



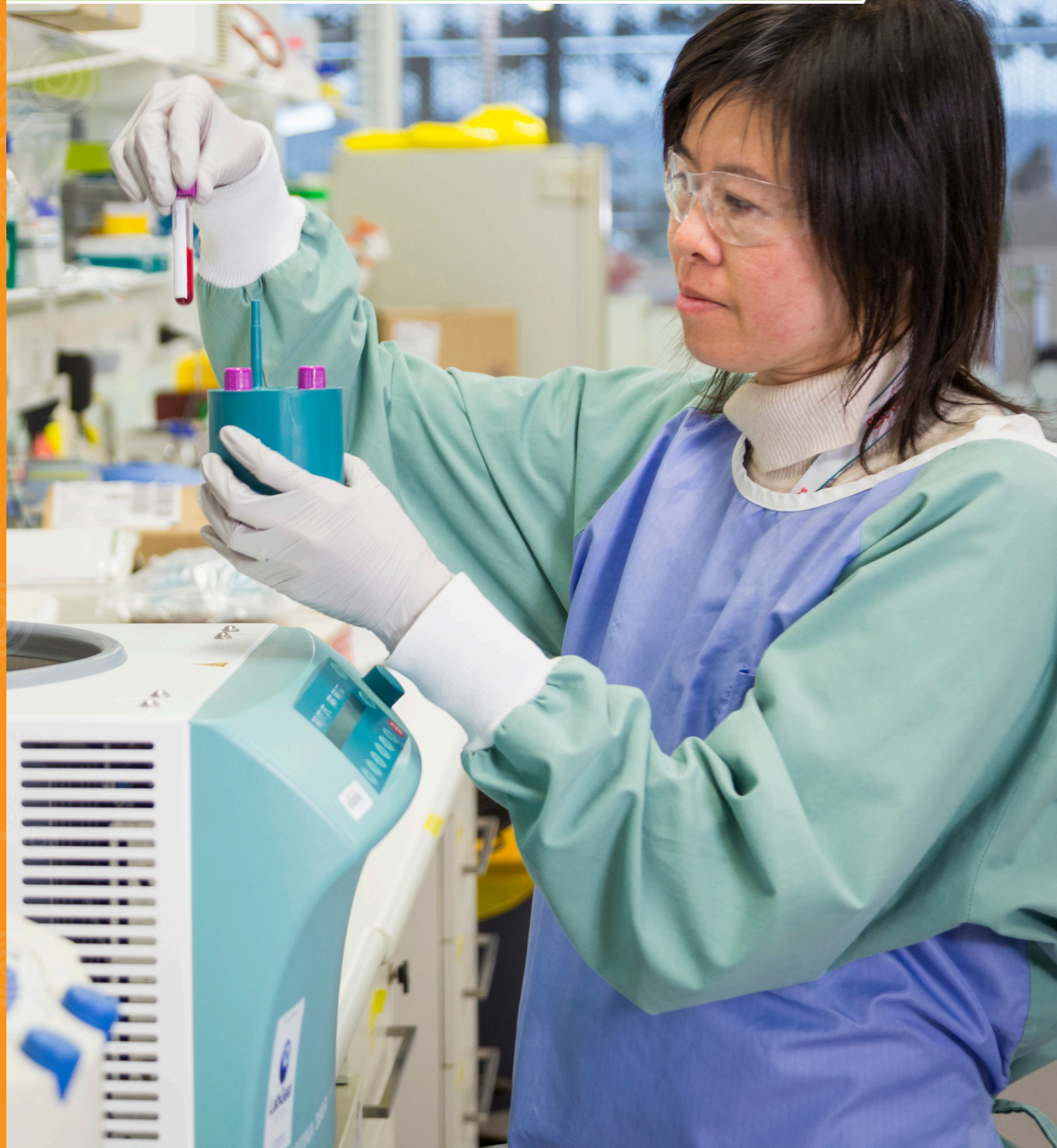
Children's Health Queensland

Research Impact Report 2023



Queensland
Government

We're building and harnessing creativity, research, technology and collective expertise to prepare for the future.



Acknowledgement of Country

Children's Health Queensland Hospital and Health Service pays respect to the Traditional Custodians of the lands on which we walk, talk, work and live.

We acknowledge and pay our respects to Aboriginal and Torres Strait Islander Elders past, present and emerging.

We acknowledge the historical and contemporary impacts of Queensland's history of colonisation on the health and wellbeing of Aboriginal and Torres Strait Islander peoples.

We recognise the ongoing intergenerational trauma and racism experienced by members of the community.

Contents

Message from the Chief Executive and Board Chair.....	2
2023 at a glance.....	3
Message from the Director of Research and Board Research Committee Chair.....	4
Our strategy.....	5
Research impact	
Easing the strain of hand fractures in busy clinical environments	6
Ultrasound breakthrough for treating children's forearm fractures	8
World first trial into alternative for cannulas	10
Investigating best intravenous fluids for critically ill kids	11
Building resilience in children during natural disasters	12
Lowering the risks for children receiving kidney transplants	12
Improving education to support children in remote areas with feeding disorders	14
Identifying children at risk of prolonged temporary tube feeding	15
Early detection of impairments in premature babies	16
Awards and prizes	18
Spreading the word: Research metrics	19
Committees and governance.....	20

Children's Health Queensland Hospital and Health Service Research Impact Report 2023. Published by the State of Queensland (Queensland Health), May 2024.

An electronic version of this document is available at www.childrens.health.qld.gov.au/research/our-research/strategy-reports

This document is licensed under a Creative Commons Attribution 3.0 Australia licence. To view the licence, visit creativecommons.org/licenses/by/3.0/au

© State of Queensland (Queensland Health) 2017. You are free to copy, communicate and adapt the work, as long as you attribute the State of Queensland (Queensland Health).

For more information contact Children's Health Queensland Research +61 07 3069 7230 or CHQ-Research@health.qld.gov.au

Disclaimer: The content presented in this publication is distributed by the Queensland Government as an information source only. The State of Queensland makes no statements, representations or warranties about the accuracy, completeness or reliability of any information contained in this publication. The State of Queensland disclaims all responsibility and all liability (including without limitation for liability in negligence) for all expenses, losses, damages and costs you might incur as a result of the information being inaccurate or incomplete in any way and for any reason reliance was placed on such information.

Message from the Chief Executive and Board Chair

In 2023, Children’s Health Queensland continued to dream big and cement its position as an international leader in child and youth healthcare research. We are constantly adapting and improving the way we provide the best evidence-based care, as part of our unwavering commitment to improve the outcomes for every child and young person in Queensland and around the world.

The Queensland Children’s Hospital was ranked 10 out of 250 paediatric hospitals in Newsweek’s Best Specialized Hospitals 2024 list, the highest ranked children’s hospital in Australia and the Southern Hemisphere. Our researchers’ pursuit of innovation and discovery is a big part of this peer-nominated rating and well-deserved recognition on a global scale.

The reach of our researchers in 2023 expanded to more than 130 cities across 35 countries, with more than 665 international collaborations with leading institutions worldwide. This impact on international paediatric care is testament to the shared commitment across our organisation to positively change the life trajectory of every child, no matter where they live.

An example of the global impact of our research is the work of nurse practitioner Tricia Kleidon, examining possibilities for midline catheters (inserted in the upper arm) as an alternative to cannulas in children. Her team’s world-first trial at the Queensland Children’s Hospital has shown to minimise patient discomfort, treatment disruption and the potential for substantial cost savings in all healthcare settings.

A new model of care to lower patient wait times and ease the burden of acute hand fractures on busy clinical environments has also been developed, through the work of occupational therapist Katherine Dalton. This model was co-designed by Children’s Health Queensland clinicians and families, reflecting the importance of generating knowledge, innovating, and collaborating to provide the best care together.

Children’s Health Queensland provides care and support to children and young people across the vast state of Queensland, including those affected by natural disasters.



Research has helped us measure the positive impacts of our Queensland Centre for Perinatal and Infant Mental Health initiative ‘Birdie’s Tree’, which provides much-needed resources to help parents, carers and educators support children during natural disasters.

In aiming to adapt and meet the needs of our ever-changing world, our targeted research action plan and strategy is constantly evolving. The *Children’s Health Queensland Research Strategy 2023-2025* is driven by a vision to lead life-changing care for children and young people, for a healthier tomorrow.

Congratulations to all our researchers, who are already delivering on our indicators for success, including making 56 new clinical trials available to children, young people, and their families across Queensland in 2023.

Children’s Health Queensland will continue to leverage its unique position as the State’s dedicated specialist paediatric healthcare service to be a national and international leader in research and knowledge, remaining agile, flexible, and responsive to the changing needs of Queensland’s children and youth while delivering rigorous and clinically informed research that can improve lifelong outcomes for children of today and into the future.

We remain confident Children’s Health Queensland is well placed to harness our creativity and build on our collective expertise to prepare for the future of healthcare. We look forward to witnessing the ways we continue to turn ground-breaking research into action, so tomorrow will be better for children across Queensland and the world.

Frank Tracey

Chief Executive

Heather Watson

Board Chair

Children’s Health Queensland Hospital and Health Service



2023 at a glance

132

research projects*

616

articles and book chapters published

56

new clinical trials

\$3.6m

grant funding received

3,578

patients recruited to clinical trials

220

Projects reviewed by Human Research Ethics Committee

\$11.8m

research income including:

\$4.5m

philanthropic

\$3.1m

grants and academic income

\$4m

from industry

\$77.3m**

total research funds from executed contracts under management

\$59.4m

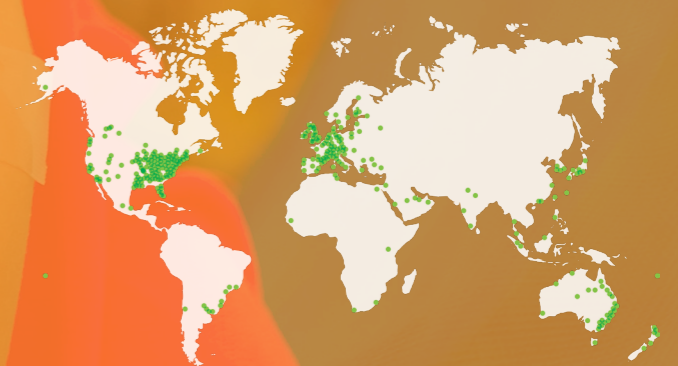
in clinical trials

\$7.9m

in industry research projects

667 international collaborations with

leading institutions in 132 cities across 35 countries



*Total projects authorised by the Children’s Health Queensland Research Governance Office.

** Amount includes funding from previous and future years under executed agreements.

Message from the Director of Research and Board Research Committee Chair

Children’s Health Queensland continued to mobilise and empower Queensland’s paediatric research community in 2023, leading ground-breaking projects to better the lives of children and young people globally.

As we move towards celebrating 10 years of care at the Queensland Children’s Hospital in 2024, it is important to recognise the vital contribution of our researchers, championing a culture of comprehensive healthcare and clinical excellence over the past decade.

Our *Children’s Health Queensland Research Strategy 2023-2025* sets ambitious goals and a renewed focus on increasing the number of staff leading and collaborating on research across the spectrum. In 2023 alone, 132 new research projects were launched at Children’s Health Queensland, with \$3.6 million in grant funding received.

We also recruited more than 3,500 patients for 56 new clinical trials in support of our goal to make innovative healthcare accessible to children, young people and their families no matter where they live.

We’re proud of our research teams who have continued to collaborate broadly, building strong partnerships both domestically and internationally. Many of the research projects in this report were co-designed by, and executed alongside universities, industry, patients and their families.

In 2023, the Paediatric Intensive Care Unit at the Queensland Children’s Hospital conducted one of the largest worldwide trials to-date, investigating the best choice of intravenous fluid therapy, one of the most common treatments given to more than half a million critically ill children in intensive care each year. The study reflects our efforts to leverage our clinical expertise and resources to answer important questions that impact the care of thousands of children worldwide.



We are committed to putting our research findings into practice, and already clinicians at the Queensland Children’s Hospital are improving early kidney transplant function for young children with kidney failure, thanks to our involvement in the Better Evidence for Selecting Transplant Fluids (BEST-Fluids) trial. As a result of this study, alongside 15 other hospitals, the findings were incorporated into our transplant protocols, lowering the risk of delayed graft function (DGF) in young transplant recipients.

In addition to commending the efforts of our researchers, we recognise the time and knowledge so generously shared by our various research committees and advisory groups (see page 20). Through your efforts year-on-year, we continue to confirm Children’s Health Queensland’s position as a world-class health service that prioritises research and innovation.

As we celebrate the tenth birthday of the Queensland Children’s Hospital in 2024, we look forward to the next 10 years of research and innovation at Children’s Health Queensland and leading life-changing care for children and young people.

Associate Professor Andy Moore
Director of Research

Professor Simon Denny
Board Research Committee Chair

Our strategy

Children’s Health Queensland’s research strategy is driven by our vision to lead life-changing care for children and young people – for a healthier tomorrow.

Children’s Health Queensland Research Strategy 2023-2025

Our research strategy aims to mobilise and empower the Queensland paediatric research community to lead ground-breaking research and translate new knowledge into better health outcomes for children and young people across Queensland and the world.

Our research enablers



Workforce

We aim to build our research workforce at all career stages, increasing the number of Children’s Health Queensland staff leading and collaborating on research across all areas.



Clinical excellence

We strive to increase and improve access to clinical trial activity across Queensland, with a strong focus on Aboriginal and Torres Strait Islander children and young people and those from culturally and linguistically diverse (CALD) backgrounds.



Partnerships

We collaborate broadly with clinical and non-clinical partners from academia, industry and the community.



Technology and critical infrastructure

We leverage Children’s Health Queensland’s clinical infrastructure, people, systems and data as well as state wide services to answer clinically important questions, inform new research initiatives and implement research findings into practice.

Indicators of success

We aim to increase the number of Children’s Health Queensland staff as lead investigators on research grants and publications, and have more clinicians enrolled in and completing high degrees by research (HDR) and supervising HDR students.

We strive to see more paediatric clinical trials open and accessible to all children, young people and their families across Queensland, as well as a greater volume of research studies across the spectrum.

The research we lead and collaborate on will improve clinical practice, quality, innovation, and service.

We are also committed to increasing consumer engagement in research.



Easing the strain of hand fractures in busy clinical environments

A new model of care has been developed at the Queensland Children's Hospital to lower patient wait times for families in outpatient clinics and ease the burden of acute hand fractures on busy clinical environments.

The model was co-designed by Children's Health Queensland clinicians and families through patient journey mapping, a tool which helps patients share their healthcare experience and allows open discussion to suggest areas for improvement as well as possible solutions.

The feedback of 26 families who attended Queensland Children's Hospital for a broken hand identified the need to address long wait times — often up to four hours — prompting the trial of an Australian-first, allied health led paediatric hand fracture clinic.

Over a five-month period at the hospital, all hand fracture referrals were triaged by an orthopaedic doctor and those not required to receive surgical attention would see a specialist hand occupational therapist in the allied health led clinic.

Children's Health Queensland occupational therapist Katherine Dalton, who led the research trial, said the therapy-led clinic allowed appropriate patients to be fast tracked out of the busy surgical outpatient environment.

"This model of care is for simple, stable hand fractures where we know patients are going to manage well with conservative treatment," she said.

100 families were seen through the trial clinic and asked six questions at the completion of clinical care, evaluating function, pain and comfort, and their experience including the time and cost of care.

90 per cent of families were satisfied with the wait time, while all respondents were happy with the overall clinic experience and care options provided.

All patients who completed a patient-reported outcome measure (PROMs) three months after their injury had full return of their hand function.

"This has never been done in an Australian children's hospital before," Ms Dalton said.

"It's about using our health system to provide children the right level of care that they need, in a more timely manner."

The therapy-led clinic also eased the burden of the hospital's medical orthopaedic fracture clinic by 20 per cent, during a period which experienced a 22 per cent surge in referrals of children with a broken hand. This allowed better access for patients who needed a surgeon's specialist attention.

Queensland Children's Hospital will continue with the allied health led hand fractures clinic in 2024 and 2025, while other Australian paediatric hospitals have contacted Queensland Children's Hospital to investigate developing a similar model of care.

Ms Dalton said the project is a contemporary example of healthcare teams collaborating with families to improve both the clinical environment, as well as the outcomes and experiences for patients.

"It was only possible by administrative, nursing and surgical teams supporting the changes to practice for occupational therapists to lead care that has improved health care experiences for families," she said.

Consumer partnerships to drive quality improvement in acute paediatric outpatient population. International Forum on Quality and Safety in Healthcare, Melbourne October 2023 PowerPoint Presentation (bmj.com)

A new model of care to lower patient wait times and ease the burden of acute hand fractures on busy clinical environments.

Ultrasound breakthrough for treating children's forearm fractures

Portable ultrasound devices may provide an alternative to x-ray machines for diagnosing forearm fractures in children, in a move that could reduce patient wait times in emergency departments.

Children's Health Queensland clinicians partnered with researchers at Griffith University and The University of Queensland to compare functional outcomes in patients assessed by ultrasound and those who had an x-ray on a suspected forearm fracture.

The ultrasounds were performed by nurses, physiotherapists and emergency physicians at the Queensland Children's Hospital, alongside Gold Coast University Hospital, Robina Hospital and Sunshine Coast University Hospital.

A total of 270 children aged between five and 15 years were treated during the 14-month trial, with participants randomly assigned to initially undergo point-of-care ultrasonography or radiography. Each was then followed up for eight weeks.

The results found ultrasounds were just as effective in diagnosing fractures as x-rays, the majority of children had similar recoveries and returned to full physical function across the two modalities.

Overall, the children who received an ultrasound had shorter stays in emergency departments and their families were more satisfied with the treatment.

Queensland Children's Hospital Director of Orthopaedic Surgery Dr David Bade said the findings could help tackle health inequality between larger and smaller hospitals.

"This research allows us to achieve a more efficient diagnostic and treatment service for these common injuries, not only in big tertiary hospitals but possibly also in smaller regional and rural centres."

"It eliminates the need for children and families in these communities to travel to larger hospitals for an x-ray," he said.

The research also has implications beyond diagnosis, to potentially free up x-ray machines for acute patients and lower hospital costs without compromising patient safety.

Forearm fractures account for almost two per cent of children presenting to emergency departments, with the most common type being buckle (torus) fractures.

These injuries are unique in children, due to the soft and plastic nature of their bones and can be managed with a wrist splint or bandage. If diagnosed with a bedside ultrasound, instead of an x-ray, it eliminates unnecessary radiation exposure in young children.

It's proposed ultrasound could also be used outside hospital settings such as general practices or sports medicine clinics, after its use during the trial by physicians, nurse practitioners, and physiotherapists alike.

Ultrasonography or Radiography for Suspected Pediatric Distal Forearm Fractures. The New England Journal of Medicine, May 2023 DOI: 10.1056/NEJMoa2213883

Ultrasounds for diagnosing forearm fractures in children could reduce patient wait times in emergency.



Results provided some of the earliest international evidence to support use of midline catheters in children.

World first trial into alternative for cannulas

A world first trial at the Queensland Children's Hospital has examined whether midline catheters (MCs) could be used in children, as an alternative to cannulas, when intravenous treatment for more than four days is anticipated.

Up to 50 per cent of peripheral intravenous catheters (PIVCs) or cannulas fail during treatment in children causing pain, the need for recatheterization and additional health care costs.

MCs inserted in the upper arm, are longer alternatives to traditional PIVCs and have gained clinical popularity with technological advances in design.

Children's Health Queensland nurse practitioner for the vascular assessment and management service (VAMS), Tricia Kleidon, wanted to compare the clinical effectiveness of both options for children requiring peripherally compatible infusions for four days or longer.

"We wanted to determine if the use of a midline catheter, rather than PIVC for children requiring peripherally compatible intravenous therapy for four days or longer improved patient, catheter, and cost outcomes," she said.

Tricia Kleidon and Professor Amanda Ullman from The University of Queensland's Paediatric Nursing

and Patient Safety group along with VAMS research nurses recruited 128 patients over a two-year period at Queensland Children's Hospital and randomly assigned a standard care cannula or midline catheter

The results provided some of the earliest international evidence to support judicious use of midline catheters in children.

Those who received the MC encountered significantly fewer device failures, less insertion attempts, and longer treatment stability compared to those receiving traditional PIVCs.

The results also demonstrated a substantial cost saving of more than 150 dollars per child.

"Our research has shown that we can prevent patient discomfort, treatment disruption, and save valuable resources including staff time and healthcare costs, with the introduction of a midline catheter," Ms Kleidon said.

In response to the findings, Children's Health Queensland researchers in partnership with the Children's Inpatient Research Network of Australia and New Zealand, are looking to implement midline catheters effectively and sustainably across paediatric settings.

Midline Compared With Peripheral Intravenous Catheters for Therapy of 4 Days or Longer in Pediatric Patients: A Randomized Clinical Trial, JAMA Pediatrics, November 2023 DOI: 10.1001/jamapediatrics.2023.3526

Investigating best intravenous fluids for critically ill kids

The Paediatric Intensive Care Unit (PICU) at the Queensland Children's Hospital has conducted one of the largest trials to date, investigating the best choice of intravenous fluids for critically ill children.

Intravenous fluid therapy is one of the most common treatments given to more than half a million children admitted to PICUs each year, to hydrate and maintain normal electrolytes.

The trial, in partnership with The University of Queensland was the 16th largest paediatric intensive care trial in the world to date.

516 patients younger than 16 years were randomly assigned either gluconate/acetate-buffered solution,

lactate-buffered solution or saline.

Treatment with the balanced solutions compared with saline reduced the incidence of a rise in plasma chloride.

As high chloride content in intravenous fluids has been attributed to kidney injury, clinicians may consider choosing a balanced solution for this clinical practice.

A subsequent larger trial will focus on investigating if balanced solutions reduce hospital length of stay in critically ill children.

Effect of Saline vs Gluconate/Acetate-Buffered Solution vs Lactate-Buffered Solution on Serum Chloride Among Children in the Pediatric Intensive Care Unit: The SPLYT-P Randomized Clinical Trial, JAMA Pediatrics, February 2023

DOI: 10.1001/jamapediatrics.2022

Building resilience in children during natural disasters

Children living through natural disasters, and the early childhood educators caring for them, are receiving greater support thanks to the Birdie's Tree series.

Birdie's Tree is a set of resources created by the Queensland Centre for Perinatal and Infant Mental Health (QCPIMH) to help children and families going through natural disasters and disruptive events.

In the wake of devastating floods in the Northern Rivers of New South Wales in 2022, the Birdie's Tree Early Learning Program by the QCPIMH provided resources to educators, parents and young children to aid the recovery effort.

104 early childhood educators across six early learning centres in the region were provided with comprehensive resources and support from Birdie's Tree staff over a three-month period.

Approximately 500 children who attended these centres also had the opportunity for mental health screening, while information sessions were offered to their parents and caregivers.

Educators were asked to provide feedback on their experience and to document children's learning from the

Birdie's Tree Early Learning Program.

Reflecting on their experiences, educators consistently expressed increased confidence in educating young children about severe weather events and doing so in a calm, supportive manner.

They also felt better equipped to connect with families experiencing ongoing challenges associated with their flood recovery.

Sharleen Keleher, who led the Northern Rivers flood recovery project with QCPIMH, said this study highlights the important role of early childhood education in preparing and supporting families before and after disasters.

"Supported by their engagement with the Birdie's Tree Early Learning Program, educators sparked meaningful conversations, creating a safe haven where children felt cared for and prepared for future weather challenges.

"The research also highlights the impact of cross-sectoral collaborations in championing the recovery of our little ones after disasters," she said.

Birdie's Tree continues to be delivered as part of a wide range of disaster recovery services across Queensland.

Lowering the risks for children receiving kidney transplants

The Queensland Children's Hospital has been part of a trial investigating the best selection of transplant fluids to lower the risk of delayed graft function (DGF) in kidney transplant recipients.

DGF is a complication of deceased donor kidney transplants, affecting up to 50 per cent of recipients, where the transplanted organ doesn't start working straight away.

Saline is widely used as an intravenous fluid to optimise graft function but may increase the risk of DGF given its high chloride content.

The Queensland Children's Hospital was one of 16 hospitals across Australian and New Zealand to take part in the Better Evidence for Selecting Transplant Fluids (BEST-Fluids) trial, in partnership with the Australian Kidney Transplant Network (AKTN) and the Australian and New Zealand Dialysis and Transplant Registry (ANZDATA).

The trial randomly assigned recipients either intravenous balanced crystalloid solution or saline during surgery

and up until 48 hours after transplantation.

Among the 808 patients across the two- and half-year trial, those who received intravenous fluid therapy with balanced crystalloid solution reduced the incidence of DGF compared with saline.

Children's Health Queensland Executive Director of Medical Services and paediatric nephrologist, Associate Professor Steve McTaggart said: "The results from this study will improve early kidney transplant function for young children in Queensland with kidney failure."

Researchers concluded balanced crystalloid solution should be the standard-of-care intravenous fluid in deceased donor kidney transplantation.

As a result of the study, the findings have been incorporated into the transplant protocol at the hospital.

Balanced crystalloid solution versus saline in deceased donor kidney transplantation (BEST-Fluids): a pragmatic, double-blind, randomised, controlled trial, *The Lancet*, July 2023, [https://doi.org/10.1016/S0140-6736\(23\)00642-6](https://doi.org/10.1016/S0140-6736(23)00642-6)



This study highlights the important role of early childhood education in preparing and supporting families before and after disasters.

Improving education to support children in remote areas with feeding disorders

Queensland children with feeding disorders are receiving care closer to home, thanks to a world first trial in allied health expanding the reach of simulation training for clinicians.

Traditionally, simulation training for clinicians learning to treat infants and children with feeding and swallowing disorders has been conducted face-to-face, predominantly at tertiary hospitals or metropolitan care centres. This limits access for rural and remote speech pathologists, resulting in challenges with children receiving care by trained clinicians close to home.

Following the COVID-19 pandemic, researchers from Children's Health Queensland and The University of Queensland worked to test the feasibility of telesimulation by adapting and piloting an in-person training scenario to a digital format.

The research team then conducted a randomised controlled trial with 39 speech pathologists, and found improvements in clinical reasoning and self-reported confidence or anxiety, regardless of whether they received in-person simulation or telesimulation.

Children's Health Queensland's Dr Jeanne Marshall said the results concluded that telesimulation learning outcomes were equal and in some cases, superior to in-person education.

"Clinicians were learning a lot, they were gaining confidence and those skills and confidence were maintained, and people were equally satisfied in both conditions," she said.

Since the completion of the research, the team has expanded its telesimulation portfolio in speech pathology, delivering scenarios for more than 115 clinicians across Australia and New Zealand, including clinicians in rural and remote areas.

The work has also been presented at conferences internationally.

"In the future, we're really keen to see if we can expand on the success of the program to build the case for telesimulation which has a more multidisciplinary focus," Dr Marshall said.

Development and Pilot Testing of Telesimulation for Pediatric Feeding: A Feasibility Study, *Dysphagia*, October 2023, DOI: 10.1007/s00455-023-10556-3

Telesimulation learning outcomes were equal and in some cases, superior to in-person education.

Identifying children at risk of prolonged temporary tube feeding

Researchers at the Queensland Children's Hospital have worked to identify possible characteristics of children at risk of prolonged temporary tube feeding.

While short-term tube feeding can provide essential nutrition to children with a range of clinical issues, around 36 per cent of patients continue tube feeding beyond the resolution of their medical condition.

In partnership with The University of Queensland and the Australian Centre for Health Services Innovation, researchers reviewed the medical records of more than 500 children.

Previous research had identified that children with quickly resolving medical conditions are less at risk of prolonged tube feeding, so researchers at the hospital focused their attention on 211 children who were tube fed for greater than five days.

The study identified children with complex feeding difficulties, and those who had a history of failing to grow, cancer, congenital conditions, prematurity, or digestive diseases were most at risk of prolonged tube feeding.

Children who were tube fed for more than five days were also typically older and more lived in rural and remote areas of Queensland.

Based on these characteristics, children can be identified earlier as being at risk of developing tube feeding dependence and their tube feeding journeys improved through tube exit planning.

Characteristics and health service utilisation of children most at risk for prolonged temporary tube feeding, *Nutrition in Clinical Practice (NCP)*, April 2023, <https://doi.org/10.1002/ncp.10981>

Early detection of impairments in premature babies

Children's Health Queensland researchers are a step closer to detecting premature babies at risk of cerebral palsy and other neurodevelopment disorders earlier than ever before.

Babies born before 32 weeks are 40 times more like to be diagnosed with cerebral palsy than those born at full term. They're also at increased risk of motor delays, autism, ADHD, developmental coordination disorder (DCD) and their IQ is on average 12 points lower.

Children's Health Queensland consultant physiotherapist Dr Joanne George said: "It's very hard to know which child is likely to have which outcome and this can be incredibly stressful for parents and families."

The research led by Dr George set out to identify robust biomarkers, both MRI and clinical, to enable earlier detection of infants at risk of adverse outcomes.

"If we can identify which kids have which outcomes by 30 weeks gestation, they've still got another 10 weeks in hospital, which presents a whole new window of opportunity for early interventions," she said.

The research, in partnership with The University of Queensland and Commonwealth Scientific and Industrial Research Organisation has built one of the largest cohorts in the world — 269 children born prematurely less than 31 weeks gestation — who have undergone an early neonatal MRI and clinical testing between 30 and 32 weeks postmenstrual age.

Follow up examinations were conducted at term equivalent age, three, 12 and 24 months with initial findings indicating earlier MRI has better predictive accuracy for outcomes than waiting until 40 weeks gestation.

"It's opening possibilities for children to have a number of these assessments done prior to discharge rather than having to come back to the hospital," Dr George said.

Most recently, 118 six-year-old children have returned to the Centre for Children's Health Research (CCHR) for further rigorous assessments of cognition, language, learning, mental health, and motor outcomes.

When the project began in 2012, diagnoses of cerebral palsy were typically given after two years of age, and cognitive difficulties not picked up until children started school.

The timeline has significantly shortened, but Dr George said continued investigation could see at risk premature babies diagnosed shortly after birth with early interventions such as neuroprotection and neurorehabilitation beginning in the Neonatal Intensive Care Unit.

The team has presented its initial findings both nationally and internationally, as well as published 14 papers.

Dr George will continue assessing six-year-olds from the cohort at the CCHR over the next two years, while also beginning analysis of the latest data.

Diagnostic accuracy of the Hammersmith Neonatal Neurological Examination in predicting motor outcome at 12 months for infants born very preterm, Developmental Medicine & Child Neurology (DMCN) DOI: 10.1111/dmcn.15512

By identifying which kids have which outcomes by 30 weeks gestation, it presents a whole new window of opportunity for early interventions.



Awards and prizes

Children’s Health Queensland researchers were recognised with a variety of awards and honours in 2023 for their life-changing work.



James Scott

Clarivate Highly Cited Researcher 2023, recognised for demonstrating broad influence in child and youth mental health.

Of the world’s population of scientists and social scientists, Highly Cited Researchers are one in 1,000, selected for authoring multiple Highly Cited Papers.

Professor James Scott was recognised for his research over the past decade into prevention and intervention strategies to improve the mental health of adolescents.

Professor Scott has established a program of research developing preventative strategies and cost-effective real-world interventions for mental illness in children and youth.

His work incorporates studies in epidemiology, clinical trials, bullying and psychiatric neuro-immunology.

Dr Geoff Askin

The Children’s Health Queensland Inaugural Medal of Distinction was awarded to Dr Geoff Askin for his ongoing work in the diagnosis, treatment and care of children and young people with spine deformities and injuries.

Anne Chang

Professor Anne Chang was awarded the *Children’s Healthcare Australasia Individual Medal of Distinction* for her ongoing work improving the lives of children with bronchiectasis and achieving equitable health services for First Nations children and young people.

Amanda Ullman

Professor Amanda Ullman and team were awarded the *Australian Patients Association Most Outstanding Patient Innovation* for the IV Passport, which allows patients to document current historical and future IVs. This consumer-voted award recognises excellence in the healthcare sector. For the IV Passport, it celebrated the consumer led co-design of the mHealth application, which is especially valuable for children with complex health conditions who rely on the insertion and management of IVs, including central venous catheters, across healthcare systems.



Tricia Kleidon

Children’s Health Queensland Excellence in Research Awards: Tricia Kleidon for her work in paediatric vascular access, and the Oncology Research team.

Dr Jessica Killey

Dignan-Stephens Award for best allied health student research, “Health professionals supporting engagement (the old adherence) with non-invasive burn scar treatments”.

Children’s Health Queensland Surgical Research Symposium 2023

Alex Seeto

Best presentation: “Lower Limb Alignment and Knee Joint Morphological Parameters in Paediatric Patients With Anterior Cruciate Ligament Rupture” *CHQ Research Showcase 2023.*

Spreading the word

The work of Children’s Health Queensland researchers is contributing to better care, and health and wellbeing outcomes for children across Australia and internationally.

4,006

total **mentions** across academic, online and social media platforms



616

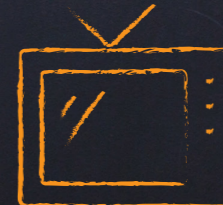
articles and book chapters published



Media

291

news items across 21 countries



3,692

social media mentions



Research published in some of the world’s most prestigious journals including:

- *The Lancet*
- *The New England Journal of Medicine*
- *JAMA*
- *Nature Medicine*
- *Cochrane Database of Systematic Reviews*
- *Lancet Respiratory Medicine*
- *Lancet Child Adolescent Health*
- *Cochrane Database of Systematic Reviews Medicine*

Committees and governance

Children's Health Queensland Board Research Committee

The Children's Health Queensland Research Committee provides oversight and recommends strategies to the Children's Health Queensland Board to build long-term collaborations in research and enhance clinical service delivery founded on sustainable partnerships. The Committee helps build expertise and guide engagement to ultimately position Children's Health Queensland (CHQ) as a world-class health service of national and international significance.

Membership 2023

Heather Watson Chair, CHQ Board member
Cheryl Herbert, CHQ Board member
David Gow, Chair of the CHQ Board
Suzanne Cadigan, CHQ Board member
Professor Simon Denny, CHQ Board member
Associate Professor Frank Tracey, Chief Executive CHQ
Associate Professor Steven McTaggart, Executive Director Medical Services CHQ
Associate Professor Leanne Johnston, Executive Director Allied Health CHQ
Associate Professor Andy Moore, Director of Research CHQ
Professor Craig Munns, Director of Children's Health Research Centre, Faculty of Medicine, UQ
Imelda Ryan (until March 2023) CHQ Business Manager Research
Dayna Williamson (from April 2023), CHQ Senior Manager Research Services & Partnerships.

Children's Health Research Alliance

The Children's Health Research Alliance was an unincorporated joint venture between Children's Health Queensland Hospital and Health Service and the Children's Hospital Foundation. It aimed to identify research priorities for funding that align to childhood disease burden in Queensland and the research and service capabilities of Children's Health Queensland and its partners. With the commencement of the Queensland Children's Research Collaborative Council, the Children's Health Research Alliance concluded in March 2023.

Membership 2023

Associate Professor Frank Tracey, Chief Executive CHQ
Lyndsey Rice, Chief Executive Office, Children's Hospital Foundation (CHF)
Cheryl Herbert, CHQ Board Member
Associate Professor Leanne Johnston, Executive Director, Allied Health CHQ
Nick Van Dyke, Director of Impact CHF
Associate Professor Andy Moore, Director of Research CHQ

Queensland Children's Research Collaborative Council

In 2023, Children's Health Queensland established the Queensland Children's Research Collaborative Council an executive round-table with academic partners The University of Queensland (UQ), QUT and the Children's Hospital Foundation. The Council provides recommendations to the CHQ Board to progress statewide research endeavours, including the development of a dedicated paediatric health and medical research alliance.

Membership 2023

Professor James Angus AO, Independent Chair
David Gow, Chair CHQ Board
Associate Professor Frank Tracey, Chief Executive CHQ
Professor Patsy Yates, Executive Dean, Faculty of Health, QUT
Michael McArdle, Executive Director, Office of Research Services, QUT
Professor Geoff McColl, Director, Executive Dean, Faculty of Medicine, UQ
Professor Craig Munns, Director of Children's Health Research Centre, Faculty of Medicine, UQ
Lyndsey Rice, CEO, CHF
Jane Black, Board Chair, CHF

Children's Health Queensland Research Council

The Children's Health Queensland Research Council is an advisory body, providing senior Children's Health Queensland research clinicians with an opportunity to inform and help deliver our strategic research priorities, in line with the overall health service strategy. This advisory group, chaired by Children's Health Queensland Director of Research, Associate Professor Andy Moore, is made up of 122 senior clinician researchers representing the full spectrum of clinical services and departments, and members of the Children's Health Queensland's executive leadership team.

Human Research Ethics Committee

Children's Health Queensland's Human Research Ethics Committee (HREC) reviews the ethical and scientific validity of proposed research within the Children's Health Queensland Hospital and Health Service and in partner agencies across Australia. The HREC is certified with the National Health and Medical Research Council to conduct paediatric clinical trials (Phases I to IV), involving drugs and devices, interventional research, other health and medical research, mental health, justice health and paediatric population health research.

We're translating ground-breaking research into action today. So children and young people can have a healthier tomorrow.



Membership 2023

Professor Alan Isles AM, Chair
Graham Hyde OAM PHF (layperson)
Paula Penfold AM (layperson)
Michelle Carr (healthcare professional)
Michelle Bond (healthcare professional)
Rebecca Doyle (healthcare professional)
Hugh Miller (healthcare professional)
Reverend Robert Rogers (pastoral care provider)
Bobbie Gadsden (pastoral care provider/Aboriginal and Torres Strait Islander representative)
Alexandra Zollner (lawyer)
Ann-Maree Russo (lawyer)
Dr Helen Buntain (current clinician researcher)
Associate Professor Paul Lee-Archer (current clinician researcher)
Dr Craig McBride (current clinician researcher)
Dr Helen Petsky (current clinician researcher)
Dr Sainath Ramans (current clinician researcher)
Amanda Smith (HREC Coordinator)
Ashleigh Fielding (HREC Support Officer)

The best care for every Queensland child



childrens.health.qld.gov.au

 [childrenshealthqld](https://www.facebook.com/childrenshealthqld)  [queenslandchildrenshospital](https://www.instagram.com/queenslandchildrenshospital)