Government of Western Australia
Child and Adolescent Health Service

Perth Children's Hospital Foundation

The KIDS Research Institute Australia

2025

Child Health Research Symposium

Empowering Futures: Advancing Child Health

3-7 November

Wandju wandju, nidja

Acknowledgement of Country

The Child and Adolescent Health Service (CAHS) acknowledges the Whadjuk and Binjareb people of the Noongar Nation as the Traditional Custodians of the land, sea and waters on which we work and live. We pay our respects to the Elders past and present. Aboriginal people, as the First Peoples, have cared for this land for at least 65,000 years. We recognise and value their continuing cultural and spiritual connections to this land. CAHS acknowledges the diversity of Aboriginal people from across Western Australia who access the health services provided within CAHS.

CAHS recognises that the colonisation of this Country has come at a great cost to Aboriginal peoples and communities and the continued effects of colonisation impact on health and wellbeing today. We pay tribute to the strength, resilience, and courage of Aboriginal people who have survived the devastation of the recent past, to stand strong and proud today.

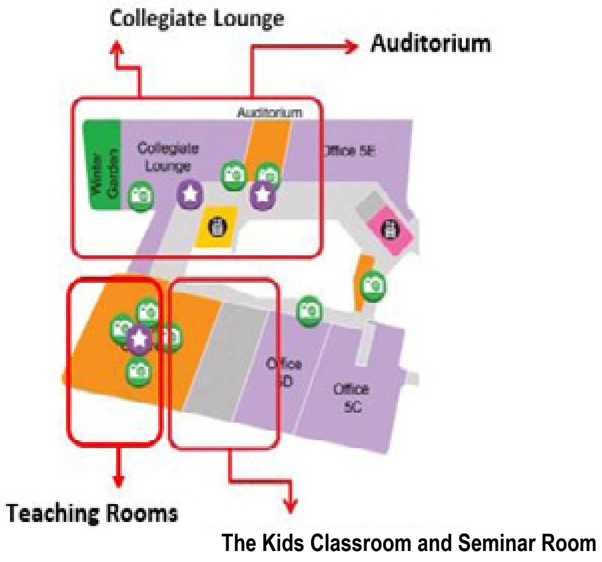
CAHS is committed to working towards a better future, where all cultures are respected and valued, and Aboriginal people take their rightful place as the First Australians.

We acknowledge Perth Children's Hospital Foundation for their generous support of this year's Symposium.

We also extend our thanks to our partner The Kids Research Institute Australia and to the Child Health Research Symposium Organising Committee and all those who contributed to the prizes, planning, organisation and running of the Symposium.

Locations

- Level 5, Perth Children’s Hospital
  - Auditorium
  - Collegiate Lounge
  - Teaching Rooms
  - The Kids Classroom and Seminar Room
- Level 6, Manda, The Kids Research Institute Australia



Legend of abbreviations used in this program

Child and Adolescent Community Health	CACH
Child and Adolescent Health Service	CAHS
Child and Adolescent Mental Health Services	CAMHS
Curtin University	Curtin
Curtin enAble Institute	Curtin enAble
Edith Cowan University	ECU
Fiona Stanley Hospital	FSH
Griffith University	Grifith
Lions Eye Institute	LEI
Murdoch Children's Research Institute	Murdoch Children's
Murdoch University	Murdoch

Perron Institute for Neurological and Translational Science	Perron Inst
Perth Children's Hospital	PCH
Perth Children's Hospital Foundation	PCHF
Saint John of God Subiaco	SJOG Subiaco
South Metropolitan Health Service	SMHS
The Kids Research Institute Australia	The Kids
The Hospital Research Foundation Group	HRFG
University of Leuven, Belgium	Leuven
University of Western Australia	UWA
WA Country Health Service	WACHS

Foreword

The Child and Adolescent Health Service, together with The Kids Research Institute Australia, is proud to present the 2025 Child Health Research Symposium, supported generously by the Perth Children's Hospital Foundation.

Returning to the theme Empowering Futures: Advancing Child Health, this year's symposium renews a focus on exciting opportunities for improving child health outcomes, especially through fast evolving data-driven technologies.

The first of our 2 keynote speakers – Associate Professor Clyde Matava, an anaesthetist from the SickKids Hospital in Toronto – is one of several presenters who will explore the theme, giving a presentation on Transforming Paediatric Healthcare: Artificial Intelligence, Clinical Informatics and the Future of Child Health Research.

Empowering Research Success through Data Services and a special lunchtime session celebrating 30 years of data linkage research at CAHS and The Kids – are among other on-theme presentations.

Another highlight of this year's lineup will be an address by second visiting keynote – Sydney Children's Hospital paediatrician, Professor Karen Zwi – who will share insights on addressing inequities in hospital outcomes for Australian children from priority populations.

Information stalls are a new inclusion to this year's program and will provide added points of interest outside the hospital's main auditorium. After its successful debut last year, the Great Debate is back, as is the popular Poster Event which will once again serve as the Symposium's official opening.

More than 220 local investigators responded to a call for abstract submissions and over the course of the symposium, they will help showcase the extraordinary breadth of research underway across our health service.

The symposium continues to go from strength to strength and we look forward to welcoming you to this year's event.

Valerie Buić
Chief Executive
Child and Adolescent Health Service

Professor Jonathan Carapetis
Executive Director
The Kids Research Institute Australia

Message from Perth Children's Hospital Foundation

Every year, more than 100,000 children and their families walk through the doors of Perth Children's Hospital. They come from every corner of our vast state – from the Pilbara to the Great Southern, from remote communities to right here in Perth – because when a child is sick or critically ill, this is where they need to be.

As we all know, Perth Children's Hospital is Western Australia's specialist paediatric healthcare provider. It is here that the sickest children receive world-class care, and where families find not just treatment, but hope.

At the Foundation, our role is to stand alongside these children, their families, and the extraordinary health professionals who care for them. We exist for one reason and one reason only - to ensure every WA child has access to the best possible healthcare, no matter where they live.

Thanks to the incredible generosity of our donors and partners, we have been part of advancing children's healthcare for over a century. In the past financial year alone, we funded 28 new grants worth $32 million. More than $2.6 million of this was dedicated to transformational research – because innovation is what ensures tomorrow's children receive even better care than today's.

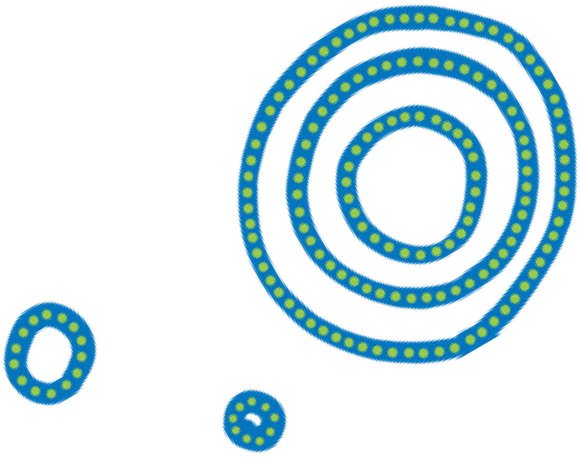
This research spans some of the toughest challenges our children face – cancer, cardiology, mental health, infectious diseases, palliative care, neonatal intensive care and more. Through initiatives like the Rare Care Centre, the Comprehensive Kids Cancer Centre, and Kids Rehab WA, we are creating hubs of expertise that make a global impact.

We are also nurturing the next generation of researchers. Early Career Research Awards are empowering young scientists to explore new frontiers – from diabetes and respiratory disease to Aboriginal health and tailored nutrition for critically ill children. Their work is already shaping better outcomes.

What makes this research powerful is its real-world impact. Clinical trials developed here in WA mean our children have access to cutting-edge treatments without having to travel interstate or overseas. Collaborating with The Kids' Research Institute and leading universities, Perth Children's Hospital is becoming a beacon of medical innovation.

Together – families, clinicians, researchers, donors, and partners – we are making sure WA's sickest children get the very best chance at life. That is the impact we are all here to drive forward, and it is why the Perth Children's Hospital Foundation is proud to sponsor the CAHS Research Symposium.

Carrick Robinson
Chief Executive Officer
Perth Children's Hospital Foundation



Program Overview

Monday 3 November	17:00 - 19:00	Poster Opening Event	Collegiate Lounge

Tuesday 4 November	**9:30 - 11:15**	**Aboriginal and Torres Strait Islander Health**	**Auditorium**
	9:30 - 11:15	CACH concurrent session	The Kids Seminar Room
	9:30 - 11:30	Workshop 1: Qualitative Research Methodologies Dr Amanda Timler - CAHS	The Kids classroom level 5
	11:15 - 11:30	Morning tea break	Collegiate lounge
	11:30 - 12:30	**Plenary 1: Paediatric health equity and access**	**Auditorium**
	12:30 - 13:00	Lunch	Collegiate lounge
	13:00 - 14:00	**Keynote presentation - A/Prof Clyde Matava Transforming Paediatric Healthcare: Artificial Intelligence, Clinical Informatics, and the Future of Child Health Research**	**Auditorium**
	14:00 - 14:15	Afternoon tea break	Collegiate lounge
	13:00 - 16:00	Nursing concurrent session	Teaching rooms level 5
	14:00 - 17:00	CAMHS concurrent session	The Kids Seminar Room
	14:15 - 15:30	The Kids Session 1: The Kids Enabling Your Research	The Kids Manda level 6
	14:15 - 16:00	**Plenary 2: Innovation of paediatric clinical care and trials**	**Auditorium**

Wednesday 5 November	**9:30 - 11:15**	**Early-career Presentations**	**Auditorium**
	9:30 - 11:30	Workshop 2: Grant writing and finding funding Dr Tegan McNab -The Kids Tolu Okitika - Perth Children's Hospital Foundation Dr Erika Sutanto - CAHS	The Kids Seminar Room
	11:15 - 11:30	Morning tea break	Collegiate lounge
	11:30 - 12:30	**PhD Lightning Presentations**	**Auditorium**
	12:30 - 13:00	Lunch	Collegiate lounge
	13:00 - 14:00	**Keynote presentation - Prof Karen Zwi Providing Enhanced Access for Child Health Services (PEACH): addressing inequities in hospital outcomes for Australian children from priority populations using both quantitative and qualitative methodologies.**	**Auditorium**
	14:00 - 14:15	Afternoon tea break	Collegiate lounge
	14:15 - 15:30	The Kids Session 2: Celebrating 30 years of Data Linkage Research at The Kids and CAHS	The Kids Manda level 6
	14:15 - 15:30	**Plenary 3: Family-centred and psychological care**	**Auditorium**
	15:00 - 18:00	Allied Health concurrent session	The Kids Seminar Room

Program Overview

Thursday 6 November	**9:30 - 10:45**	**Plenary 4: Developmental and mental health in early life**	**Auditorium**
	9:30 - 11:30	Workshop 3: Putting your evidence into practice: implementation science for child and adolescent health Prof Sara Bayes and Dr Laura Fortington - Edith Cowan University	The Kids Seminar Room
	10:45 - 11:00	Morning tea break	Collegiate lounge
	11:00 - 12:30	**Plenary 5: Nutrition, immunity and environmental health**	**Auditorium**
	12:30 - 13:00	lunch	Collegiate lounge
	13:00 - 13:50	The Great Debate - It's taking too long to go digital in WA Health	Auditorium
	13:50 - 14:15	Symposium closing and prizes	The Kids Manda
	14:15 - 15:30	The Kids Session 3: Adolescent Mental Health	Auditorium

Friday 7 November	11:00 - 13:30	RACP WA Paediatric Trainee Research Awards	The Kids Seminar Room

Research Support Information Booths

Research information booths are a brand new feature of this year's symposium and provide an opportunity for attendees to connect with representatives from a range of research support teams working within and beyond CAHS.

The booths will be located in the PCH auditorium foyer on level 5, from Tuesday 4 November - Thursday 6 November.

Though all will be staffed to coincide with their relevant sessions, there may be times when some booths are unattended. Contact details will be available in the absence of a team member.

Participating teams

- **CAHS Aboriginal Health**
- **CAHS Clinical Trials**
- **CAHS Research Support and Development**
- **CAHS Ethics and Governance**
- **Edith Cowan University Employability Project - Research internships**
- **Nursing Education, Research and Innovation (tbc)**
- **OMRI FHRI Fund**
- **Perth Children's Hospital Foundation - Grants**
- **The Kids Research Institute Australia - Research Services**
- **University of Western Australia - Research Infrastucture and Partnerships - Research internships**

2025 Workshops

Tuesday

4 November

9:30 - 11:30

Qualitative research methodologies

The Kids classroom lvl 5

Dr Amanda Timler, CAHS Research Facilitator

Step into the world of qualitative research and discover the different methodologies, methods, and basic analysis techniques. This interactive workshop will guide you through the qualitative language such as discussing methodological differences between phenomenology, grounded theory, ethnography, and case studies.

Learn to write qualitative research questions and how to get the most out of your participants. Whether you're new to qualitative research or looking to sharpen your skills, this workshop offers practical tools, real-world examples, and expert tips to help you design and conduct meaningful qualitative research.

Register

Wednesday

5 November

9:30 - 11:30

Grant Writing and Finding Funding

The Kids Seminar Room

Dr Tegan McNab -The Kids
spokesperson - Perth Children's Hospital Foundation
Dr Erika Sutanto - CAHS

Learn about sources of funding for research and gain the skills and strategies needed to write compelling and successful grant proposals. Learn how to structure proposals effectively, articulate research impact, and meet the expectations of funding agencies.

Whether you’re a first-time applicant or just looking to strengthen your grant-writing skills, this workshop will provide valuable insights to help turn great ideas into funded projects.

Register

Thursday

6 November

14:15 - 15:30

Putting your evidence into practice: implementation science for child and adolescent health

The Kids Seminar Room

Prof Sara Bayes and Dr Lauren Fortington - Edith Cowan University

Discover how to implement evidence-based programs, policies, and practices into health care. This interactive workshop provides a practical introduction to implementation science by introducing the strategies to support you in moving the research to the real-world. Learn how to plan, adapt, and sustain approaches that create meaningful, lasting impact across clinical and community settings.

Professor Bayes and Dr Fortington are representing The Implementation Café, an initiative supported by Edith Cowan University (ECU) and the Western Australian Health Translation Network (WAHTN). The Café offers bite-sized learning, practical insights, and conversations on implementation science to support professionals across health and related fields to turn evidence into action.

Register

Keynote Speakers

Associate Professor Clyde Matava

Tuesday 4 November 13:00 - 14:00
PCH Auditorium

Transforming Paediatric Healthcare: Artificial Intelligence, Clinical Informatics, and the Future of Child Health Research

Dr. Matava is a staff anaesthetist at SickKids Hospital and Associate Professor at the University of Toronto. He is the Associate Chief of Perioperative Services for Bioinformatics and the Director of Anaesthesia Informatics, Innovation and Technology in the Department of Anaesthesia at SickKids. His current work focuses on the use of informatics, standardised datasets, AI - in particular machine learning and machine vision - to improve outcomes in medical and patient care and medical education.

His clinical interests include airway management and regional anaesthesia. He has served as the President of the Canadian Paediatric Anaesthesia Society and is the current President for the Society for Technology in Anaesthesia Board and past Chair of Epic's Anaesthesia Specialty Steering Board. He is editor at the journals Paediatric Anaesthesia, the Journal of Medical Systems, and the journal Anaesthesiology.

Professor Karen Zwi

Wednesday 5 November 13:00 - 14:00
PCH Auditorium

Providing Enhanced Access for Child Health Services (PEACH): addressing inequities in hospital outcomes for Australian children from priority populations using both quantitative and qualitative methodologies

Professor Karen Zwi is a Consultant Community Paediatrician at Sydney Children's Hospital (SCH), Conjoint Professor at the University of New South Wales (UNSW), and Clinical Services Director for Child Youth and Family at Northern Sydney Local Health District.

She is a practising community paediatrician with clinical expertise in treating children from priority populations such as asylum seekers, refugee children, children in out-of-home care and Aboriginal children. She believes in developing services that promote equity and resilience, are co-designed by families, strengths based, and effective in improving child health outcomes and the patient and family experience.

Monday

3 November

17:00 - 19:00 **Poster Opening Event** PCH Collegiate Lounge

Tuesday

4 November

9:30 - 11:15 **Aboriginal and Torres Strait Islander Health** PCH Auditorium

Chairs: Mel Robinson - CAHS, Director Aboriginal Health
Ass Prof Glenn Pearson - The Kids, Director of First Nations Strategy and Leadership

Speaker	Institution	Title
Dr Stephen Paull	CAHS/CACH /The Kids	Key partner perspectives on adapting a healthy lifestyle program in Perth
Dr Jessica Buck	The Kids/UWA	Understanding the needs of Aboriginal communities in childhood cancer research
Dr Ciaran Costello	CAHS/The Kids /UWA	Investigating how socio-economic factors increase anaesthesia risk
Jacinta Walton	The Kids	Moorditj Marp (Strong Skin): The Importance and Impact of Community-Driven Skin Health Research and Promotion
Dr Hannah Thomas	The Kids/UWA	Co-interpreting the results of the SToP Trial with nine remote Kimberley communities
Dr Eileen Boyle	Curtin	The Paediatric ESCALATION System: How Health Professionals Involve Aboriginal Families.
Dr Stephen Paull on behalf of Stephanie Smith	CAHS/CACH /The Kids /Curtin	Communicating research findings as recommended by Aboriginal participants

Join us for morning tea at 11.15 in the Collegiate Lounge

9:00 - 12:30 **CACH concurrent session** The Kids Seminar Room

Chair: Dr Brad Jongeling MS Teams

Speaker	Institution	Title
Rona Kelly	CAHS/CACH	Identifying barriers to GP shared care for children with ADHD: a mixed methods study'
Karen Nitsche	CAHS/CACH	The SET and GO: A Parenting Self-Efficacy Tool for Gathering Outcomes of Developmental Interventions
Dallas Sewell	CAHS/CACH /Griffith	Clinical Validation of 'Child Development Information System' Risk Themes to Strengthen Child Health Outcomes
Dr Ming Zhao	The Kids	Neighbourhood Built Environment Profiles and Children's Development Vulnerability
Dr Shevaun Drislane	UWA	Understanding drivers of acceptance of maternal and infant RSV immunisation in WA.
Sini Lambiase	The Kids	STARS for Kids: Strengths-based, tiered, accessible, resources and supports
Consumer voice		includes a 10min QandA
Dr Danica Hendry	Curtiin	Parental Guidance: Empowering families in navigating children's screen use
Diane Burns	CAHS/CACH	Exploration of the role of the clinical nurse specialist in the assessment of ADHD
Dr Stephen Paull	CAHS/CACH /The Kids	Perspectives of consumers with lived experience on a pilot healthy lifestyle program

Tuesday

4 November

11:30 - 12:30 **Plenary 1: Paediatric health equity and access** PCH Auditorium

Chairs: Professor Jane Valentine - or Dr Anna Gubbay (TBC)

Speaker	Institution	Title
Dr Jan-Albert Mina	CAHS/SMHS	Bridging the Gap: Tertiary healthcare utilisation by young people in Western Australia
Takakazu Ryan Yatoji Tan	SJOG Subiaco	Unplanned Utilisation of Paediatric Services by VPNs Within 1-year of Neonatal Discharge
Dr Huong Le	The Kids/ Curtin/UWA	Inequity in influenza vaccination uptake between public and private schools
Alison Salt on behalf of Natalie Cavallo	CAHS	Early detection of Cerebral Vision Impairment in children at-risk of Cerebral Palsy

Join us for lunch at 12.30 in the Collegiate Lounge

13:00 - 14:00 **Keynote presentation** PCH Auditorium

A/Prof Clyde Matava University of Toronto and staff anaesthetiist at SickKids Hospital

Transforming Paediatric Healthcare: Artificial Intelligence, Clinical Informatics, and the Future of Child Health Research

Chair: Britta Regli-von Ungern (TBC)

13:00 - 16:15 **Nursing concurrent session** Teaching Rooms 3 & 5, level 5

Chairs: Jodee Eaves - CAHS Coordinator of Nursing, Education, Research and Innovation, Nursing Services

Prof Fenella Gill - Acute Paediatrics PCH and Curtin University

Welcome by Marie Slater - CAHS Executive Director Nursing Services

Speaker	Institution	Title
Melisa Young	CACH/CAMHS /Curtin	Preparing nursing students to care for children and families: A mixed-method study
Chelsea Kelly	CAHS/Curtin	Ways Aboriginal families recognise deterioration in children with dark-coloured skin
Dr Afizu Alhassan	CAHS/Curtin	Prevalence, patients' characteristics, and outcomes of care escalation events among children from culturally and linguistically diverse backgrounds at Perth Children's Hospital
Natalie Middleton	CAHS/The Kids /Curtin	Evaluating Paediatric Sepsis Pathway Uptake in Western Australia: A Multi-Site Point Prevalence Study
Natalie Middleton	CAHS/The Kids /Curtin	After Sepsis: Early Learnings from a Paediatric Follow-Up Program
Dr Sharon Perrella	UWA	Gestational diabetes mellitus is implicated in infant body composition
Rachael Fleming	CAHS/Curtin	Identifying factors that impact evidenced-based practice for nurses working in the NICU
Michelle Adamson	CAHS	Embedding Environmental Sustainability into Paediatric Burns Outpatient Culture
Arielle Jolly	CAHS/Curtin	Bereavement Care After Unexpected Child Death in a PICU: An Integrative Review
Arielle Jolly	CAHS/Curtin	An informed design approach to the development of a PICU bereavement service

Tuesday

4 November

Join us for afternoon tea at 14.00 in the Collegiate Lounge

14:15 - 15:30 **The Kids Session 1: Enabling Your Research** The Kids Manda lvl 6

Chair: A/Prof Debbie Palmer

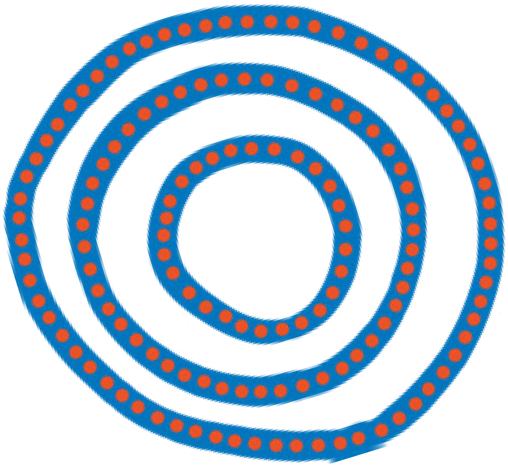
Adjunct A/Prof Alka Saxena - What's new in Genomics WA
Ali Hollingsworth - Empowering Research Success Through Data Services
Wesley Billingham - Biostatistics Support: Valuable Engagement for Success
Dr Chris Gorman - BioSpecs: A Flexible Laboratory Service

Come and learn how The Kids Research Institute Australia helps researchers with our 4 speakers who will finish the session with a combined Q and A.

14:15-15:30 **Plenary 2: Innovation of paediatric clinical care and trials** PCH Auditorium

Chair: Dr Chris Blyth (TBC)

Speaker	Institution	Title
Crystal Bourke	CAHS/The Kids /UWA	Increasing sputum sample frequency in paediatric cystic fibrosis: An innovative QI project
Dr Ushma Wadia	CAHS/SMHS /The Kids/UWA	REVIVE - REspiratory syncytial Virus Immunisation program - eValuating Effectiveness and impact
Dr Rachael Marpole	CAHS/The Kids /UWA	Reducing RESPiratory hospital Admissions in children with cerebral palsy: economic analysis
Prof Asha Bowen	CAHS/The Kids /UWA	SNAP-PY: Staphylococcus aureus Network Adaptive Platform (SNAP) trial for paediatrics and youth
Dr Sonia McAlister	The Kids/UWA	Infant vaccine responses vary with repeat maternal Tdap vaccination and priming type
Dr Sylvester Dodzi Nyadanu	Curtin	Trends and perinatal risk factors for neonatal resuscitation in Western Australia
Ashenafi Kibret Sendekie	Curtin	Pharmacist vaccination for Australian children and adolescents: lessons from policy and legislation



Tuesday

4 November

14:00 - 17:00 **CAMHS concurrent session** The Kids Seminar Room

Chair: Dr Vineet Padmanabhan
Director, Clinical Services, CAMHS

MS Teams

Speaker	Institution	Title
Dr Laura Dondzilo	CAHS/CAMHS	A Delphi study to identify research priorities for an Australian Child and Adolescent Mental Health Service
Sarah Pellicano	Curtin/Murdoch Children's	Supporting the Mental Health of Justice-Involved Youth: A Qualitative Study
Dr Aleksandra Miljevic	Perron Inst	Advancing treatments for youth with suicide ideation and depression
Dr Cayla Bellagarda	CAHS/CAMHS	Temporal Trends in Youth Mental Health: Insights and Predictions from 20 Years of CAMHS Service Data
Edan Johnston	CAHS/Curtin/ Curtin enAble	Validating the Eating Disorder Inventory-3 Perfectionism Subscale in Adolescents
Dr Leartluk Nuntavisit	CAHS/CAMHS	Multisystemic Therapy treatment outcomes 2006-2024: Learnings, Challenges and Strengths.
Thomas Betts and Dr Hayley Jackson	The Kids	Cultural Safety in Mental Health Services for Aboriginal and Torres Strait Islander Young People
Dr Samantha Speirs	The Kids/UWA	Co-designing and evaluating a short-stay youth suicide service: The Luminos Project

16:20 - 17:00 **CAMHS keynote presentation** The Kids Seminar Room

Prof Alka Ahuja, Dr Vineet Padmanabhan, Oliver John, Dr Cayla Bellagarda

Crisis Care for Young People:
An International Comparison of Two Innovative Service Models

Wednesday

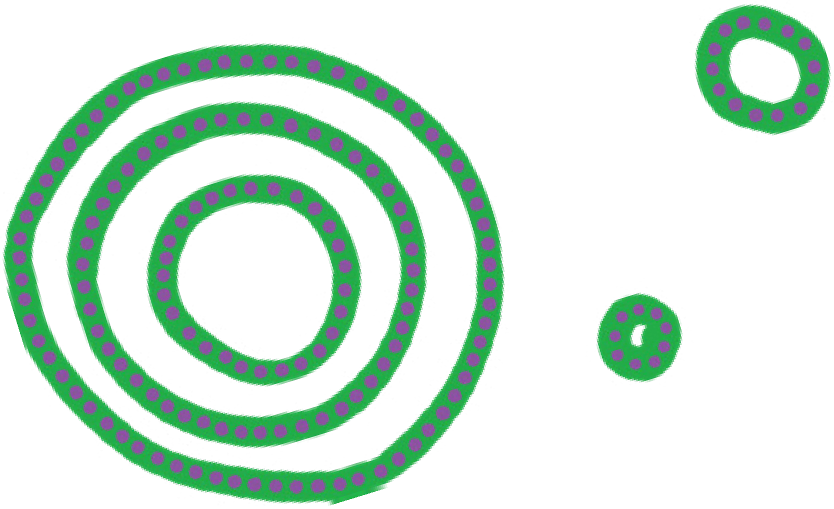
5 November

9:30-11:15 **Early-career Presentations** PCH Auditorium

Chair: Prof Meredith Borland - Director, Emergency Research
Jurors: Prof Fenella Gill, Dr Weihao Lee (TBC), Dr Sharon O'Brien (TBC)

Speaker	Institution	Title
Dr Hannah Benschop	CAHS/UWA	Lines That Matter: Assessing Hypothermia and Hypoglycaemia During Preterm Venous Access
Dr Katy Burley	Curtin /Curtin enAble	What Matters to You' - exploring family priorities in accessing Child Development Services
Mia Cahill	CAHS/The Kids /UWA	Consumer research priorities for neonates with surgical conditions (FROG Study)
Dr Jenny Davies	Curtin	In their own words: advice from parents of children with cancer
Dr Josh du Heaume	CAHS/WACHS	The Impact of Nirsevimab on Infants within the South West of WA
Tamara Farrell	CAHS/The Kids /Curtin	Feasibility of indirect calorimetry in invasively ventilated paediatric patients
Xuehua Jin	UWA	Data-driven reassessment of low milk supply in breastfeeding mothers
Dr Gareth Lingham	LEI/UWA	Comprehensive eye growth charts to assess myopia across continents
Caitlin Munro	The Kids/Curtin /UWA	Grief Support Needs and Intervention Preferences in Bereaved Young Adults
Anwen Taplin	CAHS/The Kids/UWA	A propensity-score matched analysis to compare two airway management techniques
Dr Tamara Veselinović	CAHS/The Kids /UWA	Ear Portal: Using asynchronous tele-audiology to improve access to Ear, Nose and Throat services for children with otitis media in an urban area

Join us for morning tea at 11.15 in the Collegiate Lounge



Wednesday

5 November

11:30-12:30 **PhD Lightning Presentations** PCH Auditorium

Chair: Prof Peter Richmond (TBC) - Immunology, Ths Kids, UWA
Jurors: A/Prof Hannah Moore, Dr Simon Erickson (TBC), Prof Asha Bowen (TBC)

Speaker	Institution	Title
Fraulein Arigo	ECU	Prognostic Biomarkers for Childhood Dementia
Crystal Bourke	CAHS/The Kids /UWA	Lung clearance index is more sensitive than spirometry in paediatric bronchiectasis
Tiffany Bradshaw	The Kids/Curtin	Applying adult spirometry phenotypes to very preterm children?
Nivedithaa Divakara	The Kids/UWA	Diet at birth is critical for skin ILC3 ontogeny
Dr Thomas Drake-Brockman	CAHS/The Kids /UWA	Validating the HLS-Child-Q15-EN child health literacy scale in English
Stephen Dymock	The Kids/Curtin /UWA	Identifying novel treatments for paediatric T-cell acute lymphoblastic leukaemia
Bonnie Hyatt	The Kids/UWA	Investigating Commensal-Dependent Antibiotic Resistance in Strep A
Srushti Kasare	CAHS/The Kids/ Murdoch/UWA	Monocyte and Dendritic Cell Development in Preterm Neonates: Clues to Sepsis Risk
Hannah L Moore	The Kids/UWA	Introducing PELICAN: A new resource for understanding lung function after preterm birth
Dr Amina Rhaman	UWA	Prenatal ambient heat exposure and the developing brain
Dr Thomas Drake-Brockman on behalf of David Sommerfield	CAHS/The Kids/ UWA	RCT of pre-procedural chewables in children fasting before surgery
Biruk Tusa	Curtin	Maternal depressive disorder and educational outcomes in children: A registry-based cohort study
Erica Heather Russell	UWA/University of Edinbugh	Exploring Spiny Mouse dermal fibroblasts as a blueprint for human skin regeneration
Summer Walker	The Kids/ECU	Infant diet recommendations reduce IgE-mediated egg, peanut and cow's milk allergies
Bernadette Wong	The Kids/UWA	REASSURED yet? The profiles of Strep A molecular Point-of-Care tests

Join us for lunch at 12.30 in the Collegiate Lounge

13:00 - 14:00 **Keynote presentation** PCH Auditorium

Professor Karen Zwi

Providing Enhanced Access for Child Health Services (PEACH): addressing inequities in hospital outcomes for Australian children from priority populations us ing both quantitative and qualitative methodologies

Chair: Tony Dolan (TBC) - CAHS Executive Director PCH and Neonatology

Wednesday

5 November

Join us for afternoon tea at 14.00 in the Collegiate Lounge

14:15 - 15:30

The Kids Session 2: 30 years of the WA Data Linkage System

The Kids Manda lvl 6

Chair: A/Prof Hannah Moore

Dr Minda Sarna - From Data to Policy: using linked data to inform RSV immunisation policy
Prof Francis Mitrou - The West Australian Aboriginal Child Health Survey Linked Data Study
Prof Hayley Christian - The Neighbourhood Environment and Early Child Development: a data linkage study using the Australian Early Development Census

Prof Jenny Downs - Does gastrostomy improve the lives of children with severe disability and their families?
Nasir David - What’s next for data linkage in WA

Come and hear a celebration of data linkage research across Western Australia.

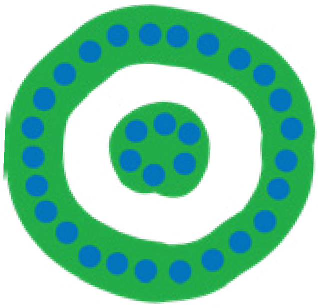
14:15 - 15:30

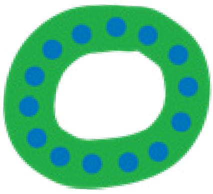
Plenary 3: Family-centred and psychological care

PCH Auditorium

Chairs: Dr Mary Sharp

Speaker	Institution	Title
Dr Nofar Ben Itzhak	The Kids/ Leuven	Diagnosis and rehabilitation of children with cerebral visual impairment
Ashenafi Kibret Sendekie	Curtin	Navigating ethical dilemmas in child and adolescent vaccination: a scoping review
Dr Thomas Drake-Brockman	CAHS/The Kids /UWA	Child, parent, and staff experiences of children's perioperative anxiety
Dr Ezra Kneebone	The Kids	Supporting Father Involvement in the NICU: A Group Model Building Study
Dr Megan Dodd	CAHS/The Kids /UWA	Children's Chronic Pain Experience in a Tertiary Hospital - A Qualitative Exploration
Arielle Jolly	CAHS/Curtin	Bereavement Care Practices: A National Survey of Australian PICUs



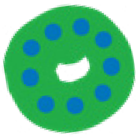


Wednesday

5 November

15:00 - 18:00 **Allied Health concurrent session**
Chairs: Dr Cloe Benz - Allied Health Coordinator HITH
The Kids seminar room
MS Teams

Speaker	Institution	Title
Caitlin Symons	CAHS/The Kids /UWA	Amplifying the voices of Australian sepsis survivors: why co-designing research with consumers is non-negotiable.
Dr Sarah Hall	CAHS/The Kids /Curtin	General Movement Assessment and Prediction of Cognitive Outcome: A Systematic Review
A/Prof Brook Galna	Murdoch	Acceptability of a wristband to measure physical activity in children with autism
Ashlee Baird	CAHS	Measuring the Impact of a Physiotherapy Expansion in Paediatric Hospital in the Home
Galvin Tay	Murdoch	Step-Up Programme: A Feasibility Study on the Impact of Physical Activity on Autistic Children
Stephanie Bovell	Murdoch/HRFG	Step Up: Exploring Parents' Perspectives of Physical Activity for Autistic Children
Dr Simon Garbellini	CAHS	Effectiveness of cerebral palsy upper limb education for occupational therapists
Frith Klug	ECU	Local government perspectives on restricting unhealthy food advertising: A qualitative study
Nikita Westerhout	CAHS	Investigating what is important to families on Hospital in the Home Physiotherapy
Karen Twyford	CAHS/UWA	Functional Impacts of Music Therapy for Children with Acquired Brain Injury
Derry O'Meara	CAHS/The Kids /Curtin/UWA	Move to Improve - supporting children with chronic conditions to move more
Jacqui Hunt	CAHS	Perth Children's Hospital 'Play and Wait' Strategy: Consumer Engagement Activity Trials.



Thursday

6 November

9:30 - 10:45 Plenary 4: Developmental and mental health in early life PCH Auditorium

Chairs: Professor Andrew Whitehouse (TBC), Deputy Director (Research) The Kids

Speaker	Institution	Title
A/Prof Gayatri Jape	CAHS/UWA	Identify and Act: a QI project to identify autism in preterm-born children in WA
Sally Partington	CAHS/CAMHS	Longitudinal Bone Density Trajectories in Adolescent Eating Disorders: Insights from a 12-Month Audit
Dr Aine Sommerfield	CAHS/The Kids/UWA	Australian children and young adults priorities for paediatric anaesthesia
Dr Jonatan Leffler	The Kids	Understanding the Link Between Atopy, Viral Infections, and Asthma in Children
Dr Samantha Lee on behalf of David Mackey	LEI	Results of the Western Australia Atropine for the Treatment of Myopia study

Join us for morning tea at 10:45 in the Collegiate Lounge

11:00 - 12:30 Plenary 5:Nutrition, immunity and environmental health PCH Auditorium

Chairs: A/Prof Debbie Palmer - Head, Nutrition in Early Life, The Kids

Speaker	Institution	Title
Dr Poonam K Pannu	The Kids	ORIGINS: One-Year-Old's Nutrition Unveiled in Unique Longitudinal Cohort Study
Dr Jonatan Leffler	The Kids	Evaluating antiviral immunity in a clinical cohort of transgender young people
A/Prof David Martino	The Kids/UWA	The Impact of Chlorinated Drinking Water on the Infant Gut Microbiota: A Randomised Controlled Trial
Isabella Brookes	CAHS	Exploring Early Nutritional Impacts of Modulator Therapy in Children with Cystic Fibrosis
Dr Ushma Wadia and Keiran Veale	The Kids/UWA	No needle, No Whoop: Clinical trial results of BPZE1, intranasal pertussis vaccine in healthy children
Savannah Machado	The Kids/UWA	Colostrum - the missing link for successful food allergy prevention?

Join us for lunch at 12.30 in the Collegiate Lounge

13:00 - 13:50 The Great Debate PCH Auditorium

It's taking too long to go digital in WA Health

Join us for a light-hearted debate with clinicians and researchers across CAHS and The Kids.

Introduction: Dr Clare Matthews - CAHS Executive Director Medical Services

Moderator: Professor Lyn Beazley OAM - Adjunct Professor Murdoch University, Honorary Distinguished Fellow Institute Advanced Studies UWA, Director Bright Sparks

Panel: Dr Sam Brophy-Williams, A/Prof Meredith Borland, Dr Charlie McLeod, Shaun O'Neill, Dr Thomas Drake-Brockman, Dr Rob Lethbridge

Thursday

6 November

13:50 - 14:15 **Symposium closing and prizes** PCH Auditorium

Dr Clare Matthews will present the winning certificates to researchers in the following categories:

Best Lightning presentation - winner and runner up
Best presentation by an early-career researcher - winner and runner up
Best poster presentation (people's choice) - winner and runner up
Highest scoring abstract - poster presentation
Highest scoring abstract - oral presentation
Best Allied Health presentation
Best Child and Adolescent Mental Health presentation
Best Child and Adolescent Community Health presentation
Best Nursing presentation

Join us for afternoon tea and photos at 14:15 in the Collegiate Lounge

14:15 - 15:30 **The Kids Session 3: Adolescent Mental Health** The Kids Manda lvl 6

Char: Professor Kathy Modecki, FHRI Distinguished Fellow, The Kids and School of Psychological Science, UWA

Yael Perry - Head, Youth Mental Health
Holly Moss - Project Coordinator, Community in Practice
Enhancing inclusive practice for LGBTQA+ youth

Rigel Paciente - PhD Candidate, Healing Kids, Healing Families
Medical Trauma, Mental Health outcomes: Trauma-Informed Care: The triadic relationshp of young people, caregivers and their clinicians

Amelia Freeman - Research Assistant, Healing Kids, Healing Families
A randomised pilot and feasibility trial of a trauma-informed and co-designed wellbeing program to promote mental health in adolescents with Type 1 Diabetes: The Wellbeing-T1D Study

Michael Beardsley - Research Assistant, Developmental Science of Mental Health
Are we forgetting someone? Evidence map and systematic review of program effectiveness for children exposed to domestic and family violence

Leanne Fried - Senior Research Fellow, Human Development and Community Wellbeing
Social and Emotional Wellbeing (SEW) in the Arts: Using the SEW-Arts Framework to strengthen young people’s social and emotional wellbeing and long-term mental health through the arts

Friday

7 November

11:00 - 13:30 **RACP WA Paediatric Trainee Research Awards** The Kids seminar room

Come and hear the presentations of this year's WA PCHD Trainees and join us for a light lunch.

Tuesday abstracts

4 November

Aboriginal and Torres Strait Islander Health

Key partner perspectives on adapting a healthy lifestyle program in Perth

Paull, Stephen[1,2,3], Smith, Stephanie[1,2,3], Moullin, Joanna[4], Sevdalis, Nick[5], Mildon, Robyn[6], Anderson, Yvonne[1,2,3]

[1]Curtin Medical School, Faculty of Health Sciences, Curtin University, Bentley, WA, Australia, [2]Child and Adolescent Community Health, Child and Adolescent Health Service, Perth, WA, Australia, [3]The Kids Research Institute Australia, Perth Children's Hospital, Nedlands, WA, Australia, [4]Curtin School of Population Health, Faculty of Health Sciences, Curtin University, Bentley, WA, Australia, [5]Centre for Behavioural and Implementation Science Interventions, National University of Singapore, Singapore, [6]Centre for Evidence and Implementation, Melbourne, Victoria, Australia

Introduction: The prevalence of childhood obesity and weight-related comorbidities is increasing, and family-based multicomponent lifestyle interventions are needed. Adopting and adapting evidence-based programs is challenging and rarely implemented successfully. An equitable healthy lifestyle program from Aotearoa/New Zealand is being scaled out to pilot in East Metropolitan Perth within Child and Adolescent Community Health, involving community partnership and key cultural considerations. The community-based program includes weight-related health assessments, and 6 months of weekly group education sessions.

The aim of this study was to determine the barriers and enablers for successful implementation in Perth, the outcome measures of success, based on perspectives of health organisation leaders, interested healthcare professionals, referrers, and community support personnel.

Methods: A workshop with 22 participants (March 2024) and an open-ended survey with 26 additional participants (September – October 2024). Data were analysed using Framework Analysis.

Results: Identified enablers of implementation included 1) Program design, 2) Leadership support, 3) Experienced implementation team, and 4) Urgent need for such a program. Identified barriers for implementation included 1) Constrained resources, 2) Compatibility with current CAHS structure, 3) Program suitability for different population groups, and 4) Engaging priority cohorts.

Identified outcome measures included participant, service, and implementation outcomes. Data will be incorporated into an Implementation Research Logic Model alongside data from Aboriginal community representatives and program consumers.

Discussion: Identified determinants and outcome measures have and continue to inform program development and evaluation. Preparatory work and engagement with key partners prior to implementing programs in different contexts is paramount to accelerate successful implementation.

Understanding the needs of Aboriginal communities in childhood cancer research

Wilkes, Elizabeth[1], Buck, Jessica[1,2]

[1]WA Kids Cancer Centre, The Kids Research Institute Australia, [2]Centre for Child Health Research, University of Western Australia

Cancer kills more Australian children than any other disease. We know that Aboriginal and Torres Strait Islander children with cancer have poorer survival outcomes, but the biological and socio-cultural reasons for this are not well understood. We have established the First Nations Childhood Cancer Research Team at The Kids Research Institute Australia, the first research group in Australia to focus on cancer in Aboriginal and Torres Strait Islander children. The aim of our research is to work with the community to understand their priorities for childhood cancer research, and to develop a program of research that will benefit all Aboriginal and Torres Strait Islander children with cancer.

We have held community yarning circles on Whadjuk (Perth), Menang (Albany) and Goreng (Tambellup, Katanning) Noongar country, alongside Kaurna country (Adelaide), with further meetings planned throughout WA and across Australia. More than 100 people have attended so far, the majority elders in the Noongar community, and some with lived experience of childhood cancer. Community members who attended were supportive of a research program being developed. Common themes raised in our yarning circles have included the need to understand genomics and why cancer is more common in some families, the need to protect cancer and blood samples stores in hospitals and research institutes, and how traditional medicines can be used to assist with cancer treatment.

The groups also discussed the effect of environmental factors such as junk food, water quality and mining on rising rates of childhood cancer.

Investigating how socio-economic factors increase anaesthesia risk

Costello, Ciaran[1], O'Brien, Cormac[1,2,3,4], Heath, Chloe[1,2,3], Evans, Daisy[1,2,3,5], Sommerfield, David[1,2,3,6], Hauser, Neil [1,2,3,6], Sommerfield, Aine[1,2,3,6;]; Khan, R. Nazim[2,3,5], von Ungern Sternberg, Britta S.[1,2,3,6]

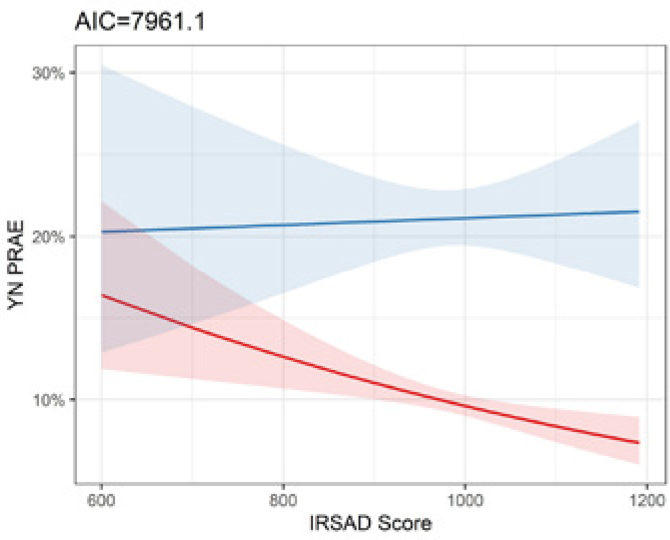
[1]Department of Anaesthesia and Pain Medicine, Perth Children's Hospital, [2]Perioperative Medicine Team, The Kids Research Institute Australia, [3]Institute for Paediatric Perioperative Excellence, University of Western Australia, [4]School of Biomedical Sciences, University of Western Australia, [5]School of Mathematics and Statistics, University of Western Australia, [6]School of Medicine, University of Western Australia

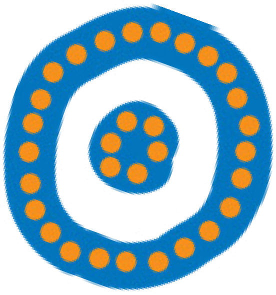
Background: Perioperative respiratory adverse events (PRAE) are significant causes of morbidity and mortality in paediatric anaesthesia and represent a significant burden on perioperative resources. This study assessed whether socioeconomic indices are linked to a risk of PRAE.

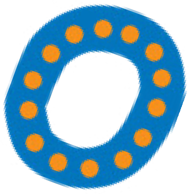
Methods: We conducted a single centre prospective observational cohort study at Perth Children's Hospital in 2024. Under waiver of consent, we collected data on all children admitted to the post anaesthetic care unit between 08-18.00, following elective or emergent procedures under general anaesthesia.

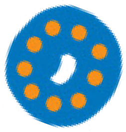
Results: Data from 9780 individual patients was analysed. Patients from more disadvantaged/less advantaged areas had a higher proportion of caregiver smoking and a higher prevalence of STBUR (snoring, trouble breathing, unrefreshed). The prevalence of most respiratory risk factors and sleep disordered breathing symptoms were higher in Aboriginal and/or Torres Strait Islander children compared with non-Indigenous children. The proportion of children classified as "Obese" was higher for more disadvantaged/less advantaged regions. Patients from "Very Remote" areas had the highest proportion of emergency surgeries. Patients from the most disadvantaged/least advantaged suburbs, indicated by a lower index of relative socioeconomic advantage and disadvantage (IRSAD) score, had higher rates of PRAE (IRSAD Score OR 0.9989 95% CI 0.9982-0.9997 p=0.006). Patients with positive respiratory history (recent URTI, wheezing, or nocturnal cough) had approximately stable risk of PRAE across all IRSAD scores, while those without had decreasing risk of PRAE with IRSAD scores.

Conclusion: Understanding how socio-economic factors increase anaesthesia risk is useful to guide policies addressing health disparities in Western Australian.









Moorditj Marp (Strong Skin): The Importance and Impact of Community-Driven Skin Health Research and Promotion

Walton, Jacinta[1,2], Ugle, Taleah[1,2], Ricciardo, Bernadette[1,2,3,4,5], Amgarth-Duff, Ingrid[1,2,3], Nannup, Noel[2], Tilbrook, Dale[2,7], Kessaris, Heather-Lynn[4], Michie, Carol[2], Cross, Donna[2,3], McRae, Tracy[1,2], Burgess, Rachel[1,2], Douglas, Richelle[6], Winmar, Rowie[6], Ingrey, Jodie[7], Weston, Stephanie[5], Blane, Sally[8], Thomas, Hannah[1,2], Low, Agnes[1,2], Bowen, Asha C[1,2,3,5]

[1]Wesfarmers Centre for Vaccines and Infectious Diseases, The Kids Research Institute Australia, Nedlands, WA, Australia, [2]The Kids Research Institute Australia, Nedlands, WA, Australia, [3]University of Western Australia, Crawley, WA, Australia, [4]Fiona Stanley Hospital, Murdoch, WA, Australia, [5]Perth Children's Hospital, Nedlands, WA, Australia, [6]Derbarl Yerrigan Health Service, East Perth, WA, Australia, [7]South West Aboriginal Medical Service, Bunbury, WA, Australia, [8]Cancer Council WA, Subiaco, WA, Australia

Purpose: Downstream complications of skin diseases and overexposure to ultraviolet radiation can have serious negative consequences. Furthermore, knowledge of one's condition through evidence-based health education enables individuals to make informed choices about their own health, including prevention, identification, seeking advice, and treatment. However, our studies have shown a need for culturally relevant and representative skin health promotion resources for Aboriginal children and families. This program of work aims to highlight the value and validate the importance of community-driven culturally relevant health promotion resources.

Methods: Building on the successes of our team's Koolungar Moorditj Healthy Skin Project, families of Aboriginal children with eczema were engaged to participate in a 4-week reading initiative centred around the community-led children's storybook, Kaal Tackles Eczema.

Post initiative, families provided feedback through a 4-point Likert scale, multiple-choice and free-text response survey, or semi-structured interview (yarning), to evaluate the resource's relevance, acceptability and readability, knowledge gain and behavioural change for the child and their family.

Preliminary results: Participants generally feel more confident in managing their eczema, have learnt new information about their condition and find the resource relatable and representative of Aboriginal families. These initial results highlight the significance of community-led, culturally relevant, and representative health promotion resources in supporting Aboriginal children and their families to prevent, identify, and manage skin disease. These insights will inform the development of a series of children's storybooks addressing other priority skin conditions.

Conclusions: Strong community involvement in the design of health promotion resources is essential in enhancing skin health outcomes.

Co-interpreting the results of the SToP Trial with nine remote Kimberley communities

Thomas, Hannah M[1,2], Enkel, Stephanie[1,2], Mullane, Marianne[1,2], McRae, Tracy[1,2], Bessen, Will[3], Burgess, Rachel[1,2], and Bowen, Asha C[1,2,4] on behalf of the SToP Trial

[1]Wesfarmers Centre for Vaccines and Infectious Diseases, The Kids Research Institute Australia, Nedlands, Western Australia, Australia, [2]The Kids Research Institute Australia, Nedlands, Western Australia, Australia, [3]TunaBlue, Perth, Western Australia, Australia, [4]Perth Children's Hospital, Nedlands, Western Australia, Australia

Between 2018 and 2023, researchers, service providers and remote Kimberley communities collaborated to conduct the SToP Trial, a large stepped-wedge cluster randomised controlled trial of a holistic package of 'See', 'Treat' and 'Prevent' skin health activities to decrease impetigo (skin sores). Guided by The Kids Research Institute Standards for the Conduct of Aboriginal Health Research and overarching principles of Indigenous data sovereignty (IDS) and reciprocity, we aimed to centre community voices at every stage, including prioritising co-interpretation of trial outcomes with participating communities for the first time in remote Australian research history.

Over 11 community sessions, more than 90 community members and remote service providers came together to discuss and reflect on community-specific and trial-wide results prior to sharing with service providers and the broader scientific community. These iterative sessions were cofacilitated where possible by local community members and supported by a graphic recorder who captured conversations in real-time, creating a visual resource in the form of unique, community-specific books describing the outcomes of the trial. With no previously established processes for IDS in the communication of clinical trial results, we aimed to create and prioritise space for the inclusion of community perspectives. In this context, we have incorporated understandings of Aboriginal culture, developed through two-way learning throughout the course of the project, to pilot a visual and verbal method for bringing community member perspectives to the forefront of trial outcomes. This represents a new way of working which could be considered for other trials in the future.

The Paediatric ESCALATION System: How Health Professionals Involve Aboriginal Families

Boyle, Eileen[1,6], Laird, Pamela[2,6], Leslie, Gavin D[1], Stokes, Scott[3,4], Andrew, Jenni[5], Howard, Jon[5], Robinson, Melanie[6], Harris, Tania[7], Garstone, Mikayla[2], Thompson, Erica[2] and Gill, Fenella J.[1,6]

[1]School of Nursing, Faculty of Health Sciences, Curtin University, [2]The Kids Research Institute Australia, [3]Kimberley Regional Paediatric Service, Broome Hospital, Western Australia, [4]National School of Nursing and Midwifery, University of Notre Dame, Broome, [5]Western Australia Country Health Service, Perth, [6]Perth Children's Hospital, Child and Adolescent Health Service, [7]Health Consumers Council, Mount Lawley, Western Australia

Background and aim: The paediatric ESCALATION System promotes early recognition and response to a child's deteriorating health in West Australian hospitals. A distinctive feature is integrated family involvement. This study aimed to understand healthcare professionals' experiences involving Aboriginal families in detecting clinical deterioration in hospital.

Design: Qualitative interpretive design guided by the Practical Robust and Implementation and Sustainability Model (PRISM) framework. Stage one of a multisite three-staged pre-post intervention study.

Methods: Healthcare professionals (nurses and doctors) were recruited from three sites (Perth, Broome, Port Hedland) to participate in semi-structured focus groups or interviews. Data were analysed using reflexive thematic analysis.

Results: Seventy-two healthcare professionals participated in nine focus groups and four individual interviews. Four themes mapped to the PRISM framework described healthcare professionals' experiences i) Integrating family concern (Organisational Perspective & Healthcare Professional Experience) acknowledged the central role of Aboriginal families in identifying early signs of their child's deteriorating health ii) Building a relationship (Implementation & Sustainability Infrastructure) was central to effective engagement, iii) Recognising communication barriers (Implementation & Sustainability Infrastructure) related to language and health literacy iv) Culturally secure care is a shared responsibility (External Environment) described the significance of enhancing culturally sensitive care.

Conclusion: Healthcare professionals valued Aboriginal families' role in recognising their child's deteriorating health. Effective Aboriginal family involvement in the ESCALATION system relies on strong healthcare professional and family relationships, Aboriginal liaison officer support, and cultural awareness with appropriate communication. Findings will inform the development of tailored solutions to enhance Aboriginal family engagement in escalating care.

Communicating research findings as recommended by Aboriginal participants

Smith, Stephanie[1,2,3], Harris, Tania[4], Paull, Stephen[1,2,3], Anderson, Yvonne[1,2,3]

[1]Curtin Medical School, Faculty of Health Sciences, Curtin University, Bentley, WA, Australia, [2]Child and Adolescent Community Health, Child and Adolescent Health Service, Perth, WA, Australia, [3]The Kids Research Institute Australia, Perth Children's Hospital, Nedlands, WA, Australia, [4]Health Consumers' Council, Perth, WA, Australia

Background: Research participants should be informed about study findings. Research is lacking on tailoring research messages to meet participants' varying information expectations. Guidelines for communicating with Aboriginal and Torres Strait Islander Peoples remain limited, and it is crucial that feedback formats are relevant. This work evolved from the Healthy Lifestyle Program for children, young people and their families in Perth. Workshop findings with 29 Aboriginal advisors in April 2024 on barriers/enablers/mitigation strategies for adapting the program, identified that researchers often do not 'close the loop' on findings that are relatable to participants. A book was recommended to communicate the findings back to participants.

Aim: Develop an output reporting cultural and place-based considerations of the Healthy Lifestyle Program for Aboriginal participants that best meets their expectations.

Method: A workshop, conducted in June 2025 with a Cultural Advisory Group (9 Aboriginal Elders) working in partnership with the program team to understand how best to share findings with the original participants. An Aboriginal facilitator conducted the workshop and original study findings were presented. The workshop was audio-recorded, transcribed, and data are undergoing reflexive thematic analysis.

Findings: Initial themes cover ensuring the context and lived realities of participants are recognised when presenting findings, using artwork to further tell their story, and the need for multiple feedback modes. The book will be presented.

Conclusion: Ensuring research includes consumer/community involvement is paramount to enabling unique research recommendations being actioned. Prioritising Aboriginal and community voice in how findings are communicated is critical to genuine partnership in research.

CACH concurrent session

Identifying barriers to GP shared care for children with ADHD: a mixed methods study'

Kelly, Rona[1], Sinclair-Heddle, Mel[2], Nitsche, Karen[2], Lim, Rachel[2], Redhead, Karen[2], Brad Jongeling[1,2,3]

[1]Child Development Service, CACH, [2]Child and Adolescent Community Health, [3]University of Western Australia – Department of Paediatrics

Background: Attention deficit hyperactivity disorder (ADHD) is the most common neurodevelopmental disorder in Australian children and account for approximately 60% of all clients on Child Development Service (CDS) paediatric caseloads.

This project aimed to identify clinical and service level barriers that may limit the success of ADHD shared care arrangements between CDS and Perth metropolitan general practitioners (GPs).

Method: A mixed-methods exploratory sequential design—survey-development variant—was employed in two phases:

1) Qualitative phase:

i) A literature review identified potential barriers to shared care.

ii) A GP working group was convened to define 'shared care' and explore barriers over a series of workshops.

2) Quantitative phase

Thematic analysis of the qualitative data informed a structured survey sent to GPs, organised into the following themes:

i) Scope and sustainability of the GP role

ii) Skills and experience

iii) Care coordination and documentation

iv) Resources and support

v) Complexity of ADHD management

Results: 103 GPs completed the survey, 55% of whom were currently involved in shared care. Barriers varied depending on participants' experience in shared care as well as years of clinical experience. Clinical barriers identified included role clarity and perceived skills in co-prescribing and service level barriers included GP resources, communication between GPs and CDS and support available.

The SET and GO: A Parenting Self-Efficacy Tool for Gathering Outcomes of Developmental Interventions

Nitsche, Karen[1], Pieterse, Bridget[1], Lawrence, Nicky[1], Bear, Natasha[2]

[1]Child Development Service, Child and Adolescent Community Health, [2]Institute for Health Research, Notre Dame University

This presentation reports on the development, validation and implementation of the SET and GO, a nine-item parenting self-efficacy outcome measurement tool, within the Child Development Service (CDS). CDS is a multidisciplinary service, that supports caregivers with children who have diverse developmental concerns ranging in age from 0 to 18 years. The SET and GO was developed to address an identified gap in available tools that quantify the impact that services have on building the capacity of caregivers to support their child's development.

The SET and GO, a retrospective pretest-posttest scale, was developed in a collaboration between staff and consumers. It was validated with 204 caregivers accessing a range of services including developmental paediatrics, audiology, speech pathology, occupational therapy, physiotherapy, clinical psychology and social work. Analysis of the tool's psychometric properties indicated that the SET and GO is unidimensional with good internal consistency and test re-test reliability, and adequate construct validity. A preliminary minimal clinically important difference (MCID) value of ≥7 was established.

The SET and GO has recently been implemented, allowing the CDS to measure and report on meaningful outcomes for caregivers accessing a range of intervention services. Future research will focus on the collection of a larger validation sample to allow assessment of the validity of the tool when used with Aboriginal caregivers and to further refine the MCID value.

Clinical Validation of CDIS Risk Themes to Strengthen Child Health Outcomes

Sewell, Dallas[1], Girschik, Jennifer[1], Forde, Karen[1]

[1]Child and Adolescent Community Health

Background: The Strengthening Child Health Outcomes (SCHO) project aims to utilise Child Development Information System (CDIS) data to support the early identification of families for enhanced support through the Partnership Service. However, the operational nature of the variables in CDIS can present some challenges for predictive analytics. This study sought to identify broad clinically relevant 'themes' across which individual CDIS variables could be meaningfully combined and then rank those themes for their relevance to Partnership Service referral. The outcome is a list of clinically appropriate themes which could be considered as 'exposures' in future analytical work.

Methods: A three-round iterative clinical review process was used. Three Clinical Nurse Specialists independently grouped 216 CDIS variables into provisional themes and rated each for its relevance to Partnership Service referral. Ratings were reviewed and refined through structured feedback from two panels of cross-specialty nurses until consensus was achieved.

Results: Twenty preliminary themes were expanded and refined into 26 themes. Five themes which include Child Safety Concerns, Parenting Concerns, Family Domestic Violence, History of Children in Care, and Substance Use were rated high priority. Mother's Previous Pregnancies, Transport Issues, and Maternal Age were rated low priority. Seven themes were rated intermediate, and nine received mixed ratings, highlighting context-specific importance.

Discussion/Implementation: The final clinician-endorsed framework improves interpretability of CDIS data and provides a practical structure for use in predictive modelling. This work supports the development of evidence-based, practice-aligned tools and unlocks CDIS as a valuable resource for future research and targeted child health service innovation.

Neighbourhood Built Environment Profiles and Children's Development Vulnerability

Zhao, Mingxuan[1], Christian, Hayley[1,2], Adams, Emma[1,2], Schipperijn, Jasper[3], Boruff, Bryan[4], Lowe, Melanie[5], Brinkman, Sally[6]

[1]The Kids Research Institute Australia, The University of Western Australia, Perth, Western Australia, Australia, [2]School of Population and Global Health, The University of Western Australia, Perth, Western Australia, Australia, [3]Department of Sports Science and Clinical Biomechanics, University of Southern Denmark, Odense, Denmark, [4]School of Agriculture and Environment, The University of Western Australia, Perth, Western Australia, Australia, [5]RMIT University, Melbourne, Victoria, Australia, [6]University of South Australia, Adelaide, Southern Australia, Australia

Introduction: The early years are a foundational period for child health and development, much of which occurs within the environmental context of a child's neighbourhood. Despite persistent inequities in early development, the specific role of the neighbourhood built environment remains underexplored. Understanding how different neighbourhood typologies influence early development can inform more equitable urban planning and policy.

Objectives: To identify typologies of neighbourhood built environments and the association with early childhood developmental vulnerability, and whether these associations differ by area-level disadvantage.

Methods: Australian Early Development Census data were linked with geospatial measures of the neighbourhood built environment for 5,033 children in Perth, Western Australia. Associations between neighbourhood built environment profiles identified by latent profile analysis and developmental vulnerability were tested, considering area-level disadvantage.

Results: Five built environment profiles emerged: 'Average neighbourhood', 'Established neighbourhood', 'Low destinations and transport mix', 'Connected residential', and 'Semi-rural'. Children in the 'Established neighbourhood' profile had the lowest proportion of developmental vulnerability (18.3%), while those in the 'Semi-rural' profile had the highest proportion (25.8%). Neighbourhoods with better access to child-relevant destinations, attractive green spaces, and public transport were associated with lower developmental vulnerability. Conversely, neighbourhoods with poorer movement network, less destination access, and higher traffic exposure were linked to worse developmental outcomes. In more disadvantaged areas, associations between the profiles and development were less consistent.

Conclusions: These findings provide direction for policy makers and practitioners to prioritise the make-up of neighbourhood built environments that best supports early child development.

Understanding drivers of acceptance of maternal and infant RSV immunisation in WA

Drislane, Shevaun[1]; Attwell, Katie; Moore, Hannah[2]

[1]School of Social Sciences, University of Western Australia, [2]The Kids Research Institute Australia

2025 is the first year when both maternal and infant RSV immunisation is available in Australia. In Q3 of 2025 we commence a study to explore how parental preference and choice plays out in WA with respect to RSV immunisation demand and acceptance. This presentation will outline early, interim findings from a qualitative study assessing drivers of parental demand and acceptance of maternal and infant RSV immunisation in WA.

Through qualitative interviews with parents who accepted immunisation we will:

i) interrogate parents' attitudes and preferences around accepting maternal or infant RSV immunisation;

ii) explore the extent to which WA parents felt they had a choice in which immunisation they received, and how they were supported in making that decision;

iii) Assess to what extent parental education and knowledge regarding RSV infection was pivotal to decisions to accept Abrysvo or Nirsevimab.

iv) Analyse whether parent concerns around 'newness' of immunisation products shaped their immunisation demands and acceptance. As part of this we will explore whether parents in WA felt more comfortable with infant RSV immunisation (Nirsevimab) as it is now in its second year of availability in WA and local data as to safety and efficacy from 2024 is available.

Finding from this study will contribute knowledge around parental understanding and perceptions of RSV infection, the range and significance of driving factors for parental preference and acceptance of maternal or infant RSV immunisation, and whether or to what extent parents' decision-making trajectory was shaped by their risk perceptions and risk rankings.

STARS for Kids: Strengths-based, tiered, accessible, resources and supports

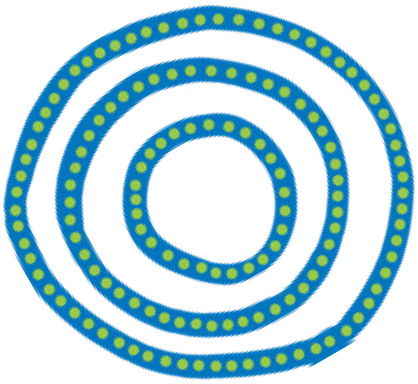
Lambiase, Sini; Young, Bec; Cole, Jo; D'Vaz, Nina; Davies, Jackie; Silva, Desiree; Downs, Jenny; Finlay-Jones, Amy

ORIGINS Project, The Kids Research Institute Australia

Background: At the start of school, one in five Australian children do not have the developmental skills to thrive. Australian medical and hospital systems are overloaded, compromising the wellbeing of families with young children, compounding concerns if health and developmental issues are overlooked. This leads to missed early interventions and greater future health problems. National reports urge better, integrated early support services, as late intervention costs Australia an estimated $15.2 billion. Improving family health requires early detection combined with effective access to affordable intervention and treatment.

Objective: The STARS for Kids program is being tested to determine whether it increases parents' completion of child development checks, while also examining the program's impact on parents' mental health and family wellbeing.

Method: The STARS project will test a tiered early intervention model using health screening tools and targeted support like specialist referrals and online resources. In NSW, this model will be trialled through physical hubs, while WA will test a digital version with online service navigation to reach vulnerable families. A randomized controlled trial (RCT) will assign families to either the STARS program or enhanced usual care. A nested RCT will focus on children aged 12–36 months with emotional regulation issues, offering a targeted video program to their parents. Feedback from parents, providers, and policy makers will help evaluate the program, alongside an economic analysis to assess long-term value and impact.



Parental Guidance: Empowering families in navigating children's screen use

Hendry, Danica[1,2], Zabatiero, Juliana[1,2], Losch, Alea[1,2], Kervin, Lisa[2,3], Cliff, Dylan[2,3]; Zhang, Zhiguang[2,3]; Sefton-Green, Julian[2,4], Paatsch, Louise[2,4], Zhao, Andy[2,4], Langton, Katrin[2,4], Mannell, Kate[2,4], De La Cruz, Melissa[2,4], Edwards, Suzy[2,5], Roberts, Pauline[2,6], Zarb, David, Stone, Laura[7], McCormack, Derek[8], Straker, Leon[1,2]

[1]Curtin University, [2]ARC Centre of Excellence for the Digital Child, [3]University of Wollongong, [4]Deakin University, [5]Australian Catholic University, [6]Wanslea, [7]ABC Kids, [8]Raising Children Network ABC Kids

Excessive screen time for children is one of the top health concerns for parents, and parents frequently seek guidance on this topic. To understand what information parents would like to access about their children's screen use, and how they would like to access it, an interpretative descriptive framework was applied to two rounds of semi-structured qualitative focus groups led by a transdisciplinary research team. These groups included parents of children aged birth to 8 years (n=51), professionals working with children and their families and in child-related services (n=25) and members of the community more broadly (n=12) including grandparents, parents of older children and adults without children.

Rather than rigid time limits, participants expressed a preference for individualised guidance that scaffolds children's skills using screens. Participants indicated that this should include information on both risks and benefits of screen use in the areas of relationships and connection, health and wellbeing, online safety and citizenship and exploration and learning. Online sources, health professionals and schools were identified as some of the key sources that parents would like to access this information. Participants valued information delivered with compassion and empathy, that validates their experiences and provides practical strategies, and is from credible and trustworthy sources.

These findings can support tailored service provision by organisations and professionals who work with families to empower parents in raising children in a constantly changing digital world. Additionally, while the study focused on screen use, the valued attributes of information are likely similar across different health domains.

Exploration of the role of the clinical nurse specialist in the assessment of ADHD

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[1]Child Development Service, CACH; 2Research and Evaluation, CACH

Background: This project explores an expanded role of the clinical nurse specialist (CNS) in the assessment and management of children presenting to the Child Development Service (CDS) with attention, regulation and concentration difficulties.

In Australia, rising demand for timely ADHD assessments has prompted a shift toward multidisciplinary models of care. Traditional paediatrician-led assessments often involve two or more appointments to reach a diagnosis and establish a management plan. Research from the United Kingdom and the United States suggests that the involvement of nurses with specialist training in ADHD in the assessment and management of children with ADHD can offer potential improvements in efficiency and patient satisfaction.

Aim: This project aims to evaluate caregiver acceptability of an expanded scope of practice of the clinical nurse specialist in the assessment and management of ADHD.

Method: The CNS conducts an initial assessment which includes a developmental history and information gathering from families, teachers, and the child using standardised questionnaires and a structured clinical interview. The paediatrician then completes a single assessment session and collaborates with the CNS to finalise the diagnosis and management plan.

Results: Of 180 families who received an assessment outcome, 125 (69%) completed an experience survey. Preliminary analysis of survey responses indicates a high level of satisfaction with the information and service that caregivers received.

Conclusion: Expanding the role of the CNS provides a collaborative approach that is well-received by families. This finding supports further exploration of the role of the CNS across services within CDS.

Perspectives of consumers with lived experience on a pilot healthy lifestyle program

Paull, Stephen[1,2,3], Harris, Tania[4], Iwanowski, Katie[1,2,3], Moullin, Joanna[5], Anderson, Yvonne[1,2,3], Smith, Stephanie[1,2,3]

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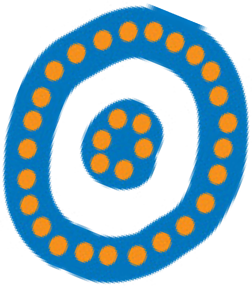
Introduction: The prevalence of childhood obesity and weight-related comorbidities is increasing. Multicomponent lifestyle and behavioural interventions are needed that are family-based and multi-disciplinary, developed with genuine partnership and co-creation. An equitable healthy lifestyle program from Aotearoa/ New Zealand is being scaled out to pilot in East Metropolitan Perth with community partnership and key cultural considerations. The community-based program includes weight-related health assessments, and six months of weekly group education sessions.

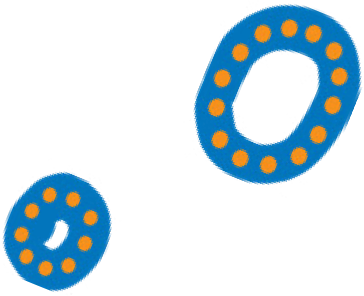
The aim of this study was to determine the barriers and enablers for client engagement with the pilot program, and the adaptations required to increase acceptability and feasibility, based on the perspectives of consumers within the program.

Methods: Two focus groups (May 2025) with total of 13 participants from the pilot program (seven children/young people, mean age 11.6 years; six caregivers, mean age 43.0 years). The sessions were audio recorded and transcribed verbatim. Data were analysed using a barrier/enabler approach combining Framework Analysis with the Consolidated Framework for Implementation Research.

Results: Identified strengths of the program included welcoming, safe and respectful environment; communication with families; program content and delivery; and healthy changes being made at home. Barriers to engagement included busy lifestyle; location and transport; and timing of group sessions. Recommended adaptations included modifying timing and locations of sessions; specific additions to program content; and further improving communication and resources.

Discussion: Identified determinants have and will continue to inform program adaptation, with ongoing engagement with a Consumer Advisory Group. Engagement with consumers during program implementation is paramount to accelerate successful implementation.





Nursing concurrent session

Preparing nursing students to care for children and families: A mixed-method study

Young, Melisa[1], Zhou, Huaqiong[1,2,3], Kalembo, Fatch[1], Barnwell, Martina[1,3], Brown, Janie[1,2,4], Ferullo, Jade, Sears, Joy[1]

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Introduction: Student nurses are expected to graduate able to care for paediatric patients across healthcare settings. However, inadequate preparation may result in students feeling ill-equipped for clinical placement and unable to develop effective age-appropriate communication skills, which impact on patient safety. Additionally, fear of nursing children, lack of preparation, and moral distress contribute to graduate attrition and workforce decline.

Aim: 1) to determine the requirements, experiences, and expectations of stakeholders in preparing students to care for infants, children, young people, and their families; and 2) to design an integrated curriculum.

Methods: A two-stage mixed-methods study. Stage 1 involved curriculum content mapping (n=26 units), surveys of academics (n=15), students (n=17), and experienced nurses (n=146), and interviews with experienced nurses (n=7) and parents/caregivers (n=2). Results of stage 1 were compared, coded, categorised, and used to develop five scaffolded case studies. Stage 2 involved collaboratation with paediatric nursing experts (n=5) and parents/caregivers (n=1) to validate the authenticity of the case st udies.

Results: Embedded course content was limited and lacked visibility. Academics agreed that paediatric content was important but felt unprepared to deliver. Students felt unprepared for placement and were challenged by communicating and interacting with children and their families. Stakeholders agreed with 3 core aspects of preparedness: physical and psychosocial differences, family centred care, and rights of a child. The five case studies are available for use across the curriculum, with peer support to enable integration into exisiting content. The curriculum is capped with a speciality paediatric elective unit in the final semester.

Ways Aboriginal families recognise deterioration in children with dark-coloured skin

Kelly, Chelsea[1,2], Leslie, Gavin D[1,3], Laird, Pamela[1,2,4], Stokes, Scott[1,5,6], Odutolu, Yetunde[2], Harris, Elizabeth[2], Gill, Fenella J[1,2,3]

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Background: Observable signs of clinical deterioration can present differently in children who have dark-coloured skin. Families are often the first to recognise changes in their child's condition. Aboriginal children experience barriers to accessing healthcare and are hospitalised at approximately twice the rate of non-Aboriginal children. No known studies have focused on Aboriginal family knowledge of identifying clinical deterioration in children with dark-coloured skin.

Aim: To describe how Aboriginal families of children with dark-coloured skin notice changes in their child's condition that are indicative of clinical deterioration.

Methods: Semi-structured interviews with Aboriginal families whose child was hospitalised at a children's hospital or a regional hospital. Family included any members within the kinship system who were responsible for caring for the hospitalised child. An interview schedule was developed with a research consumer advisory group. Families reported their child's skin colour based on the Fitzpatrick Skin Chart. Reflexive thematic analysis was used to analyse data.

Results: Eight Aboriginal family members participated in interviews between November 2024 to June 2025. Preliminary themes are i) knowing the child, ii) differentiating normal sickness from serious sickness, iii) behaviour changes, iv) skin changes and v) getting medical help. Families of children with lighter coloured skin were more likely to notice and observe colour changes and families of children with dark-coloured skin relied more on behaviour changes.

Conclusion: Behavioural changes featured prominently as cues for Aboriginal families to recognise early signs of clinical deterioration.

Prevalence, patients' characteristics, and outcomes of care escalation events among children from culturally and linguistically diverse backgrounds at Perth Children's Hospital

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Background: Recognition and response to clinical deterioration and escalation of care are key steps to preventing adverse outcomes in hospital. In Western Australia, individuals from culturally and linguistically diverse (CaLD) backgrounds comprise approximately 17.7% of the population. Little is known about escalation of care events for children from CaLD backgrounds.

Aim: To describe the prevalence, patient characteristics, and outcomes of escalation of care events among hospitalised children from CaLD backgrounds.

Methods: Retrospective cohort observational study of Rapid Response System (Medical Emergency Team, Code Blue) events and Aishwarya Care Calls from 1 January - 31 December 2024. Routinely collected data were captured using a project-specific data extraction tool. CaLD status was determined by country of birth, primary language and interpreter requirements. Data were analysed descriptively.

Results: 254 RRS events involved 185 patients, with 35(18.9%) from CaLD backgrounds. 100 Aishwarya Care Calls involved 80 patients, with seven from CaLD backgrounds. Most frequent RRS events triggers were; clinical concern (35.4%) and Early Warning Score >8(27.2%). Care Calls were initiated due to disagreement with care plans (41%) and non-clinical concerns (22%). Following a RRS event, patient outcomes were; transferred to Paediatric Critical Care (17.7%), transferred to another ward (6.3%), remained on same ward (56.3%). Eleven transfers to Paediatric Critical Care involved children from CaLD backgrounds. Following Aishwarya's Care Calls, 76% remained on the same ward, 6% were transferred to another ward with 11% no outcome documented.

Conclusion: Children from CaLD backgrounds appeared to be over-represented in RRS events and transfers to Paediatric Critical Care but under-represented in Aishwarya's Care Calls. It will be important to understand the reasons for these findings.

Evaluating Paediatric Sepsis Pathway Uptake in Western Australia: A Multi-Site Point Prevalence Study

Middleton, Natalie[1], Abass, Fuad[2,6], Bara, Sonny[3], Bowers, Emma[2], Cheung, Brian[3]; Congerton, Emma[4], Dantaz, Jessica[5], Edge, Emma[6], Fletcher, Robert[7], Flood, Kristy[2], Friesen, Noel[6], Gilbert, Sharron[7], Hartett, Janelle[6], Hinds, Amanda[2], Kenworthy, Ashleigh[1], McCarthy, Bernard[1], McElroy, Eileen[3], McNeilly, Libby[3], Newman, Leanne[7], Patience, Emma[3], Verma, Shakshi[1], Blyth, Christopher[1],[8,9,10]

[1]Perth Children's Hospital (PCH), Perth, Western Australia, [2]Armadale Hospital, Perth, Western Australia, [3]Fiona Stanley Hospital (FSH), Perth, Western Australia, [4] Joondalup Health Campus (JHC), Perth, Western Australia, [5]Rockingham General Hospital (RGH), Perth, Western Australia, [6]St John of God Midland Public Hospital, Perth, Western Australia, [7]WA Country Health Service (WACHS), Western Australia, [8]University of Western Australia, Perth, Western Australia, [9]PathWest, Perth, Western Australia, [10]The Kids Research Institute, Perth, Western Australia

Background: Sepsis is a leading cause of preventable childhood morbidity and mortality. In the first half of 2025, public hospitals across Western Australia (WA) commenced implementation of a Paediatric Sepsis Pathway, adapted from the Perth Children's Hospital (PCH) resources, to support timely recognition and management of paediatric sepsis in alignment with national standards. However, the current uptake of the pathway and adherence to key clinical performance indicators (KPIs) remain unknown.

Objective: This study aims to evaluate the initial implementation of the Paediatric Sepsis Pathway across WA hospitals during a two-week period in July and August 2025. Specifically, it will assess pathway utilisation and compliance with key clinical standards, including time to antibiotics, blood culture collection, lactate measurement, and pathway documentation.

Methods: A multi-site point prevalence study will be conducted involving paediatric patients (aged 0–16 years) who underwent a sepsis review using a sepsis pathway form at participating hospitals. Data will be collected either digitally or manually, depending on site capability, and analysed using a validated REDCap audit tool. KPI analysis will be limited to patients initially managed at the study site. Statistical analysis will be undertaken to identify trends and areas for improvement.*

*contninues overleaf

Significance: This study will establish a baseline for benchmarking and guide future quality improvement initiatives. Understanding current clinical practices and the uptake of the sepsis pathway will support system-wide improvements in paediatric sepsis care across WA and contribute to national efforts to standardise and strengthen sepsis management.

After Sepsis: Early Learnings from a Paediatric Follow-Up Program

Middleton, Natalie[1], Brophy Williams, Sam[1], Kenworthy, Ashleigh[1], Gill, Fenella[1,2], McCarthy, Bernard[1], Blyth, Christopher[1,3,4,5]

[1]Perth Children's Hospital, Perth, Western Australia, [2]Curtin University, Perth, Western Australia, [3]The University of Western Australia, Perth, Western Australia, [4] PathWest WA, Perth, Western Australia, [5]The Kids Research Institute, Perth, Western Australia

Background: Paediatric sepsis is a leading cause of morbidity and mortality in Australia. Survivors often face long-term physical, cognitive, and psychosocial challenges. In March 2025, Perth Children's Hospital implemented a novel, nurse-led post-sepsis follow-up program to support recovery and assess quality of life at 3, 6, and 12 months after hospital discharge.

Objectives: This study aims to evaluate the quality-of-life outcomes from the first six months of the program, focusing on the long-term impact of sepsis on children and their families.

Methods: Eligible children are enrolled during their hospital stay or shortly after discharge. The program involves structured virtual follow-up appointments at 3, 6, and 12 months, using the validated Paediatric Quality of Life Inventory (PedsQL™) to assess outcomes for patients and their families. Additionally, a retrospective cohort assessed only at 12 months will be evaluated to the program's impact.

Results: Outcomes will include measures of child quality of life and broader indicators of family wellbeing. Data from the first six months will inform early trends and areas for improvement.

Conclusion: This program represents a critical step in addressing the long-term needs of paediatric sepsis survivors and their families. Findings will help shape future models of post-sepsis care in Australia.

Gestational diabetes mellitus is implicated in infant body composition

Perrella, Sharon[1,2,3], Warden, Ashleigh[1,2,3], McEachran, Jacki[1,2,3], Lai, Ching Tat[1,2,3], Wlodek, Mary[1,4], Prosser, Stuart[1,5], Geddes, Donna[1,2,3], Gridneva, Zoya[1,2,3]

[1]School of Molecular Sciences, The University of Western Australia, [2]ABREAST Network, [3]UWA Centre for Human Lactation Research and Translation, [4]Department of Obstetrics and Gynaecology, University of Melbourne, [5]Western Obstetrics

Background: Gestational diabetes mellitus (GDM) is the most common pregnancy complication associated with adverse maternal and neonatal outcomes including low milk supply which prevails during first three weeks postpartum, despite frequent breastfeeding and breast expression. This suggests that endocrine factors may impair milk production in some women with GDM and prevent their infants from achieving optimal nutrition. However, studies of infant growth and body composition in this population are few.

Methods: Women with (n=47) and without GDM (n=57) were recruited in the last trimester of pregnancy and provided demographic and health data. Body composition of women and their infants was measured with bioelectrical impedance spectroscopy at 3 and 6 months after birth. Statistical analysis used unpaired Student's t-test.

Results: No significant difference in maternal adiposity was observed between the groups. No difference in infant body composition was observed at 3 months of age. At 6 months of age female infants of mothers with GDM had lower body weight (GDM: 7048±795 g, control: 7567±811 g, p=0.029) and adiposity, including body mass index (GDM: 16.68±1.22 g, control: 17.63±1.77 kg/m2, p=0.037), fat mass (GDM: 2172±453 g, control: 2443±409 g, p=0.035), fat mass index (GDM: 6.66±1.22, control: 7.45±1.17, p=0.026), and percentage fat mass (GDM: 30.41±3.48 %, control: 32.10±2.31, p=0.049) compared to female infants of mothers from the control group.

Conclusions: Maternal metabolic status may influence early postnatal infant development warranting monitoring of growth in GDM-exposed populations.

Identifying factors that impact evidenced-based practice for nurses working in the NICU

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Background: Infants admitted to Neonatal Intensive Care Units require specialised treatment. A nursing knowledge practice gap has been identified in key areas including respiratory support, pain management, skin care and nutrition. Barriers to evidence-based practice include high nurse workload, poor equipment resources and a need for comprehensive education. There is a need to understand the factors that impact evidence-based practice for nurses working in Neonatal Intensive Care Units.

Aim: The systematic scoping review will identify factors that impact the provision of evidenced-based practice by nurses working in Neonatal Intensive Care Units.

Methods: The Systematic Scoping Review protocol was registered apriori on PROSPERO. The Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews checklist was followed. Five databases were systematically searched (Medline, CINAHL, JBI, Scopus, and the Cochrane Database). Of 431 studies screened, 283 studies were assessed for eligibility and 45 studies were included. Data extracted were mapped to the Theoretical Domains Framework and the PAGER framework further guided analysis.

Results: Of 14 Theoretical Domains that influenced the provision of evidenced-based practice key domains were knowledge (43 studies), environmental context and resources (21 studies) and beliefs about capabilities (14 studies).

Conclusion: The findings of this review will inform the development of a questionnaire that will be used to further explore factors influencing provision of evidenced based care by Neonatal nurses in the Neonatal Unit at King Edward Memorial Hospital.

Embedding Environmental Sustainability into Paediatric Burns Outpatient Culture

Adamson, Michelle[1,2,], Martin, Lisa [1,3], Dodds, Belinda [4], Rea, Suzanne [2,3], McWilliams, Tania[2], Wood, Fiona [1,2,3]

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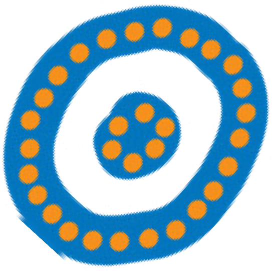
Environmental sustainability in healthcare remains under-prioritised despite growing global urgency. This project sought to improve environmental sustainability awareness and engagement among staff in a paediatric burns outpatient setting. A pre-test/post-test design assessed staff attitudes, awareness, and perceived barriers to sustainability across a 14-week intervention period to test the impact of three low-cost, high-impact interventions: a multidisciplinary Green Team, staff education sessions, and a sustainability information board. The interventions produced a statistically significant overall improvement in staff knowledge and awareness of environmental sustainability in healthcare ($p = 0.009$). Access to information to support sustainable decision making ($p = 0.0273$), awareness of local initiatives ($p = 0.014$), access to equipment to make sustainable choices ($p = 0.0078$) and perceptions of leadership modelling sustainable behaviours ($p=0.0156$) improved significantly. Participation in the Green Team was associated with greater years of clinical experience, suggesting that senior staff can act as sustainability champions. This project demonstrates that sustainable practice is possible within the complex, high-waste environment of paediatric burns care and offers a scalable model for other healthcare teams seeking to improve their environmental impact through staff-led engagement.



Bereavement Care After Unexpected Child Death in a PICU: An Integrative Review

Jolly, Arielle[1,2], Davies, Kylie[1], Butler, Ashleigh[3], Gibbons, Kristen[4], Erickson, Simon[2], Gill, Fenella J[1,5]

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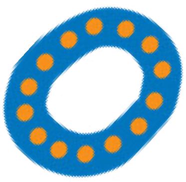
Background: The unexpected death of a child in a PICU involves intense grief for the child's family and can cause sustained psychosocial impacts. Supporting families with evidence-based bereavement care is key to improving grief outcomes. To inform the delivery of bereavement care in the PICU, understanding the needs of families of children's whose death is sudden and unexpected is essential.

Aim: To understand what is known about a) the bereavement care needs of families who have experienced the unexpected death of a child in a PICU, and b) approaches to address bereaved PICU families' needs.

Methods: We chose an integrative review following a systematic, six-stage approach. Original peer-reviewed research articles relating to (P) relatives of children who died (I) an unexpected death (Co) in PICU were included from five databases along with grey literature from google searching. Articles were critically appraised using CASP and MMAT checklists and data were synthesised using the constant comparison method.

Results: From 28 eligible articles of original research and five items of grey literature only two research articles focused on unexpected child death exclusively. Articles reported various family bereavement needs including self-care and remembrance activities, and also reported benefits from ongoing contact from hospital staff, including provision of information, grief interventions, and follow-up support.

Conclusion: Our findings show little is known about the specific needs of families after the unexpected death of a child. Current bereavement care approaches that may be helpful are based largely on mixed evidence from both expected and unexpected deaths, highlighting a need for focused research in this area.



An informed design approach to the development of a PICU bereavement service

Jolly, Arielle[1,2], Erickson, Simon[2], Odutolu, Yetunde[2], Hughes, Catherine[2], Jacqueline Reid[3], Higgins, Kelly[2], Thomas, Linda[3,4], Robinson, Mel[3] Sharbanee, Jason[1,5], Cross, Jarrod[2], Douglas, Kate[2], Fitzgerald, Paul[3], Gibbons, Kristen[5], Davies, Kylie[1,2] Butler, Ashleigh[6] Gill, Fenella J[1,3], the FOOTPRINTS Working Party and the ANZICS Paediatric Study Group

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Background: When a child dies suddenly and unexpectedly in a paediatric intensive care unit (PICU), their relatives face intense bereavement. Many bereaved families have identified a lack of appropriate PICU-based bereavement support, however developing innovative healthcare interventions in the sensitive area of bereavement is challenging. Working collaboratively with key stakeholders, including clinicians and bereaved families, in a process of informed design can help to overcome many of these challenges, but is rarely reported in PICU or bereavement literature.

Aim: To contribute to this limited body of evidence, we share our experience of using an informed designed methodology to develop a PICU bereavement service as part of a wider implementation-effectiveness study, the FOOTPRINTS Project.

Methods: Over a six-month period, we held six focused stakeholder design meetings and six family advisory meetings. In total, 34 clinicians and researchers from four states in Australia, including nurses, doctors, psychologists, social workers, an aboriginal health expert and a pastoral carer participated, as well as 15 bereaved family members. In line with informed design methodology, we engaged in iterative cycles of stakeholder and family input. Field notes recorded in a design planning document were synthesized into a service plan by a core design team.

Results: The outcome of this informed design process was the development of the FOOTPRINTS Service plan, including the service model, roles, training and resource requirements, service contact points and care bundles.

Conclusion: Informed design provided a flexible and inclusive methodology to effectively engage experts and bereaved family advisors in the process of designing a PICU bereavement service intervention ready for testing.

Plenary 1: Paediatric health equity and access

Bridging the Gap: Tertiary healthcare utilisation by young people in WA

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Background: Young people (10-24 years) have unique healthcare needs, often unmet within rigid paediatric or adult care services. There are limited data to guide service planning and research priorities in Western Australia (WA) to meet their needs.

Objectives: To describe healthcare utilisation among 10-24-year-olds at Fiona Stanley Hospital (FSH), a mixed paediatric-adult tertiary hospital in WA, including patterns across inpatient, outpatient, and emergency department (ED) services and associated healthcare costs.

Methods: A retrospective observational study of 10-24-year-olds attending FSH between 1 January and 31 December 2023 was conducted. De-identified data were extracted from electronic hospital databases, including sociodemographic parameters, ICD-10 diagnoses, and episode-level costs. Descriptive statistics were used to analyse utilisation patterns.

Results: In 2023, 68,166 young people presented to FSH (6,101 inpatients, 43,393 outpatients, and 18,672 Emergency Department presentations), accounting for 9.4% of all hospital activity. Utilisation increased with age, peaking at 43.6% among 20-24-year-olds. Leading presentations were injuries (10-14 years), mental health (15-19 years), and conditions requiring medical subspecialty care (20-24 years). Gender distribution was mostly equal, but females comprised 71% of mental health visits among 15-24-year-olds. Total care costs were A$86 million, with inpatient services accounting for A$62 million and half of costs incurred by 15-19-year-olds.

Conclusion: This is the first Australian study to comprehensively examine healthcare use among young people at a tertiary mixed hospital. Findings demonstrate distinct age- and gender-based service utilisation, highlighting the need for tailored and developmentally appropriate models of care to meet the evolving tertiary care needs of young people.

Unplanned Utilisation of Paediatric Services by VPNs Within 1-year of Neonatal Discharge

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Background: Advancements in neonatal care have improved survival among very preterm neonates (VPNs), yet many of these infants face ongoing medical complexities that extend into infancy. The transition from neonatal to paediatric care often involves unplanned healthcare utilization, underscoring the need to better understand service demand in this vulnerable population.

Aim: To describe the patterns of unplanned utilization of acute paediatric care services (APCS) by VPNs within the first year following neonatal discharge.

Setting: A tertiary-level, non-surgical, non-cardiac neonatal unit co-located with a maternity and fetal medicine service managing over 4,600 live births and up to 1,200 neonatal admissions annually.

Methods: A retrospective cohort analysis was conducted on infants born between 22+0 and 32+6 weeks gestation and discharged home to our hospital's catchment area between January 1, 2021, and December 31, 2022. Infants were grouped as attenders or non-attenders of unplanned APCS, and comparisons were made across demographic and clinical variables. Among attenders, frequency, reasons, and outcomes of visits were analysed.

Results: Of VPNs discharged to the local area, 50.7% had unplanned paediatric presentations, with 68.5% occurring within two months of discharge. Attenders were significantly more likely to have lower birth weights, lower gestational ages, longer neonatal hospitalizations, and a discharge diagnosis of chronic lung disease. Respiratory issues (63%) and gastrointestinal concerns (31.5%) were the most common presenting complaints. While 63% were discharged the same day, 31.5% required local admission and 5.5% were transferred for higher-level care.

Conclusion: VPNs, especially those born extremely preterm, experience high rates of unplanned APCS usage post-discharge, often driven by respiratory morbidity.

Inequity in influenza vaccination uptake between public and private schools

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Background: Seasonal influenza vaccine (SIV) is the most effective tool to prevent influenza infection, associated hospitalisations and deaths. Despite this, coverage remains sub-optimal, especially in school-aged children. We investigate SIV uptake in Australian school-aged children in 2023, compare the uptake between public and private schools, and assess the role of socio-economic inequality in SIV uptake inequity.

Method: We analysed whole-of-population linked immunisation, census, and administrative data.The Oaxaca-Blinder decomposition was used to identify factors driving inequity in SIV uptake between public and private schools.

Results: Of 9.5 million SIV doses administered, only 0.7 million (7%) went to school-aged children (5-<18 years), despite them comprising 16% of the population. SIV coverage among school-aged children was low (15% for secondary, and 18% for primary), well below overall population coverage (33%).

Private school students have notably higher SIV uptake than public school peers, with a wider gap at higher education level (19.6% in private vs. 14.2% in public secondary schools). Private school students demonstrate greater socio-economic advantage. Differences in observed child, parental, family, and residential-area characteristics explain >60% of total SIV uptake gap. Of note, parental education, parental income, and socio-economic characteristics of residential area play the most important role.

Implications: Addressing socio-economic inequality among parents could reduce vaccination uptake inequity for children. Targeted vaccination campaigns should be considered for specific cultural, linguistic, and socio-economic groups. Alternative SIV vaccine and delivery methods for school-aged children (i.e., nasal spray and school-based) could be explored.

Early detection of Cerebral Vision Impairment in children at-risk of Cerebral Palsy

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Background: Cerebral Vision Impairment (CVI), the leading cause of vision impairment (VI) in children, is caused by damage to the visual pathways in the brain, occurring in 60-70% of children with cerebral palsy (CP). Early detection and intervention for VI improves developmental outcomes and is strongly advocated by families, yet routine CVI screening is not standard practice for infants at high risk of CP.

Aim: To implement and evaluate a feasible routine screening process for CVI within the Kids Rehab WA Early Intervention Program (EIP).

Methods: Infants referred to EIP (Feb–Dec 2024) underwent CVI screening at their initial appointment using the CVI screening tool assessing fixation, following, and atypical eye movements. Infants with concerns were referred for further visual assessment (Occupational Therapy, Paediatrician Ophthalmology). Infants were reassessed at 12 months to evaluate screening effectiveness and monitor for any missed cases.

Results: Of 146 infants, 133 (91%) underwent CVI screening, including all 24 children later diagnosed with CP. Of 23 infants identified at risk for CVI, 17 were already known to Ophthalmology, 5 were newly referred, and 1 referral was pending. At 12-month follow-up, no additional vision concerns were identified. Of 21 infants initially flagged with VI, 9 were confirmed to have CVI (all with CP), while 2 no longer demonstrated vision concerns but were diagnosed with other neurodevelopmental disorders.

Conclusions: Routine CVI screening in high-risk infants is feasible and effective, enabling early identification and timely intervention. Infants with CP and other neurodevelopmental disorders remain at high risk for CVI.

Plenary 2: Innovation of paediatric clinical care and trials

Increasing sputum sample frequency in paediatric cystic fibrosis: An innovative QI project

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Objectives: Sputum surveillance is recommended in people with cystic fibrosis (CF) but can be challenging in children. Our aim was to increase sputum sample frequency and the number of children providing at least one sputum sample by 20%.

Methods: An 18-month multidisciplinary intervention was implemented in a paediatric CF clinic for children 6 years or older. At routine clinic visits, families and children with CF were given targeted educational resources (audio-visual, one-on-one education, and handouts), sputum collection pots, pathology forms and information about home sputum collection processes. Motivational incentives (sputum passports, certificates and donated prizes) were used to encourage behaviour change. Samples were independently expectorated without suctioning or induced sputum procedures. Sputum sampling frequency was compared to baseline sampling 18 months prior to the intervention.

Results: One hundred and fifty-five children (84 male (54%)) participated in the intervention, with 163 in the baseline period (78 male (48%)). Total sputum samples increased by 73% from 282 at baseline to 463 with the intervention. The number of children with at least one sample increased from 93/163 (57%) children at baseline to 124/155 (80%) children, representing a 40% increase. Children who gave four or more samples increased from 31/163 (19%) to 54/155 (35%). Children aged 9 to 12 had the greatest improvement in the number providing at least one sample (23/41 (56%) vs 46/52 (88%)). Of the children who provided samples, 81/93 (87%) had pathogens grown at baseline compared to 109/124 (88%) post intervention.

Conclusions: Sputum sample frequency can be increased through targeted multidisciplinary intervention.

Grant Support: In kind support from Cystic Fibrosis Western Australia for audio-visual resources and motivational prizes.

* This project (known within the hospital as the 'Year of the Frog' campaign run by the PCH CF multidisciplinary team) has been nominated for a CAHS excellence award.

Reducing RESPiratory hospital Admissions in children with cerebral palsy: economic analysis

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Introduction: The health costs of respiratory disease in Cerebral palsy (CP) are high. Reducing these costs with a preventative approach to respiratory health may be possible. This study aimed to investigate the health costs of children with CP who did and did not receive an intervention aimed at reducing health service use for respiratory disease.

Participants and Methods: In a 12-month feasibility randomised controlled trial, 20 children with CP aged 0-12 years at risk of respiratory disease were randomly assigned to treatment and control groups. The control group received regular care. The treatment group received a comprehensive assessment and individualised collaborative interventions from a multidisciplinary team. Health service usage data was collected fortnightly and included medical and allied health appointments, admissions and diagnostic tests. The health costs were calculated for children in both groups and compared.

Results: The total costs of participants for the treatment versus the control group were $562,752 versus $2,043,413. The main cost differences were seen in admission days (a difference of $1,446,091) and parent-missed workdays (a difference of $30,820). Admissions data from 12 months before the study period showed that the control group had more admissions days than the treatment group (151 days versus 25 days).

Conclusion: The large difference between the groups suggests it may be possible to reduce health costs for children with CP at risk of respiratory disease by preventative treatments. However, given the baseline differences, a larger multicentred randomised control trial is required to confirm economic benefits.

REVIVE - REspiratory syncytial Virus Immunisation program – eValuating Effectiveness and impact

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Background: In April 2024, Western Australia launched the country's first state-wide universal nirsevimab program for infants entering their first Respiratory Syncytial Virus (RSV) season and high-risk children entering their second RSV season. In 2025, state funded nirsevimab and National Immunisation Program-funded Maternal RSV vaccine is available. REVIVE study provides the results of the 2024 program in WA and early insights into 2025 program.

Methods: Between April 2024 and February 2025, children hospitalised with laboratory-confirmed RSV-associated acute respiratory infection (ARI; cases) and contemporaneous test-negative ARI controls were enrolled. Demographic variables, medical risk factors, symptoms and outcomes were assessed. Nirsevimab effectiveness in preventing RSV-associated hospitalisation was estimated using a test negative design.

Results: Between April 2024 and February 2025, 361 nirsevimab-eligible children were enrolled including 202 RSV-positive cases and 159 test-negative controls. A higher proportion amongst controls (89/159; 56%) compared to cases (53/202; 26.2%) received nirsevimab. Cases were older (median age 0.40 years compared with test-negative controls (0.30 years; $p < 0.02$). There were no other significant differences in other demographics. The overall adjusted estimate of nirsevimab effectiveness against RSV-associated ARI hospitalisation was 81% (95% CI: 61.6, 90.6). Early estimated of 2025 effectiveness data will be available in November.

Conclusion: This study is the first to provide estimate of nirsevimab effectiveness against hospitalisation in Australia and demonstrates that a single dose of nirsevimab in 2024 was highly effective against RSV-associated hospitalisation in infants. At the symposium, we will be able to provide early insights into the longitudinal effectiveness of the hybrid program in 2025.

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SNAP-PY: Staphylococcus aureus Network Adaptive Platform (SNAP) trial for paediatrics and youth

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Background: Staphylococcus aureus bacteraemia (SAB) has an incidence of 8.3/100,000 children per year—higher than any vaccine-preventable bacterial infection causing sepsis. Despite this, fewer than 300 children with SAB had been enrolled in randomised controlled trials (RCT) prior to the Staphylococcus aureus Network Adaptive Platform (SNAP) trial, resulting in limited evidence to guide paediatric treatment.

Aims: The SNAP Trial aims to improve SAB management for patients of all ages. SNAP-PY is the dedicated paediatric and youth arm, recognising that adult outcomes cannot be directly applied to children.

Methods: SNAP-PY operates within the broader SNAP adaptive platform and focuses on enrolling neonates, children, and adolescents with SAB. Children may be randomised into multiple domains to evaluate antibiotic treatment for S. aureus, including methicillin-susceptible and resistant strains. The primary endpoint is 90-day mortality. Safety outcomes, such as acute kidney injury (AKI), are monitored. A Data Safety Monitoring Board reviews safety and efficacy across the full cohort, including children. Bayesian methods allow borrowing from adult cohorts, where appropriate and pre-specified, while ensuring paediatric findings remain robust.

Results: As of April 2025, 605 children have been screened, 194 randomised—yielding 300 paediatric randomisations across domains (1.6 randomisations per child)—and 347 enrolled in the observational registry. Children will continue randomisation in the MSSA silo, testing (flu)cloxacillin versus cefazolin for Penicillin-Susceptible S. aureus and Methicillin-Susceptible S. aureus bacteraemia, despite closure in adults.

Conclusion: SNAP-PY is now the largest ever SAB Trial in children, adding evidence to inform treatment choices globally.

Infant vaccine responses vary with repeat maternal Tdap vaccination and priming type

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Maternal pertussis vaccination is a key strategy to protect young infants from severe disease. However, maternal antibodies can interfere with infant responses to their own vaccines (immune interference), and it remains unclear whether repeat adult Tdap boosters during pregnancy further affects infant immunity.

We evaluated immunogenicity and antibody persistence in infants born to mothers who received either their first or second adult Tdap booster during pregnancy. We also investigated whether this varied based on infant priming dose: either acellular pertussis (aP1) or whole-cell pertussis (wP1), followed by two doses of DTaP-IPV-HBV/Hib at 2, 4, and 6 months (Optimum study, ANZCTRN12617000065392p). All infants received 13-valent pneumococcal conjugate vaccine at 2, 4, and 12 months, and a DTaP-IPV booster at 18 months.

IgG antibody concentrations to diphtheria, tetanus, pertussis, Hib, hepatitis B, and PCV13 antigens were measured at 6, 7, 18, and 19 months using multiplex fluorescent bead-based immunoassays.

At 6 months, infants whose mothers received two Tdap boosters showed enhanced immune interference, regardless of priming dose type. By 7 and 18 months, aP1-primed infants with repeat maternal Tdap exposure had higher antibody levels to some antigens, while wP1-primed infants had lower antibody levels. These effects varied by antigen and timepoint.

Our findings suggest that repeat maternal Tdap immunisation shapes infant immune responses well beyond early infancy, with distinct patterns based on pertussis priming type. As fully aP-primed cohorts age into childbearing years, continued monitoring is essential to guide maternal immunisation strategies and optimise infant protection.

Trends and perinatal risk factors for neonatal resuscitation in Western Australia

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Objective: To examine temporal trends and quantify the contribution of maternal and fetal risk factors to neonatal resuscitation in Western Australia (WA) using an advanced causal inference method.

Methods: A retrospective population-based cohort of 469,288 live births between 01/01/2000 and 31/12/2015, inclusive in WA, was analysed. To estimate interpretable population-level effect estimates, a G-computation approach using marginal standardisation was applied to estimate covariate-adjusted absolute risk differences (RDs) and 95% confidence intervals (CIs) for perinatal risk factors associated with neonatal resuscitation.

Results: Neonatal resuscitation was performed in 144,828 births (31.0%), most commonly involving suction or oxygen therapy. The rate declined from 51.3% in 2000 to 20.0% in 2015. Key maternal and obstetric contributors of increased risk (RD%, 95% CI) included nulliparity (6.9, 95% CI: 6.6–7.2), caesarean section (3.9, 95% CI: 3.5–4.2), pregnancy complications (3.2, 95% CI: 2.9–3.4), being unmarried (2.1, 95% CI: 1.8–2.6), smoking during pregnancy (2.0, 95% CI: 1.6–2.4), and maternal age 35–39 years (1.2, 95% CI: 0.8–1.5). Major fetal contributors included preterm birth (15.6, 95% CI: 15.1–16.2), low birth weight (12.7, 95% CI: 12.1–13.5), non-vertex presentation (9.4, 95% CI: 8.8–9.9), macrosomia (6.4, 95% CI: 6.0–6.8), post-term gestation (5.6, 95% CI: 3.6–7.4), and male sex (1.3, 95% CI: 1.0–1.5). Smaller effects were found for multiple births, lower socioeconomic status, and rurality.

Conclusions: Despite declines, neonatal resuscitation remains common. Findings underscore the importance of optimising antenatal and delivery care to reduce avoidable resuscitation and improve child health outcomes.

Pharmacist vaccination for Australian children and adolescents: lessons from policy and legislation

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Background: Pharmacist-administered vaccinations have improved access and coverage worldwide, including in Australia. However, a nationally consistent regulatory framework is still lacking. This review compares policies and legislation across Australian states and territories regarding pharmacist-delivered vaccinations for children and adolescents, identifying key areas for improvement.

Methods: Using three policy pillars from the Australian Scope of Practice Review, (1) legislation and regulation, (2) funding and payment policy, and (3) workforce design, development, and education, we reviewed policies, guidelines, and grey literature from pharmacy organisations, health departments, and immunisation programs (as at April 1, 2025).

Findings: Variation in policies exists across jurisdictions. Legislation and Regulation: South Australia permits pharmacists to vaccinate all age groups, while Queensland allows vaccination from age two for most vaccines, with no age restriction for influenza and COVID-19. Other states generally limit pharmacist-administered vaccinations to children aged five to 10 and above. Funding and Payment Policy: Although some vaccines are covered by the National Immunisation Program, state-funded programs differ, and families often face out-of-pocket costs for vaccine administration. Workforce design, development, education, and planning: While training requirements are nationally aligned, workforce planning and integration into public health efforts vary by region.

Conclusions: To ensure safe and equitable access, Australia needs a nationally harmonised framework for pharmacist-administered vaccinations, including consistent regulation, funding, and workforce strategies. These findings can also inform countries introducing pharmacist-led vaccination services, stressing the importance of collaboration between policymakers, healthcare providers, and pharmacy organisations.

Keywords: Pharmacist, child, adolescent, legislation, immunisation, policy, jurisdiction, Australia

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CAMHS concurrent session

A Delphi study to identify research priorities for an Australian Child and Adolescent Mental Health Service

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The Western Australian (WA) Child and Adolescent Mental Health Service (CAMHS) is currently under reform, presenting many unique and important opportunities for research. Identifying CAMHS research priorities is thus timely and ensures finite resources are channeled into projects which are aligned with the interests and needs of its key stakeholders. Accordingly, this study aimed to establish consensus on CAMHS research priorities across both those with a lived experience with, and mental health professionals working at, the service.

A modified Delphi method with two broad phases was employed. The CAMHS Research Steering Committee generated a list of broad research priority areas (phase one) which were subsequently rated by the two representative panels (CAMHS lived and professional experience) across two Delphi rounds (phase two). Consensus was reached on the following eight broad research priorities: Best Practice, Experiences of Care, Diagnosis and Identification, Evaluation and Implementation, Service Utilization, Innovation, Workforce, and Determinants and Modifiers.

This study shows that involving consumers, carers, and staff in research priority setting will inform a research agenda that is of direct relevance to health service users and staff.

The identified priorities and methods used provide an important precedent to support similar efforts in health services nationally and internationally.

Supporting the Mental Health of Justice-Involved Youth: A Qualitative Study

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Background: Young people in contact with the criminal justice system experience disproportionately high rates of mental illness, self-harm, and suicide compared to their non-justice-involved peers. After release from custody, they face barriers accessing mental health care in the community and often present to emergency departments for mental health-related concerns. Community-based service providers, who are more likely to engage with these young people, play a critical role in supporting mental wellbeing and facilitating access to care. This qualitative study explored service providers' perspectives on and experiences supporting the mental wellbeing of this population.

Methods: We interviewed over 20 service providers from a wide range of community, health, legal, and social services in Perth, Western Australia.

Findings: Supporting mental wellbeing was an inherent component of all services, whether directly or indirectly. Perceived enablers of mental wellbeing included strengths-focused, culturally appropriate, holistic, and person-centred supports. Participants emphasised the importance of building trust and highlighted the value of practical activities to foster positive self-concept and self-esteem (e.g., art, music, and exercise). Barriers included missed opportunities for early diagnosis, intervention, and diversion; limited information sharing across services and sectors to identify and address client needs; and entrenched social and structural determinants — such as housing instability — that fundamentally undermine mental wellbeing.

Discussion: Given the complex and cross-sectoral contributors to mental wellbeing experienced by justice-involved young people, supports must be similarly multi-faceted. Key takeaways include embedding strengths-focused mental wellbeing supports into services, enhancing capacity through adequate resourcing, and strengthening cross-sector collaboration to improve continuity of care.

Advancing treatments for youth with suicide ideation and depression

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Mental health conditions are a serious and growing concern in adolescent and youth populations, the most prominent of which are depression in females and suicidal ideation in males. Suicide ideation and depression in any gender are highly correlated. Current treatment options for youth are effective but do not help everyone, can take time to be effective, and may worsen the problem (i.e., first-line antidepressants may increase suicidal ideation in young patients).

This study aims to explore an emerging non-invasive brain stimulation treatment called repetitive Transcranial Magnetic Stimulation (rTMS) for treating suicide ideation in youth with depression.

The study further seeks to identify brain changes and genetic markers to better predict treatment resistance and response.

This will be a randomised, double-blind, sham-controlled trial in youth aged 15-25 years. An accelerated real or sham rTMS protocol (depending on group allocation) will be administered for 10 days with all participants receiving daily psychotherapeutic skill sessions. Participants will be followed-up for up to 12 months after treatment. Exploratory measures of the brain and rTMS-related brain changes will be collected with magnetic resonance imaging (MRI) and exploratory genetic measures will be collected using saliva samples for biomarker development.

This project could validate rTMS as an effective and fast-acting treatment option for to youth struggling with suicide ideation and depression.

Temporal Trends in Youth Mental Health: Insights and Predictions from 20 Years of CAMHS Service Data

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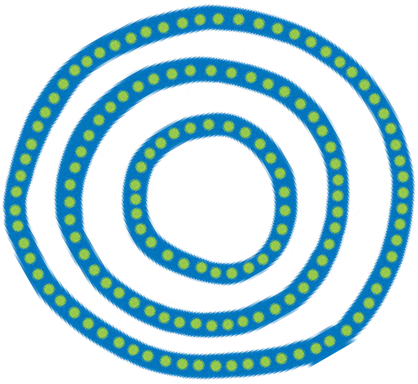
Mental health services must proactively anticipate future demand to ensure appropriate allocation of funding, resources, and workforce. Global anecdotal and epidemiological evidence indicates a rising prevalence of mental health disorders among children and young people over recent decades, which presents a critical consideration for future service planning. However, these trends are often slow to emerge, difficult to interpret in real time, and further obscured by external disruptions such as the COVID-19 pandemic. Traditional approaches, including retrospective evaluations and cross-sectional community surveys, can capture historical or contemporaneous needs but have limited predictive utility for long-term service planning.

The current study employs advanced time series modelling techniques to analyse two decades of routinely collected data from the WA Child and Adolescent Mental Health Services (CAMHS) system. We present an overview of ARIMA modelling for health care data, and a discussion of trends in mental health diagnoses at CAMHS between 2004 and 2024, and predicted trends from 2026-2044. The large-scale dataset, with consistent sampling intervals, enables robust time series analyses. These methods can adjust for secular, seasonal, and random fluctuations, thereby enhancing the accuracy of trend identification. Such models can both characterise historical trends and forecast future service demand in the short, medium, and long term. By providing a clearer understanding of past and emerging trends, the findings can inform proactive development of services, targeted funding allocation, workforce training, and early intervention strategies.



Validating the Eating Disorder Inventory-3 Perfectionism Subscale in Adolescents

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Background: Clinical perfectionism is a consistent maintaining factor for eating disorder symptoms. A common measure of clinical perfectionism (the perfectionism subscale of the Eating Disorders Inventory-3 [EDI-P]) demonstrates a pattern of findings that are incongruent with the broader literature, and thus an investigation into the reliability and construct validity of the measure is necessary.

Research question: Is the EDI-P a valid measure of clinical perfectionism in adolescents with eating disorders?

Methods: This study will adopt a cross-sectional, correlational design. Questionnaire data from 377 adolescents who attended an intake assessment at an eating disorders program will be used, including: the EDI-P, a child-adapted version of the Eating Disorder Examination (C-EDE), the Multidimensional Anxiety Scale for Children-2 (MASC-2), the Children's Depression Inventory-2 (CDI-2), the Compulsive Exercise Test (CET), Rosenberg's Self-Esteem Scale (RSES), and the Self-Compassion Scale Short Form (SCS-SF). Firstly, the construct validity of the EDI-P will be investigated by examining its association with converging and discriminating constructs, such as anxiety and self-compassion. Secondly, confirmatory factor analysis will be used to compare the relative fit of a one-factor and two-factor solution for the EDI-P. Thirdly, hierarchical regression will be used to determine the unique variance in eating disorder symptoms accounted for by the EDI-P.

Anticipated implications: Psychometric analysis of the EDI-P may clarify recent incongruent findings, having potential to inform future research and clinical practice. This may help guide researchers and clinicians in using clinical perfectionism measures that are appropriate for use with adolescents with eating disorders, improving research and treatment outcomes.

Multisystemic Therapy treatment outcomes 2006-2024: Learnings, Challenges and Strengths

Nuntavisit, Leartluk

Multisystemic Therapy program, Child and Adolescent Mental Health Services

Conduct disorder is a common mental and behavioural problem in children and adolescents and ranked in the top five of leading causes of disease burden within Australian children. Conduct disorder negatively affects well-being of both children and family members, who experience repercussions of the child's behaviours e.g. verbal and physical assault in their home, police involvement, legal sanctions and social exclusion. In the absence of effective intervention, conduct disorder predicts various adult mental illness, substance abuse, chronic unemployment, family and domestic violence, and incarceration.

Multisystemic Therapy (MST) is an intensive family and community-based treatment for families with adolescent exhibiting juvenile antisocial behaviours.

The MST intervention was implemented within the W.A. Department of Health in 2005 and since operated two small clinical teams within the Perth metropolitan area. This retrospective study reports on longitudinal data collected from 749 research participants engaged in the program between January 2006 to December 2024, which includes baseline, post-treatment and 6-month follow-up data.

This study is an evaluation of treatment outcomes of adolescents in 4 different cohorts categorised by year of engagement in the program as follows: 2006-2009, 2010-2014, 2015-2019 and 2020-2024. We explored the differences in the demographic and clinical profiles of each cohort which might reflect significant societal changes in the past 19 years (for example, rapid technological advances and COVID-19 pandemic), and influence on child mental health and well-being.

The finding highlights an importance of adaptability and sustainability of therapeutic interventions to help ensure relevance, effectiveness, and long-term impact, especially in dynamic environments.

Keywords: Conduct disorder, Juvenile antisocial behaviours, Multisystemic therapy,
Program Effectiveness

Cultural Safety in Mental Health Services for Aboriginal and Torres Strait Islander Young People

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The legacy of colonisation and ongoing discrimination have contributed to disproportionately high rates of mental health challenges among Aboriginal and Torres Strait Islander children and adolescents. Culturally safe care is increasingly recognised as essential to addressing these inequities and improving outcomes.

This presentation will discuss a research project in Boorloo (Perth, WA) that aims to explore how Aboriginal and Torres Strait Islander families experience cultural safety in mainstream child and adolescent mental health services, and their views on what is needed to achieve genuine cultural safety.

The project employed Aboriginal Participatory Action Research methods, including co-design and Indigenous governance. Data collection is nearing completion. Across three studies, focus groups and one-on-one yarns are being conducted with Aboriginal and Torres Strait Islander young people, carers, professionals, and cultural experts. Yarns are audio-recorded, transcribed verbatim, and will be analysed thematically.

Early findings demonstrate a consensus on the need to enhance cultural safety in mental health services. Key priorities include embedding Aboriginal staff at all levels and centring Aboriginal ways of knowing, being, and doing. The physical environment is often viewed as too clinical and would benefit from becoming more welcoming and culturally inclusive, for example, through Aboriginal artwork. Clinicians must understand colonisation-related trauma—such as grief, loss, and disconnection—and build trust through genuine, consistent engagement with families.

Key recommendations and practical implications will be presented, with a focus on actionable steps to strengthen cultural safety and improve services for Aboriginal and Torres Strait Islander families.

Co-designing and evaluating a short-stay youth suicide service: The Luminos Project

Panton, Kirsten[1,2], Aims Hansen[3], Sam Speirs[3], Jacinta Freeman[4], Zrinka Highfield[1,5], Kieran Marshall[5], Ellie Tighe[5], Laura Hemming[6], Bep Uink[7], Francis Mitrou[4,8], Vu Vuong[4], Ashleigh Lin[3]

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Suicide continues to be the leading cause of death for young people (15-24 years) in Western Australia (WA). To support this continuous need, innovative ways of working with suicide were needed. The Luminos Project is a pilot service targeting youth suicide in WA, that was modelled from the Maytree model in the United Kingdom.

The Luminos Project was co-designed by young people (n = 26), parents/carers (n = 11) and stakeholders (n = 26), through semi-structured interviews and focus groups. This data informed the development of The Luminos Project model of care, which has 4 pillars: Pillar 1: Safe, inclusive, home-like environment; Pillar 2: Emotional support; Pillar 3: Suicide intervention and management, and Pillar 4: Skill building. The Luminos Project is a 4-night, 5-day service for 16–24-year-olds who are experiencing thoughts of suicide. It opened in November 2023, and an interim evaluation has been completed on the qualitative and quantitative data collected. Data is collected at baseline (day 1 of their stay), 1-week post-stay, 3-months post-stay, and 6-months post-stay.

The interim evaluation revealed that while some young people still experienced thoughts of suicide, it was often less frequent, intense and more manageable. Young people indicated that they found the staff to be relatable, empathetic, respectful and promoting safety. Overall, young people are finding this pilot service beneficial, suggesting that this model of care could be used as a proof of concept that can be replicated in other populations and regions.

CAMHS keynote presentation

Crisis Care for Young People: An International Comparison of Two Innovative Service Models

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This study explored and compared two innovative mental health crisis response services for young people: the Crisis Connect Clinic (CCC) in Western Australia and 111 Press 2 (111) in Wales. Both services were launched in response to government reviews, with a shared goal—reducing emergency department (ED) presentations by offering 24/7 access to mental health advice, assessment, brief intervention, and referrals. While they were built on similar principles, their models differ: CCC operates as a multidisciplinary service for under 18s embedded within a hospital ED, while 111 Press 2 functioned as a national phone line, covering all ages, with calls triaged to local services.

This research collaboration offers a unique international comparison of crisis models using shared outcome metrics. It addresses key questions of service efficacy, cross-regional applicability, and specific service components not shared by the two service models enhance impact. The findings will inform evidence-based best practices and contribute to the ongoing refinement of mental health crisis services globally, with a focus on achieving efficient, equitable, and effective care. Identification of similarities and differences in the design, implementation and outcomes of the two services provides important evidence of "what works best for whom", supporting flexible and personalise service design and delivery. This work contributes directly to refining models of care and building more responsive, effective, and adaptable mental health systems.

Wednesday abstracts 5 November

Early-career researcher presentations

Lines That Matter: Assessing Hypothermia and Hypoglycaemia During Preterm Venous Access

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Aim: Hypothermia and hypoglycaemia in the first hours of life is a significant risk factor for preterm infant morbidity and mortality. The aim of this study was to determine whether the mode of primary venous access, via umbilical catheterisation (UC) or peripheral intravenous catheter (PIVC), affects incidence and degree of hypothermia and hypoglycaemia in the first hours of life amongst extremely premature neonates.

Methods: A retrospective audit of infants born <27 weeks' gestation admitted to tertiary neonatal intensive care unit from 2022 to 2024. The primary outcome was incidence of hypothermia defined as skin temperature <36.5° and incidence of hypoglycaemia <2.6mmol/L during or after the UC or PIVC procedure. Secondary outcomes were rates of severe hypothermia (<36°), severe hypoglycaemia (<1.5mmol/L), intraventricular haemorrhage (IVH), and time to first intravenous access.

Results: 127 infants were included, 73 received primary PIVC and 54 received UC. The rate of hypothermia at 2 hours of life was 59% in the UC group compared to 23% in the PIVC (p = 0.0001) group, despite both groups starting at similar median admission temperature. There was no significant difference in rate of hypoglycaemia, irrespective of severity. Time to first intravenous access was significantly longer in the UC group (median (IQR) 70min (28), vs 51min (16.5) p = <0.00001)

Conclusion: Umbilical catheterisation is associated with significantly higher rates of hypothermia, but not hypoglycaemia. Future prospective QI projects are already underway (Tiny Baby audit GEKO 52396) to reduce hypothermia for infants requiring UC procedures.

'What Matters to You' – exploring family priorities in accessing Child Development Services

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Introduction: The What Matters to You study was a national research project undertaken across multiple child development services (CDS). This project explored what families want in accessing CDS using qualitative methodology, speaking to the families who access our services and clinicians who work within them.

Methods: Phases 1&2: Families with children under 6 years of age with more than one area of developmental concern were recruited from each participating CDS for participation in online focus groups. Thematic analysis of transcribed focus groups was undertaken.

Phase 3: All clinicians who identified as practicing developmental medicine in Australia were invited to participate in a Delphi survey, reaching consensus around 'what families want' in accessing CDS.

Phase 4: The key themes from families and clinicians were combined as draft outcome measures and represented to the participants of focus groups for validation and consensus.

Results: Thematic analysis of phases 1 and 2 identified key themes important to families, which included pragmatic and service outcomes, child wellbeing, empowerment of families and emotional support of parents. All clinician identified outcomes were identified as important by families, but clinicians did not identify several themes nominated by families.

Discussion: The aim of the project is to create a series of family reported outcome measures by which we can benchmark CDS service provision against nationally. There is a current paucity of research specifically discussing children with developmental delay and patient/family reported outcome measures. This will likely impact on service delivery for CDS across the country.

Consumer research priorities for neonates with surgical conditions (FROG Study)

Cahill, Mia[1,2,3]; Thomas, Rebecca[4]; Heath, Chloe[1,2,5]; Sommerfield, David[1,2,5]; Hauser, Neil[1,2,5]; Taverner, Fiona[6,7]; Sommerfield, Aine[1,2,5]; Frank, Belinda[2]; von Ungern-Sternberg, Britta S[1,2,5]

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Neonatal intensive care units (NICUs) are commonly associated with the care of premature infants, yet a distinct subset of NICU patients are term or near-term neonates with conditions requiring major surgery within the first days of life. There has already been considerable research conducted into the management and outcomes of premature neonates; however, surgical neonates remain an understudied population. Surgical neonates and their clinical trajectories involve unique challenges and risks, and their care needs differ substantially from those of non-surgical neonates. While improvements in perioperative care have led to better survival rates, limited research has focused on preoperative and postoperative care, pain management, and long-term outcomes in this vulnerable group.

The "Focused Research priorities to improve Outcomes and Guide care for neonates with surgical conditions" (FROG) study aims to address this gap by identifying consumer-driven research priorities in neonatal surgical care. Using the James Lind Alliance (JLA) methodology, the study engages patients, parents, caregivers, and clinicians in a structured process involving surveys and workshops to generate and rank the most important research priorities for this population. The goal is to establish a consensus-driven research agenda that reflects the real-world needs of families and supports more targeted, patient-centred research.

Findings will inform future research directions, helping to align healthcare innovations with the lived experiences of those most impacted. By incorporating consumer voices into the research process, this study seeks to bridge the gap between clinical priorities and family needs, ultimately improving care quality and long-term outcomes for neonates undergoing surgery.

In their own words: advice from parents of children with cancer

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Background: Approximately 770 children are diagnosed with cancer in Australia every year. Research has explored their experiences and developed recommendations for improving outcomes for families including provision of psychology services and improved communication between healthcare professionals and parents.

Methodology: In this qualitative study, 44 participants (21 fathers and 23 mothers), with ages ranging from 28-51 years (M 37 years, SD 5.6 years) were interviewed. Parents were asked "*What advice would give to parents whose child has just been diagnosed with cancer that you wish you had known when your child started treatment?*" to explore their suggestions to help others.

Findings: Thematic analysis of the data generated seven themes. Take it second by second; Find some normality; Take care of yourself; You need to talk to someone; Just take all the help; Speaking up for your child; and Take care of the siblings.

Conclusion: The results of our study provide firsthand advice from parents. The overwhelming theme that emerged is that while many parents revealed that they had not asked for or received support, in hindsight they unanimously reflected that they wished they had sought out services. The strength of this study is that parents are more likely to accept the advice of other parents with a shared lived experience. The results of our study can be used to develop resources that could be provided to parents. These resources would emphasize that the recommendations come from parents who have traveled the same path and have learnt from hindsight and experience.

The Impact of Nirsevimab on Infants within the South West of WA

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Background: In 2024, Western Australia (WA) introduced infant RSV immunisation with nirsevimab. Its effect had not yet been studied in a regional WA setting.

Aims and Methods: We conducted a retrospective study to assess the impact of the WA RSV Infant Immunisation Program in the South West region. We compared the epidemiology and disease burden of RSV-related hospitalisations in children under six years of age across the 2023 and 2024 RSV seasons. Demographic, clinical, and immunisation data were analysed, with comparisons made across all children under six and a subgroup of 2024 nirsevimab-eligible infants matched to a 2023 cohort.

Results: RSV notifications in children under five increased by 45% from 2023 to 2024. Despite this, RSV-related hospital admissions in children under six decreased by 21%, with a 67% drop in nirsevimab-eligible infants. Admissions requiring high-flow oxygen or non-invasive ventilation decreased by 64% overall and by 80% in the nirsevimab-eligible group. There were no tertiary transfers for respiratory support in 2024 compared with seven in 2023. Median age at admission increased in 2024, while length of stay remained similar for most, except for longer stays in non-eligible children. Total admission days fell by 76% in the nirsevimab-eligible group and doubled in non-eligible children. Nirsevimab was estimated to be 77% effective in preventing RSV-related admissions, avoiding 236 hospital days and at least $680,000 in costs.

Conclusion: Nirsevimab was highly effective in reducing RSV-related hospitalisations in infants in the South West of WA.

Feasibility of indirect calorimetry in invasively ventilated paediatric patients

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Background: Optimal nutrition provision is crucial for critically ill children in paediatric intensive care units (PICUs), particularly for those who are invasively ventilated. Predictive equations used to determine energy targets are vastly inaccurate due to heterogeneity of critical illness, therefore Indirect Calorimetry (IC) is recommended to establish nutrition targets in PICUs. However, no studies have been published detailing the feasibility of current IC devices in invasively ventilated paediatric patients. We aimed to determine the feasibility of using IC to inform energy targets in invasively ventilated patients and define limiting factors.

Methods: A single-centre prospective observational cohort study was conducted from May 2023-April 2024 (RGS6582) at Perth Children's Hospital. All invasively ventilated children (0-18y) in PICU were screened daily until extubation, to determine proportion of patients meeting technical and stability criteria for IC.

Results: 129 participants (age 0-15.7y, 51%male) were screened for IC eligibility a median 2-times [IQR1-3]. Forty-seven (36%) participants met criteria for IC on at least one day. Of the 82 ineligible participants, 58 (45%) were due to body weight <10kg, of which 19 (15%) had an additional reason for ineligibility. Cuff leak was the next most common exclusion; however, it was the exclusive reason for IC ineligibility in only 4 (3%) participants. Time to screen was 2-minutes [IQR1-3], and for IC was 20-minutes [IQR:18-22].

Conclusion: Preliminary results suggest that body weight <10kg is the most common limiting factor for IC. Improved IC software accommodating body weights <10kg would increase IC utility from 36% to 67%, thereby improving feasibility.

Data-driven reassessment of low milk supply in breastfeeding mothers

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Background: Low milk supply (LMS) impacts infant health and may be defined by an arbitrary 24-hour milk production (MP) threshold of <600 mL. However, this approach overlooks variability in infant milk needs and growth patterns, limiting its clinical applicability. This study aimed to identify LMS subtypes and re-evaluate the definition of LMS using data-driven approaches.

Methods: In this retrospective cross-sectional study, lactating mothers 4–26 weeks postpartum (n=460) completed demographic questionnaires and measured 24-hour MP and infant milk intake using the test-weighing method. Infant growth was indicated by their weight outcomes. Latent Profile Analysis (LPA) and Receiver Operating Characteristic (ROC) curve analysis were used for classification and diagnostic evaluation.

Results: Four distinct milk supply classes were identified: class 1 with adequate MP, infant intake and growth (n=254); class 2 with high MP exceeding infant demand and adequate growth (n=30); class 3 with poor infant growth despite moderate MP (n=120); and class 4 with extremely low MP and high formula intake (n=56). Classes 1 and 2 were grouped as the normal milk supply (NMS) group, while classes 3 and 4 formed the LMS group. Among all feeding and infant growth indicators, 24-hour MP had the highest diagnostic accuracy for LMS (AUC: 0.920; Accuracy: 0.828; Youden's Index: 0.666), with an optimal cutoff of 708 mL/24h.

Conclusions: This data-driven classification of LMS incorporates both maternal MP and infant growth, providing a more nuanced framework than MP alone. These findings suggest that previously proposed LMS thresholds may underestimate actual clinical lactation insufficiency.

Comprehensive eye growth charts to assess myopia across continents

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Purpose: Myopia (short-sightedness) is becoming increasingly common world-wide. Excessive axial eye growth typically underlies myopia and current management strategies focus on inhibiting eye growth. This creates the need for reference eye growth curves. This study aimed to generate definitive region- and sex-specific reference eye growth charts leveraging the international CREAM-kids consortium.

Methods: After exclusions, 559,938 axial length measurements from 147,573 children were included in the analysis. Most participants were from East Asia (84%, aged 6–18 years), followed by Europe (12%, aged 6–21 years) and Australia (4%, ages 6–21 years). European and Australian cohorts were combined due to highly comparable axial length distributions. Centile curves were created for each region and sex using multi-Gaussian models, with centile curves fitted using weighted cubic splines.

Results: Males had longer axial lengths than females by approximately 0.5mm across all reported centiles. Axial length distributions differed by region: among females, median axial length in European/Australian vs East Asian cohorts was 22.35mm vs 22.67mm, respectively, at age 7 years and 23.31mm vs 24.36mm, respectively, at age 18 years. Regional differences in axial length were larger at higher compared to lower centiles. Modelled centiles showed excellent agreement with empirical values (Pearson r=0.99), with minimal bias (e.g., ±0.02mm in European/Australia females, −0.05mm in East Asian females).

Conclusions: These centile charts provide region- and sex-specific references for axial length. They reveal important regional and sex differences in eye growth, and offer a valuable tool for identifying excessive elongation and supporting targeted myopia prevention and management.

Grief Support Needs and Intervention Preferences in Bereaved Young Adults

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While bereavement is common among young adults (YA) aged 18 to 25—with over 75% experiencing a significant loss by age 18— there are limited resources and services suited to support YA with grief and the unique challenges of emerging adulthood. To inform ways to reduce the negative long-term health, social, and economic impacts of bereavement, support wellbeing, and improve care for bereaved YA, we co-designed this study with a group of Stakeholder Advisory Representatives (STARS), made up of three stakeholder groups: four bereaved YA; one family member of a bereaved YA; and two grief professionals who work with YA. We investigated bereaved YA grief-related support needs and intervention preferences.

Fifteen participants (19-26 years, M= 22.07 years), who had been bereaved by an important person since the age of 16 years, completed an online survey about their grief experience, their unmet support needs, their experiences with and perceptions of support services, and their intervention preferences by responding to rating scales and open-ended survey questions.

Participants indicated that they are more likely to seek individual (1:1) support over group formats and prefer face-to-face services and online resources rather than telephone or online chat support services. Preliminary findings in a collaborative reflexive content analysis (in progress) highlight the importance of: Practical Help, Lived Experience/ Peer Support, Support Designed for Young Adults, Availability and Accessibility, and Resources for Family/ Friends of Young Adults.

These findings have the potential to improve care to better support and meet the unique needs of bereaved young adults.

A propensity-score matched analysis to compare two airway management techniques

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Approximately 15% of children undergoing general anaesthesia experience a perioperative respiratory adverse event. The highest risk is associated with the emergence and extubation periods of anaesthesia. During anaesthesia, endotracheal tubes (ETT) are routinely used in children and are either removed awake or deep. Both techniques have their advantages and disadvantages. Deep extubation is linked to lower rates of bronchospasm and laryngospasm but higher rates of airway obstruction compared with awake extubation. An alternative technique is to exchange the ETT for a softer laryngeal mask airway (LMA) while the patient is deeply anaesthetised, followed by awake removal of the LMA. This aims to reduce the risk of airway obstruction associated with deep removal and other complications linked to awake removal of the more invasive ETT.

Data collected from patients (n=1533) undergoing general anaesthesia at PCH in 2024 was analysed using propensity-score matching to assess whether there was a reduction in postoperative respiratory adverse events in patients who had an ETT removed awake compared to patients with an ETT exchanged to an LMA before awake removal. Missing values were multiply imputed and the m=100 dataset was matched in a 1:1 ratio. Adverse events occurred in 40 (11.8%) of 341 matched patients without an exchange, compared to 32 (9.5%) of 341 matched patients with an LMA exchange. Although not statistically significant, further investigation is warranted into whether there is a benefit to the low-cost intervention of ETT exchange which also has the potential to improve theatre flow and reduce costly theatre times.

Ear Portal: Using asynchronous tele-audiology to improve access to Ear, Nose and Throat services for children with otitis media in an urban area

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Background: Diagnostic assessments and treatment for chronic otitis media (OM) often requires tertiary Audiology and Ear, Nose and Throat (ENT) consultation. In Australia, the mean waiting time for non-urgent ENT outpatient appointments has been reported to be up to 1500 days.

Objectives: The project aims to assess the potential benefits of tele-audiology in reducing extensive waiting periods for children living in urban areas, while mitigating the adverse effects of delayed OM treatment as well as an increased financial burden on the healthcare system.

Methods: The Ear Portal project recruited children living in the urban area of Perth. Eligible children were invited to a face-to-face consultation by a researcher, who collected medical history and conducted ear and hearing assessments. The appointment results were reviewed by the Ear Portal multidisciplinary team (MDT) to make a diagnosis and provide a care plan for each patient.

Results: 250 children were enrolled in the Ear Portal and had a short waiting time (28 days (IQR = 19.8)) than children in the control group (450 days (SD = 211.4)). Parent reported language, communication and behavioural outcomes were significantly better for children that encountered shorter waiting times, than children with high waiting times.

Conclusion: The Ear Portal project successfully reduced waiting times for audiology and ENT consultations, improving language, behavioural, and quality-of-life outcomes for children with chronic OM. This model can serve as an additional service run by audiologists, providing a cost-effective solution in urban healthcare settings and reducing the burden on both patients and providers.

PhD Lightning presentations

Prognostic Biomarkers for Childhood Dementia

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Aim: This longitudinal study will establish a childhood dementia (CD) cohort with blood sampling at baseline and 12 months to identify protein and gene biomarkers of neurological decline using advanced omics technologies. Integrative analysis will create a signature predictive of neurodegeneration and reveal shared disease pathways across different CD types. Simultaneously, the study will test autophagy-targeting therapies in patient-derived neuronal models to evaluate their therapeutic potential across multiple CD disorders.

Methods: Individuals with LSD-associated CD are recruited into the WA CD cohort (RGS5097), with blood samples (baseline and 12 months) and skin biopsies collected for biomarker analysis and iPSC generation. Proteomic and transcriptomic analyses identify neurodegeneration biomarkers through correlation with clinical data. Patient-derived iPSCs, particularly from Sanfilippo B and C cases, are differentiated into neurons and treated with novel autophagy-modulating small molecules. Therapeutic efficacy is evaluated via autophagy-lysosomal pathway activity to identify shared treatment targets across CD types.

Preliminary Results: Baseline sample collection has been completed for the cohort (RGS5097) comprising 15 participants with genetically confirmed LSDs across eight distinct phenotypes: mucopolysaccharidosis types I-IV (n=7), neuronal ceroid lipofuscinoses (n=2), Cockayne syndrome (n=1), neurodegeneration with brain iron accumulation (n=1), gangliosidosis (n=1), Niemann-Pick disease (n=1), and X-linked adrenoleukodystrophy (n=2). Analysis of protein, gene, and diagnostic biomarkers is underway.

Conclusion: This study delivers key advances: establishing WA's first CD RNA library, identifying novel prognostic blood biomarkers for paediatric neurodegeneration, validating autophagy-targeting therapeutics in patient neurons, revealing shared disease mechanisms across CD types, and developing clinical biomarkers for disease monitoring and treatment assessment.

Lung clearance index is more sensitive than spirometry in paediatric bronchiectasis

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Introduction: Lung clearance index (LCI), measured via multiple breath washout (MBW), is a sensitive and easy-to-perform measure of small airway disease. We aimed to evaluate whether LCI detects lung function impairment in children with bronchiectasis and explore its relationship with aetiology and spirometry.

Methods: We prospectively performed MBW and spirometry on children and adolescents with bronchiectasis (n=41; 113 visits; 10.16 ± 3.86 years; 54% male) and healthy controls (n=50; 87 visits; 8.77 ± 4.17 years; 44% male) as part of the BRIGHT longitudinal cohort study. Lung function data were collected according to international guidelines and presented as global lung function initiative z-scores. Data are presented as mean ± standard deviation.

Results: LCI was significantly elevated (worse) in children with bronchiectasis (2.26 ± 2.35 z-scores) compared with healthy controls (0.25 ± 0.67 z-scores; t-test: $p<0.001$). At stable baseline visits, 47% (15/32) of children with bronchiectasis had an abnormal LCI (>1.64 z-scores) compared to 25% (7/28) with abnormal spirometry (<-1.64 z-scores). LCI z-scores positively correlated with age in children with bronchiectasis (Pearson coefficient: 0.29, $p=0.02$) but not in healthy controls (0.05, $p=0.64$). LCI z-scores correlated with FEV1 z-scores in children with bronchiectasis (Pearson coefficient: -0.55, $p<0.0001$). More than a third of children with bronchiectasis had an abnormal LCI but normal FEV1 values (11/28: 39%).

Conclusion: LCI is more sensitive than FEV1 to detect lung function impairment in children and adolescents with bronchiectasis. These findings support further research to assess the utility of LCI for clinical monitoring and as an outcome measure for clinical trials.

Grant Support: NHMRC GTN2016566 Ramsey. CB is supported by the Future Health Research and Innovation (FHRI) Fund Clinician Research Training (CRT) Scholarship and the Athelstan Saw Top Up Scholarship. AS is supported by a MRFF Investigator Grant 1193796.

Applying adult spirometry phenotypes to very preterm children?

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Prematurity associated lung disease (PALD) is heterogenous and complex. Phenotypes of PALD in children have been proposed: POLD- prematurity associated obstructive lung disease (reversible or fixed: FEV1 and FEV1/FVC<LLN), pPRISm- prematurity associated preserved ratio of impaired spirometry (FEV1<LLN and FEV1/FVC ≥LLN), pDysanapsis-dysanapsis of prematurity (FEV1≥LLN and FEV1/FVC<LLN) and normal spirometry (Cousins *et.al.* Thorax, 2023).

We applied these classifications to a longitudinal Western Australian cohort born very preterm (<32 weeks gestation) between 1997-2003.

Spirometry and respiratory questionnaires were completed at early childhood (4-8 years), mid-childhood (9-12 years) and adolescence (16-23 years). The spirometry classifications were applied to participants at each time point.

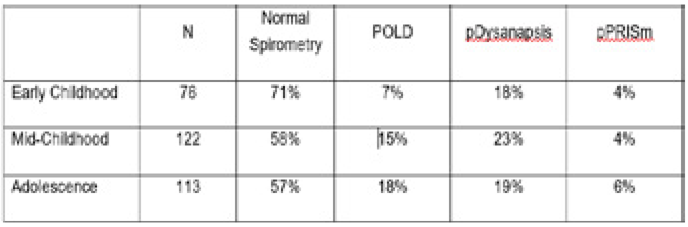
200 very preterm participants completed 311 acceptable spirometry measurements; the majority were classified as normal (Table 1).

Of those with normal spirometry, respiratory symptoms were reported in 44%(24/54) at early childhood, 46%(33/71) at mid-childhood and 56%(36/64) at adolescence. In those classified with PALD phenotypes, respiratory symptoms were reported in 28%(6/22) at early childhood, 54%(28/51) at mid-childhood and 55%(27/49) at adolescence.

Of those with ≥2 measurements(N=102), 37% changed phenotypes; 60%(23/38) started as normal, with 11 at the borderline, having a FEV1 or FEV1/FVC z-score in the 10th percentile LLN (<-1.28 z-scores).

The burden of respiratory symptoms in children with normal spirometry and the phenotype instability, suggests relying on spirometry alone may misclassify a large proportion of PALD.

Table 1. Phenotype classifications



	N	Normal Spirometry	POLD	pDysanapsis	pPRISm
Early Childhood	76	71%	7%	18%	4%
Mid-Childhood	122	58%	15%	23%	4%
Adolescence	113	57%	18%	19%	6%

Diet at birth is critical for skin ILC3 ontogeny

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Background: Skin innate lymphoid cells (ILCs) are critical for barrier repair and skin microbial homeostasis. Post birth, there is a wave of ILC infiltrating the skin. Tissue-resident ILCs are foundational to early-life immunity and contribute to long-term tissue integrity. However, what controls the expansion and function of skin resident ILC populations is currently unknown. Colostrum, the milk secreted by the mother during the first 3 days post birth, is highly enriched in bioactive compounds including growth factors, microbiota-shaping molecules and vitamin A, suggesting it may influence skin immune development.

Aim: This study investigates the role of colostrum in skin immune system development, focusing on ILC ontogeny.

Methods: We used histology to compare skin ILC ontogeny in colostrum-deprived mice (nursed by dams at an advanced lactation stage and no longer providing colostrum) to control mice (nursed by dams providing colostrum followed by mature milk). Immune cell infiltration into the skin was also analysed using multiparametric flow cytometry.

Results: Data indicate that, at 2 weeks of age, colostrum-deprived mice exhibit macroscopic skin abnormalities including dry scaly/flaky skin and delayed hair growth as well as reduced ILC and ILC3 populations compared to controls.

Conclusion: This study is the first to establish a causal role for colostrum in the development of skin ILC3 ontogeny, suggesting it may influence skin microbiota colonisation and the risk of skin inflammatory disease including allergy and psoriasis.

Validating the HLS-Child-Q15-EN child health literacy scale in English

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Health literacy is a key determinant of health, empowering children to participate in decisions about their own health. Assessing health literacy is important in both clinical practice and research. The HLS-Child-Q15 is a relatively short questionnaire for assessing health literacy in children; however, it has not yet been validated in English. We set out to translate and validate this tool in English, to make it accessible to a large population of English-speaking children.

We translated the HLS-Child-Q15 into English following established methods, including forward and backward translation using multiple translators. We incorporated clinician and consumer input into the translation process. We conducted a qualitative pre-test to assess comprehension and a validation to assess psychometric properties and test-retest reliability. We recruited English-speaking children aged 8 to 15 years.

The process yielded an acceptable translation. A qualitative pre-test conducted with 10 children demonstrated good comprehension of questionnaire items and resulted in small changes to increase item clarity. Validation with 207 participants demonstrated that questionnaire output score increased with age, school year, self-efficacy score, parental educational level, and home literacy environment score. Cronbach's alpha coefficient of 0.854 (95% CI 0.812-0.887) confirmed internal consistency. An intraclass correlation coefficient of 0.612 (95% CI 0.402-0.761) confirmed test-retest reliability.

The translated HLS-Child-Q15 was well understood by children. Validation of the translated questionnaire demonstrated adequate psychometric properties, consistent with the original German questionnaire. The newly translated HLS-Child-Q15 is suitable for use with English-speaking children.

Identifying novel treatments for paediatric T-cell acute lymphoblastic leukaemia

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Acute lymphoblastic leukaemia (ALL) is a cancer characterised by the overproduction of immature white blood cells and represents the most common form of childhood cancer in Australia. T-cell acute lymphoblastic leukaemia (T-ALL) is an aggressive subtype of ALL and accounts for 15% of paediatric and 25% of adult ALL cases. The current standard of care involves multi-agent high-dose chemotherapy, however, chemotherapeutic intensity has been raised to the limit of tolerance with a high rate of treatment-related toxicity and adverse events. Although the introduction of risk-stratified therapy has substantially improved cure rates and the overall survival for children with T-ALL is approximately 80%, the prognosis of patients with refractory or relapsed T-ALL is dismal and these children often die of disease. Therefore, further improvements in outcome and a reduction of adverse effects will require novel therapeutic approaches, which my project will fundamentally seek to address. A comprehensive review of preclinical childhood T-ALL studies has been performed to identify which drugs are the most promising to study. An extensive panel of unique patient-derived cell lines have been characterised and mouse models of childhood T-ALL established, using samples obtained from patients treated at Perth Children's Hospital. An unbiased, large-scale drug screen has been carried out using the cell lines and the best candidate novel agents will be further investigated in the mouse models. Ultimately, this project will provide a foundation for further preclinical and clinical studies to identify novel, safe and more effective treatments for childhood T-ALL.

Investigating Commensal-Dependent Antibiotic Resistance in Strep A

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Research Topic and Objectives: Previous studies have suggested that current phenotypic in vitro antibiotic susceptibility tests produce misleading results because there is growing evidence bacteria utilise factors of the host environment to bypass antibiotic action. In this study we have investigated the ability of oropharyngeal commensal bacteria (natural residents of the host environment) to rescue Streptococcus pyogenes from clinically relevant antibiotics.

Methods: Epsilometer tests (Etest), antibiotic broth microdilution assays and checkerboard assays supplemented with host factors (e.g. metabolites and commensal supernatant) were used to identify phenotypic changes in antibiotic susceptibility. A modified Etest utilising a commensal underlay culture was developed to investigate commensal-pathogen cross-protection.

Results: Supplementation of growth media with commensal supernatant did have considerable effects on antibiotic susceptibly profiles. S. pyogenes isolates that appeared susceptible to penicillin on standard antibiotic susceptibility test media (Mueller Hinton Agar) became resistant when the same media included enzymes/metabolites secreted by oropharyngeal commensals.

Significance: This study has identified commensal strains can affect antibiotic susceptibility of an important pathogen and may explain why S. pyogenes infections relapse. Future work will help to develop in vitro antibiotic susceptibility tests that can account for host factors and therefore prevent antibiotic treatment failure.

Monocyte and Dendritic Cell Development in Preterm Neonates: Clues to Sepsis Risk

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Preterm infants are susceptible to late-onset sepsis (LOS), a major cause of morbidity and mortality in neonatal care. As key regulators of early immune responses, dendritic cells (DCs) and monocytes play a critical role in shaping host defence. While preterm immune development follows a distinct trajectory, the impact of LOS on myeloid cell composition and function—particularly cytokine responses to microbial stimuli like lipopolysaccharide (LPS)—remains poorly understood.

We longitudinally profiled innate immune cells and LPS-stimulated cytokine responses in 129 very preterm infants (<30 weeks gestation) from birth to day 28, stratified by LOS status. Monocyte and dendritic cell subsets were assessed by flow cytometry, and cytokines were quantified using multiplex cytokine assays. Results were compared with 20 term infants and 20 healthy adults to evaluate developmental and LOS-related immune differences.

While monocyte frequencies did not differ between preterm infants with and without LOS, functional differences emerged early. LOS infants showed increased CD64 and CD16 expression and reduced CD86 on monocyte subsets from day 7 onward. Proportion of plasmacytoid DCs were significantly lower in LOS infants from day 7 to 28. Following LPS stimulation, LOS infants exhibited reduced IL-10 and IL-6 production, with altered cytokine ratios (IL-10/TNF-α, IP-10/IL-6) and decreased pro-inflammatory chemokines (IL-8, MIP-1α).

This study demonstrates that late-onset sepsis disrupts innate immune development in preterm infants, characterized by reduced plasmacytoid DCs and impaired cytokine responses. Novel cytokine ratios may serve as early biomarkers for immune dysfunction, offering potential targets for risk stratification and intervention.

Introducing PELICAN: A new resource for understanding lung function after preterm birth

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Background: Existing studies suggest infants born preterm (before 37 weeks' gestation) are vulnerable to lung disease, which may progress over their lifespan. However, small sample sizes and high heterogeneity in individual studies have limited a thorough understanding of lung function trajectories, and the factors associated with both resilient and adverse trajectories.

We aimed to establish the world's first harmonised global repository for lung health data from cohorts of survivors of preterm birth to generate greater statistical power and enable use of robust methods, expediting our understanding of lung health trajectories after preterm birth.

Methods: PELICAN (Prematurity's Effect on the Lungs In Children and Adults Network) is a global network led from Perth and formed in 2020, with a project to bring together data from multiple cohort studies. Datasets were identified following three systematic literature searches. A consensus-based variable selection and data harmonisation exercise was undertaken to determine data for inclusion. A secure, online data collection portal hosted by The Kids Research Institute Australia opened for contributions in 2022.

Results: As of June 2025, the PELICAN repository contains data from 15 cohort studies representing 11 countries and 2754 survivors of preterm birth (gestation range 22-37 weeks), including 1115 with bronchopulmonary dysplasia. The PELICAN dataset has a mean (range) number of follow up visits of 1.9 (1-6).

Conclusions: PELICAN presents a unique opportunity to fill key evidence gaps in the long-term respiratory outcomes of survivors of preterm birth, essential for guiding follow-up and early intervention for those at risk of poorer outcomes.

Prenatal ambient heat exposure and the developing brain: A scoping review

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Background: Ambient heat exposure during pregnancy is associated with adverse outcomes, and adverse neurodevelopmental outcomes are an emerging concern. This scoping review synthesises human and animal evidence on the association between prenatal ambient heat exposure and poor neurodevelopmental outcomes.

Methods: On September 18, 2024, a search was conducted across MEDLINE, Global Health, Web of Science, PsycINFO, and CINAHL. Studies examining prenatal ambient heat exposure and neurodevelopmental outcomes such as congenital malformations and mental health conditions were included. Two reviewers independently screened and extracted in duplicate using Covidence. Studies were categorised based on short-term or long-term outcomes.

Results: The search yielded 8,189 studies, with 58 meeting the inclusion criteria (17 human, 41 animal). Animal evidence was primarily based on rodents (n = 32) exposed to extreme heat that caused hyperthermia. Human studies were methodologically diverse, yielding inconsistent results. There was robust evidence to suggest an increased risk of central nervous system (CNS) malformations and a reduction in brain weight in animal studies. However, evidence from the small number of human studies was inconclusive. For long-term outcomes, such as mental health (n = 11), both human and animal studies were limited but generally reported adverse outcomes.

Conclusion: Overall, the evidence suggests a potential link between prenatal heat exposure, CNS malformations and altered brain size in animal models; however, the implications for humans remain uncertain. Human studies were scarce and inconsistent in their approaches. Future animal studies should employ realistic heat exposures to improve human applicability, and human studies should utilise consistent measures.

RCT of pre-procedural chewables in children fasting before surgery.

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Background: Pre-operative fasting reduces the volume of stomach contents, reducing pulmonary aspiration risk. Fasting can be stressful for young children leading to more irritability, more hypotension on induction and evidence of a catabolic state. Previous adult studies used carbohydrate-rich drinks to help with fasting.

Methods: A single-centre, open-label, clinical trial to evaluate efficacy and acceptability in children of pre-procedural carbohydrate-based chewables for use in pre-procedural fasting.

Phase one involved patients scheduled for an upper gastrointestinal endoscopy who were offered 20 pre-procedural chewables up to one hour prior to surgery to ensure no residue was seen 1hr after consuming. In phase two, 300 children undergoing elective, day-stay surgical procedures were randomised to receive either the pre-procedural chewables, DEXTM (fasting carbohydrate drink) or standard clinical care (no fasting intervention). Children's behaviour, anxiety and acceptance and consumption of the randomised intervention (if applicable) were assessed pre-operatively. Blood glucose and ketone levels were measured following anaesthesia induction. Post-operatively delirium and post-operative nausea and vomiting were assessed. A short survey asking participants about the ease of fasting, and whether the intervention helped.

Results:

Phase 1: no adverse events and no visible chewables in 23 recruited patients at gastric endoscopy. Parents and children thought the chewables helped with fasting tolerance.

Phase 2: 300 children were successfully recruited. 72% of children in the chewables group thought they helped compared to 46% for DEX. Similarly, 75% of parents thought the chewables helped with their child's fasting compared to 55% in the DEX group.

Maternal depressive disorder and educational outcomes in children: A registry-based cohort study

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Background: Previous studies examining the association between maternal depression and offspring academic outcomes have reported mixed findings, often relying on assessments conducted at a single point in time. This study aimed to examine the association across multiple stages of schooling to provide a more comprehensive understanding of its impact over time.

Methods: Data were obtained from the New South Wales (NSW) Perinatal Data Collection, linked with the NSW Admitted Patient Data Collection for mothers and their offspring, and the NSW National Assessment Program—Literacy and Numeracy (NAPLAN). Maternal perinatal depressive disorder was identified using ICD-10-AM diagnostic codes. Children's academic performance was assessed using NAPLAN at three time-points (Grades 3, 5, and 7) based on whether they met or did not meet the national minimum standards (NMS) in five domains: reading, spelling, grammar, writing, and numeracy. Generalised Estimating Equations (GEE) and propensity score matching (PSM) were used to examine the associations, with findings reported as adjusted odds ratios (OR) and 95% confidence intervals (CI).

Results: After adjusting for key confounders and applying PSM, maternal perinatal depressive disorders were associated with increased odds of children not meeting the NMS in reading (OR = 1.30, 95% CI: 1.12–1.51), spelling (OR = 1.38, 95% CI: 1.18–1.62), writing (OR = 1.28, 95% CI: 1.13–1.46), and grammar (OR = 1.15, 95% CI: 1.01–1.32), but not in numeracy (OR = 1.09, 95% CI: 0.91–1.30). Similar patterns were observed for antenatal depressive disorders, particularly for spelling (OR = 1.36, 95% CI: 1.13–1.63) and writing (OR = 1.25, 95% CI: 1.07–1.45). In the unmatched analysis, postnatal depressive disorders were also associated with increased odds of children not meeting the NMS in reading (OR = 1.30, 95% CI: 1.03–1.65) and spelling (OR = 1.37, 95% CI: 1.06–1.77); however, these associations were no longer significant after matching.

Conclusion: Maternal depressive disorders, particularly antenatal depression, were consistently associated with poorer academic outcomes in offspring, especially in literacy domains. These associations remained significant after PSM, highlighting the importance of addressing maternal mental health during the antenatal period to support children's long-term educational outcomes.

Exploring Spiny Mouse dermal fibroblasts as a blueprint for human skin regeneration

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Burns affect thousands of Australians each year with significant financial burden to healthcare systems across the world. The most at risk group for burn at children under the age of 0-5, followed by adolescent boys. Severe injury to the skin always results in a permanent scar, which results in poor function as well as severe mental health consequences. Scars often required life-long intervention to release the contraction of damaged tissue as the child grows. The spiny mouse is an emerging regenerative model able to perfectly regenerate it's skin after injury, and due to it relatively close phylogeny to humans compared to other regenerative vertebrates, poses unprecedented potential for application to meliorate human scarring and fibrosis to improve patient outcomes.

The main cellular driver of scarring are fibroblasts. While its long been considered that there are functionally distinct subpopulations of dermal fibroblasts including fibrotic subtypes, we have found that human dermal fibroblast exhibit plasticity across the fibroblast lineage. For this reason, we turn to the spiny mouse to look for clues for regenerative cues. We investigated the heterogeneity of spiny mouse dermal fibroblasts to elucidate potentially regenerative subpopulations and act as a blueprint to drive human dermal fibroblast towards a more regenerative phenotype. Additionally, the conditioned media removed from spiny fibroblast during culture seems to have to ability to change human cell behaviour and may be able to a potential clue into regenerative drivers. Understanding pathways by which the spiny mouse dermal fibroblasts regenerate will help to guide human skin wound from repair to regeneration.

Infant diet recommendations reduce IgE-mediated egg, peanut and cow's milk allergies

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Background: Meta-analyses of randomized controlled trials have found that introducing eggs and peanuts earlier during infancy reduced egg and peanut allergy risk. Hence, infant feeding advice has dramatically changed from previous recommendations of avoidance to current recommendations of inclusion of common food allergens in infant diets.

Objective: To compare the prevalence of IgE-mediated food allergies at 1-year of age between two cohorts, before and after infant feeding and allergy prevention guidelines changed in 2016.

Methods: In cohort 1 (506 infants born 2006-2014), no infant feeding advice was provided to participants. In cohort 2 (566 infants born 2016-2022), when the infants were 6 months of age, all families were provided with infant feeding and allergy prevention guidelines. All infants had a first-degree relative with a history of allergic disease. At 1-year of age, infant food allergen sensitization and IgE-mediated food allergy were assessed.

Results: Peanut, egg and cow's milk were introduced earlier in cohort 2 compared to cohort 1 (all $p<0.001$). Combined prevalence of IgE-mediated peanut, egg and/or cow's milk allergies was 4.1% in cohort 2 compared to 12.6% in cohort 1, adjusted odd ratio (aOR) 0.28, 95% CI 0.16-0.48, $p<0.001$). Specifically, peanut allergy 1.1% vs 5.8% (aOR 0.24, 95% CI 0.08-0.76, $p=0.015$), egg allergy 2.8% vs 11.7% (aOR 0.23, 95% CI 0.12-0.45, $p<0.001$), and cow's milk allergy 0.5% vs 2.4% (aOR 0.14, 95% CI 0.04-0.55, $p=0.005$).

Conclusion: Direct provision of updated food allergy prevention guidelines to families facilitated earlier introduction and reduced prevalence of peanut, egg and cow's milk allergies.

REASSURED yet? The profiles of Strep A molecular Point-of-Care tests

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Background: Preventing acute rheumatic fever remains a public health challenge, especially in rural and remote Australia, where timely and accurate diagnosis of Strep A sore throat remains unmet.

Strep A molecular point-of-care tests (mPOCTs) are commercially available diagnostic tools that offer laboratory-standard performance with rapid results (under 30min) at near-patient settings. In a context where laboratory capacities are not easily accessed, Strep A mPOCTs offer a promising diagnostic solution.

However, these tests are costly, with attributes varying across different brands, potentially impacting practicality or uptake at near-patient settings. A comprehensive understanding of this technology is critical prior to recommendation for wide-scale use in limited-resource settings.

Methods: Through a laboratory and field comparative evaluation, four commercial Strep A mPOCTs will be evaluated against ten parameters from the REASSURED framework – 'Real-time connectivity', 'Ease of Specimen Collection', 'Affordability', 'Sensitivity', 'Specificity', 'User-friendliness', 'Rapidness and Robustness', 'Equipment requirements' and 'Deliverability'. The framework represents an ideal set of attributes for diagnostics optimised for use in limited-resource settings and is widely accepted as a benchmark for evaluating point-of-care diagnostics.

Results: Independent insights from the comprehensive REASSURED evaluation characterises the accuracy, accessibility and affordability of each mPOCT. Additionally, the harmonised and pragmatic approach developed for these comparative evaluations are applicable to other Strep A mPOCTs that become commercially available in the future.

Conclusion: A rigorous understanding of the attributes of each Strep A mPOCT helps clarify trade-offs, enabling the selection of tests that best meet the real-world needs of specific healthcare contexts and unlocking intended benefits where mPOCTs are most needed.

Plenary 3: Family-centred and psychological care

Diagnosis and rehabilitation of children with cerebral visual impairment

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Background: Cerebral visual impairment (CVI) is a brain-based visual disorder and is the most common cause of childhood visual impairments. Children with CVI present with diverse visual perception (VP) impairments affecting quality of life and limiting inclusion and participation. Thus, the heterogeneity present in CVI urgently calls for 1) quantified profiling of a child's strengths and difficulties derived from VP assessment tools, and 2) development of a rehabilitation that can be individualised (targeting strengths and difficulties) and adapted (automatically changing in difficulty according to the child's progress) to each child's profile.

Aim: To present assessment tools and a quantified VP profile that assists in diagnosing CVI and to present the development and outcome of the iVision game-based rehabilitation.

Methods: The VP quantification tool was developed using a Delphi study involving expert clinicians and vision scientists. The rehabilitation was developed using an evidence-based, iterative, and multidisciplinary approach involving families and children, clinicians, therapists, and vision scientists.

Results: The iVision project in Belgium has developed a VP quantification tool and four individualised and adaptive mini-games that improve VP (e.g., object recognition, figure-ground perception, visual spatial perception) and show clinically meaningful health-related quality of life improvements as demonstrated in a triple-blind randomised controlled clinical trial.

Conclusions: Multidisciplinary assessment and diagnosis are crucial as CVI is commonly comorbid with other neurodevelopmental disorders. Profiling the abilities of a child is feasible and effectively assists in prioritising the child's needs for rehabilitation. The iVision rehabilitation shows promising effectiveness in children with a diverse clinical picture.

Navigating ethical dilemmas in child and adolescent vaccination: a scoping review

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Background: Vaccination saves millions of lives; however, ethical dilemmas in vaccinating children and adolescents remain challenging, especially as more healthcare professionals (HCPs) beyond traditional vaccinators become involved. This scoping review explored common dilemmas, contributing factors, decision-making strategies, and the role of biomedical ethics in guiding HCPs' decisions.

Methods: Using the PRISMA-ScR checklist and the Population, Concept, and Context (PCC) framework, the review applied Arksey and O'Malley's methodology. A comprehensive search was conducted across six major databases and Google Scholar from July–October 2024 using terms related to ethics, vaccination, HCPs, and children/adolescents.

Findings: Eighty-six studies published between 1995 and 2024 were analysed. Frequent ethical dilemmas included balancing parental autonomy with the child's best interests, public health priorities with individual rights, and HCPs' responsibilities with personal attitudes or limited skills. Contributing factors were themed as child/adolescent-related (e.g., decision-making capacity), parental/family-related (e.g., vaccine hesitancy, cultural objections), HCP-related (e.g., vaccination attitudes, skills in dealing with dilemmas), and system-related (e.g., mandatory policies, jurisdictional variations, logistical barriers). Strategies used to manage dilemmas included: communication and education, HCP training and teamwork, digital tools, and policy advocacy. Ethical decisions were consistently guided by the principles of autonomy, beneficence, non-maleficence, and justice.

Conclusion: Ethical complexities in child and adolescent vaccination require that all HCPs, regardless of discipline, are prepared to respond. Ethical decision-making should reflect the maturity and needs of each child, family context, cultural norms, and system-level constraints to ensure equitable and respectful care.

Keywords: Child, adolescent, ethics, ethical dilemma, healthcare professional, vaccination

Child, parent, and staff experiences of children's perioperative anxiety

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Preoperative anxiety is common, reported to occur in 50-80% of children undergoing anaesthesia. Preoperative anxiety can be characterised by feelings of apprehension, tension and worry, and is associated with both physiological and psychological adverse outcomes including long-term impacts such as nightmares, separation anxiety, increased fear of doctors, and eating disorders. Social, technological, and pharmacological interventions are available to address preoperative anxiety. To best inform the implementation of these interventions, we sought to better understand children's anxiety in the perioperative setting.

Semi-structured interviews were completed with 21 children, 20 parents, and 20 staff (including volunteers), at Perth Children's Hospital. Interviews were recorded, transcribed, and subject to analysis following the Framework Method.

All three participant groups commented a wide range of ideas about perioperative anxiety. The key themes that emerged were: anxiety due to loss of certainty; responding with comfort, distraction, and engagement; the role of parents in managing anxiety; and a changing anxiety environment.

The loss of certainty was key a driver of anxiety in the perioperative environment. The use of comfort, distraction, and engagement by children, parents, and staff in order to alleviate anxiety, should be key targets for the development of interventions that seek to address children's perioperative anxiety. This occurs within a changing social and mental health environment, which clinicians must be responsive to.

These insights will assist in the implementation and adaptation of strategies to address perioperative anxiety, including the development of tools to assist children to report and manage their anxiety.

Supporting Father Involvement in the NICU: A Group Model Building Study

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Despite evidence of improved outcomes for babies in the Neonatal Intensive Care Unit (NICU) when their parents participate in their care, some fathers remain less involved than mothers.

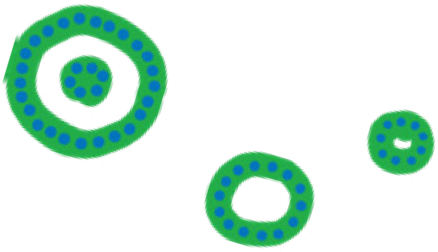
This study aimed to describe the factors impacting fathers' involvement in the NICU and to identify strategies to alleviate barriers to participation.

Group Model Building (GMB) is a participatory research method suited to understanding and addressing complex problems (e.g. father involvement in the NICU). For this study, 21 Australian NICU parents (13 fathers and 8 mothers) participated in a series of GMB workshops. In the workshops, participants engaged in individual and small-group activities to generate a collective understanding of the factors impacting fathers' involvement and strategies to promote their participation in the NICU.

Four categories of factors were identified:
1) Work and other life pressures;
2) Accessibility of the hospital and its services;
3) Father's own experiences, beliefs and knowledge;
4) Staff communication, attitudes and practices.

The factors 'Staff communication', 'Responsibilities outside the NICU', and 'Mental Health' were voted for needing priority attention. The strategies most frequently endorsed to promote father involvement included 'Communication technology tools, 'Additional paid parental leave' and 'One-on-one support from staff'.

These findings indicate that supporting father involvement in the NICU requires a multi-model approach with input from government, employers and health services. These findings will inform the development of a co-designed intervention to support the wellbeing and involvement of WA fathers in the NICU.



Children's Chronic Pain Experience in a Tertiary Hospital – A Qualitative Exploration

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Background and Aim: Chronic pain, defined as pain persisting beyond three months, significantly impacts children's physical, emotional, and social functioning. The complexity of pain in children is shaped by biopsychosocial factors making personalised and culturally safe communication essential. Children and parents frequently report feeling overwhelmed by information overload, with difficulties understanding and navigating their pain experience. This study aimed to explore the perspectives of children living with chronic pain and their parents, to understand how they receive, process, and manage pain-related information within a tertiary hospital setting.

Methods: Participants (children >6 years with chronic pain and their parents) were recruited from Perth Children's Hospital Chronic Pain Service. Semi-structured interviews were conducted in-person or online, recorded, transcribed, and analysed thematically. Participants also completed demographic questionnaires and a modified 5-item Cancer Information Overload (CIO) scale adapted for chronic pain.

Results: Twenty children and 21 parents participated. Thematic analysis revealed five key themes: disjointed health communication, difficulty conceptualising pain, emotional distress linked to uncertainty, coping strategies and suggestions for improvement (e.g. visual tools, community involvement). The CIO scale results indicated moderate information overload, with children scoring higher than parents.

Conclusion: This study highlights the ongoing communication challenges faced by children and their families navigating paediatric chronic pain. Our insights support the development of clear, consistent, age-appropriate, and multidisciplinary led education, to empower families and enhance their care experience.

Key words: Paediatric chronic pain, qualitative research, information overload, communication

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Bereavement Care Practices: A National Survey of Australian PICUs

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Background: Hospital-based bereavement care is recognised as an important source of support for families who experience the death of a child in a paediatric intensive care unit (PICU) and yet has been identified as inaccessible and inadequate in many critical care units worldwide. Recent surveys exploring critical care bereavement practices have not reported comprehensive paediatric data. Where gaps exist within the Australian PICU setting is currently unknown.

Aim: To understand current bereavement care practices in Australian PICUs.

Methods: A cross-sectional design involved adapting a validated 34-item critical care bereavement survey for the paediatric setting and testing for face validity with five PICU nurses. The e-survey was purposively circulated to research coordinators at the 11 Australian PICUs via the ANZICS Paediatric Study Group mailing list. Data were analysed descriptively.

Results: Completed surveys were received from 11 Australian PICUs (100% response rate). All respondents reported provision of inpatient bereavement care elements, however only two (18.2%) provided a formal PICU bereavement follow-up service. Six PICUs (54.5%) provided an informal service, while three (27.3%) provided no follow-up service, and only one follow-up service had been evaluated. Of the PICUs who provided bereavement follow-up, 66.7% stated it was a voluntary, unpaid service, typically provided by social workers or nurses.

Conclusion: This national survey shows variation in bereavement care practices within Australian PICUs, with limited formal services to support families after their child's death, suggesting that more comprehensive bereavement follow-up is needed. Exploration of family bereavement needs and their experience of current supports is needed to inform the development of evidence-based, family-centred PICU bereavement follow-up services.

Allied Health concurrent session

Amplifying the voices of Australian sepsis survivors: why co-designing research with consumers is non-negotiable

Symons, Caitlin[1], Whiteway, Lyn[1,2], Alsop, Caitlin[1], Cunningham, Perry[1], O'Brien, Michelle[1], Greaves, Jenna[1], Campbell, Anita[1,3,4], Anpalagan, Keerthi[1,3,4], McNally, Jane[1,3], Tong, Steven YC[5,6], Davis, Josh[5-7], Bowen, Asha[1,3,4], on behalf of the SNAP Trial

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Among bacterial pathogens, Staphylococcus aureus causes the most infection-related deaths globally, with ~1,000,000 deaths annually of which 299,000 are from bloodstream infections. With fewer than 4,500 participants ever randomised to any intervention for S. aureus bacteraemia (SAB) to date, there is little evidence to guide management. The Staphylococcus aureus Network Adaptive Platform (SNAP) trial aims to answer multiple whole-of-life SAB management questions. Including the voices and knowledge of those with lived experience of SAB means the issues most relevant to patients are prioritised. All SNAP Consumer Reference Group (CRG) members have lived experience of S. aureus infections (3 patients, 3 caregivers), and come from 5 Australian states.

A consumer representative was first appointed to the SNAP Global Trial Steering Committee. Following this, the coordinating team at The Kids Research Institute Australia created an advertisement and a Terms of Reference to recruit consumers to the SNAP CRG. The ad was circulated via existing connections, social media and networks such as Sepsis Australia.

The SNAP CRG was established in 2022, meeting quarterly. Members are reimbursed for their time. They have actively contributed to grants as investigators and provided invaluable advice to support SNAP and its sub-studies. Additionally, members co-developed a Facebook page to support knowledge sharing with the public. The SNAP CRG have also been instrumental in understanding issues impacting patients with SAB that are not well-researched (i.e. post-sepsis syndrome). 6- and 12-month trial endpoints were added following CRG advice that SAB recovery continues well beyond the primary outcome of 90 days.

General Movement Assessment and Prediction of Cognitive Outcome: A Systematic Review

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Aim: This systematic review aimed to determine the accuracy of the General Movements Assessment (GMA) for predicting general and specific cognitive outcomes from early childhood to adulthood.

Method: Eligible studies were cohort and case–control studies examining the association between Prechtl's GMA at writhing and fidgety age in infancy and cognitive outcomes from six months of age. The primary outcome was general cognition, and secondary outcomes were specific cognitive abilities including attention, working memory, processing speed, memory, verbal skills, visual skills, and executive functions. Six databases were searched up to August 2024. Risk of bias was assessed using the Quality in Prognosis Studies tool. Data were narratively synthesised or meta-analysed where study methodology and design were sufficiently homogenous. Certainty of evidence was evaluated using GRADE for prognostic studies.

Results: Thirty-nine studies met inclusion criteria, of which 38 included high-risk infants. The certainty of evidence was generally limited by study risk of bias, inconsistency, and imprecision. However, there was moderate-certainty evidence that aberrant writhing movements are likely associated with reduced general cognitive ability in early childhood. In later childhood, aberrant fidgety movements are likely associated with lower IQ, verbal, and visual abilities. Additionally, lower motor optimality scores or abnormal movement character at fidgety age are probably linked to poorer working memory in childhood.

Interpretation: While GMA may have some association with later cognitive outcome, there is a lack of conclusive evidence. Further high-quality studies using multivariable prognostic models are needed to better understand short- and long-term cognitive outcomes associated with GMA.

Acceptability of a wristband to measure physical activity in children with autism

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Wearable technologies, such as instrumented wristbands, have been successfully used to measure physical activity over long durations in large cohorts of neurotypical children. However, early research indicates that children with autism may dislike wearing instrumented wristbands.

The aim of this research was to pilot an instrumented wristband designed to measure physical activity in children with autism.

We asked nine children (5 female, 4 male; aged 5 to 12 years) with autism to wear a silicon wristband with an embedded physical activity sensor for 7 days continuously (Axivity, AX6).

During a subsequent event, we asked the children's parents about non-wear time and their recommendations for measuring physical activity with wearables. Of the 9 children, good quality data was collected for 7 days for three children; for at least 2 days for four children; and less than a full day for two children.

Reasons parents cited for non-wear time included forgetting to put the sensors back on after bathing, the size and fit (too tight or too loose) of the wristband, and other sensory reasons such as feeling sweat under the band. Some parents said their children fiddled with the wristbands and took them off.

Overall, we found that measuring physical activity with an instrumented wristband is feasible for some children with autism. Our findings suggest that methods to measure physical activity that that reduce discomfort, distraction or the need to remember to put the sensor back on after bathing could improve wear time and acceptability.

Keywords: autism; physical activity; wearables

Measuring the Impact of a Physiotherapy Expansion in Paediatric Hospital in the Home

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Introduction: Hospital in the Home (HITH) provides acute inpatient equivalent care at home. Recent HITH expansions, including multidisciplinary care models, enables more patients to be cared for at home. HITH can positively impact cost of living pressures for families and improve patient flow challenges. Since 2006, Perth Children's Hospital's (PCH) HITH has offered part-time physiotherapy cover, and in 2024, a pilot was funded to expand this service.

Methods: The HITH Physiotherapy expansion launched on April 15, 2024, increasing staffing from 0.7 FTE to 2.2 FTE across 7 days/week. A Plan-Do-Study-Act (PDSA) model was used, beginning with chronic respiratory patients transferred from a ward. Three new referral pathways were introduced: direct to HITH, Hospital Avoidance, and HAPI Outreach. Data collection included consumer and referrer feedback, admission, treatments, travel, bed days, and clinical costings data.

Results: At completion of the 52-week study period, for 72 admissions, 1,190 physio sessions were completed, up from 240 in 2023. Over 70% of families live >20kms from PCH, with an average travel time of 32 min. HITH substituted 844 hospital bed days, allowing more young people to access hospital-based care and an estimated $1,866,928 cost-reduction. Net promoter scores were excellent for consumers (+95) and referrers (+72), with overwhelmingly positive written feedback.

Conclusion: HITH physiotherapy's expansion measures positively across all metrics, is well received and provides high quality care. Future considerations include strategies for service coverage across geographical locations given that many families live a significant distance from the hospital.

Step-Up Programme: A Feasibility Study on the Impact of Physical Activity on Autistic Children

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Autistic children often experience challenges across emotional, behavioural, and cognitive domains that affect their daily functioning and overall quality of life. This feasibility study explored the impact of an 8-week co-designed physical activity intervention on autism-related traits, mental health, executive functioning, and quality of life in autistic children aged 5 to 12 years.

The intervention was developed through participatory action research with both children and their caregivers, ensuring that activities were tailored to individual interests, abilities, and sensory preferences. Twelve children from 11 families (7 male and 5 female), with a formal diagnosis of Autism Spectrum Disorder (ASD), participated in weekly physical activity sessions involving aerobic, resistance, and coordination-based activities.

Measures included the Social Responsiveness Scale (SRS-2), Behaviour Problems Inventory–Short Form (BPI-S), Anxiety Scale for Children with Autism Spectrum Disorder (ASC-ASD), and Child Health Questionnaire (CHQ-PF28) were used pre- and post-intervention. Results indicated a significant reduction in anxiety symptoms, with ASC-ASD scores showing a large effect size (Hedges' g = 1.25), while no significant changes were observed in autism traits, executive functioning, or quality of life.

Findings suggest that co-designed physical activity may be particularly effective for reducing anxiety in autistic children, even over a short timeframe.

The program was well-received and demonstrated promise as a low-cost, community-based approach. These findings underscore the value of accessible, community-based physical activity interventions in supporting the mental health of autistic children and highlight the need for further research with larger, more diverse samples.

Keywords: autism, physical activity, anxiety, executive functioning, quality of life, intervention, child development, feasibility study

Step Up: Exploring Parents' Perspectives of Physical Activity for Autistic Children

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Improved fitness, motor skills, social skills, and confidence are some of the benefits of physical activity for children with autism. Yet physical activity participation rates among autistic children are lower than the general population.

Barriers and facilitators to participation uptake are explored in this study. Using a thematic inductive approach, 20 parents (all women) of autistic children aged five to 12 years participated in semi-structured interviews. Parents reflected on their child's experiences engaging in informal and organised physical activity, past and present; experiences motivating their child; ideas for future programmes; and the outcomes they desire for their child.

Emotion regulation and self-appraisal were also explored. The need for more community education, understanding of sensory factors, and creation of opportunities for their children were consistent themes that emerged.

Preliminary results from this study informed the codesign of a physical activity programme for autistic children.

This study and the codesigned programme contribute to the growing body of knowledge on supporting autistic children in physical activity and provide optimal implementation insights for educators, trainers, and allied health professionals.

Keywords: autism, physical activity, codesign, participation

Effectiveness of cerebral palsy upper limb education for occupational therapists

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Background: A key role of Occupational Therapists is the management of arm and hand impairment for children with cerebral palsy. An education series was developed to support community and hospital Occupational Therapists to guide appropriate arm and hand assessments and intervention at the most beneficial time.

Aim: To determine the effectiveness of a cerebral palsy upper limb education series for Occupational Therapists.

Methods: Occupational Therapists attending the education completed a pre, post and six-month post questionnaire. Data from the questionnaires was analysed using a t-test with the hypothesis that the response scores would be higher post education.

Results: A total of 26 Occupational Therapists completed the education, with 26, 23 and 13 pre, post and six-months post responses. Participant confidence improved after training and remained statistically significant, even six-months later in: (i) describing and classifying a child's clinical upper limb presentation and manual ability; (ii) completing an assessment of upper limb muscle tension; and (iii) choosing appropriate upper limb assessments and treatment. Participants responded that they felt more competent when completing interventions.

Conclusion: The cerebral palsy upper limb education series of Occupational Therapists was effective. This information will inform future education series and potentially inform curriculum development for undergraduate Occupational Therapy students.

Local government perspectives on restricting unhealthy food advertising: A qualitative study

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The World Health Organization states there is unequivocal evidence that food marketing influences food preferences and eating habits. This study aimed to investigate local government (LGs) perspectives on restricting unhealthy food advertising on local government-owned infrastructure.

This qualitative study utilised individual and small-group interviews with representatives from LGs and other public health organisations across WA. Data were collected between June and October 2024 using semi-structured discussion guides. Purposive sampling ensured participants represented diverse LGs based on socio-economic status, geographic location, and annual revenue. A general inductive approach was used to analyse data.

Thirty-four stakeholders from 15 LGs participated in the study. The main themes were: (1) policy understanding and interest; (2) policy development and approval; and (3) policy implementation and enforcement. Several barriers and enablers were identified, influencing LG capacity, interest, and readiness. LGs with a clear commitment to protecting public health placed greater priority on developing a policy but identified the need for consistent definitions (e.g. unhealthy food) and frameworks (e.g. monitoring compliance of advertising agencies) to support them.

This study highlighted the need for additional support for LGs to adopt effective policies restricting unhealthy food advertising. Recommendations included offering targeted training for LG officers to build capacity in policy implementation and fostering partnerships with public health organisations to provide cohesive support and resources. Tools to simplify the process of consistently and accurately identifying foods that require advertising restrictions are important. Addressing these factors can significantly strengthen future policy efforts to reduce unhealth food advertising on government-owned infrastructure.

Investigating what is important to families on Hospital in the Home Physiotherapy

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Introduction: Hospital in the Home (HiTH) is an inpatient multidisciplinary service delivered in a child's home. Evidence demonstrates that HiTH models are clinically effective, however what does delivering care at home mean for families? Questions remain regarding the perception of clinical care and functionality in the provision of this service for families engaging in HITH for physiotherapy for respiratory admissions.

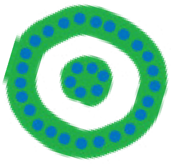
Methods: A discharge survey was distributed on completion of PCH HiTH Physiotherapy admissions from April 2024-May 2025. Responses from the HAPI outreach program were excluded.

This study analyses Qualitative open answer responses with a reflective thematic analysis method from the question "Would you like to provide suggestions for improvement or feedback on positive experiences?".

Results: 82 HITH admissions were completed, 68 responded to the survey (83%). Five HAPI outreach responses were excluded. Qualitative responses were completed in 39 surveys (62%) and were included in the thematic analysis. A deductive analysis process started with 43 sub-themes, which were consolidated into 5 themes. These include:

(1) Care for the Chronically ill child: Care that Comes Home,
(2) Neurodivergent affirmative and inclusive Care,
(3) Unburdening the Backbone: Supporting Families,
(4) Right time, right way: Coordination, Communication, and Consistency,
(5) Returning to Life: Reconnecting with school, work and routine.

Conclusion: The themes reflected in families' opinions indicates that there are aspects of HITH physiotherapy that are supportive to families and additionally areas to improve.



Functional Impacts of Music Therapy for Children with Acquired Brain Injury

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Background: There is increasing evidence for the effectiveness of music therapy in adult neurorehabilitation, and particularly, acquired brain injury (ABI), however there is limited evidence for child and adolescent populations. The exact causal mechanisms of how and why the intervention works have not been explored. We aim to investigate the impact of music therapy for children and adolescents with ABI within paediatric hospital settings and develop theory on how music therapy produces functional outcomes.

Methods: Realist research provides an understanding of what works, how, for whom and in what circumstances, through developing program theory. A realist inquiry involving realist review and evaluation is currently underway across three separate phases of theory development, testing and consolidation. This presentation will share results from phase 1 including a) realist review of literature, and b) survey of national and international paediatric music therapists.

Results: The initial program theories and causal mechanisms regarding the impact of music therapy on functional outcomes for children and adolescents with ABI both nationally and internationally will be detailed and next steps for the evaluation will be shared.

Discussion: This study aims to determine whether a causal relationship exists between music therapy treatment and paediatric patient outcomes. Results are anticipated to inform the next phases of the realist evaluation, which involve testing and consolidation of the identified program theories with a variety of stakeholders including children with an ABI, their families/carers, and medical and allied health professionals employed within ABI teams in tertiary paediatric hospitals in Australia.

Move to Improve - supporting children with chronic conditions to move more

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Chronic disease affects approximately 20% of Australian children and adolescents. Children and adolescents living with chronic health conditions (CHCs) experience higher rates of physical inactivity and mental illness than their physically healthy peers, which may exacerbate their physical symptoms and undermine quality of life. Physical activity has been shown to improve both physical and psychosocial outcomes in healthy children, as well as in children with a range of CHCs. Move to Improve helps children and families overcome barriers to physical activity and reach their individualised physical activity goals, through a fun and family-centred approach. Move to Improve participants receive an 8-week physical activity program with additional dietetics and psychology support. The pilot study has recruited children aged 5-17 living with one of four CHCs: type 1 diabetes, cancer, post-burn injuries and cerebral palsy. This research will provide evidence on how to best incorporate physical activity into routine care for children with CHCs in Australia.

Primary outcome measures (assessed pre- and post-program, and at 6 and 12 months) include habitual physical activity, goal attainment, and quality of life. Secondary outcome measures include aerobic capacity, motor function, grip strength, body composition and a series of self-report questionnaires. Semi-structured interviews conducted at 2 months post program capture feasibility data. The pilot study has been designed with extensive input from stakeholders including children and families, researchers and healthcare providers. Early data shows positive trends in goal performance and satisfaction and quality of life data, with positive feedback received from both families and clinicians.

Keywords: Chronic condition, physical activity, exercise is medicine

Perth Children's Hospital 'Play and Wait' Strategy: Consumer Engagement Activity Trials

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Background: Families often experience lengthy waiting times in hospital clinics which can contribute to boredom, anxiety, and dysregulation. To address this, in 2022, Perth Children's Hospital Foundation (PCHF) funded the 'Play and Wait' (P&W) Strategy; a collaboration between occupational therapists (OTs) and volunteers aimed to provide meaningful engagement for children in waiting rooms. Across two years, this initiative delivered over 35,000 activity packs and 100% of caregivers reported the packs were important in distracting children from their worries and reducing overwhelm and stress. A new 2025 PCHF grant will expand P&W, introducing interactive activity trolleys, where volunteers will facilitate activities in waiting areas to:

- Provide regulating experiences,
- Introduce medical equipment/materials,
- Reduce boredom.

Aim: To ensure consumer engagement in the P&W expansion to promote consumer participation and satisfaction.

Methods: A mixed methods design incorporating consumer trials, parent survey and a staff/volunteer focus group.

Results: Twelve activities developed by OTs, allied health assistants and volunteers were trialled by children recruited via ward flyers and staff networks. Thirty-two children (3–9 years, M = 5.42, SD = 1.85) completed 208 activities, rating each activity as "love it," "like it," or "so-so." Additional data collection included feedback from caregivers via surveys, and OT staff and volunteers during a focus group (data collection/analysis currently underway).

Conclusion: Findings from the activity trials in Stage One will inform the selection of P&W trolley activities and implementation plan for Stage Two. These findings will be shared before the program rolls out across PCH waiting areas.

Thursday abstracts 6 November

Plenary 4: Developmental and mental health in early life

Identify and Act: a prospective QI study to identify autism in preterm born children in a high-risk follow-up clinic in WA

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Background: Preterm-born children have a three-fold higher incidence of autism compared to full-term infants. Although autism can be diagnosed between 18-24 months of age, access to early intervention (EI) and complex assessments may be delayed. We implemented autism screening in our high-risk infant follow-up program using quality improvement (QI) methodology. Our goal was to screen 90% of children and refer 100% of those with a positive screen for EI.

Methods: We developed a standard workflow using the 12-month Social Attention and Communication Revised (SACS-R) checklist for autism screening, administered alongside the Griffiths assessment at 12 months corrected age. Infants scoring ‘atypical’ on 3 out of 5 key items (eye contact, gestures, pointing, imitation, response to name) were classified as ‘high-likelihood (HL)’ for autism and referred to EI. Feasibility and acceptability of the screening process were assessed through caregiver and clinician surveys using Likert scales.

Results: During the 6-month QI period (September 2024 - February 2025), 48 children (median gestation: 28 weeks, median corrected age at assessment: 12 months) were screened. Of these, 4 children (8.5%) scored as ‘HL’ and were referred to EI. Caregiver surveys indicated high acceptability (96%) and positive perception of the tool (96%). Clinicians found the tool easy to use (92%), with high satisfaction (83%) and improved follow-up care (66%).

Conclusion: ASD screening at 12 months corrected age using QI methodology was feasible and acceptable in a preterm high-risk follow-up clinic. Prospective long-term follow-up of infants referred to EI will be crucial for assessing EI effectiveness.

Longitudinal Bone Density Trajectories in Adolescent Eating Disorders: Insights from a 12-Month Audit

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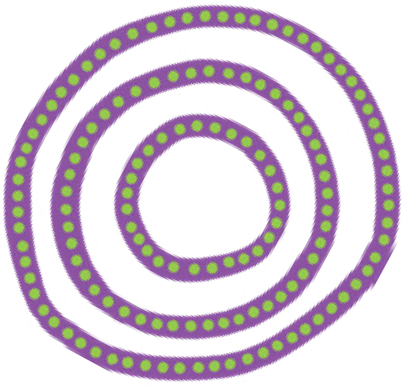
Background: Adolescents with eating disorders are at high risk of low bone mineral density (BMD), increasing long-term fracture risk. Dual-energy X-ray absorptiometry (DEXA) assesses baseline BMD and monitors treatment efficacy. This audit analysed changes in BMD Z-scores between baseline and repeat DEXA scans in adolescents being treated in the specialist Eating Disorder Service.

Methods: A retrospective audit reviewed 53 patients admitted between November 2021 and January 2024 at PCH who had both baseline and repeat DEXA scans. Repeat scans occurred on average 14.5 months (range: 10-20 months) post-baseline. Changes in lumbar spine, femur, and total body less head (TBLH) BMD Z-scores were assessed.

Results: All 53 patients had baseline and repeat DEXA scans. At baseline, 36% (19/53) had low BMD (Z-score ≤ -1.0 at any site). At repeat scan, 40% (21/53) showed persistent low BMD. Overall, 75% (40/53) of patients experienced a decline in Z-score at at least one site, while 25% (13/53) showed stable or improved Z-scores across their sites.

Conclusion: This audit highlights persistent low BMD in adolescents with eating disorders, with an increase in prevalence at repeat scans. A significant proportion showed declining Z-scores at one or more sites despite ongoing care. Findings underscore the critical need for robust, individualised bone health interventions and consistent monitoring to mitigate long-term risks in this vulnerable population.



Australian children and young adults priorities for paediatric anaesthesia

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We partnered with Australian children and young adults in a priority-setting project to identify their research priorities in anaesthesia and perioperative medicine.

The project was approved by the CAHS Human Research Ethics Committee (RGS000003678).

A modified James Lind Alliance method was undertaken which involved surveys, a community conversation and a final consensus meeting. Participants were children and young adults aged 6 to 18 years living in Australia. An online Community Conversation workshop was held in March 2024 with 14 young children and adolescents (6-16 years old) to discuss and generate ideas for future research in the perioperative space. Participants were from Western Australia, New South Wales and South Australia. A prospective online Idea Generating Survey was open from April to June 2024 with 178 respondents providing 381 research ideas. A longlist of research ideas was created by agreement between researchers and youth consumers and an online prioritisation survey to prioritise the longlist of research ideas had 152 respondents. A single online consensus meeting was held in March 2025, attended by 12 children and young adults (8 - 17 years old) and 3 researchers. The top ten consumer priority list was determined by consensus.

The resulting priorities differed from those conducted in Australia for adult perioperative medicine and from the parent/carer priorities previously identified for paediatric anaesthesia care. The top three priorities of children and young adults concerned safety, pain management and anxiety. These research priorities can help guide paediatric anaesthesia research.

Understanding the Link Between Atopy, Viral Infections, and Asthma in Children

Isabelle Coenen[1], Anya C Jones[1,2], Alice A White[3], Mari Takashima[4], Wen Ray Lee[4], Matthew D Wong[4], Dwan Vilcins[4], Ulrich Kadolsky[5], Ali Sadiq Cheema[5], Alka Saxena[5], Anthony Bosco[2,6], Keith Grimwood[7], Patrick G Holt[1], Peter D Sly[4], Deborah H Strickland[1], Jonatan Leffler[1,3]

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Allergic sensitisation and impaired antiviral responses are key contributors to virus-induced wheeze in early childhood. In previous work, we observed that plasmacytoid dendritic cells (pDC) from children with recurrent wheeze showed reduced activation of type I interferon (IFN-I) genes compared to children whose wheeze had resolved.

In this study, we investigated how IgE crosslinking influences pDC activation and its relevance to asthma development. Seventy-one 7-year-old children from the Early Life Lung Function (ELLF) cohort were assessed for viral infection history, allergic sensitisation, and lung function. We examined pDC responses to resiquimod (a TLR7/8 agonist) and the effect of anti-IgE crosslinking using flow cytometry, cytokine profiling, and transcriptional analysis.

Children clustered into IFN-I high and low responders based on pDC responses. Asthma prevalence was lower in the IFN-I high group (17%) compared to the IFN-I low group (46%, $p<0.03$). The IFN-I low group had higher levels of atopy, reduced expression of IFN-related genes, and a link with symptomatic viral lower respiratory infections.

To probe mechanisms, pDCs were pre-treated with anti-IgE before stimulation. IgE crosslinking suppressed pDC activation and downregulated transcriptional networks including TPM2, LILRA4, and CLEC4C, and was associated with IgE receptor expression.

These results suggest that atopy and IgE-mediated signalling can impair antiviral pDC responses through specific transcriptional pathways, potentially increasing asthma risk in children.

Results of the Western Australia Atropine for the Treatment of Myopia study

Mackey, David

Lions Eye Institute, University of Western Australia.

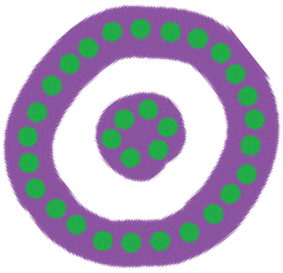
Myopia is predicted to affect 50% of the world's population by 2050. 25% of Generation 2 of the Raine Study at age 20 have myopia. Genetic and environmental factors have been associated with myopia. Lack of time spent outdoors in childhood being the most modifiable risk factor.

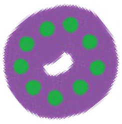
The Western Australia Atropine for the Treatment of Myopia study, was a double-masked, placebo-controlled trial and randomised to receive 0.01% atropine (n = 104) or placebo (n = 49) eyedrops (2:1 ratio) instilled nightly over 24 months (mean index age = 12.2 ± 2.5 and 11.2 ± 2.8 years, respectively.

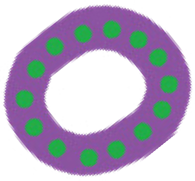
In Australian children, 0.01% atropine eyedrops were safe, well-tolerated, and had a modest myopia-control effect, although there was an apparent decrease in efficacy between 18 and 24 months, which is likely driven by a higher dropout rate in the placebo group. A year 3 follow-up showed evidence of rapid myopia progression following cessation of 0.01% atropine a year earlier.

As with other studies internationally COVID-19 lockdowns disrupted the benefit of treatment but this was only briefly in Western Australia compared to other countries.

Low-concentration Atropine eye drops are now approved in Australia but not listed on the PBS. Most public hospital eye clinics do not see children for Atropine treatment and thus disadvantaging families who cannot afford the drops and private clinic costs.







Plenary 5: Nutrition, immunity and environmental health

ORIGINS: One-Year-Old's Nutrition Unveiled in Unique Longitudinal Cohort Study

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Dietary intake in the first year of a child's life is an important determinant of their growth and development. ORIGINS is a longitudinal birth cohort study, exploring the key factors that contribute to a 'healthy start to life' through the prevention of non-communicable diseases. In this study, we aim to describe the dietary intakes of one-year old children participating in ORIGINS and compare these to the Australian Dietary Guidelines and Nutrient Reference Values (NRVs).

Between 2020 and 2023, dietary intake data were collected on 779 one-year-old children using a Food Frequency Questionnaire (FFQ). The analysis explored milk intake (breastmilk, infant formula, and cow's milk), the introduction to solids, macronutrient, micronutrient, and food group intakes.

The results indicated that 41.5% were being breastfed at one year of age, while 58.0% continued to receive formula milk. While the cohort met NRV cut-offs for most micronutrients, iodine intake fell below requirements, and sodium intake exceeded recommendations. Diet quality, based on the food group intake, did not meet recommendations, with children over-consuming fruit and discretionary foods, while under-consuming vegetables, cereals and grain foods.

These findings highlight areas for potential improvement in the dietary intake of one-year-old children. Specific focus should be on reducing the intake of discretionary foods and providing children with opportunities to consume more vegetable and cereal-based foods. Reducing fruit intake may allow for consumption of foods from other food groups. Addressing these imbalances could help guide future dietary interventions to support healthier eating habits and better nutritional outcomes for young children.

Evaluating antiviral immunity in a clinical cohort of transgender young people

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Sex hormones including oestrogen and testosterone have potent immune-modulatory properties. This is relevant for transgender (trans) individuals taking gender-affirming hormones (GAH). We established the Gender and IMmunity (GIM) cohort to provide scientific evidence on how GAH may impact immune function in young trans individuals.

We recruited trans individuals receiving care at the Perth Children's Hospital, Gender Diversity Service. Blood samples were collected from trans participants prior-to and during GAH, as well as age-matched controls not taking GAH (n = 64). Immune cells from all participants were stimulated with the virus analogue Resiquimod (TLR7/8 agonist) in a cell culture model. Utilising flow cytometry analysis and mapping of released cytokines, all samples were characterised for baseline immune profiles. In addition, a detailed analysis of plasmacytoid dendritic cells (pDC) was performed using a custom-made 26-parameter spectral flow cytometry panel. Together this approach yielded highly detailed readouts of immune profiles in trans young people.

Preliminary analysis suggests that antiviral responses were elevated in control females compared to control males, based Interferon (IFNα) production. Limited changes were detected longitudinally in trans participants taking GAH. However, significant differences in IFNα production was observed in birth-assigned females taking puberty-blockers. We theorise that endogenous oestrogen concentration may be driving these responses. Together with related projects, our research program aims to fill a current gap in clinical knowledge relating to potential immune impacts of GAH; with the aim of empowering trans young people to make informed healthcare decisions.

The Impact of Chlorinated Drinking Water on the Infant Gut Microbiota: A Randomised Controlled Trial

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Background: Water chlorination is essential for controlling harmful microbes in drinking water; however, the antimicrobial effects of chlorine-based disinfectants may negatively impact the developing infant microbiota. This trial investigated the effects of chlorinated water on the infant gut microbiome. The waTer qUality and Microbiome Study (TUMS) was a double-blinded, randomised controlled trial. Six-month old infants (n=197) received either de-chlorinated drinking water via benchtop filtration (treatment, n=99), or regular chlorinated water (control, n=98) for twelve months. Tap water and stool samples were collected at baseline and at end of intervention. Metagenomic sequencing was used for faecal microbiome analysis. Primary outcomes were differences in gut microbiota alpha and beta diversity. Secondary outcomes included changes in the differential abundance of species and functional profiles. This study was registered with Australian New Zealand Clinical Trial Registry: ACTRN12619000458134.

Results: 170 baseline (83 control, 87 intervention), and 130 end of intervention (65 control, 65 intervention) stool samples were collected. No significant differences in overall community structure were observed between groups after the intervention, including beta diversity which contributed to 0.6% of variation (95% CI; 0.4, 0.13, p=0.35), richness (-4.25, 95% CI; -14.85, 6.35, p=0.43) or Shannon Index (0.06, 95% CI; -0.14, -0.32, 0.04, p=0.45). However, 55 genera were differentially abundant (adjusted $p < 0.01$) at the end of the intervention, primarily within the Firmicutes phylum. The chlorinated water control group showed higher abundance of antibiotic resistance MetaCyc groups and pathways (adjusted $p < 0.05$), mostly attributable to Escherichia and Klebsiella species.

Conclusions: Exposure to chlorinated drinking water induces minor changes in infant gut microbiome composition and increases the abundance of antibiotic-resistant genes. While chlorination remains vital for public health, these findings highlight the need for alternative disinfection strategies and further research into the potential for increased antibiotic resistance and long-term health outcomes.

Exploring Early Nutritional Impacts of Modulator Therapy in Children with Cystic Fibrosis

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Background: Optimising nutritional status is essential for improving long-term health outcomes in children with cystic fibrosis (CF). Highly effective modulator therapies (HEMTs), used in CF treatment, may reduce overall disease burden, and improve nutritional status. Early clinical trials suggest HEMTs have the potential to preserve pancreatic function, reverse gastrointestinal manifestations and reduce risk of long-lasting pancreatic damage, nutritional deficits and malnutrition. In September 2024, HEMTs were approved for use in Australia for children under five years of age. However, there is limited longitudinal evidence on changes in clinical manifestations to guide practical adjustments to enzyme, salt, and multivitamin dosing in patients commencing HEMT. Exploring and understanding changes to disease manifestations with HEMT introduction is critical to refine nutritional interventions for children with CF who are 2-5 years of age.

Methods: A two-year, multi-centre observational cohort study commenced in 2024 with data collection concluding in late 2027. Data collection is across eight tertiary hospitals in Australia, including Perth Children's Hospital (PCH). Participants are children with CF aged 2-5 years who have commenced HEMT. Key outcomes include changes in growth parameters, pancreatic faecal elastase, sweat chloride, biochemical markers, and supplement dosing.

Results: Twenty four children from PCH have been recruited thus far. Preliminary results demonstrate improvement in four of seven children who have undergone their six-month review resulting in a 50% reduction in their salt supplementation. Data collection continues.

Conclusion: This study will provide novel data in an Australian population, support evidence-based practice, and inform future nutritional priorities and research directions for this emerging cohort.

No needle, No Whoop: Clinical trial results of BPZE1, intranasal pertussis vaccine, in healthy children

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Background: BPZE1, a live attenuated intranasal pertussis vaccine, is designed to prevent Bordetella pertussis (Bp) infection (colonization), disease and transmission to address limitations of current vaccines. This study assessed BPZE1-induced immune responses, non-interference and safety when administered with and without tetanus-diphtheria-acellular pertussis vaccine (Tdap; Boostrix™) in children 6-17 years old, primed in infancy with acellular pertussis vaccine (aPV).

Methods: 366 healthy school-age participants were randomized 1:1:1 to BPZE1+intramuscular-placebo, BPZE1+Tdap, or Tdap+intranasal-placebo. Primary endpoints were geometric mean fold rise (GMFR) from baseline of nasal mucosal secretory immunoglobulin A (S-IgA) against whole cell pertussis extract (WCE) at Day 29 and solicited adverse events (AEs) through 7 days post-vaccination. Key secondary endpoint was BPZE1+Tdap induction of serum IgG against tetanus, diphtheria, and aPV antigens compared with Tdap at Day 29.

Results: GMFRs of S-IgA against WCE were similar among BPZE1 and BPZE1+Tdap groups (3.8 [95% CI 3.1-4.7] and 3.5 [2.9-4.3]), but low in Tdap group (1.2 [1.0-1.5]). All participants in BPZE1+Tdap and Tdap groups had anti-tetanus and anti-diphtheria antibody levels ≥0.1 IU/mL and similar serum IgG responses to pertactin, filamentous hemagglutinin and pertussis toxin at Day 29. Solicited AEs were 50%, 52%, 45% (nasal/respiratory) and 42%, 50%, 55% (systemic) in BPZE1, BPZE1+Tdap and Tdap groups, respectively.

Conclusions: Intranasal BPZE1 vaccination with or without Tdap induced robust nasal mucosal and non-interfering systemic immunogenicity in school-age children who had been primed with aPV as infants with a favourable safety profile. In contrast to Tdap, BPZE1 has the potential to both protect against Bp colonization and reduce Bp transmission.

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Colostrum – the missing link for successful food allergy prevention?

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Background: Animal and observational clinical studies emphasise two critical risk factors for food allergies: high skin permeability and inefficient oral tolerance. Colostrum, the first food for the newborn and rich in bioactive factors, could promote gut immunity and healthy skin development. We hypothesise that colostrum is critical for preventing allergic sensitisation via the skin and successful oral tolerance at weaning, contributing to food allergy prevention.

Method: Using a mouse model of colostrum deprivation, at weaning, pups orally received either 1mg egg antigen (OVA) or water daily for 5 days to induce oral tolerance. We then induced OVA food allergy to evaluate tolerance efficacy. For peanut sensitisation via the skin, 1-week old pups were exposed to peanut extract via the skin and later challenged to assess anaphylaxis.

Results: Colostrum-deprived mice showed increased allergic diarrhea, elevated Th2 pro-inflammatory cytokines (IL-4 and IL-13), gut permeability, and mast cells compared to CTRL mice. OVA-induced oral tolerance significantly reduced allergic diarrhea in both groups, with a stronger effect in CTRL mice ($p = 0.001$). OVA-specific IgE and mMCP-1 levels were also reduced in tolerised mice. Preliminary data for peanut allergy revealed distinct skin abnormalities in colostrum-deprived pups, including increased skin thickness. Ongoing experiments are evaluating sensitisation risk associated with these skin changes.

Conclusion: Colostrum deprivation at birth increases susceptibility to egg allergy and may increase the risk of peanut sensitisation via impaired skin development. This is particularly significant given widespread suboptimal colostrum feeding in newborns and increased food allergy risks early in life.

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