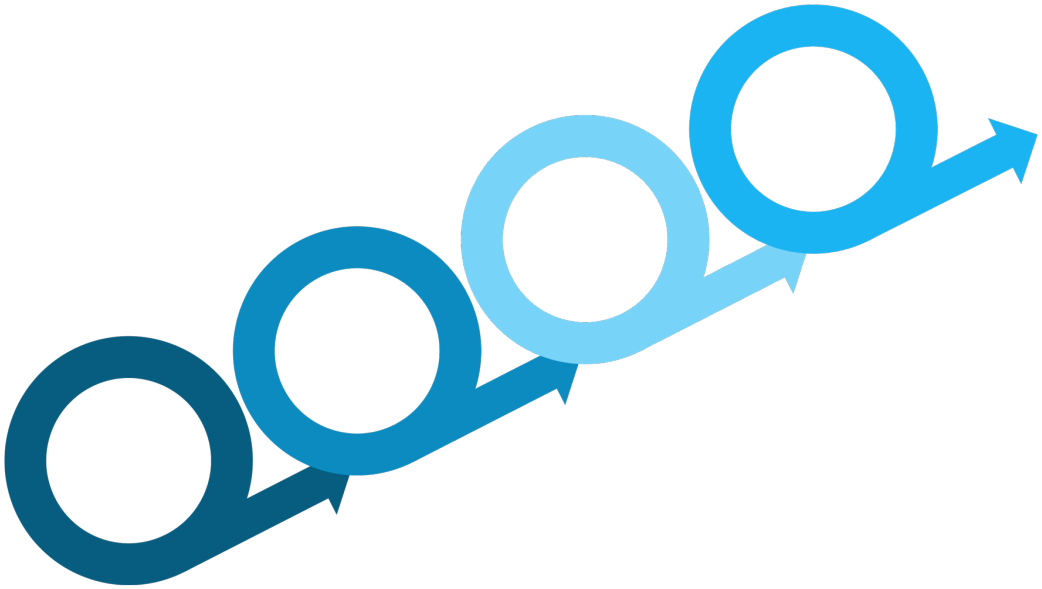
WCHRI 5 YEAR STRATEGIC EVALUATION REPORT 2021



The Power of Partnership

UNIVERSITY OF ALBERTA

Alberta Health Services

STOLLERY CHILDREN'S HOSPITAL FOUNDATION

AWHF alberta women's health foundation

Organization Overview

Since 2006, the Women and Children's Health Research Institute (WCHRI) has endeavoured to facilitate academic research, specializing in women's and children's health issues. Historically, women and children have been significantly underrepresented in health research. WCHRI was established to address this gap in research and facilitate advancements in women and children's health.

WCHRI is a partnership between the University of Alberta and Alberta Health Services, with core funding from the Stollery Children's Hospital Foundation and the Alberta Women's Health Foundation. Thanks to our funders' generosity, WCHRI is able to support a broad range of research programs focused on improving health for women and children. Support is offered through three program streams: research grants, research catalysts and research support platforms.

WCHRI vision:

> To harness the power of research innovation for a healthy future for children and women.

WCHRI mission:

> WCHRI will foster the brightest minds to discover, innovate and ultimately transform the health of children and women through supporting research excellence.

The operating principles ascribed to achieve this vision and mission include:

- Facilitate research activities, build capacity, catalyze research innovation and excellence.
- Advocate for women and children's health research platforms, programs and policy, in Alberta, across Canada and beyond.
- Communicate research outcomes to stakeholders, patients, community and government.
- Train the next generation of researchers.
- Translate knowledge to support evidence informed practice and policy.
- Sustain operations through effective accountability reporting and stakeholder engagement.

Together, the vision, mission and operating principles guide the development of WCHRI's strategy. The strategic plan is a tool used to help communicate WCHRIs organizational purpose to our stakeholders and to guide our day-to-day operations. WCHRI strategic plan is organized into five main goals:

1. Academic Members: Support our members as they strive for research excellence and advance health research for greater impact.
2. In Training Members: Build capacity in women and children's health research by inspiring and supporting the next generation of researchers.
3. Environment: Create a research environment where we challenge the status quo and address the unique health needs of women and children, a place where investigators want to come to in order to conduct world class research in women and children's health.
4. Ecosystem: Innovate with our stakeholders and organizational partners to increase the impact and reach of women and children's health research locally, provincially, nationally and internationally.
5. Sustainability and growth: Commit to professional and efficient, internal operational processes that ensure the highest levels of business accountability and sustainability leading to enhanced capacity and growth.

Evaluation Approach - Research Impact Assessment

Since 2014, WCHRI has been using a health research impact assessment (RIA) framework as our overarching model to support organizational and programmatic evaluation. This framework is based on the Canadian Academy of Health Sciences Impact Framework[1] and is used to illustrate how investments in WCHRI ultimately contribute to better health outcomes for women and children.

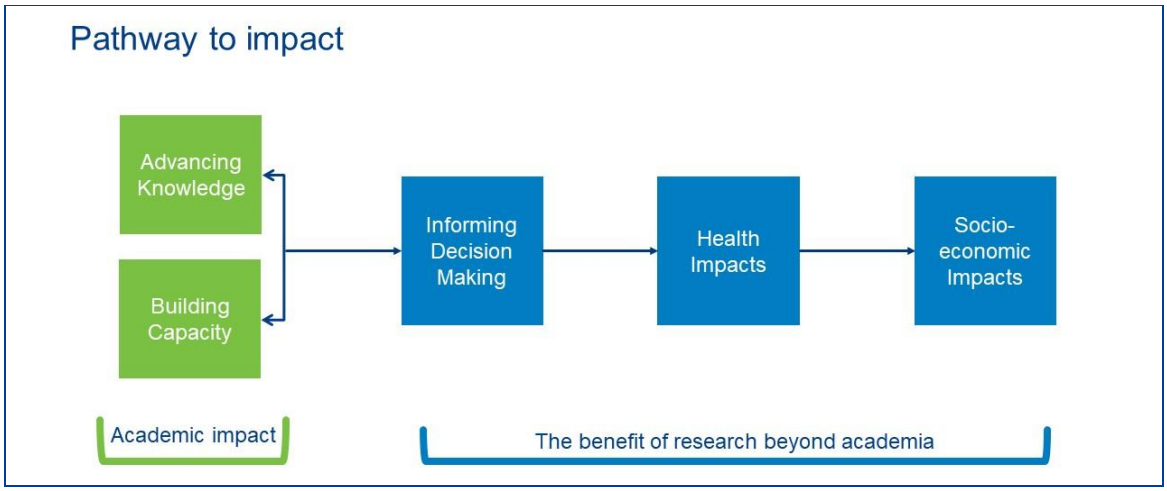


Figure 1: Pathway to impact[2]

The RIA framework helps us to think broadly about impacts, it uses a "multitude of methods from social science disciplines to examine the research process with a view to maximising its societal and economic impacts such as intellectual property, spin-out companies, health outcomes, public understanding and acceptance, policy-making, sustainable development, social cohesion, gender equity, cultural enrichment, and other benefits".[3]

In using the RIA framework and methods, we are prompted to think about our research context and adapt our assessment strategies accordingly. Our approach to assessing impact shifts depending on the unit or 'level' of the organization. For example:

- WCHRI member level - assessing WCHRI academic member research (including research that is not directly funded/supported through WCHRI programs).
- WCHRI project level - assessing WCHRI funded and/or supported research studies.
- WCHRI program level - assessing WCHRI functional areas and/or operational programs (e.g. innovation grant program, research platforms, partnerships).
- WCHRI organizational level - assessing WCHRI in its entirety (e.g. vision, mission, operational model, strategic plan).

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[1] *Panel on Return on Investment in Health Research, 2009. Making an Impact: A Preferred Framework and Indicators to Measure Returns on Investment in Health Research, Canadian Academy of Health Sciences, Ottawa, ON, Canada*

[2] *Adapted from Miciak, M. (Personal Communication July 2020), Powerpoint Presentation: 'Measuring and Communicating Impact Health System Impact Fellowship 2019 National Cohort Retreat', which was adapted from Canadian Academy of Health Sciences (2009) http://www.cahs-acss.ca/wp-content/uploads/2011/09/ROI_FullReport.pdf*

[3] *Adam, P., Ovseiko, P.V., Grant, J. et al. ISRIA statement: ten-point guidelines for an effective process of research impact assessment. Health Res Policy Sys 16, 8 (2018). https://doi.org/10.1186/s12961-018-0281-5*

In using the RIA framework, we are prompted to think about purpose and audience - Who are our stakeholders? What is their relationship to the research being assessed? How does this help us think about assessment questions and methods? These questions may have different answers depending on which unit of analysis we are using, for example at the project level a stakeholder may be women and/or children with lived experience, but at the program level we might think about stakeholders as WCHRI academic members and trainees, whereas at the organizational level our stakeholders may be our funders, the University and/or the health system.

The RIA also provides us with a template, a structure, a way of organizing our approach to assessment:

- logic models help us think about what we do and why (inputs, activities, outputs and outcomes),
- evaluation questions help us define scope,
- indicators help us decide what data to collect and analyse.

By using these tools and methods, and reflecting on our stakeholders and research context, we've designed the following strategic evaluation aimed at assessing health research impacts that emerge through WCHRI programs and exploring the extent to which these impacts align with the objectives of our strategic plan.

WCHRI 5 Year Strategic Evaluation - Summary

Purpose statement: To determine the health research impacts of WCHRI and to what extent they align with the objectives of the strategic plan in order to drive future program development.

Evaluation questions:

1. What are the health research impacts produced through WCHRI?
2. To what extent do these impacts align with the strategic objectives of the organization?
3. How might we modify WCHRI programs to better align with the organizational strategic plan?

Audience: WCHRI Oversight Board

Simple, high-level logic model:

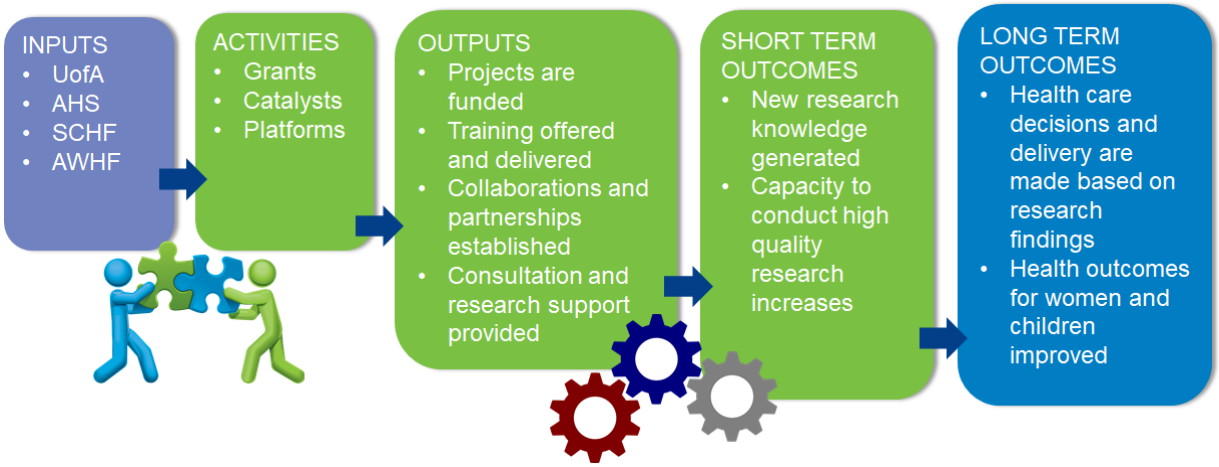

Figure 2: WCHRI 5 Year Strategic Evaluation - Summary

In order to answer the evaluation questions, two data collection matrices were developed (see tables below). The data collection matrices provide a guide to potential indicators that may help us answer the evaluation questions and are used as a guide for assessment. The indicators were selected based on those developed by the Canadian Institutes of Health Research (CIHR)[4] and Rand100[5] and thereby represent indicators that are generally accepted within the health research community. All data was collected through WCHRI operational activities, end of grant reports, surveys to members and bibliometric analysis.

Evaluation Question 1: What are the health research impacts produced through WCHRI?	
Impact Category	**Potential Indicators**
Advancing Knowledge	• Number and type of scientific products created and disseminated • Proportion of projects reporting creation of new health knowledge • Proportion of projects reporting new method, theory or replication of findings • Media attention • Citation analysis of WCHRI research
Building Capacity	• Number of research projects supported (grants and platforms) • Quality of research platform support provided • Number of research collaborations among WCHRI researchers • Ratio of funding researchers received from other sources to funding researchers receive from WCHRI • Total number trainees and/or staff supported by WCHRI grants
Informing Decision Making	• Proportion of projects reporting translation of knowledge • Proportion of projects reporting application of findings • Proportion of projects reporting having had an impact on stakeholders
Health Impacts	• New treatments developed at or available at/adopted by the institution • Number of researcher accounts of how research contributed to innovation and/or improvements in patient care
Socio-economic Impacts	• Number of jobs created through research activities (e.g., Amount of direct employment of trainees, researchers, support and administrative staff) • Number of new offices and labs affiliated with WCHRI in the last 5 yrs • The economic benefit (in $) of employing people in health research rather than in another capacity

Evaluation Question 2: To what extent do these impacts align with the strategic objectives of the organization?		
Goals	**Objectives**	**Indicators**
Academic Members	Research Leadership	• Number of editorships in high profile journals • Number and type of prizes and awards • Number of speaker invitations/conference invitations • Number of researchers who lead large national or international research projects
	Collaborations	• Number of research collaborations among WCHRI researchers
	Advance Individual Research	• Average # of publications by researcher • Percentage of researchers that went on to apply for further funding sources

[4] *Canadian Institutes of Health Research - Indicators and Results (Personal Correspondence, 2016)*

[5] *Guthrie, Susan, Joachim Krapels, Catherine A. Lichten, and Steven Wooding, 100 Metrics to Assess and Communicate the Value of Biomedical Research: An Ideas Book. Association of American Medical Colleges, 2016. https://www.rand.org/pubs/research_reports/RR1606.html.*

	Recruit and Retain Research Excellence	• Number of early career researchers recruited in the last 5 years • Percentage of early career researchers that went on to apply for further funding sources
In-Training Members	Attract the Best Trainees	• Number of trainees supported year over year • Longitudinal data on career progression of students
	Support their Research Training	• Proportion of students who felt they were supported by WCHRI during research training • Number and quality of research training sessions offered by WCHRI
Environment	National Leader in Women and Children's Health Research	• Percent change in quantity of research supported (grants and platforms) over time • Number of researchers who lead large national or international research projects • Number of research platform inquiries and/or projects supported from outside UAlberta
	Supporting Range of Research Types	• Percent of research in each category of awardees (fundamental, preclinical, clinical, population health) • Proportion of projects using a patient oriented research approach • Researchers' interest in/capacity for conducting patient oriented research
	Interventional Research Involvement	• Proportion of interventional research supported • Number of high enrolling clinical trials • Proportion of clinicians engaged in research/number of active clinical trialists • Number of research integrated clinics/wards • Level of patient participation in clinical trials (e.g. number/proportion of patients linked to or involved in research)
	Increase Access to Novel Therapies	• Proportion of research providing access to novel therapies
Ecosystem	Increase Dissemination of Knowledge	• Percentage of projects reporting translation of knowledge • Citation analysis of WCHRI research
	Increase Implementation	• Percentage of projects reporting use/application of findings • Number of researcher consultations to policy makers (organizational to national) • Number of researchers consulting to/collaborations with industry • Number of researchers on relevant boards and committees/appointed to policy groups • Number of researchers sitting on industry steering committees
	Engage Stakeholders	• Percent of WCHRI researchers reporting having collaborated with industry • Percentage of projects reporting having had an impact on stakeholders • Percentage of projects reporting stakeholder involvement in the research process
	Improve Health Outcomes	• Number of projects reporting that human participant benefited as a result of participating • Number of projects reporting health impacts • Percentage of projects reporting application of findings • New treatments developed at or available at/adopted by the institution • Researcher accounts of how research contributed to innovation and improvements in patient care

In order to supplement this strategic evaluation, we have prepared four separate reports as appendices. Each report assesses impacts through a different organizational level or unit:

- **WCHRI grants research impact report:** This report summarizes the impacts produced from WCHRI funded grant projects from ~2014-2020. For each research grant that is awarded through WCHRI, the awardee is required to complete an end of grant report. Since ~2014 we have been collecting these grant reports electronically through REDCap. Several REDCap project databases have been used over the years and the way we have collected the data has shifted periodically. In 2018 we adjusted the end of grant reporting to ask more questions focused on health impact, especially relative to knowledge dissemination, knowledge application / implementation, stakeholder engagement, and health impacts produced. We also switched from open ended text responses to more checkbox fields. As a result, we have a limited impacts data set for 2015-2018 with a more comprehensive impacts data set for 2018 to current.
- **WCHRI research platforms evaluation report:** This report provides a point in time snapshot of impacts associated with research platform support (e.g. clinical research coordination, data coordinating centre/research data management, biostatistics, KT, qualitative support, stakeholder engagement). We developed and distributed a survey to research platform end users (which included both WCHRI and non-WCHRI members). The survey was aimed at trying to understand the quality of research platform support provided, whether or not offering this type of support increases research capacity of the researchers and teams receiving the support, and also looks at impacts associated with the projects that were supported through the platforms.
- **WCHRI bibliometric analysis:** This report provides a high level assessment of WCHRI member publication data. Since not all WCHRI member research is supported directly through WCHRI grants and platforms, a bibliometric analysis is one approach to gaining insight regarding the reach of women and children's health research that emerges from the day-to-day work of WCHRI members.
- **WCHRI strategic and operational programs report:** This report is a compilation and summary of the strategic progress reports that are presented to the WCHRI Oversight Board on a quarterly basis. Within this report, we have also inserted operational data statistics related to our grant programs, research platforms and communications. This report also contains an assessment of WCHRI member success at CIHR.

Strengths and Limitations

Our approach to this evaluation is influenced by several organizational factors:

- We are not experts in RIA or evaluation. We've taken an approach that is very pragmatic, where we have embedded and infused evaluation/RIA into the way we work, thereby making it a meaningful activity at multiple levels of the organization and in our day-to-day operations.
- We tend to lean towards 'attribution' vs 'contribution' theory - while we recognize that impacts of health research are incremental and collaborative, not easily attributed to specific projects and/or programs, it is difficult to establish an evaluation approach that assesses contribution to a field. We recognize that we are using evaluation criteria that are based on a simplified and reduced representation of health research processes, rather than criteria that account for the complex and interactive nature of health research.

- Our MoU has a very clearly defined evaluation and reporting schedule - we cannot choose the “ideal” time to assess/evaluate programs and projects, we therefore have to take an iterative approach, one where each evaluation timepoint is not an “end point”, but rather an opportunity to learn and improve.
- We have limited human resources and capacity for evaluation/RIA - we cannot evaluate everything we do, we have to pick and choose. While we developed a strategic evaluation plan that was very comprehensive, our ability to execute this plan in its entirety was limited. We have therefore focused our evaluation efforts on those impacts that are more within the scope of WCHRI influence (e.g. advancing knowledge, building capacity, informing decision making) and where data was already being collected through operational processes.
- We collect significant data through our operational activities - we use several systems to track staff activity, research platform project work, grants, communications, and events. While this has many positives, it also means that we lean towards quantitative methods (rather than qualitative). This is a limitation as the quantitative data tells an incomplete story of impact. These systems also sometimes limit our ability to easily collect data on indicators that were not already embedded into our operational processes.

Key Findings

As a reminder, our evaluation questions were focused on understanding what health research impacts have been produced through WCHRI; to what extent these impacts align with our strategic objectives; and to explore if there is a need to modify WCHRI programs to better align with our strategic plan. Health research impacts are based on a series of indicators (see tables above) and are identified in the next section using the following icons:

Advancing knowledge	
Building capacity	
Influencing decision making	
Health impacts	
Socio-economic impacts	

We’ve organized WCHRI health research impacts by strategic goal. For each goal, we have tried to summarize the strategic objectives then showcase those impacts that are best aligned with the strategy. The intent is to highlight impacts and outcomes, rather than outputs - outputs can be thought of as the “things we did”, whereas outcomes are the differences that occurred because of the outputs. For details around outputs as well as additional information and detail regarding outcomes, please refer to the ancillary reports in the appendix.

Goal 1 - Our academic members

This section of WCHRI's strategic plan centres around three main objectives - promoting research leadership and collaborations; supporting our members to advance their research; and recruitment and retention.

WCHRI objectives	Potential indicators of health research impact
Research leadership	• Number of editorships in high profile journals • Number and type of prizes and awards • Number of speaker invitations/conference invitations • Number of researchers who lead large national or international research projects
Collaborations	• Number of research collaborations among WCHRI researchers
Advance individual research	• Average # of publications by researcher • Percentage of researchers that went on to apply for further funding sources
Recruit and retain research excellence	• Number of early career researchers recruited in the last 5 years • Percentage of early career researchers that went on to apply for further funding sources

Health Research Impacts

As noted in the operational programs report, we've made progress in identifying priority areas within WCHRI theme areas. Subgroups are emerging with research focused on the following priorities: developmental origins of health and disease (DOHaD), women's mental health, child/youth mental health, women's cardiovascular health, precision health.

Through the bibliometric analysis, we can see that the top five areas of WCHRI publishing strength include pediatrics, cardiovascular, oncology, public/environmental/occupational health, and biochemistry & molecular biology (each category having more than 600 publications).

Through our operating grant reports we found that over 1500 publications were reported for WCHRI funded projects, with an average of 6 publications per researcher (per project).

Self-reported data from WCHRI funded operating grants shows that 50% of academic member awardees have received honors and/or awards during their period of WCHRI research support.

Several WCHRI members are national leaders in their field with almost 70% of CIHR panel Canada Research Chairs (CRCs) at UofA being WCHRI members.

We assessed WCHRI member CIHR success (proportion of WCHRI members within various Faculties) and found that WCHRI members are on average twice as successful at CIHR compared to other faculty at the UofA. When we look at specific programs, such as CIHR Foundation Grant program (2014-2018), we found that 65% of UofA awardees were WCHRI members.

WCHRI grants programs provide significant support to members and we see consistency in application volumes year over year. Through operating grant reporting, we see strong leverage of WCHRI funded awards - bridge program, recruitment awards, and innovation grants typically lead to significant additional research dollars from a wide variety of funding agencies.

When we look specifically at the relationship between certain types of WCHRI grants awarded and CIHR success, the associations and leverage are less clear:

- There is some evidence that points to graduate studentships being associated with increased CIHR success (especially with more than one graduate studentship).
- There is some evidence to suggest that Innovation awards are not associated with CIHR success.

Anecdotal evidence from WCHRI members suggests that research platform support, in particular biostatistics consultation, study design support, and KT planning, is helpful in developing a high quality CIHR grant application. However, we have not consistently tracked research platform consultation/support to application success rates.

In terms of recruitment, over the last five years more than 80 assistant professors joined WCHRI as academic members - these individuals are primarily new recruits in the Faculty of Medicine & Dentistry, with the majority being academic physician recruits in clinical departments.

During the last five years, WCHRI provided start-up and infrastructure support for six new faculty recruits, five of whom are early-career, one of whom is mid-career. Of the five early career researchers, two received Early Career Researcher awards through CIHR, one was appointed Canada Research Chair Tier 2, and one received a CIHR project grant.

Goal 2 - Our in-training members

This section of WCHRI's strategic plan is geared towards objectives and strategies aimed at attracting and supporting students in their research training.

WCHRI objectives	Potential indicators of health research impact
Attract the best trainees	• Number of trainees supported year over year • Longitudinal data on career progression of students
Support their research training	• Proportion of students who felt they were supported by WCHRI during research training • Number and quality of research training sessions offered by WCHRI

Health Research Impacts

As evidenced in the operational program report, WCHRI supports a wide range of funding opportunities for trainees at various levels of training, theme, and program type (clinical, basic science, applied health, community-engaged). Uptake for WCHRI trainee funding programs is consistent, with approximately 65 summer students (undergraduate) and 60 graduate

students applying annually. We also see strong program leverage with approx 50% of summer and graduate students receiving alternative funding from other agencies.

Trainee reported impacts through our grants reporting system are limited, but the average number of publications per graduate student trainee is approximately 5 (this includes publications, abstracts and/or presentations).

94% of graduate student trainees indicated that they felt they received adequate direction and/or mentorship from their supervisor or other qualified personnel on the research program team.

When looking at WCHRI operating grants we see the importance these awards may play in supporting student researchers with over 65% of awards contributing to trainee salaries. The innovation grant and partnerships awards in particular are often used to fund trainees.

We've seen an evolution in our training programs over the last 5 years, with the introduction of a postdoctoral fellowship program in 2018. While it may be too early to assess the impacts of this program, we have seen some program leverage (4 out of 9 postdocs in 2018 and 2019 cohorts received alternative external funding) and to date we know of one postdoctoral fellow (from the 2018 cohort) who has been offered an academic (assistant professor) position.

Since 2016 we have offered the PaCET program, which is aimed at building capacity for stakeholder engaged/participatory research. PaCET learning is situated both theoretically and experientially, with an aim to support the praxis of engaged research. PaCET alumni have gone on to work as researchers, instructors, practitioners, community leaders, evaluators, entrepreneurs and civil servants.

In 2018 we established a Trainee Advisory Committee (TAC). This committee provides students from a wide range of disciplines with an experiential learning and leadership opportunity - they gain valuable skills in governance, project management, decision making and communications.

Goal 3 - Our environment

This section of WCHRI's strategic plan explores ways in which we create a local research environment that supports world class research addressing the unique health needs of women and children.

WCHRI objectives	Potential indicators of health research impact
National leader in women and children's health research	• Percent change in quantity of research supported (grants and platforms) over time • Number of researchers who lead large national or international research projects • Number of research platform inquiries and/or projects supported from outside UAlberta
Supporting range of research types	• Percent of research in each category of awardees (fundamental, preclinical, clinical, population health) • Proportion of projects using a patient oriented research approach • Researchers' interest in/capacity for conducting patient oriented research

Interventional research involvement	• Proportion of interventional research supported • Number of high enrolling clinical trials • Proportion of clinicians engaged in research/number of active clinical trialists • Number of research integrated clinics/wards • Level of patient participation in clinical trials (e.g. number/proportion of patients linked to or involved in research)
Increase access to novel therapies	• Proportion of research providing access to novel therapies

Health Research Impacts

WCHRI research platforms provide a critical and high quality infrastructure for women and children's health researchers:

- 100% of respondents indicated positive (or neutral) satisfaction with the support provided.
- Over 80% of respondents to our research platforms evaluation survey indicated that this support helped them conduct their research more efficiently, conduct high quality research, improve their (or their team's) research skills and knowledge, achieve methodology rigour and apply best practices and standards in their projects.
- High proportion of comments from respondents noted the strong relationship they developed with research platform team members and thinking about these individuals as collaborators and colleagues rather than service providers.

WCHRI research platform support has increased steadily over the last 5 years with ~100 studies supported in 2015, to ~180 studies supported in 2020.

While the vast majority of projects supported through research platforms are local and/or site based research, the Data Coordinating Centre, currently supports two national networks (Innovation in Pediatric Clinical Trials and CHILD-BRIGHT Network) - this includes ~16 studies, which are a combination of Health Canada regulated trials and non-regulated trials. WCHRI is increasingly known for providing high quality infrastructure support for pediatric clinical trials.

Site based research supported by WCHRI research study coordinators increased steadily over the last five years with ~60 studies supported in 2016 and over 100 studies supported in 2019 and 2020. These studies had local impacts allowing over 150 children access to novel drug therapies and over 1400 children the opportunity to participate in other types of interventional and observational research studies. We also see a steady increase of access to research for women at Lois Hole Hospital for Women with over 120 women accessing the LHHW research centre from 2018 to present. This infrastructure makes it easy for local investigators to participate in clinical research and facilitates start-up for industry studies, making Stollery and LHHW more attractive site based research locations.

When looking at WCHRI operating grants we see some indication of how these awards support development of a local health research economy with over 50% of awards contributing towards research staff salary. The innovation grant and partnerships awards in particular are often used to fund staff salaries.

Goal 4 - Our ecosystem

This section of WCHRI's strategic plan challenges us to innovate with our stakeholders to increase the impact and reach of women and children's health research.

WCHRI objectives	Potential indicators of health research impact
Increase dissemination of knowledge	• Percentage of projects reporting translation of knowledge • Citation analysis of WCHRI research
Increase implementation	• Percentage of projects reporting use/application of findings • Number of researcher consultations to policy makers (organizational to national) • Number of researchers consulting to/collaborations with industry • Number of researchers on relevant boards and committees/appointed to policy groups • Number of researchers sitting on industry steering committees
Engage stakeholders	• Percent of WCHRI researchers reporting having collaborated with industry • Percentage of projects reporting having had an impact on stakeholders • Percentage of projects reporting stakeholder involvement in the research process
Improve health outcomes	• Number of projects reporting that human participant benefited as a result of participating • Number of projects reporting health impacts • Percentage of projects reporting application of findings • New treatments developed at or available at/adopted by the institution • Researcher accounts of how research contributed to innovation and improvements in patient care

Health Research Impacts

Through bibliometric analysis, we find that over 40% of WCHRI-affiliated publications are openly available to the entire world and nearly 40% of all WCHRI-affiliated publications involve international collaboration. WCHRI researchers collaborate with researchers from more than 3000 institutions nationally and internationally. The highest collaboration rates exist with other researchers in Canada, the USA, UK and Australia. Within Canada, our members have the strongest collaborations with colleagues at University of Calgary, University of Toronto and University of British Columbia.

WCHRI research is highly cited (across research theme areas), with above average impact scores for several publication types. More than 14% of WCHRI-affiliated publications were in the top 10% most-cited documents in their subject category. This is consistent with bibliometric data we compiled in 2016 where the percentage was 16%.

WCHRI is performing just above the world average, with an Impact Relative to World of 1.01 and WCHRI-affiliated publications perform well when compared to other publications in their subject categories. Again, this is consistent with bibliometric data that we compiled in 2016 where the comparable indicator (average of relative citations) was 1.40.

We have also found that the research projects that are supported through research platforms are contributing to the field, with over 69% of respondents indicating that these projects

contributed to the advancement of knowledge, the application of research evidence in practice and/or policy, and innovation and/or improvements in patient care/health outcomes.

It's also important to note the role of WCHRI communications in developing a social media strategy and broadening the reach of WCHRI research - in 2021 we reported over 1280 Twitter and 530 Facebook followers, nearly 5000 YouTube video views.

When we looked at the data reported through WCHRI grants, we found that publication of results is not as consistent as was noted in the bibliometric reporting. This is very likely due to a time lag between end of grant reporting and how long it takes to finalize, submit and have a manuscript accepted for publication.

When we looked at data reported through WCHRI grants about the dissemination and application of research findings (e.g. beyond publication), we found that nearly 40% of projects* reported some additional form of knowledge translation. Awardees were asked about their knowledge dissemination and application strategies, as well as engagement of stakeholders in KT:

- Dissemination of knowledge - developing educational materials (24%); plain language summary briefings for different audiences (17%); social media (19%); development of networks and communities of practice (17%).
- Application of knowledge - offering education sessions (24%), developing patient-centered interventions and decision aids (22%), contributing to change in practice (21%), and implementation/utilization of new tools (17%).
- Several of these projects noted the types of strategies employed, which included developing apps, infographics, pamphlets, blogs, websites, picture books, film and video.
- Nearly 75% of these projects engaged with stakeholders in their dissemination and application strategy - types of stakeholders listed included schools, nurses, clinics, clinicians, patients, families, parents and youth.

When we looked at data reported through WCHRI grants about potential health impacts that were produced through WCHRI funded research, we found that over 50% of projects* reported that the work may produce health impacts. Of these projects:

- 30% noted potential changes in health status (e.g. morbidity, mortality, quality adjusted mortality)
- 35% noted potential changes in determinants of health (e.g. modifiable risk factors, social determinants, environmental determinants)
- 35% noted potential changes in quality of care (e.g. acceptability, accessibility, appropriateness, effectiveness, efficiency, safety)

**note: for KT and health impacts, we have a very limited dataset (~100 records) as these questions were only added to the reporting system in October 2018.*

Discussion Questions

More refined membership data may be needed in order to better understand areas of strength and collaborations, however, does this data help us see where we have areas of research strength and reflect on how those areas of strength overlay or complement areas of research priority? Are there other indicators we should be considering in order to better understand leadership and collaboration?

We have several strategic initiatives specifically geared towards improving CIHR success and research leadership / team development - however, should we also consider changes in our funding programs (e.g. Innovation grant) to focus more on CIHR funding success? What about other tri-council funding such as NSERC and SSHRC?

As we explore equity, diversity, and inclusion at WCHRI, we are seeing that both our application requirements and indicators of success for programs may be exclusionary - how might we rethink these indicators?

We do not have mechanisms in place to follow-up on trainee career progression in a systematic way. How important is this information in future impact assessment?

WCHRI has established a very strong research infrastructure over the years, are there other types of indicators that we need to be using in order to better assess the impacts of these support structures?

We were not able to obtain data for many of the indicators listed - should we be focusing more attention on collecting data for some of these “unanswered” indicators?

We organized this evaluation around a couple key questions - are there other types of questions that you would like to see us focus on in the future?

Contributors

Many WCHRI staff participated in the preparation of this strategic evaluation - guiding our conceptual approach, identifying indicators, supporting data collection and analysis, developing charts, tables, and figures, reviewing and providing feedback on the reports. We are grateful to the University of Alberta Library team (Alison Henry, Thane Chambers, Sonya Leung) who worked with us and produced the WCHRI Bibliometric Report. Finally, we could not have done most of this work without additional support from a group of very talented students, supported through the Evaluation Capacity Network, who worked on different components of our evaluation strategy over the last few years and whose contributions were critical to the development of this report. A big thank you to:

- Kirstyn Morley (WCHRI evaluation intern, 2018) - developed the research platforms evaluation plan, logic model, indicators and evaluation instruments (survey and interview questions)
- Joanne Baergen, Fern Leavens, Jackie MacDuffie, and Laura McAlpine (MACE 597 course participants, Spring/Summer 2020) - developed the overarching strategic evaluation plan, including evaluation questions, indicators and data collection strategy.
- Eki Okungbowa (WCHRI evaluation intern, 2020-21) - developed the research grants impact assessment report, including all data cleaning and analysis.