantly inherited disorder affecting clearance of LDL cholesterol; causing potential cardiovascular disease by 35 years of age. Estimated prevalence is 1:200-250, with up to 90% of cases undiagnosed and untreated. Opportunistic screening in the paediatric population may provide a clinically- and cost-effective approach for identification and treatment of children and first-degree relatives.

Aims: To investigate feasibility of FH screening using opportunistic blood lipid testing in outpatients aged 2-16 years presenting to ACT Pathology for referred phlebotomy.

Methods: Based on LDL, participants were categorised as: ‘unlikely FH’, ‘raised LDL requiring further evaluation’, or ‘likely FH after secondary causes excluded’. Referring clinicians of participants with LDL≥4.0mmol/L were urged to further investigate.

Results: Of 832 participants, 2.8% had LDL≥4.0mmol/L categorising them as ‘likely FH after excluding secondary causes’. 87.6% were ‘unlikely FH’ and 9.6% were ‘raised LDL requiring further evaluation’. 86.3% of participants were only screened due to study participation; 2.6% of which were ‘likely FH after secondary causes excluded’.

Conclusion: 2.8% of participants had LDL≥4.0mmol/L. Noting this is prior to exclusion of secondary causes, it is significantly greater than estimated prevalence of 0.4-0.5%. 83% of participants with LDL≥4.0mmol/L were not referred for testing. This shows opportunistic testing can identify children with undiagnosed hyperlipidaemia, enabling early diagnosis and treatment.

Impact: This demonstrates a method to identify cases of randomly elevated LDL, a major cause of premature morbidity and mortality. Larger scale evaluation and further investigations can identify FH cases resulting in timely treatment and potential reverse-cascade screening, thereby addressing a clinically important condition at minimal cost.

Poster 70

TITLE: AI-Assisted Research: From Evidence Synthesis to Health Innovation

AUTHORS: Marwa Metwalli, Australian Catholic University

ABSTRACT

Introduction (Background and Significance): Exponential growth in biomedical literature makes rigorous, independent evidence synthesis increasingly challenging for ACT clinician-researchers. Traditional workflows are time-intensive and resource-dependent — a gap that structured AI-assisted frameworks can practically address.

Aims/Question: Can a structured, multi-phase AI-assisted workflow enable rigorous evidence synthesis and translational health innovation — from research question to prototype — without large teams or significant funding?

Methods: Six phases were applied: defining the research problem, aims, hypothesis, and research questions; identifying literature gaps; retrieving and manually screening peer-reviewed papers using AI-assisted tools; interrogating research questions within a dedicated AI project environment with referenced responses; extracting and visualising data; and producing scientific illustrations and mind maps, with outputs manually compiled into a structured research file. AI tools supported — not replaced — researcher judgement, with all outputs verified and attributed according to research ethics principles.

Results: Applied to a dermatological research problem, the workflow produced a manuscript ready research manuscript, five prototype therapeutic garments incorporating coffee-derived bioactives and bamboo lyocell fiber developed with a manufacturing partner, and proposed RCT designs with validated endpoints for atopic dermatitis, herpes zoster, and diabetic lower limb infections.

Conclusion: This structured, ethics-conscious AI-assisted workflow demonstrated an accelerated, reproducible path from research question to translational health prototype across an interdisciplinary research context.

Impact: This framework offers ACT clinician-researchers, ACT hospitals, and ACT dermatology and wound care services a low-cost, reproducible methodology for generating rigorous evidence — supporting clinician-led research capacity and translational innovation within the ACT health system.

Poster 71

TITLE: Shared Decision Making for Labour Interventions

AUTHORS: Rebeka Stepto, Canberra Health Service; Roberto Orefice, Canberra Health Service

ABSTRACT

Background: Birth is an exciting time for families. However, there are rising rates of birth trauma, often related to emergency interventions in labour. Shared decision making (SDM) is the process by which care providers and their patients share best available evidence and important individual factors to weigh up options and come to an informed choice regarding their health care. There is limited evidence for women's perceptions of shared decision making for obstetric emergencies in labour.

Aims: To evaluate women's perception of shared decision making in labour for obstetric emergencies in labour using the SDM-Q9 questionnaire and begin to identify clinical factors that can influence this process.

Materials and Methods: Postpartum women who had had an emergency intervention in labour (caesarean section, instrumental delivery, anal sphincter injury or massive bleeding) were recruited via poster and in person to complete an online or hard copy survey including the SDM-Q9, demographic and clinical data. This data was paired with data from the medical record and general descriptive statistical analysis was used.

Results: 19 women consented to the study and completed surveys for analysis. Most were primiparous (88%) and most women attended hospital run birth classes (77%). Emergency CS was the most common intervention (55.6%). Overall, the average SDMQ9 score was high (75) reflecting a high degree of shared decision making.

Conclusion: Perceptions of SDM in labour for obstetric emergencies are generally high in the days after birth.

Impact: More research is needed to evaluate influencing factors for SDM in labour.

Poster 72

TITLE: Feeding Smarter, Not Harder: An ICU Enteral Feeding Pathway Review

AUTHORS: Taryn Billing, Canberra Health Service; Lily Vincent; Ashwin Kumar

ABSTRACT

Introduction: Current recommendations have shifted towards hypocaloric feeding in response to an impaired metabolic response in the early stages of critical illness.

Aims: This project aimed to engage stakeholders in reviewing Canberra Hospital’s ICU enteral feeding pathway against evidence-based guidelines and benchmarking with tertiary level ICUs in Australia.

Method: A literature review was conducted, examining critical care nutrition literature published since 2015. Benchmarking was performed via an emailed questionnaire to eleven ICUs across Australia, comparing enteral feeding protocols. Stakeholder consultation was conducted, involving a survey of ICU staff regarding awareness of and agreement with the current pathway.

Results: The current ICU enteral feeding pathway prompts staff to commence enteral feeding at 30kcal/kg ideal body weight (IBW)/day.

Findings from the literature review recommend commencement of enteral feeding at hypocaloric values with progression towards rates of 20-25kcal/kg/day value between days 3 to 7.

Benchmarking outcomes demonstrated all units commence feeding at hypocaloric values, using either a standard rate per hour (e.g. 40ml/hr/day) or weight adjusted rate per hour (e.g. 0.5ml/kg/hr) with the target rate between 25-30kcal/kg/day.

Half of the survey respondents felt the current protocol reflected evidence-based practice

Conclusion: The primary outcome was to reduce the commencement rate of enteral feeding to 0.5ml/kg IBW/hr (or 15kcal/kg IBW/day) and titrate feeds towards a rate of 1ml/kg IBW/hr (or 30kcal/kg IBW/day) over 3 days. There was low agreement with the current ICU enteral feeding pathway aligning with best practice.

Impact: The proposed changes to the enteral feeding pathway have bought us into line with international guidelines and practice of other major ICUs.

Poster 73

TITLE: Improving the Patient and Carer's Last Chapter of Life

AUTHORS: Yoonju Hwang, University of Canberra; Thomas Georgeson, Canberra Health Services; Imogen Mitchell, Canberra Health Services & Australian National University

ABSTRACT

Background: A substantial proportion of deaths in Australia occur in acute hospitals, yet delivery of high-quality end-of-life (EOL) care remains inconsistent. Local evidence describing end of life care practices within Canberra Health Services can be used to guide service delivery.

Aim: To describe current EOL care practices at Canberra Hospital, with a focus on planning and documentation, comfort-focused care processes and high-burden interventions near the end of life.

Methods: A retrospective observational cohort audit was undertaken using a nationally available audit tool. Eligible cases included deaths occurring between 1 February 2024 and 31 January 2025 in the Emergency Department (ED), death within 48 hours of admission following ED presentation, or deaths within specific hospital units. Data were extracted from electronic medical records.

Results: The audit included 191 deaths, grouped into Emergency (n=40), Cardiology (n=40), Oncology (n=32), Geriatric (n=40), and Other (n=39). Pre-admission Advance Care Plans (ACP) were documented for 22.0% (42/191) overall and varied substantially between units (6.3%-50.0%). Comfort care was initiated for 64.9% (124/191). A total of 8.4% of patients died during a Medical Emergency Team (MET) call, and 25% of patients had CPR in the last 48 hours of life. Documented pre-admission ACP was associated with lower CPR (7.1% vs 30.2%, p=.002) and lower intubation/invasive ventilation (7.1% vs 34.2%, p=.001).

Conclusion: End-of-life care practices at Canberra Hospital varied substantially across clinical cohorts, particularly for documentation of planning, comfort care initiation, and escalation near death. The association between pre-admission ACP documentation and reduced high-burden interventions suggests that improving ACP accessibility at presentation may support less invasive end-of-life care.

Poster 74

TITLE: Prospective Evaluation of Clonal Haematopoiesis in a Multidisciplinary Research Clinic

AUTHORS: Jun Yen Ng, Canberra Health Services; Shiloh Middlemiss, College of Health and Medicine, Australian National University; Maya Latimer, Canberra Health Services; Mark Polizzotto, Canberra Health Services

ABSTRACT

Background: Clonal Haematopoiesis (CH) refers to the clonal outgrowth of hematopoietic stem cells driven by acquired mutations in the absence of haematologic neoplasms. It is present in 10-30% of people >70 years, and common in people living with HIV and cancer survivors. It is a silent driver of mortality and serious complications, including hematologic neoplasms and cardiovascular diseases.

CH is increasingly identified with crucial knowledge gaps, including the roles of screening, intervention, surveillance and the psychological burden. Hence, the Clonal Haematopoiesis Assessment: Prevention, Treatment and Research (CHAPTER) cohort study will establish Australia's first dedicated multidisciplinary CH research clinic.

Aim: The study will establish a prospective cohort as the basis for future clinical and translational studies in CH. It will also evaluate the psychological burden of CH and people's perception and understanding of the condition, with the aim of enhancing communication and support for people with CH

Methods: This is a prospective, longitudinal cohort study. People referred to the haematology clinic with possible CH will undergo standard-of-care pre-evaluation to exclude other causes of cytopenia, followed by a careful discussion of screening by molecular testing. Participants with confirmed CH will be able to access individualised monitoring for CH-associated complications, multidisciplinary support, and report their experiences and concerns through patient-reported outcome measures.

Conclusion: The CHAPTER study (NCT07313059) incorporates individualised monitoring and support for people with CH. This includes streamlined assessments of psychological distress, understanding, perception and allied health support. These goals align with the priority area of person-centred approach to integrating genomics into healthcare, as identified in the National Health Genomics Policy Framework.

Poster 75

TITLE: Memory Efficient Interpretable Foundation Models for Multi-omics Gene Regulation

AUTHORS: Md Asifur Rahman, UNSW; Ripon Chakrabortty, UNSW; Hasan Turan, UNSW; Ebrahim Aly, UNSW

ABSTRACT

Introduction: Gene regulation explains how cells adopt and change states, and understanding it is foundational for tasks such as early cancer detection, drug target discovery, and dose response prediction. Single cell and multi-omics datasets are expanding rapidly, making manual curation of gene-gene and regulator-target relationships infeasible. This has driven deep learning and sequence based modelling, but key challenges remain in long range context, local cell state specificity, and resource efficient multi-modality training.

Aims: Develop a resource efficient foundation model that learns context specific regulatory structure from large scale multi-omics sequences and remains explainable, adaptable, and deployable under health data sovereignty constraints.

Methods: Develop computational methods to build the foundation model and pretrain it on omics corpora. Design parameter efficient representations and long context attention schemes that expand context span while preserving local and global regulatory signals. Correct read depth variation and sparsity using noise aware objectives and calibration. Combine modality specific models via compositional training and model merging, then evaluate online learning for continual cohort updates with reduced forgetting. Assess performance using predictive benchmarks, cross cohort generalization tests, and attribution-based analyses.

Results: Expected outputs include a resource efficient backbone with transferable embeddings, improved long range modelling, and interpretable drivers that map to context specific mechanisms.

Conclusion: Results will demonstrate scalable multi-omics integration, efficient context expansion, and reliable adaptation while retaining mechanistic interpretability.

Impact: Institutions can train and fine tune the model within governance boundaries for cell type and state classification, disease prediction, stratification, and target discovery, accelerating translation from molecular measurements to actionable clinical hypotheses.

Poster 76

TITLE: A Comparison of Referrals of Older Adolescents and Young Adults Attending the Canberra Health Services Department of Bariatric Medicine

AUTHORS: Tayla Ward, Canberra Health Services; Louise Brightman, Canberra Health Services; Ashvini Munindradasa, Canberra Health Services

ABSTRACT

Introduction: Obesity is a complex problem with a myriad of public health ramifications. Correlations exist between obesity and poorer overall health outcomes including: diminished life expectancy, increased chronic disease burden and reduced quality of life. There is an established framework for the management of adults with obesity within the public health sector in Australia, although less is known about the demand for such services in the older adolescent and young adult population.

Objectives: This study contrasts the Canberra Health Services (CHS) Department of Bariatric Medicine (DBM) referral rates and characteristics in the older adolescent and young adult population (15-25 years) in 2018 and 2023.

Methods: Existing referral data from electronic medical records was collected, de-identified and analysed based on year of referral to the DBM (2018 versus 2023) for all patients aged 15-25 years.

Results: A total of 87 patients were identified, with a 71.9% increase in referral quantity from 2018 compared to 2023 (n=32 versus n=55). Mean age (years) was similar across both 2018 and 2023 cohorts (21 and 22 years, respectively). Mean BMI (kg/m2) remained relatively steady in 2018 versus 2023 (47kg/m2 versus 48kg/m2, respectively). The average number of comorbidities was comparable (3 in 2018 and 4 in 2023).

Conclusions/Impact: This study provides insight into DBM referral rates and features in older adolescents and young adults in 2018 versus 2023. This underscores the ongoing need for an integrated, coordinated and multidisciplinary approach to obesity management for older adolescents and young adults throughout the ACT, and may reflect a similar demand within other publicly funded services in Australia.

Poster 77

TITLE: Making the Unmeasurable Measurable: Inclusive PROMs for Spiritual Care

AUTHORS: Srishti Antil, Deakin University; Chris Dudfield, Canberra health Services

ABSTRACT

Introduction: Spiritual wellbeing is a pivotal component of holistic consumer care, yet measuring outcomes of a construct that is inherently complex and difficult to quantify remains limited. Patient-Reported Outcome Measures (PROMs) provide a mechanism to capture consumers' own perception of spiritual wellbeing. Though questions remain about which measures are truly valid, inclusive and safe to use.

Aims/Questions: To examine validated spiritual-care PROMs to determine validity, suitability and applicability for implementation in CHS, which delivers spiritual care across diverse spiritual, secular and non-religious worldviews.

Methods: A rapid scoping review was undertaken using Arksey and O'Malley's framework and reported in accordance with PRISMA-ScR guidelines. Several databases were interrogated for appropriate studies validating spiritual care PROMs. Screening was completed using AI assistance, with extracted data including study cohort, measure performance, structure and relevance to a pluralistic consumer demographic.

Results: Six studies met inclusion criteria. PROMs emphasising existential and intrapersonal dimensions, such as meaning-making, peace and self-connectedness, demonstrated firm and consistent quality-of-life and symptom outcomes. Faith-based measures yielded weaker outcomes across diverse demographics. Australian and Scottish PROMs demonstrated strong unidimensional structuring, reliability and correlations with wellbeing indicators.

Conclusion: Existentially focussed, unidimensional PROMs seem to be most appropriate for routine spiritual care measurement within CHS. Inclusive language and psychometric strength align with CHS's diverse consumer population.

Impact: Implementing validated, inclusive spiritual care PROMs can strengthen consumer-centred practice, support consistent outcome evaluation and enhance quality and safety of holistic care. This may, over time, contribute to improved patient experience and responsive service delivery.

Poster 78

TITLE: Kinematic Assessment of the Patella in Open Vs Closed and Loaded Vs Unloaded Total Knee Replacements

AUTHORS: Olivia Scheide, Australian National University; Nicolo Malagutti, Australian National University; Catherine Galvin, Australian National University; Joseph Lynch, Canberra Health Services; Paul Smith, Canberra Health Services; Tom Ward, Canberra Health Services

ABSTRACT

Introduction: There are no capabilities to measure patellofemoral kinematics (PFK) quantitatively during total knee replacements (TKR). Currently, the patella is assessed intraoperatively with the joint capsule open and unloaded.

Aim: This study aimed to compare the differences in PFK between an open and closed joint and a loaded and unloaded joint after a TKR.

Methods: Eight cadaveric knees underwent a kinematically aligned TKR (GMK Sphere, Medacta International). A patellar tracker was attached to the patella and integrated into the Orthokey system (BLU-IGS Italia). The knee cycled through flexion and extension with the joint open and then closed with sutures. Loaded flexion-extension was simulated by pulling on the rectus femoris. Linear mixed effects models were used to assess differences in PFK.

Results: The closed joint had more medial patellar tilt than open joint at 10° of flexion (9.3° +/- 1.1°) (mean difference +/- standard error). There was more medial rotation in the open joint between 20° and 40° of flexion. There was no significant difference in medial-lateral position or anterior-posterior (AP) position between open and closed joint.

The loaded knee was up to 6.4°+/- 0.8° more medially rotated compared to unloaded conditions throughout flexion. The unloaded knee was tilted more medially 10° to 20° of flexion. There were no significant differences in patellar tilt and AP position.

Conclusion / Clinical Significance: There were minimal differences between the open and closed joint. Loading of the quadriceps has a large influence on rotation throughout flexion.

Impact: These tools provide the groundwork for assessment in vivo.

Poster 79

TITLE: Exploring Mechanisms of EZH2 Inhibitor Resistance in Diffuse Large-B Cell Lymphoma

AUTHORS: Elizabeth Mee, Australian National University; Rachel Woodhouse, Australian National University; Xianghan Li, Australian National University; Marian Burr, Australian National University

ABSTRACT

Introduction: Diffuse large B-cell lymphoma (DLBCL) is an aggressive malignancy and 30% of patients develop treatment refractory disease. 22% of germinal centre DLBCL and 25% of follicular lymphomas gain activating mutations in the repressive epigenetic modifier EZH2. The EZH2 inhibitor (EZH2i) tazemetostat is FDA-approved for treatment of EZH2-mutant follicular lymphoma and in clinical trials for DLBCL. However, resistance to EZH2 inhibitors develops quickly, with only 23% of patients remaining responsive beyond 12 months. There is limited understanding of the mechanisms by which lymphomas acquire EZH2i resistance or how resistance may be overcome.

Aim: To investigate mechanisms by which DLBCL cells gain resistance to EZH2 inhibitors and explore strategies to overcome resistance.

Methods: Generated tazemetostat resistant DLBCL cell lines by continuous inhibitor treatment over 11 months.

Results: EZH2i resistant cells could withstand a ten-fold higher tazemetostat treatment concentration than control cells. Resistant cells were protected from cell cycle arrest that typically follows tazemetostat treatment. Loss of repressive epigenetic marks following EZH2 inhibition was blunted in resistant cells. Whole genome sequencing is underway and may reveal mutations driving EZH2i resistance.

Our lab has discovered that inhibition of Menin, another epigenetic regulator, drives specific tumour killing in DLBCL. Menin inhibitors are FDA-approved in acute leukemias. EZH2i resistant cells remained sensitive to Menin inhibitors. Combining EZH2 and Menin inhibitors killed resistant cells more potently than Menin inhibitor treatment alone. Therefore, Menin inhibition represents a strategy to overcome EZH2i resistance.

Conclusion/Impact: Novel EZH2i resistance model provides new insights into mechanisms of EZH2 inhibitor resistance. EZH2 inhibitor resistance may be combatted through combination with Menin inhibition.

Poster 80

TITLE: Mountain Bike Injury Patterns in the Australian Capital Territory: A 2.5 Year Retrospective Review

AUTHORS: Jordyn Giljevic, Australian National University; Gerard Marmor, Canberra Health Services; Mikaela Gavin, Canberra Health Services; Rebecca Brown, Canberra Health Services; David Lamond, Canberra Health Services; Sean Chan, Canberra Health Services; Thomas Georgeson, Canberra Health Services

ABSTRACT

Background: The popularity of mountain biking in the ACT region has risen steadily in the last 10-20 years. Anecdotally ACT emergency, orthopaedic and trauma clinicians are aware of a significant volume of presentations and injuries related to mountain bike trauma but the epidemiology of injuries in the region has never been formally studied.

Aim: To examine the basic epidemiological features of mountain bike injury patterns and demographics in the ACT will be analysed over a 2.5 year period. To compare these patterns o

Methods: A retrospective cohort study was performed on all cycling injuries that presented to the Canberra Hospital Emergency Department from January 2023 to June 2025.

Results: Our data analysis is not yet complete and will be ready at the end of April 2026. We are examining a cohort of 1000 patients. Analyses are being performed on a) injury patterns in terms of type and severity for mountain and non mountain accidents b) rates of difference in injury between the different groups.

Impact: This study will be one of the largest cycling epidemiological studies conducted in Australia. We hope to make valuable findings in relation to differences in injury patterns, which will be able to guide recommendations and further research in protective clothing and injury risk management. We plan a follow up study that involves field work in the ACT to explore rider experience, environmental conditions and track conditions and relate these factors to injury risk.

Poster 81

TITLE: Investigating the Incidence, Management and Causes of Hypoglycaemia in Paediatric Patients in the Emergency Department

AUTHORS: Leanne Quah, Australian National University; Jamie Lew, Canberra Health Services; Jasmine De Giovanni, Canberra Health Services; Jane Quigley, Canberra Health Services; Ninya Maubach, Canberra Health Services; Josh Griffin, Canberra Health Services; Uma Quigley, Canberra Health Services; Alison Lally, Canberra Health Services; Thomas Georgeson, Canberra Health Services

ABSTRACT

Background: Hypoglycaemia or low blood sugar in infants and children presenting to the emergency department are not uncommon. This is defined as a blood glucose (sugar) level (BGL) low enough to cause signs and/or symptoms of impaired brain function and neurogenic response. While many children who present with hypoglycaemia do not have an underlying pathological cause for their low BGL, literature suggests that a significant minority (8-10%) do and need further specialist management.

Aims: To correlate finger-prick blood ketones, presence of prolonged starvation and a normal examination, with the underlying cause of hypoglycaemia in children and whether these factors can help as a screening tool to identify those children who do not need further investigations.

Methods: A retrospective observational cohort study was conducted on all children aged up to 16 years presenting with a glucose level of < 2.6 mmol/L to Canberra Hospital (TCH) and North Canberra Hospital (NCH) from November 2022 to November 2025.

Results: The data collected was analysed to determine a) the incidence of hypoglycaemia b) the relationship between the cause of the hypoglycaemia and i) point of care ketone test results ii) age of the patient iii) recurrent hypoglycaemic presentations. The study also examined the consistency of clinicians performing 'critical sampling' in this patient cohort. Data is still being collected and will be available in late April 2026.

Conclusion: We expect this study to provide valuable information that may allow clinicians to selectively guide appropriate management in children with hypoglycaemia and to choose which patients require critical blood sampling.

Poster 82

TITLE: Assessing the Australian Triage Scale's Ability to Predict Early Critical Care Needs in Geriatric Trauma

AUTHORS: Jing Theng, Australian National University; Rebecca Brown, Canberra Health Services; Thomas Georgeson, Canberra Health Services; Erin Martin, Canberra Health Services; Denna Fryer, Canberra Health Services; Najith Jayasundara, Canberra Health Services; Che Marfleet, Canberra Health Services

ABSTRACT

Introduction: Older adults experience disproportionate morbidity and mortality after trauma and are frequently under triaged in systems not designed around unique geriatric physiology. The Australian Triage Scale (ATS) aims to identify patients requiring immediate medical attention, making triage the first window to detect those needing time critical intervention. However, it remains unknown whether the ATS is sensitive for geriatric trauma, a group prone to subtle vital sign changes and occult injury. This study evaluates the sensitivity of the ATS for identifying need for critical emergent management (CEM) in older adults.

Aims: To determine whether the Australian Triage Scale (ATS) has predictive value for the need for critical emergent management adult (18-64) vs geriatric (65+) patients.

Methods: Retrospective cohort of adult trauma presentations to Canberra Hospital (1 Jan 2023–31 Dec 2025) using the ACT Trauma Registry linked with Health Information Systems Record review. CEM within 6 hours includes intubation/ventilation, intercostal catheter insertion, transfusion, emergency surgery/interventional radiology, ICU admission, transfer to definitive care, ISS >15, or death. ATS performance will be assessed via sensitivity, specificity, predictive values, ROC curves with DeLong comparison by age group, and under/over triage rates.

Results: Data analysis is still in progress, with early results to be presented for this poster.

Impact: By testing whether older patients who require CEM are not consistently reflected in their ATS category, this study will provide an evidence base to evaluate front door triage, and identify early assessment factors (e.g., vitals, lactate, injury characteristics) that could improve timely recognition of high risk geriatric trauma patients and guide targeted quality improvement work.

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