

WCHRI Case for Collaboration

The Power of Partnership

Imagine:

- a child, before birth, has a greater chance in life due to new technologies providing targeted treatment to the fetus and/or placenta;
- a child recuperates from heart surgery at home in their rural community with real time remote monitoring by a team of specialists;
- an Indigenous teenager engages in culturally relevant, relationship-based after-school healthy living programming, leading to better access to health care and social supports;
- a young family carrying a rare genetic disorder is able to participate in a drug trial to treat their condition;
- a woman has an earlier diagnosis followed by novel treatment strategies to be cured from ovarian cancer.

Research saves lives and gives hope. Major changes in health outcomes come about through thousands of small, focused steps taken along complex and integrated paths, over the course of years. The importance and impact of those steps is not limited to the breakthrough at the end, but to the incremental improvements that impact health and well-being along the way.

As the **only research institute in Canada** dedicated to children's health, perinatal health, and lifelong women's health, WCHRI is committed to addressing the distinct and intersecting needs of over half the population. Through a **unique partnership between Stollery Children's Hospital Foundation (SCHF), Alberta Women's Health Foundation (AWHF), University of Alberta (UofA) and Alberta Health Services (AHS)**, WCHRI supports research on the complex interplay of factors affecting health across the lifespan, with a particular focus on **developmental origins of health and disease (DOHaD)**. DOHaD explores how early life experiences shape lifelong health, examining how environmental factors during critical developmental periods – such as fetal life and infancy – impact susceptibility to chronic diseases. These factors include maternal nutrition, stress, toxin exposure, and socioeconomic conditions. DOHaD highlights the interaction between environment and genetic predispositions, influencing physiological and metabolic processes, and altering risks for conditions like obesity, diabetes, cardiovascular diseases, and mental health disorders. By understanding these early influences, our researchers aim to develop **preventive strategies and early interventions** to enhance healthy life trajectories and thus improve health outcomes across generations.

The existence of WCHRI has allowed for the **integration of several sites and programs into a unique research environment in Edmonton.**

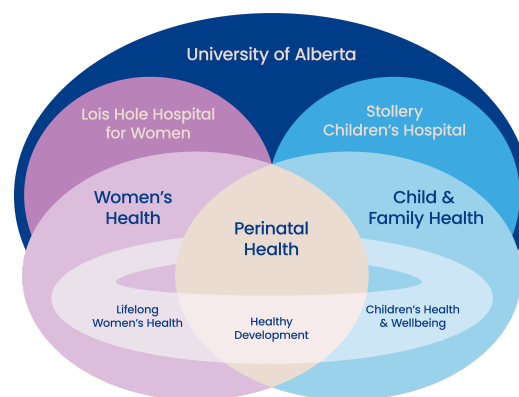
- The Stollery Children's Hospital cares for children from birth through young adulthood and WCHRI supported child health research is deeply embedded across hospital programs. This research also extends beyond the Stollery to diverse hospitals and community-based healthcare delivery sites, such as the Glenrose Rehabilitation Hospital, the Stollery Philip C.

Etches Neonatal Intensive Care Unit (NICU) at the Royal Alexandra Hospital (RAH), the Northeast Community Health Centre, and the New Canadians Health Centre.

- WCHRI supported health research also fosters community-university partnerships, engaging in significant collaborations with schools, social serving agencies, community groups, and other organizations that support children and family health and well-being. More recently, WCHRI has engaged with collaborators in the community of Maskwacis to establish Ispimihk Awasisak (Sky Children), a program aimed at improving health and well-being for Indigenous children and youth.
- WCHRI supported research is also integrated at the Lois Hole Hospital for Women (LHHW), where the most complicated pregnancies in the northern part of the province are delivered and where women can access specialized healthcare to address their unique health needs. WCHRI supported women's health research extends to the community with particular emphasis on better understanding the needs of immigrant and Indigenous women. The intersections between women's and children's health as it relates to pregnancy, perinatal health and developmental origins of health and disease are further supported through community-based research in the Canadian North; community-led programs, such as the Indigenous Healthy Life Trajectories Initiative in the Alberta communities of Wood Buffalo and Maskwacis; and collaborations with local organizations that offer intercultural pregnancy support programs, such as the Multicultural Health Brokers.

Our partnership allows us to foster **a rich research ecosystem that integrates across academic, community and healthcare** settings, creating an environment where we generate knowledge and facilitate the translation of knowledge to practice, benefitting all Albertans.

Investments in WCHRI over the last 20 years have led to the development of critical foundational research infrastructure and support platforms at the UofA, training opportunities for the next generation of researchers, the generation of new knowledge through research discoveries, and the implementation of this knowledge into health care. We have increased capacity in women and children's health research through recruitment of world-class scientists across disciplines and creating an environment at the UofA where they can advance research that optimizes health outcomes across the lifespan. WCHRI members have successfully tackled challenging research problems to **generate knowledge** that has led to **improved health outcomes** for both women and children. Their discoveries have resulted in changes to practice and policy and to new prevention and treatment strategies. In the last two decades, WCHRI has grown to over 400 academic members, 50 staff, with hundreds of trainees, community members, and partners. Together, our partnership has built **an Institute that includes a diverse and interconnected community of people who are dedicated and passionate about women and children's health.**

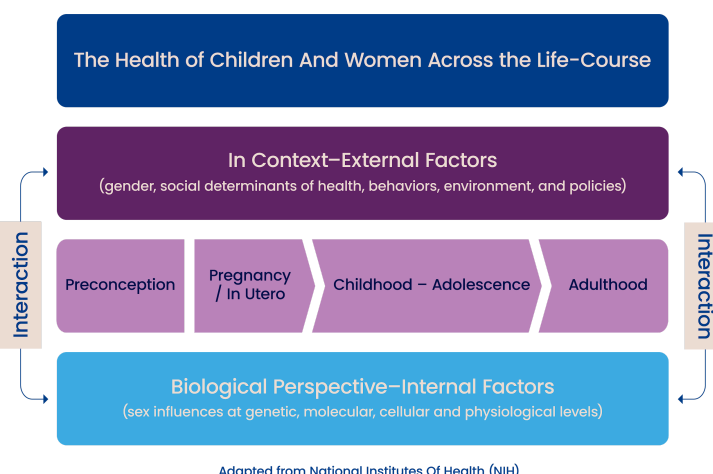


We encourage you to review [Appendix A: Vital Insights: A 10-Year Retrospective Review of the Women and Children's Health Research Institute 2014-2024](#) to learn more about the history of WCHRI and key accomplishments over the last decade.

As we move forward into the next phase of WCHRI, we will build on these successes. With a focus on the goals and objectives outlined in our strategic plan (see [Appendix B: WCHRI strategic plan](#)) we will continue to catalyze and accelerate health research that is meaningful and impactful to all Albertans; health research that is responsive to emerging needs within a growing and dynamic health system. The sections below highlight key areas of strategic opportunity and investment within this partnership – opportunities that are foundational to women and children's health research, that require a sustained commitment by all partners, and that leverage the unique nature of our partnership.

Improving Health Across the Life-course

Our partnership provides a tremendous opportunity to **address health inequities affecting women and children**. Women and children's health inequities are deeply interconnected due to their shared social, economic, and environmental determinants. Women's health directly impacts children's health, as maternal health before, during, and after pregnancy plays a crucial role in a child's development and well-being. Poor maternal health, influenced by factors like limited access to health care, inadequate nutrition, and lack of education, can lead to adverse outcomes for children, including low birth weight, developmental delays, and higher mortality rates. These inequities arise from insufficient investment and are reflected in the lack of research. Women and children remain greatly **underrepresented in health research**, leading to significant negative impacts on their health and well-being. Historically, health research has focused on adult males, resulting in a poor understanding of the unique physiological and experiential differences of women and children. Conducting research specific to women and children across various health conditions, experiences, and life stages is crucial for ensuring high-quality, evidence-based healthcare. A healthy society depends on healthy women and children. Since health events before, during, and after pregnancy can have long-term effects on both women and their children, research focused on perinatal health and developmental origins of health and disease is vital for **improving health of women and their children, across generations**.



Advancing Children's Health, Today and Tomorrow

Children's health research in Canada is extremely collaborative and well networked — each children's hospital has two critical pairings — their foundation and their research institute. Together, these pairings drive forward the best care for patients and their families — here in Edmonton, WCHRI is the research institute for the Stollery Children's Hospital. Over the last 20 years, we have built a broad child health research portfolio — one that spans disciplines, sectors, systems, and communities (see *Appendix A: Vital Insights*).

Research is essential in advancing high quality care for Stollery kids and their families — giving kids the best chance at a long and healthy life. Research helps us understand disease patterns, trends, risk factors, prevention strategies, intervention outcomes, patient/family experiences, and economic outcomes. It provides patients and families with hope when they are faced with chronic and life-threatening conditions. Research leads to better health and well-being for children across diverse contexts, and can generate strategies that can be implemented in the care of individual children, and also at a systems or societal level through changes in practice and policy.

With planning for a new standalone hospital well underway, we've chosen to highlight areas of ongoing and future collaborative opportunity where a sustained and increased investment in WCHRI research intersects and aligns with the SCHF, government, and health system priorities. Knowing that this is a dynamic and evolving environment, we are also highlighting areas where we feel we can best distinguish ourselves as a research institute and where we might draw on the strengths of our partnership to **drive forward high impact research that will benefit children and families locally, provincially and nationally**.

- **Early intervention and prevention towards improving children's health:** Low-birth weight and preterm birth are among the most prevalent and costly conditions for pediatric hospitals¹. WCHRI is home to several nationally and internationally renowned researchers who focus on perinatal health, newborn care, and early life trajectories to detect, prevent, and/or treat these conditions. Together we can invest in and support research programs that help us understand the developmental origins of health and disease, that improve early diagnosis and detection, and that lead to novel treatments or preventions.
- **Precision health:** Precision health is the future of medicine. We need to build critical infrastructure and resources to support the research of today and tomorrow. WCHRI has been building the necessary support, platforms and facilities to enable a precision child health pipeline — from problem identification to diagnosis to treatment to cure. Ongoing investments in the Translational Genomics Hub (problem to diagnosis), a stem cell facility (diagnosis to treatment) and clinical trials infrastructure (treatment to cure) are

¹ Gill PJ, Thavam T, Anwar MR, et al. Prevalence, Cost, and Variation in Cost of Pediatric Hospitalizations in Ontario, Canada. *JAMA Netw Open*. 2022;5(2):e2147447. doi:10.1001/jamanetworkopen.2021.47447

essential to creating this pipeline. Together we can advance precision child health research by leveraging prior investments in research platforms and building new infrastructure to enable discovery.

- **Technology and innovation:** The UofA is ranked #2 in Canada for Artificial Intelligence and Machine Learning (AIML) research², Alberta has world-class comprehensive population level health system data assets³, and WCHRI is home to some of the most talented clinician-scientists and biomedical researchers in the country. We can work in partnership to bring these assets and talents together in ways that advance data driven solutions and digital innovations to improve children's health at all levels of the health system, from hospital to community to home.
- **Clinical trials:** Together, we have built a world class pediatric clinical research support team and national data coordinating centre that enables clinical trials and other clinical studies at the Stollery Children's Hospital and across Canada. Locally, the Stollery Children's Hospital has developed facilities and capacity to support clinical trials in the pediatric Clinical Investigation Unit (Phase 2-4). As well, the adjacent Phase 1 unit in the adult hospital (University of Alberta Hospital) is available for pediatric studies that require this level of infrastructure. This is a unique structure that does not exist at every children's hospital in Canada – let's build on this success and continue to grow our research platform to ensure that every family has the opportunity to participate in and benefit from life saving and life improving clinical trials.
- **Indigenous health:** There is a pressing need for targeted program development and research to address health disparities among Indigenous children, recognizing the importance of culturally informed and community-centered approaches. WCHRI has been working in partnership with Indigenous scholars, and local communities to launch an Indigenous child health program, Ispimihk Awasisak (Sky Children), aimed at improving the health and well-being of Indigenous children and their families in the community. As we look to the future we see opportunities to further invest in and expand these partnerships, create meaningful relationships between communities-academia-health system, foster research skill building and training in community, support Indigenous student pathways into children's health research, and many more!

² <https://www.ualberta.ca/research/our-research/artificial-intelligence.html>

³ https://www.albertarwe.ca/rwe_in_alberta/

Closing Gaps in Women's Health

Over the last decade, we've seen a substantial increase in advocacy for women's health research⁴ which is leading to increased funding opportunities nationally and internationally. This, coupled with greater public awareness of the gaps that exist in women's health research and care, have led to a **groundswell movement** in our community. In recent years women's health research institutes and funders have come together through Partnership for Women's Health Research Canada and Women's Health Collective Canada; Canada's national health research funding agency launched the National Women's Health Research Initiative; and later this year our province will launch a new Program Improvement and Integration Network (PIN) focused on women's health. Even though only 7% of CIHR funding and 3.4% of Alberta health research funding is currently dedicated to women's health, we believe this will increase in the near future given the strong advocacy and interest we are seeing at a provincial and national level — let's make sure we're ready. Women's health is broad, encompassing conditions that are female sex-specific (e.g. cervical cancer), female sex-predominant (e.g., migraine, auto-immune disorders), and those with sex differences (e.g., cardiovascular disease) - and all interact with gender factors that influence the presentation, progression, and response to treatment. Researchers at WCHRI aim to capture the nuances of sex and gender factors that impact health and disease to optimize the health of women at all life stages.

- Growing:** We've been experiencing **positive program pressures** in women's health research at WCHRI where the number of excellent research projects being proposed exceeds the funds available. In the women's health research ecosystem, we are seeing expanded perspectives on women's health; research is moving beyond a focus on reproductive health towards broader contextual factors that impact women's health such as sex (biological factors) and gender (sociocultural factors, including identity, roles, relations, and institutionalized gender), social determinants, and the environment. Through our partnership we can expand the breadth of women's health research at WCHRI too. With increased and sustained funding we can continue to support research that addresses unique health needs of women, such as menstruation, pregnancy, menopause, gynecologic and reproductive health; but we can also increase our support for research on health issues that affect women differently and/or can be more disabling for women — such as heart disease, inflammatory disease, and metabolic conditions such as diabetes. As noted in 'Surveying the Silence: Exploring the impact of taboos in women's health,' 1 in 5 respondents feels that their gender is a barrier to receiving care. Together, we can encourage health researchers at the UofA to turn their attention to women's health leading to increased health equity.

⁴ We use a broad and inclusive definition of women's health research, incorporating both sex as a biological variable and gender as a social variable, across the life course. We include people assigned female at birth, all people who identify as women (cis and trans inclusive), as well as gender diverse individuals who do not identify as women but who share health challenges in common with women." (from CIHR IGH, 2024)

- **Mobilizing:** Research integration at the LHHW has been a priority of our partnership from the outset, with the AWHF Chair in Women's Health Research and a dedicated space for clinical research within the hospital – the Dale Sheard Centre for Solutions in Women's Health. While this physical location and Chair provide critical infrastructure for research at our women's hospital, they also serve as a beacon, emphasizing that health research is valued and that we need to both **generate and mobilize knowledge to improve health outcomes for women**. We can work together to build upon these core areas, strengthening clinical and translational research at the hospital and in our community. We can commit to sustainably funded and coordinated research platforms that support researchers, clinicians, and patients. In addition to providing essential support for clinical and research programs in the hospital, we can partner to mobilize these platforms into the community. This could involve working with community members and patients to better understand women's health research priorities, closing critical knowledge gaps, and ensuring that women and clinicians in our province have access to the best evidence when making health-care decisions.
- **Leading:** Gaps in critical areas of research have been filled with targeted investments in Research Chairs (ovarian cancer, women's mental health, and mature women's health). WCHRI has recently appointed an Academic Lead, Women's Health Research who also holds the University of Alberta Chair in Sex and Gender. We can work together to **leverage and connect this expertise**, to support our leaders in large grant applications and team building efforts, leading to greater research capacity and impacts.

Increasing our Impact

Through 20 years of partnership, we have built a **world-class research institute**. As a Top 5 Canadian university, the UofA offers a rich and dynamic home for WCHRI. Let's continue working together to make WCHRI **"the" place in Canada for researchers** to conduct women and children's health research.

- **Talent:** Let's continue to expand knowledge and expertise in women and children's health by recruiting and retaining rising stars or established researchers in areas where we want to build or sustain capacity. We can **attract and support the best and brightest** researchers in women and children's health by partnering and increasing our commitment to salary awards, permanent research positions, research time protection, and research start-up funding.
- **Leadership:** We can tackle global research challenges in women and children's health by activating and supporting research clusters and research leadership within WCHRI. WCHRI has over 400 academic researchers and 30+ research chairs⁵, by providing our research leaders with sufficient investment and support to amplify their efforts and

⁵ [Research Chairs](#) and [Canada Research Chairs](#)

messages, we can help accelerate these researchers' journey from local to national funding, **increasing the competitiveness of WCHRI researchers on the national and international stage.**

- **Resources:** It's important to **equip WCHRI researchers with dedicated access to high quality research platforms, infrastructure, and tools** in order to propel research innovations for women and children. We've built an incredible research environment at WCHRI with an exceptionally talented team who provide diverse and tailored research programs and platforms to WCHRI researchers. As an example, we've built clinical trials capacity through targeted investments in a pediatric clinical trials team and a national data coordinating centre - this has created opportunities for families to access life saving and life improving research. Now is the time to take these types of investments to the next level - investing in programs and expertise that will help our researchers gain a competitive edge at the national/international level; investing in facilities and personnel to catalyze cutting-edge research, such as stem cell technologies and data-driven solutions. Together we can ensure that WCHRI researchers have access to infrastructure resources that will create a strategic advantage for women and children's health research and increase the potential for positive return on investment.
- **Next generation:** Let's create opportunities for students to choose a training path in women and children's health research. The UofA is home to over 40,000 students from more than 150 countries, and our partnership can create unique incentives and opportunities to attract top national and international research trainees and make WCHRI the **top destination for the next generation of scientists.**
- **Public awareness:** Together we can continue to increase public awareness of the importance of women and children's health research. We're building momentum with over 600 media mentions since 2016, monthly research-focused donor engagement activities and an expanding reach on social media. Let's expand our community outreach efforts and amplify our collective messages to ensure that WCHRI **research discoveries are shared back to the community and to generate excitement** that translates into additional investment!

A Brighter Future

We are excited about the next phase of WCHRI and a continued collaboration between the SCHF, AWHF, UofA, and AHS. We see tremendous opportunities for all partners to invest in WCHRI in order to catalyze research and generate outcomes and impacts that are critical to the mission of each partner and the partnership as a whole. Together we can create a brighter future for women and children!