women & children's health research institute

2017/18 Annual Report

STRONGER TOGETHER

The Power of Partnership

UNIVERSITY OF ALBERTA

Alberta Health Services

STOLLERY CHILDREN'S HOSPITAL FOUNDATION

LOIS HOLE HOSPITAL FOR WOMEN

STRONGER TOGETHER:

Our partnerships are changing the face of healthcare for women and children

OUR VISION

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

OUR MISSION

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

Thank you to our WCHRI staff for another fantastic year. It's the teamwork and dedication of staff that makes us Stronger Together.

women & children's health research institute

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WCHRI
2017 Highlights

DISCOVERY DAY

Nevin Hammam showcases the fun side of research to students who participated in the Canadian Medical Hall of Fame Discovery Day in Health Sciences.

RESEARCH DAY 2017

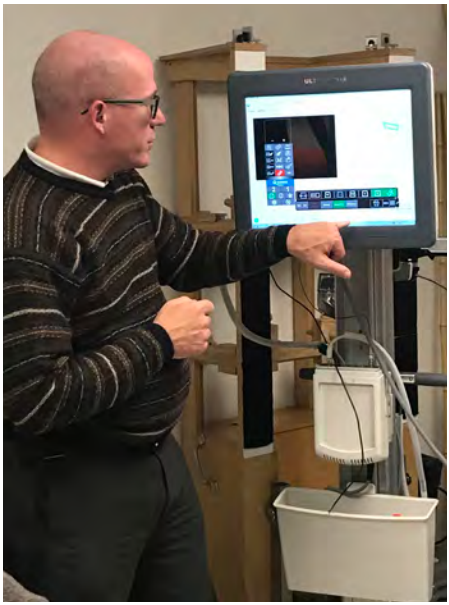
Sandy Davidge and Lawrence Richer present an oral award to Tasneem Siyam and supervisor Nese Yuksel at Research Day 2017.

WCHRI member Anita Kozyrskyj critiques posters during Research Day 2017.

LAB TOURS

PETER S. ALLEN MR RESEARCH CENTRE LAB TOUR - NOVEMBER 2017 - (Left) Christian Beaulieu demonstrates how an MRI works for Stollery donors during a WCHRI lab tour. (Right) Beaulieu shows donors finished scans of the brain.

SAMINA ALI LAB TOUR - DECEMBER 2017 - Manasi Rajagopal and Samina Ali took donors on a tour of the Stollery Children's Hospital Emergency Department (ED). They then discussed how research has improved the ED and what they are working on now.



ERIC PARENT LAB TOUR - NOVEMBER 2017 - Eric Parent discusses his research in scoliosis and demonstrates the use of 3D imaging technology.

WCHRI
2017 Highlights

CIHR NEW INVESTIGATORS IN MATERNAL, REPRODUCTIVE, CHILD AND YOUTH HEALTH ANNOUNCEMENT - On February 23, MP Randy Boissonnault was on campus to recognize five WCHRI researchers who earned top honours as CIHR New Investigators in Maternal, Reproductive, Child and Youth Health. All support was also matched by the Stollery Children's Hospital Foundation.

STOLLERY CHILDREN'S HOSPITAL FOUNDATION RADIOTHON

A few of our WCHRI staff spend their morning taking calls for the Stollery Children's Hospital Foundation Radiothon in January.

Messages

Women and Children's Health Research Institute

THIS YEAR'S ANNUAL REPORT IS INSPIRED BY PARTNERSHIPS

women & children's health research institute

The Women and Children's Health Research Institute (WCHRI) simply couldn't exist without a strong, supportive network of partners.

In 2006, WCHRI was founded through a visionary partnership between the University of Alberta, Alberta Health Services, along with our very generous funding partners—the Stollery Children's Hospital Foundation and the Royal Alexandra Hospital Foundation. Our work wouldn't be possible without their support. Since then, as WCHRI's reach has expanded, so has the breadth of our partners. Today, we support 500 members across 13 UAlberta faculties and partner with a number of other organizations on a local, provincial and national levels. We are also proud to be a research arm for the Stollery Children's Hospital and Lois Hole Hospital for Women. Our partnerships allow us to take research to new heights in children's and women's health—breaking ground in a historically under-represented area. Together we are making a difference.

It has been rightly said that research is the cornerstone of innovation and the basis of the best healthcare. This is particularly true for children's and women's health, which affects us all—healthy children and women mean healthier families, which mean healthier communities. This is why the work of our members is so important. Together, we are creating a brighter future for children and women—not only in our province, but worldwide.

As you will see in the coming pages, our partnerships have allowed this to happen and are driving change.

We're just getting started.

Sandra Davidge, PhD
Executive Director
Women and Children's Health Research Institute

Messages

Stollery Children's Hospital Foundation

INVESTING IN FUTURE GENERATIONS OF CHILDREN

To financially support a children's hospital is a massive responsibility. However, to financially support a children's hospital that is the most specialized in Western Canada, and one that's on the leading edge of innovation and discovery is an enormous privilege.

As the primary funder of children's health research through WCHRI, we are committed to investing in the talented people and teams who push the limits of modern medicine to the benefit of children everywhere. That's because our growing community of donors continually tells us that pediatric research should remain a priority for the Foundation. And we're proud to say that it is.

Since 2006, we have provided $44.1 million to WCHRI to fund more than 1,215 research grants. In 2016, we proudly announced the largest gift in the history of the University of Alberta—$40 million over ten years to provide more research grants and support more researchers in their training and education.

Researchers like Loretta Fiorillo who is making major strides in the treatment of psoriasis in young children by testing a drug approved for adults to make it safe and effective for use in children. Or advancements made by Mandi Newton, along with graduate student Ashley Radomski, in studying and treating adolescent mental health by developing an innovative online program that is helping kids from backyards across Alberta cope with anxiety.

It's difficult to imagine a world without research. It's also difficult to imagine our province without WCHRI and the necessary community support that drives our curiosity in order to discover the possible.

On behalf of all of us at the Foundation, congratulations to everyone at WCHRI on another amazing year of discovery.

Sincerely,

Mike House, MBA, ICD.D
President and CEO
Stollery Children's Hospital Foundation

Messages

Royal Alexandra Hospital Foundation

It is the vision of the Royal Alexandra Hospital Foundation to create the very best women's hospital in Canada at the Lois Hole Hospital for Women, and our partnership with WCHRI is critical to this vision.

Evidence shows that when research innovation is partnered with clinical care excellence in a hospital setting patients have better outcomes.

To that end, a giant leap forward was made with the celebrated opening of a spacious new research unit inside the Lois Hole Hospital for Women. The research unit represents a collaboration and a consolidation of values, ideals and goals by WCHRI and the Lois Hole Hospital for Women. Like the theme of this report these two institutions, both named on the research unit, are Stronger Together.

The commencement of new and exciting approaches to women's health research integrated with highly specialized outpatient clinics and inpatient care is a long-held vision first thought possible by health and academic leadership, community volunteers and, of course, generous donors to the Royal Alexandra Hospital Foundation.

Philanthropy, in particular, has brought this achievement, delivering a platform where research today will improve health practices tomorrow—and it is our mothers, daughters and sisters who will benefit.

On behalf of the Royal Alexandra Hospital Foundation and its board of directors led by Chairman Brian Tod, I salute the visionaries, the collaborators, the connectors and the donors. Thank you, everyone, for your leadership to drive forward a healthier future for women of all ages and in all stages of life.

We are Stronger Together.

Andrew Otway, MBA, CFRE
President and CEO
Royal Alexandra Hospital Foundation

Messages
University of Alberta

The University of Alberta is a proud and committed partner of WCHRI, in their passion to expand knowledge and expertise in children's and women's health.

WCHRI's support and integration of researchers in advancing standards of care not only impacts our community, but has impact worldwide. Currently, WCHRI researchers span 13 faculties across the University of Alberta and influence donors, policymakers, practitioners and patients– this is an institute that truly uplifts the whole people and shares in our belief to work for "the public good."

On behalf of the University of Alberta, I would like to congratulate WCHRI on another successful year. The University of Alberta is honoured to provide resources toward advancing children's and women's health within our community and see, first-hand, the incredible commitment of WCHRI's over 500 members.

Randy Goebel, PhD
Provost and Vice President (Academic)
Associate Vice President (Research)
Professor of Computing Science
University of Alberta

Messages

Alberta Health Services

Alberta Health Services

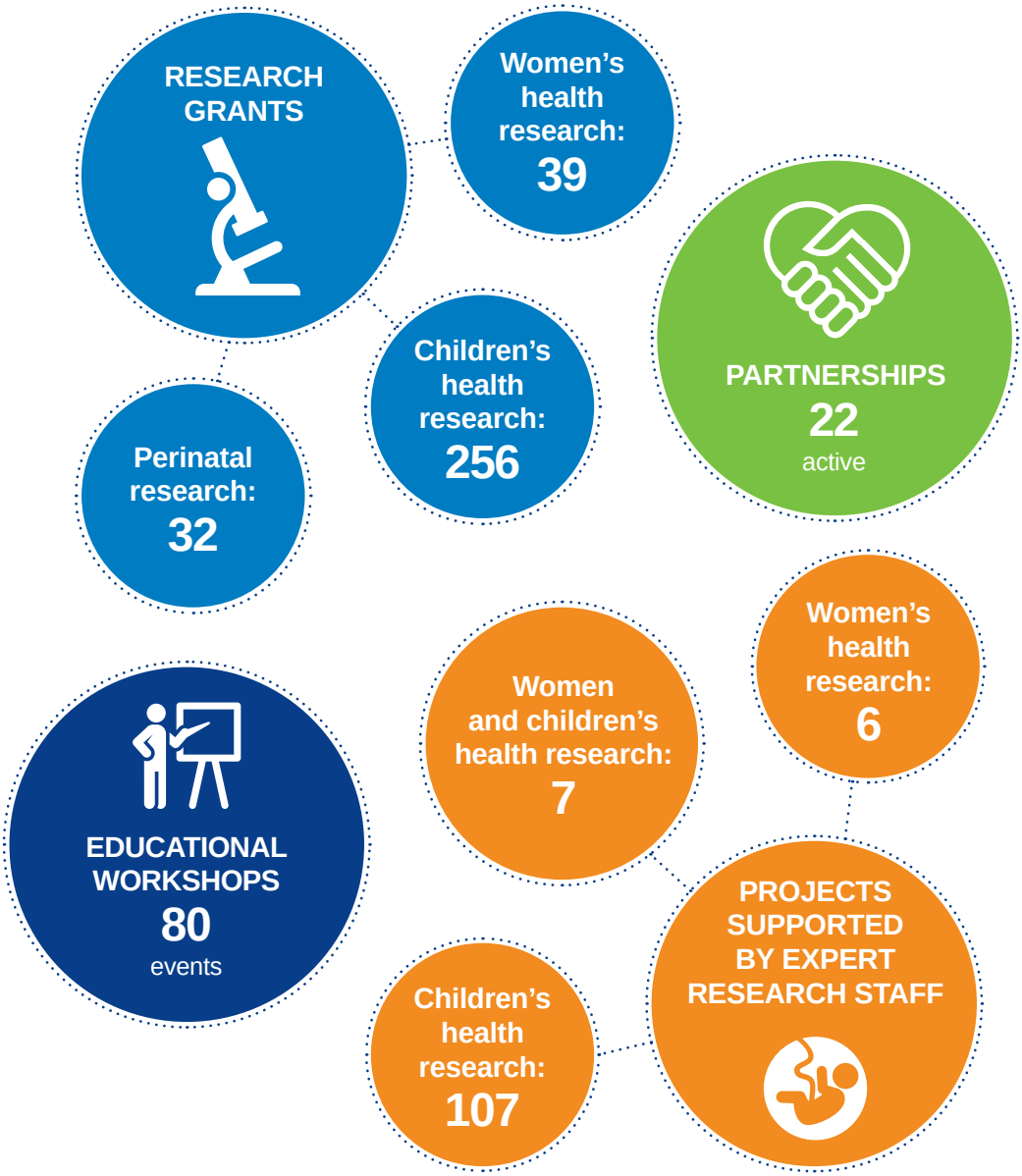
Creating, sharing and applying knowledge and evidence is how we achieve a health system that delivers high quality care and improves the outcomes for the people we serve. These elements describe the foundations of research and innovation. At Alberta Health Services, we remain dedicated to being a learning organization that values innovative research to improve the lives of the Albertans we serve.

Our valued partnership with WCHRI helps us both to create a healthy and bright future for the next generation of Albertans. Our shared commitment to women's and children's health continues to use evidence to drive best practices and advancements in care to our patients, clients and their families. We aim to make a difference together.

Kathryn Todd, PhD
Vice President for Research, Innovation and Analytics Alberta Health Services

By the numbers

2017–2018



240,835 impressions (October–March)

SOCIAL MEDIA METRICS (accounts launched in November 2017)

41,670 impressions (October–March)

337 followers

82 followers

7 ongoing recruits

RECRUITMENT SUPPORT

1 new recruit

COMMUNITY EVENTS 10

MAJOR MEMBER AWARDS

22 Canada Research Chairs

11 Fellows of the Canadian Academy of Health Sciences

7 Fellows of the Royal Society of Canada

5 members of the Royal Society of Canada's College of New Scholars, Artists and Scientists

5 CIHR New Investigator grants in Maternal, Reproductive, Child and Youth Health

1 CIHR Early Career Investigator Awards in Circulatory and Respiratory Health

Our governing bodies

OVERSIGHT BOARD MEMBERS

Richard Fedorak	Dean, Faculty of Medicine & Dentistry, UAlberta (Chair)
Steve Dew (Randy Goebel, Designate)	Provost and Vice-President Academic, UAlberta
Lorne Babiuk (Randy Goebel, Delegate)	Vice-President, Research, UAlberta
Susan Gilmour	Chair, Department of Pediatrics, UAlberta
Radha Chari	Chair, Department of Obstetrics and Gynecology, UAlberta
David Evans	Vice-Dean, Research, Faculty of Medicine & Dentistry, UAlberta
Kue Young	Dean, School of Public Health, UAlberta
Lorne Tyrrell	Director, Li Ka Shing Institute of Virology, UAlberta
Kathryn Todd	Vice-President Research, Innovation and Analytics, Alberta Health Services (Vice-Chair)
Christine Westerlund	Senior Operating Officer, Stollery Children's Hospital, Alberta Health Services
Judith Hockney	Senior Operating Officer, Royal Alexandra Hospital & Sturgeon Community Hospital, Alberta Health Services
Mike House	President and CEO, Stollery Children's Hospital Foundation
Jeff Bryson	Board of Trustees representative, Stollery Children's Hospital Foundation
Andrew Otway	President and CEO, Royal Alexandra Hospital Foundation
Melanie Nakatsui	Board of Directors representative, Royal Alexandra Hospital Foundation

EX-OFFICIO (NON-VOTING MEMBERS)

Sandra Davidge	Executive Director, WCHRI
Lawrence Richer	Associate Director, WCHRI

PROGRAM ADVISORY COMMITTEE MEMBERS (ALL UALBERTA STAFF)

Todd Alexander	Associate Professor, Pediatrics, Faculty of Medicine & Dentistry
Geoff Ball	Professor, Pediatrics, Faculty of Medicine & Dentistry
Rhonda Bell	Professor, Faculty of Agricultural, Life and Environmental Sciences WCHRI Theme Lead for Healthy Development
Margie Davenport	Assistant Professor, Faculty of Kinesiology, Sport, and Recreation
Sandra Davidge	Executive Director, WCHRI
David Eisenstat	Professor, Pediatrics, Faculty of Medicine & Dentistry
Lisa Hornberger	Professor, Pediatrics, Faculty of Medicine & Dentistry
Gary Lopaschuk	Associate Chair, Research, Pediatrics, Faculty of Medicine & Dentistry
Andrew Mackie	Associate Professor, Pediatrics, Faculty of Medicine & Dentistry
Lawrence Richer	Associate Director, WCHRI WCHRI Theme Lead for Children's Health and Wellbeing
Sue Ross	Professor, Obstetrics and Gynecology, Faculty of Medicine & Dentistry WCHRI Theme Lead for Lifelong Women's Health
Shannon Scott	Professor, Faculty of Nursing
Lonnie Zwaigenbaum	Professor, Pediatrics, Faculty of Medicine & Dentistry

Our governing bodies

INTRODUCING THE SCIENTIFIC ADVISORY COMMITTEE

This year, we are proud to introduce our Scientific Advisory Committee made up of internationally renowned research leaders. The committee provides an external viewpoint and advises WCHRI on a number of topics relevant to institute structure and strategy. The committee also helps build national and international collaborations with other like-minded institutes and networks.

Daniel Benjamin, MD, PhD

Kiser-Arena Distinguished Professor of Pediatrics, Duke University

Chair, Pediatric Trials Network

Associate Director, Duke Clinical Research Institute

Daniel Goldowitz, PhD

Professor, Department of Medical Genetics, University of British Columbia

Scientific Director, Kids Brain Health Network

Annette Majnemer, OT, PhD, FCAHS

Vice-Dean, Education, Faculty of Medicine, McGill University

Professor, School of Physical & Occupational Therapy, McGill University

Director, CHILD-BRIGHT Network

Patrick McGrath, OC, PhD, FRSC, FCAHS

Professor, Department of Psychology, Dalhousie University

Former Vice President Research, Innovation and Knowledge Translation for the IWK Health Centre and the Nova Scotia Health Authority

Paula Rochon, MD, MPH, FCAHS

Vice-President, Research, Women's College Hospital (WCH)

Professor, Department of Medicine and Institute of Health Policy, Management & Evaluation, University of Toronto

Retired Teachers of Ontario Chair in Geriatric Medicine

Lois Hole Hospital for Women

Interdisciplinary menopause clinic

Lori Battochio, Sheri Smith, Tami Shandro and Nese Yuksel work together to provide all aspects of care at the menopause clinic in the Lois Hole Hospital for Women.

Interdisciplinary approach crucial to

care of women in menopause

Women in menopause often experience a complex mix of health issues, so the kind of one-size-fits-all approach that might be taken to their care can leave them feeling frustrated and alone. With this in mind, the team at the Lois Hole Hospital for Women's menopause clinic embarked on a study of nearly 200 patients, to fill a research gap in patients' issues and subsequent treatment at interdisciplinary clinics like theirs.

Family doctor Tami Shandro works at the clinic, in concert with a range of experts—including gynecologists, pharmacists, registered nurses and dietitians—a collaboration she stresses is crucial in addressing the complex needs of patients. "We all have our expertise in different areas," she said. "I'm so blessed to be able to work with this team, and with the research team." Behind the scenes, cooperation occurs on research projects, with statistical and qualitative teams from the Women and Children's Health Research Institute providing invaluable support to clinic staff. Through supporters of the Lois Hole Hospital for Women, WCHRI offers financial support, as well, in the form of a variety of research grants. This assistance helps fund research like the recent retrospective chart study, which tracked the symptoms and care of 198 patients.

"We discovered (in this study) that the majority of our patients have a chronic health issue (like diabetes or lung disease), and often they'd have three or four," said Shandro. Menopausal symptoms were occurring in addition to the symptoms associated with their chronic health issues. Of the menopausal symptoms, the research showed that sleep problems were by far the most common and bothersome complaint for patients, with sexual dysfunction a close second.

In this evidence-based clinic, said Shandro, research inevitably leads to marked changes in patient care. When the chart study showed that more than 76 per cent of patients had severely fragmented sleep and nearly 74 per cent reported chronic tiredness, for example, she decided to seek further training in sleep disorders to better address that need.

Research like this also tends to lead to more and deeper questions. "Now we're going on to study how quality of life" is affected by the symptoms the patients reported, added Shandro, and by the subsequent hormone therapy they're given. That in turn leads to yet more questions about, on a broader level, how to ensure more women have prompt access to the resources they most need.

"We need to be more timely in our introduction of care for these women," said Shandro, and right now a months-long wait list at the clinic makes that difficult. Research like the chart study "helps get the word out that this kind of clinic is very important for women's well-being." Ultimately, Shandro and her colleagues would like to see more clinics offering the kind of interdisciplinary care needed to address the often complex health issues of women in menopause.

LOIS HOLE HOSPITAL FOR WOMEN

Research through the menopause clinic has been supported by the Lois Hole Hospital for Women through WCHRI.

Israel Amirav

Pediatric respiratory medicine in the Department of Pediatrics

Isreal Amirav and Laura Saunders

Letter study aims to

engage and empower patients

As a physician in his home country of Israel, Israel Amirav was accustomed to sharing in writing the details of each medical appointment with the families of the young patients he treated for asthma and other respiratory conditions.

Upon his arrival in Edmonton five years ago, Amirav was surprised to learn that no such practice existed here. So, the physician and professor of pediatric respiratory medicine embarked on his EMR (Electronic Medical Record) Letters Study in 2016. His purpose was twofold: to show doctors that empowering their patients in a two-way dialogue about their health is good for everyone, and to educate patients on their rights to participate in that dialogue.

For about a year, the 60 participating families left every appointment with a letter about their child's condition and medical history, then completed a survey about the experience, created by an advisory panel that comprised of both parents and researchers.

Laura Saunders, a parent participant in the advisory group, helped craft this survey and she can't say enough about how the experience has empowered her to take a more active role in her family's healthcare journey.

Now, if a doctor declines to share written information with her—something she now requests every time—I'll take my own notes," she said, "or I'll record our appointment." It's also inspired her to spread the word wherever she goes that all patients should embrace the opportunity to be active and full participants in their health care. "As a parent, especially, it's your right and your responsibility," she said.

> The overwhelmingly positive response of the families in his study, he said, and of people like Saunders, gives him hope.

While Amirav and his team are still analyzing the study results, he would ultimately like to see a policy shift that requires all doctors to provide their patients with written records at the end of each visit. For this to happen, decision makers at the very top of the system need to take action, and that, he said, will be driven by enough patients demanding it. The overwhelmingly positive response of the families in his study, he said, and of people like Saunders, gives him hope. "This is a message we should be sharing," he said. "It doesn't cost anything, and it's so simple."

THE ISSUE: There isn't always a two-way dialogue between patients and doctors.

THE RESEARCH: Parents and doctors alike see the value in providing written records for patients.

STOLLERY CHILDREN'S HOSPITAL FOUNDATION

Analysis of the letter study was supported through the WCHRI data coordinating centre and study management team, funded by the Stollery Children's Hospital Foundation.

Shokrollah Elahi

Immunology in the Department of Dentistry

Shokrollah Elahi, Melanie Deveault and her newborn baby.

Discovering the paradoxical nature of

cells in newborns

Few things are as fragile as a newborn. They can't hold up their own heads. They are fully dependent on their caregiver for everything. So when your fragile baby gets an infection, as the caregiver, it can be extremely stressful and painful; sadly, it's an all too common occurrence.

Infants are highly susceptible to developing infections and immune disorders like allergies, asthma and inflammatory bowel diseases, which has always puzzled Shokrollah Elahi, assistant professor of immunology in the Department of Dentistry. "[I wanted to ask] a simple and basic question that I always had," he said "why are newborns more susceptible to infections than adults?"

> "Why are newborns more susceptible to infections than adults?"

His research discovered that newborns only have about 30 per cent of the same cells as adults—the other 70 per cent are absent in adults. These cells, named "CD71+ cells" are actually immature red blood cells. They act as an immune suppressant for newborns, which is why newborns are more susceptible to infections, but on the flip side, allow the swift adaptation of the good bacteria in the gut.

CD71+ cells are paradoxical. "If we deplete or remove these cells from newborns, they become more resistant to infection; however, they develop inflammation in their gut," said Elahi.

Recently awarded the CIHR New Investigator in Maternal, Reproductive, Child and Youth Health national research award, Elahi will be able to continue researching these immature red blood cells to see how they interact with other immune cells and impact diseases. The CIHR award was supported by matching funds from the Stollery Children's Hospital Foundation.

"Sometimes simple questions are not answered," noted Elahi. "This simple question I had resulted in a huge discovery that may also address a major problem."

The discovery of CD71+ cells has opened up a new realm of research for Elahi and many others. These immature red blood cells could be the key to helping us understand not only infants' immune development, but also our overall immunology. The avenues for research in this area are infinite for Elahi and his team. With so many possibilities, the potential impact on the healthcare world seems limitless.

THE ISSUE: Little is known about the newborn immune system.

THE RESEARCH: A new type of immature red blood cell has been discovered and will help show how a newborn's immune system functions.

Shokrollah Elahi's research has been supported by fund matching from the Stollery Children's Hospital Foundation through WCHRI.

ENRICH

Elders Mentoring Program

Richard Oster and Maskwacis Elder Muriel Lee

Elders Mentoring Program

strengthens community for Maskwacis' expectant mothers

With the support of a seed grant from WCHRI, research associate Richard Oster embarked nearly five years ago on exploring how the ENRICH program he's part of could best serve an Indigenous community. Managed by an interdisciplinary team dedicated to improving women's health in pregnancy and postpartum, ENRICH takes a broad, sweeping approach to improving pregnancy outcomes.

"A lot of research about Indigenous communities is focused on the deficits … we wanted to promote resilience, opportunity and positivity … and utilize the strengths within the community," said Oster. After close to 18 months of close consultation with the four First Nations bands that comprise Maskwacis, about 100 kilometres south of Edmonton, the Elders Mentoring Program was born, designed to support pregnant moms and dads in the community.

"A lot of research about Indigenous communities is focused on **the deficits** … we wanted to promote resilience, opportunity and **positivity** … and utilize the strengths within the community."

Muriel Lee is one of three Elders currently in the program. Since December 2015, Tuesdays and Thursdays find her in the waiting room of the Wetaskiwin Primary Care Network office, ready to lend a listening ear, pass on cultural knowledge—such as how to make the traditional moss bag for swaddling a baby—and even teach Cree to the expectant moms coming for their checkups. "We're there to empower them and give them a safe place to talk to someone they trust, someone from their community," said Lee. "We teach them how to take care of their babies, so the transition from womb to world is as smooth and loving and gentle as possible."

This support has had a powerful impact, said Oster. One 16-year-old shared with him the pain of being judged during her pregnancy. "The only person in her entire pregnancy that didn't judge her was the Elder she met through this program." Participation brings meaning to the Elders' lives, as well. "I feel very blessed to be among the women who are bringing life into the community … and to give to my people," said Lee.

What does the future hold for this ENRICH program? "We have lots of plans," said Oster, who would like to see the original program continue, an offshoot for postpartum moms and more support for fathers. "It's working well and we need to fund it."

LOIS HOLE HOSPITAL FOR WOMEN

The ENRICH Elders Mentoring Program has received funding from generous supporters of the Lois Hole Hospital for Women through WCHRI.

Translating research
into tools for all audiences

Innovative health research is happening all over the world. Unfortunately often times, once research is published in an academic setting, it could take years, if ever for it to be translated into practice. Lisa Hartling and Shannon Scott, co-directors of Translating Emergency Knowledge for Kids (TREKK), are trying to tackle this problem one resource at a time.

It can be overwhelming for parents trying to find health information on the internet and to know which resources are both legitimate and useful. That's why Hartling and Scott are creating trusted, accurate health information for families that are based on evidence and that resonate with families' needs and experiences. "We want to ensure that what we are putting out there is really substantiated from the scientific end in terms of best evidence," noted Hartling. TREKK is not only engaging healthcare professionals as a catalyst for change, but also empowering parents to be a part of that process.

Lisa Hartling and Shannon Scott, co-directors of TREKK.

The end goal is to "decrease that 17 year gap between what we know and what we do," said Hartling. "From a pediatric point of view, we shouldn't be waiting 17 years, an entire childhood, to get something translated that was proven by research ages ago."

So far, 13 different resources, from audio books, videos to eBooks, have been created with parents involved throughout the process and based on corresponding resources for healthcare practitioners. The resources can take years to produce in order to be usable, understandable and trustworthy for different audiences.

The TREKK team is supported through a Partnership grant from WCHRI through funding provided by the Stollery Children's Hospital Foundation. "As a researcher, and as a mother who takes their kids to the Stollery, to be able to give something back to the Stollery means a lot to me personally," said Scott. "To know that these dollars are actually affecting families and affecting healthcare in other parts of the country and the globe is very meaningful to me."

TREKK received partnership funding from WCHRI through the generosity of the Stollery Children's Hospital Foundation.

Learning to live
with chronic pain

Fourteen year old Megan should be spending her time hanging out with friends and being a regular teenager. Instead her days are filled with pains that start in her stomach and head and intensify until all she can do is curl up in a ball on her bed in utter misery.

Chronic pain is a debilitating invisible disease that is easily ignored or excused as something else. Current information and resources aren't always clear on how to best help and it's heartbreaking to watch someone like Megan suffer with no solutions.

Kathy Reid, nurse practitioner at the Stollery Children's Hospital has treated many patients like Megan and knows, first hand, the challenges they and their families face. "Right off the bat, I recognized that the kids and families didn't have any information on chronic pain," explained Reid. "There were books written for families, not with families." That's why she contacted Shannon Scott and Lisa Hartling, co-directors of Translating Emergency Knowledge for Kids (TREKK), who are experts in transforming proven research into resources for families.

Writing a resource with families dealing with chronic pain is exactly what the team decided to do with the help of a WCHRI Innovation grant. The team was able to hear directly from families within the chronic pain clinic through long hours of interviews. "Parents finally got to share what it's like to have a child who is often told it's all in their head," said Reid.

Nurse practitioner, Kathy Reid and two children enjoy reading *Learning to Live with Chronic Pain*.

The next step was reviewing the evidence for treating chronic pain. Using both the interviews and the best evidence for treatment, the narrative for *Learning to Live with Chronic Pain*, an eBook and audiobook was created. "These things take time," noted Hartling. "Time and lots of resources—a lot of expertise and varied skill sets to do them really well."

The finished result is a stunning 48 page booklet that tells Megan's story of dealing with chronic pain and offers solutions such as breathing exercises. Families are ecstatic their stories are finally being told. "It's humbling that our little book hit the right nerve for what people needed," said Scott. "It's gratifying to work with families and teens to develop resources like this and to actually see how donor donations can make a difference."

The Learning to Live with Chronic Pain resource was supported by the Stollery Children's Hospital Foundation's Innovation grant through WCHRI.

Statement of operations

STATEMENT OF OPERATIONS
FOR THE YEAR ENDED MARCH 31, 2018

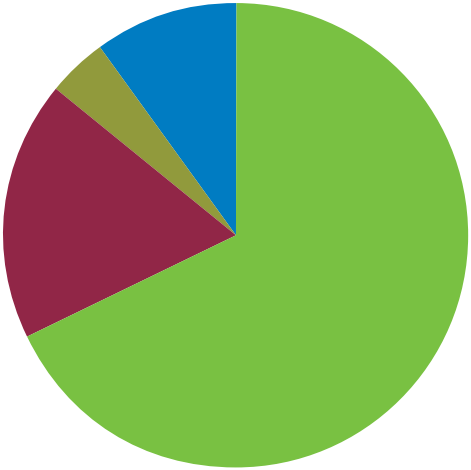
REVENUE	
Stollery Children's Hospital Foundation *	**5,373,157**
Royal Alexandra Hospital Foundation *	**1,409,317**
Faculty of Medicine & Dentistry, University of Alberta and other	**312,020**
Cost recovery	**840,582**
Total revenue	**7,935,076**

EXPENDITURES	
Research grants	**2,052,116**
Research catalysts	**2,016,688**
Research platforms	**1,620,382**
Donor designated initiatives	**1,003,879**
Administrative support	**772,529**
Total expenditure	**7,465,594**

Surplus (carry-forward to next fiscal year)	**469,482**

* Includes surplus carry-forward from prior year, transfers from closed projects & other donations

REVENUE PERCENTAGE



68% Stollery Children's Hospital Foundation

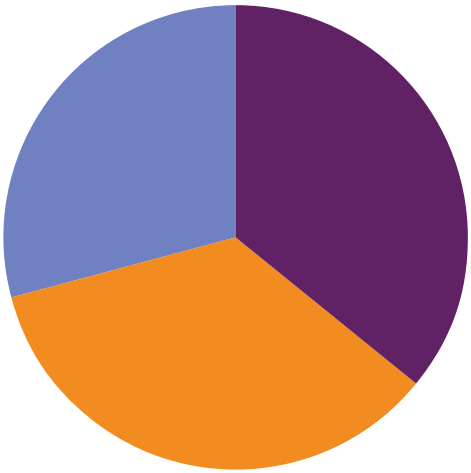
18% Royal Alexandra Hospital Foundation

4% Faculty of Medicine & Dentistry and other

10% Cost recovery

The revenue percentages reflect the ratio of researchers who align with child health compared to women's health, which is approximately 4:1.

EXPENDITURE PERCENTAGE



36% Research Grants

35% Research Catalysts

29% Research Platforms

Expenditure percentages indicated above do not include donor designated initiatives or administrative expenses (13% and 10% of the total, respectively).

Our impact

Attention is being drawn to an often overlooked and under-resourced area: **Mature women's health.**

We're developing targeted therapies to treat ovarian cancer with **more precision and fewer side effects.**

We've supported more than **500 researchers,** leading to **900 research grants** and **550 projects**.

We've also supported **100 undergraduate, graduate and post-graduate trainees.**

We're uncovering ways to better understand and diagnose the **mosquito borne Zika virus**.

Over 20% of the national award recipients of the CIHR New Investigator grants in Maternal, Reproductive, Child and Youth Health were **WCHRI researchers**.

There is now a 95% survival rate for unborn babies with an abnormally fast heart rate, thanks to research done by members of the institute.

We're finding new ways to involve patients in research at the Stollery Children's Hospital and the Lois Hole Hospital for Women.

We're testing medications that are **revolutionizing treatments for children**.

STRONGER TOGETHER

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Alberta Health Services

STOLLERY CHILDREN'S HOSPITAL FOUNDATION

LOIS HOLE HOSPITAL FOR WOMEN

women & children's health research institute

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