

Healthy Foundations of Life



IHDCYH

Institute of Human Development,
Child and Youth Health

STRATEGIC PLAN 2013-2017



Canadian Institutes
of Health Research

Instituts de recherche
en santé du Canada



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Canada

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's health research investment agency. CIHR's mission is to create new scientific knowledge and to enable its translation into improved health, more effective health services and products, and a strengthened health care system for Canadians. Composed of 13 Institutes, CIHR provides leadership and support to more than 14,100 health researchers and trainees across Canada.

IHDCYH promotes and supports research that improves the health and development of mothers, infants, children, youth and families in Canada and throughout the world. Through our support, researchers address a wide range of health concerns, including those associated with reproduction, early development, childhood, and adolescence.

Table of Contents

Message from the Scientific Director	4
Preamble	6
About CIHR and IHDCYH	8
The Challenge of Reproductive, Child & Youth Health	8
Values	10
Consultative Process	11
Vision	12
Research Investment Themes	13
I. Healthy Developmental Trajectories	
II. Healthy Reproduction, Pregnancy, Childhood and Youth	14
III. Healthy Public Policy and Systems Integration	
Enabling Tactics	16
The Path Forward	18
Appendix A: Strategic Planning Methodology	22
Appendix B: Strategic Planning Retreat Participants	25



Institute of Human Development, Child and Youth Health (IHDCYH)

STRATEGIC PLAN 2013-2017

Message from the Scientific Director

As the Scientific Director of the Institute of Human Development, Child and Youth Health (IHDCYH), it gives me great pleasure to present our new strategic plan. I am pleased to have had the opportunity to meet with many members of our community from across Canada, to discuss the needs of Canadians and the global community, and how these are best served. This extensive local, national and international consultation and environmental scan has resulted in a strategic plan that is tailored to secure the best possible future for Canada's children, youth and families.

This plan will guide the Institute for the next five years and build upon the excellent work that was started by the previous Institute leadership. As we move forward with specific research priorities and strategic directions, we will strive to build capacity and foster collaboration throughout all four pillars of research: biomedical, clinical, health systems and services, and the social, cultural and environmental factors that affect the health of populations. IHDCYH serves a unique and broad community, and this gives us a fantastic opportunity to come together and enhance creativity and innovation in our research.

Our Institute has some very exciting and game-changing initiatives ahead, as outlined in this plan, which will allow us to build and maintain stronger partnerships and leverage our funding capacity in a focused and strategic manner. I look forward to working with you all to achieve our goals.

Finally, I would like to sincerely thank everyone who participated in the strategic planning process, especially to our Institute Advisory Board members for their valuable guidance and contributions, and to the IHDCYH staff for their hard work and dedication. I am confident that we have collectively built a strategy that will make a significant impact on health outcomes of children, youth and families in Canada and internationally.



Shoo K Lee
Scientific Director
CIHR-Institute of Human Development,
Child and Youth Health

Preamble

Responding to the ever-evolving landscape of health research and health needs, the Canadian Institutes of Health Research's (CIHR) Institute of Human Development, Child and Youth Health (IHDCYH) initiated a strategic planning process to provide direction for the work of the Institute for the next five years.

Since the creation of CIHR, IHDCYH-affiliated researchers have had increasing success in achieving funding, as demonstrated through a large increase in the community's share, on a percentage basis, of CIHR funding in open and strategic grants, career salary awards, and training awards. There was also a larger increase in the number and quality of publications by IHDCYH researchers over time in Canada (versus other countries) in reproductive health, and child and youth health, especially in the years since the advent of CIHR. Furthermore, IHDCYH researchers have achieved proven impacts on clinical decision making, public policy, individual behaviours, the health care system, and the economy¹.

In 2011, CIHR and the Institutes were reviewed by an International panel of experts. Each Institute was provided with recommendations for continuing to advance the needs of their specific communities. Recommendations to IHDCYH included:

- Continue to focus on research across developmental processes, on multidisciplinary partnerships, and on development of the next generation of researchers in this field;
- Develop a strategic plan targeted at enhancing Institute capacity in healthcare services and policy research;

- Work with CIHR, other institutes, and stakeholders to remove the obstacles to usage of Canada's scattered health-related databases to allow research to determine effectiveness of interventions and progress toward improved public health;
- Address the insufficiency of jobs available to graduates of the Canadian Child Health Clinician Scientist Program in needed fields such as psychology, nursing, and dietetics; and create additional research capacity in maternal-child health through education of mid-career researchers.

For more information and a full list of the recommendations, the complete feedback is available on the CIHR website².

Building on the strengths of our community, and taking the CIHR five-year Strategic Plan (the [CIHR Roadmap](#)³) and [2011 International Review](#) into consideration, this plan articulates IHDCYH's long-term vision, and sets out goals and priorities within strategic research themes required to achieve that vision. The plan will steer IHDCYH's research agenda to ensure the best reproductive, child, and youth health outcomes and provide 'Healthy Foundations of Life' in Canada and around the world.

The plan reflects the ideas and feedback offered by more than 1,000 members of IHDCYH's community through an environmental scan conducted in early 2012. This feedback was crucial to achieving an integrated approach to IHDCYH's work and was mindful of the CIHR Roadmap and the feedback obtained during CIHR's 2011 International Review process. The results of the consultation and an environmental

scan of key documents served as the backbone for discussion and examination at the 2012 IHDCYH Strategic Planning Retreat, where representatives from the Institute Advisory Board (IAB) and key stakeholders developed IHDCYH's vision, and further refined its strategic priorities.

Bolstered by these discussions, and in alignment with the mission of CIHR, this strategic plan integrates the priorities and needs of IHDCYH's broad community, and encompasses views from biomedical, clinical, health services and population health researchers, and key stakeholders from across all regions of Canada.

This strategic plan offers a new approach to supporting excellence in the development of new knowledge. Further, this plan supports a highly integrated, collaborative, long-term, multi-pillar approach. It articulates IHDCYH's vision to develop, promote, and use world-class research to ensure the best reproductive, child, and youth health outcomes.

IHDCYH supports research that ensures the best start in life for all Canadians and the achievement of their potential for optimal growth and development

¹CIHR-IHDCYH (2001-2011) *The First Decade*. Accessed at <http://www.cihr-irsc.gc.ca/e/45247.html>

²Canadian Institutes of Health Research, *CIHR 2011 International Review*. Accessed at: <http://www.cihr-irsc.gc.ca/e/31680.html>

³Canadian Institutes of Health Research, *2009/10 – 2013/14: Health Research Roadmap: Creating innovative research for better health and health care*. Accessed at: <http://www.cihr-irsc.gc.ca/e/39977.html>



About CIHR and IHDCYH

CIHR's mission is to create new scientific knowledge and to catalyze its translation into improved health, more effective health services and products, and a strengthened Canadian health care system. Composed of 13 Institutes, CIHR provides leadership and support to more than 14,000 health researchers and trainees across Canada.

IHDCYH is dedicated to developmental, physical and mental well-being throughout the life cycle from a population perspective. What sets IHDCYH apart from other CIHR Institutes is the fact that its research community enquires into all the needs of children and families rather than being bound to one disease, or one organ. Since its inception, IHDCYH's strategic focus has been the process and integration of human development, including biological, behavioural and social factors. By facilitating partnerships and working to accelerate the translation of new knowledge, IHDCYH funds and promotes research that addresses illness and promotes the well-being of Canadian children, youth and families.

The Challenge of Reproductive, Child and Youth Health

The need for an Institute devoted to the many key issues facing Canada's families, children and youth (described in the box to the right) is clear: while Canada's health outcomes are good, Canada can and should do better.⁸

These statistics highlight the importance of IHDCYH working with other CIHR Institutes and stakeholders, as well as supporting portfolios such as education, child welfare, justice and

income assistance, to improve health outcomes for Canadian children and families. This strategic plan responds to the complex needs of our community by outlining a strategy that advances basic discoveries, and improves clinical care, health systems and public policies to produce the best reproductive, early development, child and youth health outcomes.

- According to the most recent UNICEF report, Canada ranks 17th out of 29 "rich" countries, with below average scores for child poverty, obesity and children's life satisfaction, and ranking almost at the bottom (27th) for child health and safety⁴.
- Canada's maternal mortality rates have doubled over the past 15 years, rising from 6 per 100,000 live births in 1995 to 12 in 2010⁴.
- Canada's infant mortality rate (IMR) has slipped from 5th lowest in the world in 1990 to 40th in 2011, while its preterm birth rate increased by 30% during the same period¹.
- On average, infant mortality rates in Canada were 4.9 per 1,000 live births in 2009, but varied from 3.4 in Nova Scotia and Prince Edward Island to 15.5 in the Northwest Territories and 14.8 in Nunavut⁵.
- It is estimated that at any given time, 14% of children in Canada (or more than 800,000) experience mental disorders causing significant symptoms and impaired functioning at home, at school and in the community¹, and that 75% of children with mental disorders do not receive specialized treatment services⁶.
- While accounting for less than 1% of the child population, children with medical complexity utilize almost 1/3rd of all pediatric healthcare expenditures and make multiple transitions across providers and healthcare settings⁷.

⁴UNICEF, Innocenti Research Centre, Florence (2007) *Child poverty in perspective: An overview of child well-being in rich countries*, Innocenti Report Card 7. Accessed at: http://www.unicef-irc.org/publications/pdf/rc7_eng.pdf

⁵Statistics Canada (2012) *Infant mortality rates by province and territory*. Accessed at: <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/health21a-eng.htm>

⁶C Waddell et al. (2005) *A Public Health Strategy to Improve the Mental Health of Canadian Children*. *Can J Psychiatry* 40(4):226-233

⁷E Cohen et al. (2012) *Patterns and Costs of Health Care Use of Children with Medical Complexity*. *Pediatrics* 130(6):e1463-70

⁸Health Canada, K Leitch (2007), *Reaching for the Top: A Report by the Advisor on Healthy Children & Youth*. Accessed at http://www.hc-sc.gc.ca/hl-vs/alt_formats/hpb-dgps/pdf/child-enfant/2007-avisor-conseillere/advisor-conseillere-eng.pdf

Values

CIHR's core values underpin all of IHDCYH's work. IHDCYH is being guided by these core values as follows:

- **Excellence** – In all aspects of its work, including basic research and knowledge translation to inform health policies, IHDCYH strives to meet the highest international standards of excellence. IHDCYH researchers have a proven track record of excellence as outlined in our report [The First Decade](#)¹. Between 2000 and 2010, open grants funding to IHDCYH researchers increased from \$25M to \$73M, while strategic grants funding increased from \$1M to \$34M annually. During the same period, salary awards to IHDCYH researchers increased from \$2M to \$4M, while training awards increased from \$2M to \$11M annually. The increase in number and quality of publications by IHDCYH researchers outpaced the rest of the world by over 50%, and established Canada among the top countries in the world for reproductive, child and youth health research on a per capita basis.
- **Scientific Integrity and Ethics** – IHDCYH upholds and promotes adherence to relevant research and ethical principles with the utmost honesty, probity and professionalism. We will continue to promote the highest ethical principles and processes in all aspects of our work and activities. For example, we will build on past work, such as the [Best Practices for Health Research Involving Children and Youth](#)⁹, a guide for health researchers and research ethics boards, created in partnership with the McGill Centre of Genomics and Policy.

- **Collaboration** – IHDCYH promotes, encourages and values collaboration among researchers in Canada and internationally, and will build on our collaboration with and support of domestic and international partners to fulfill this part of our mandate. We have partnered with all 12 other CIHR Institutes, a number of Initiatives housed at CIHR (eg, HIV-AIDS, the Knowledge Translation Branch, the Drug Safety and Effectiveness Network) and the CIHR Branches. In addition, IHDCYH has partnered externally with great success, not only leveraging over \$25 Million from external partners, but also benefitting from their expertise, knowledge and contacts. IHDCYH views parents and families as partners in research and will continue to be inclusive when developing each of its future initiatives.
- **Innovation** – IHDCYH values new ideas and creative approaches to addressing health and health system challenges in Canada and around the world. Our researchers know that Innovation is essential to help improve health outcomes for families, children and youth. For example, Dr Anne Snowdon and her team at the University of Windsor (funded by CIHR and partners) worked with Magna International to design and manufacture Clek, an improved booster seat that is more acceptable to children than conventional seats and thus more likely to be used. The Clek, launched in Canada in 2006 and the US in 2007, has won several national and international awards. In addition, they developed a program called “Bobby Shooster Rides Safely in his Booster,” which includes a children’s story

⁹Centre of Genomics and Policy (CGP), Maternal Infant Child and Youth Research Network (MICRYN), *Best Practices for Health Research Involving Children and Adolescents*, 2012. Accessed at: <http://www.genomicsandpolicy.org/en/best-practices-2012>

book, growth chart and educational DVD. The program demonstrated increases in knowledge and in the correct use of booster seats, one year after the intervention.

IHDCYH’s core values of excellence, scientific integrity and ethics, collaboration, innovation and the public interest will guide and underpin our work

- **Public Interest** – The public interest is of paramount importance in the creation and use of health knowledge throughout all research and related activities supported by IHDCYH. We strive to translate new knowledge into public policy to help improve the health of children, youth and families, and IHDCYH researchers have demonstrated impact in the public interest in both Canada and internationally. For example, Dr Stanley Zlotkin, a pediatric nutritionist from Toronto’s Hospital for Sick Children, developed the “Sprinkles” sachet containing a day’s supply of iron and other important micronutrients, which can be added to any semi-liquid food without changing its taste, colour, or texture¹⁰. Sprinkles has already reached four million at-risk children in more than 30 countries, and its distribution has been promoted by the WHO, the World Food Program, and UNICEF.

¹⁰SH Zlotkin et al. (2005) *Micronutrient sprinkles to control childhood anemia*. *PLoS Med*;2(1):E1.

Consultative Process

IHDCYH’s strategic plan is the result of a comprehensive methodology (outlined in Appendix A) designed to gather the views and input from the Institute’s key stakeholders - including researchers, clinicians, healthcare decision makers, public health policy makers and family representatives. The consultative process involved an environmental scan of key documents, in-person consultations, a web survey, key informant interviews and focus groups, and concluded with a strategic planning retreat in September 2012 (for a list of participants, please see Appendix B).

The synthesis of the consultations and discussions at the strategic planning retreat led to the development of a strong vision, three overarching research themes, and a number of specific strategic investment priorities, which are described in the following sections.





Vision

Leading health research for excellence in child and family health outcomes

Leading the creation and application of world-class research to strive for the best reproductive, infant, early development, childhood and youth health outcomes, IHDCYH integrates leadership, innovation, collaboration and knowledge translation.

Research Investment Themes

IHDCYH will target innovative research that contributes to improvement in critical reproductive, child and youth health outcomes, leading to better life trajectories. To ensure the best outcomes for children, youth and families, IHDCYH has identified three research investment themes:

- **Healthy Developmental Trajectories;**
- **Healthy Reproduction, Pregnancy, Childhood and Youth; and**
- **Healthy Public Policy and Systems Integration.**

We will address these themes through the following strategic initiatives:

I. Healthy Developmental Trajectories

1. Developmental Origins of Health and Disease through the Lifespan

Developmental Origins of Health and Disease through the Lifespan is a multi-disciplinary field that examines how environmental factors acting during the phase of developmental plasticity interact with genotypic variation to change the capacity of the individual to cope with its environment. Research in this theme seeks to establish what physical, environmental, or social exposures during gametogenesis, pregnancy and early postnatal life affect the onset and development of diseases in children and adults. Conditions known to be affected by such mechanisms include cardiovascular disease, obesity, asthma, reproductive deficits, diabetes and mental health. This field of study functionally relates maternal and paternal health to the health of children and youth, as well

as potential trans-generational effects. These issues are magnified in Canada's Northern communities where Aboriginal people have expressed concerns about continuing to eat traditional foods due to the biomagnification of contaminants in the food chain¹¹.

2. Preterm Birth

As maternal and infant health are key indicators of a nation's health and well-being, it is important to tackle the causes of infant mortality and morbidity. Most infant deaths occur during the neonatal period, with almost two thirds being among preterm infants, 46% of which are among very preterm infants born at <28 weeks gestation. To compound this problem, preterm births in Canada and globally have increased by 30% during the past two decades, from 6.4% in 1981 to 7.7% in 2009^{12,13}. (The extent to which preterm birth is also increasing among Canada's Aboriginal populations is unknown due to inadequate and inaccurate Aboriginal health data¹⁴.)

Preterm birth is associated with increased morbidity, including developmental delay, cerebral palsy, blindness, deafness, cognitive delay and learning difficulties. The costs of preterm birth are significant, and include both the costs at and following birth, as well as the financial and social costs of lifetime impairment¹⁵; in Canada, the lifetime costs for permanent impairments of neonatal origin have been estimated as \$676,800 per preterm infant or \$20 billion annually^{16,17}. In addition, preterm birth can have inter-generational consequences and play a causative role in adult-onset diseases such as cardiovascular disease, hypertension and diabetes¹⁸. This initiative will focus on

¹¹R Stout et al. (2009) *Maternal and Infant Health and The Physical Environment of First Nations and Inuit Communities*. Accessed at: http://www.bccewh.bc.ca/publications-resources/documents/Maternal_PhysicalEnvironmentFirstNationsInuit.pdf

¹²KS Joseph et al. (1998) *Determinants of preterm birth rates in Canada from 1981 through 1983 and from 1992 through 1994*. NEJM 339(20):1434

¹³H Blencowe et al. (2012) *National, regional, and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications*. Lancet 379:2162-2172

¹⁴Health Canada *A Statistical Profile on the Health of First Nation as in Canada: Vital Statistics for Atlantic and Western Canada, 2001/2002*. Accessed at: <http://www.hc-sc.gc.ca/fniah-spnia/pubs/aborig-autoch/stats-profil-atlant/index-eng.php#a625>

¹⁵S Saha & UG Gerdtham (2013) *Cost of illness studies on reproductive, maternal, newborn, and child health: a systematic literature review*. Health Economics Review 3:24

¹⁶J Moutquin & VI Milot-Roy (1996) *Preterm birth prevention: Effectiveness of current strategies*. 18:571.

¹⁷SK Lee et al. (2009) *Improving the quality of care for infants: a cluster randomized controlled trial*. CMAJ 181(8):469.

¹⁸P Hovi et al. (2007) *Glucose regulation in young adults with very low birth weight*. NEJM 356(20):2053-2063

identifying Canadian priorities within the global context, including prevention, management of at risk pregnancies, and optimization of outcomes both during the perinatal period and on into childhood and beyond. The international attention on this issue will allow for opportunities to increase awareness and develop a global agenda for the prevention and treatment of preterm birth around the world.

II. Healthy Reproduction, Pregnancy, Childhood and Youth

1. Environmental Health

Research on this topic will increase understanding of the influence of social, physiological and physical elements on reproduction and the growth and development of the embryo, fetus, child and youth. The health and wellbeing of all Canadians rests upon an understanding of the relationship between health and the environment, on which all life depends.

Environment includes not only the natural environment and the sustenance it provides, but also our social and built environments. Both natural and built environments contain many synthetic and naturally occurring chemical and biological agents, some of which may be harmful to health. To prevent and avoid human exposure to potentially harmful agents, society needs sound information about both exposure and hazard across the continuum that exists from source, to exposure, to biological effect, to individual response, and ultimately to public health impact. This will reduce the current burden of environmentally-related disease during pregnancy on child and youth health, and will minimize environmental health risk across all stages of life and to future generations.

This initiative provides a unique opportunity for CIHR to strengthen partnerships with both industry and other departments within the health portfolio. For example, CIHR is poised to be an agent of change that can help industry produce cleaner consumer products and create an environment that positively enhances the health of Canadians.

2. Healthy Pregnancy

Pregnancy as a research priority spans research into fertility and infertility, and maternal health prior to and during pregnancy, as well as healthy birth and causes of infant mortality. For example, with a growing social demand for medically assisted reproductive services, there is a need for further research on the cost, effectiveness and safety of new technologies, how to promote single embryonic transfer, and the impact of subsidization. In addition, maternal mortality rates have doubled over the last 15 years, while maternal health status both prior to and during pregnancy is clearly implicated in the risk of preterm birth, as well as risks during the perinatal period, early development, childhood and through into adulthood, with further intergenerational consequences. Of key importance to this initiative is the integration of ethical issues, as well as specific issues related to Canada's Northern and global health communities.

III. Healthy Public Policy and Systems Integration

1. Integrated Child and Youth Research and Health Services

Canada's pediatric health care institutions are ideally positioned to contribute vital new

knowledge for the benefit of Canadians. However, many still lack the supportive research infrastructure and a culture of research that is critically needed. Forward-thinking, creative and innovative solutions are absolutely essential for the future of our health care system. For example, better integration of services has been identified as a key step in optimizing the Canadian health care system. This includes: (a) vertical integration of health services, from primary through secondary and tertiary level care, as well as health systems administration and policy; (b) horizontal integration of research evidence into initiatives aimed at improving health systems and clinical services; and (c) integration of the research (both basic and clinical) and clinical enterprises in the health care system.

Breaking down these silos and integrating research and clinical services will go a long way towards solving many of the problems facing patients, health service providers, administrators and researchers in Canada. Pediatric health services can be transformed to support a developmental model. In this theme, the emphasis is not only on integration within hospitals, but also within communities, and across providers, stages of development and different milieus, specifically the integration within the public health, educational and justice systems, with the involvement of parents, families and caregivers.

2. Mental Health

There is an urgent need to improve mental health outcomes for children and youth in Canada. It is estimated that as many as 75% of children and youth with mental disorders do not receive specialized treatment services currently – a stark service shortfall compared

with children's physical health services (eg, childhood cancer). Meanwhile few investments are made in prevention programs to reduce the incidence of mental disorders starting in childhood. Priority areas for new research include increasing knowledge about and access to effective prevention interventions for children and youth at risk, other early interventions including early diagnostic services, and effective treatment services for children and youth with established disorders. This research theme also includes integrating and coordinating programs and services within and across community, education and healthcare systems. The specific strengths and needs of Aboriginal children and youth (eg, long term inter-generational impact of the residential school experience) will be a particular priority.



Enabling Tactics

IHDCYH will apply the following five enabling tactics when implementing activities associated with each of the three research investment themes. These tactics represent five key foundational elements that will be applied when making decisions about our initiatives. These elements reflect our culture and values, and are critical to our success as an organization and in meeting our strategic goals. They will allow IHDCYH to build on existing strengths, leverage resources, build new capacity, and ultimately promote better health outcomes.

1. Develop, foster and sustain effective **partnerships and collaboration**.

Partnerships and collaboration are fundamental to IHDCYH's operation and success. In each of its strategic priority areas, IHDCYH will seek local, national and international partners, not only to leverage its investments, but also to build on, and learn from the knowledge and wisdom of others, fostering true integrated knowledge exchange across disciplines and jurisdictions. IHDCYH will also continue to foster national and international collaborative partnerships with decision makers, governments, health care institutions, Aboriginal organizations and researchers, and the research community, recognizing the strength of diverse contributions and the value of integrating diverse interdisciplinary perspectives.

2. Facilitate **integrated knowledge translation** to ensure better evidence creation and application.

IHDCYH will continue to facilitate, support and evaluate integrated knowledge

translation and exchange in the research it funds. Through the structure of our funding opportunities and activities, we will promote linkages between researchers, funders, community members, policy makers and other stakeholders at all stages of research. Research initiatives will integrate the contributions of biomedical and clinical research with that of health services, and population and public health. The emphasis will be on research that can contribute to innovative, feasible and sustainable solutions, resulting in measurable health improvements for children, youth and families. IHDCYH will also continue to foster and promote integrated knowledge translation training for researchers.

IHDCYH will also participate in and utilize the Strategy for Patient-Oriented Research (SPOR), which is specifically designed to facilitate research that results in improved patient outcomes and health care. SPOR will establish provincial research support units and national networks of researchers, clinicians and decision makers.

3. Enhance **research capacity** to ensure a healthy and vibrant research community.

To foster a vibrant research community fully capable of supporting its strategic priorities and leading to improved health outcomes, IHDCYH will develop and maintain an integrated and explicit approach to identify and train more researchers in reproductive, child and youth health. IHDCYH will also expand and foster support and mentoring for students and new researchers across all four pillars. Further, through

new cross-cutting initiatives, IHDCYH will encourage researchers from other communities to tackle common problems, to maximize and capitalize on the health research excellence in Canada.

4. Facilitate **data sharing** to ensure collaborative, robust, easily accessible and reliable data for evidence-informed decisions.

Even though Canada has a wealth of data systems across the country, access to data is an ongoing challenge for researchers. IHDCYH will facilitate the development of a comprehensive system/infrastructure for cataloguing, sharing, and disseminating data to facilitate more widespread sharing and use, which build upon existing strengths such as SPOR SUPPORT Units. We will establish mechanisms to support discussions to help link and promote (with appropriate ethical safeguards) access to administrative, clinical and research databases within and across a multitude of jurisdictions, populations, and regions.

5. Embrace **global health** to inform strategic initiatives.

Lower income countries face unique and different challenges compared with those faced by high- and middle-income nations. Research also indicates that low-income countries can generate effective solutions for today's global health challenges, and can help inform health systems in developed countries. Key areas include: rural health service delivery; skills substitution; creative problem solving; decentralization of

management; and innovation in mobile phone use¹⁹. IHDCYH will ensure that all research and strategic investments consider the unique bridging opportunities offered by these kinds of global health opportunities.

IHDCYH is particularly interested in assessing how the advances can be applied to Aboriginal and First Nations communities within Canada.



¹⁹Shamsuzzoha BS et al. (2012) *Developed-developing country partnerships: Benefits to developed countries?* Global Health 8:17

The Path Forward

This strategic plan will steer IHDCYH's investment decisions over the next five years. Implementation will involve a spectrum of CIHR's tools for funding research, including CIHR's Signature Initiatives, Strategy for Patient-Oriented Research (SPOR), and other funding opportunities developed in collaboration with other CIHR Institutes, international partners and funding agencies from other countries, and targeted calls for research proposals.

In accordance with the specific objectives, priority funding initiatives will be further developed in consultation with the IHDCYH research community. These will include:

I. Strategy for Patient-Oriented Research

1. Child and Youth Mental Health

IHDCYH will help strengthen existing networks and initiatives for mental health research. In addition, IHDCYH will work with the Child and Youth Mental Health SPOR Network (Transformational Research in Adolescent Mental Health (TRAM)) that was recently launched by CIHR and the Graham Boeckh Foundation to achieve this goal.

2. SPOR Network in Primary and Integrated Health Care Innovations

IHDCYH is co-leading the establishment of a SPOR Network in Primary and Integrated Health Care Innovations with several other CIHR Institutes. The Network will focus on individuals with complex needs across the life course, including age groups from

children to older adults, and will utilize resources in the SPOR SUPPORT Units, Drug Safety and Evaluation Network and others.

II. Signature Initiatives

1. Environmental Health

IHDCYH is co-leading a Signature Initiative in environmental health with a number of other Institutes. This initiative will examine environmental health, including the urban environment, as well as the impact of factors such as resource extraction, agriculture and industry on health.

2. Integrating Research and Health Services

This signature initiative is aimed at systems integration of research and health care, so that research is integral to the health care enterprise. It will create a network of true research hospitals working with their communities, which will facilitate research for children and embrace all four pillars of research.

3. Other Signature Initiatives

IHDCYH will continue to support, invest in and be an active partner in numerous other Signature Initiatives. These include the Canadian Epigenetics and Environment Consortium, Community-Based Primary Health Care, Evidence-Informed Health Care Renewal, and Pathways for Health Equity for Aboriginal Peoples.

III. International Partnerships

1. Developmental Origins of Health and Disease

This field of study has clear linkages to the CIHR Signature Initiative Canadian Epigenetics, Environment and Health Research Consortium that was launched in the spring of 2012. IHDCYH is taking a lead role to establish a global consortium that will strategically coordinate funding for Developmental Origins of Health and Disease research, and will ensure that any opportunities to take advantage of the Epigenetics Signature Initiative funding opportunities are explored. The initiative will also examine the potential for cohort inter-operability and cohort enhancement.

2. Preterm Birth

IHDCYH is taking a primary role in a global consortium that is working together to identify ways to strategically coordinate funding for preterm birth research. This will enable Canada to play a lead role in this important area and leverage our substantial investment for the greater benefit of Canadians and the global community.

3. Global Health Research Initiative

The Global Health Research Initiative (GHRI) flagship research program will bring together the unique strengths of a well-established partnership of three Canadian research and development aid organizations – CIHR, the Canadian International Development Agency and

the International Development Research Centre – and harness the collective expertise of these organizations to work in concert to improve the health of women and children. IHDCYH is an active partner in the renewal of the GHRI, helping to set the specific research priority areas and engaging with partners to generate further funding for this important initiative.



IV. Other Initiatives

1. Healthy Pregnancy

IHDCYH will collaborate with other CIHR funding initiatives to create opportunities for research into optimizing healthy pregnancy and pregnancy outcomes.

IHDCYH is committed to making a tangible difference in the lives of Canadians

2. Capacity Building and Other Partnerships

IHDCYH is funding six mid-career Chairs in Applied Health Research to build capacity in clinical and health services research and will continue to build capacity in all four pillars. IHDCYH will also partner in a strategic fashion with other Institutes on Signature and Level II initiatives in order to best serve the interests of our diverse community.

Guided by its vision, IHDCYH commits to priority research areas with a focus on excellence in child and family health outcomes. IHDCYH will also define performance metrics for strategic initiatives that provide flexibility to adapt to changing circumstances while reporting on accomplishments. We are committed to making a tangible difference in the lives of Canadians.

This plan lays the foundation for sustainable, long-term investments that directly affect health outcomes and facilitates collaboration and communication among researchers, practitioners, policy makers, communities and family members to achieve 'Healthy Foundations of Life' for Canadians and the global community.



Appendix A

Strategic Planning Methodology

IHDCYH's strategic planning process was designed to represent the views and input from the Institute's key stakeholders, including researchers, clinicians, healthcare decision makers, and family representatives. It welcomed the opportunity for dialogue and synergy to create a context for strategic renewal and planning. The process was designed and implemented in collaboration with Ellen Melis (Unlimited Potential) and involved three key phases:

Phase I (April-June 2012): Dr Shoo Lee, the Institute's Scientific Director, along with key staff and local IAB members, made 13 stops across the country (locations determined through a scan of the geographic locations of IHDCYH researchers) to meet with over 400 researchers, introduce themselves and ask those in attendance what they perceived to be their challenges, the strengths in reproductive, early development, child and youth health, and their ideas about priorities in research, capacity-building and knowledge translation.

Phase II (August-September 2012): An environmental scan was conducted to provide a clear idea of the internal and external environments in which IHDCYH exists. In total, the scan captured the perspectives of over 500 IHDCYH stakeholders. In addition to a document review, the scan sought input from a larger number of stakeholders across the country through a web-based survey. Posted online from June 7 to July 17, 2012, the survey was sent to almost 1,500 stakeholders.

Over 470 individuals completed the survey.

The scan also included key informant interviews and focus group discussions with key members of our Aboriginal and early-career stage Investigator communities. Meant as an opportunity to get in-depth reflections from key stakeholder representatives, the questions centered around their thoughts on gaps, challenges, strengths, opportunities, and investment priorities. Interviewees were also asked for their suggestions on possible strategic priorities, the development of SPOR networks, and other innovative initiatives that could have significant impact on health outcomes.

A summary report of the findings from the Environmental Scan was used as the basis for the discussions at the Strategic Planning Retreat.

Phase III (September 18-19, 2012): A Strategic Planning Retreat was held with representatives from the IAB and other key stakeholder groups. Participants engaged in a facilitated process where they were asked to consider and provide input into potential research priorities, as well as the overall strategic vision and objectives of the Institute.

The consultations and scan in Phases I and II provided IHDCYH with a number of broad research areas that reflect the strengths and needs of reproductive, early childhood, child and youth research across the country. At the strategic planning retreat, members of the IAB, invited key stakeholders (see Appendix B) and IHDCYH staff reflected on the results of the consultative process. The group was

tasked to incorporate the feedback into priority investment areas that optimized innovation and impact on health outcomes. They also considered partnership potential, the leveraging of existing strengths and capacity, and the building of a sustainable research agenda to engage researchers and decision makers alike.

The resulting strategic plan '2013-2017: Healthy Foundations of Life' incorporates a strong vision and sets out goals and priorities within strategic research themes, as well as identifying core values, enabling tactics and tools that will direct IHDCYH's activities and investments.





Appendix B

Strategic Planning Retreat Participants

IAB MEMBERS	
<p>Anne Snowdon, IAB Chair Academic Chair and Professor, Ivey International Centre for Health Innovation, Western University</p>	<p>Noni E MacDonald Professor of Pediatrics, Dalhousie University</p>
<p>Alan Bocking Professor, Departments of Obstetrics and Gynaecology, and Physiology, University of Toronto; Associate Scientist, Lunenfeld-Tanenbaum Research Institute, Mount Sinai Hospital</p>	<p>Peter Mitchell Professor, Department of Obstetrics & Gynecology, and Physiology, University of Alberta</p>
<p>Leanne Boyd Director, Policy Development, Research and Evaluation, Healthy Child Manitoba Office</p>	<p>Gina Muckle Professor, School of Psychology, Université Laval and CHU de Québec Research Center</p>
<p>Tammy Clifford Vice President, Strategic Initiatives and Chief Scientist, Canadian Agency for Drugs and Technologies in Health (CADTH)</p>	<p>Elaine Orrbine President and CEO, Canadian Association of Paediatric Health Centres (CAPHC)</p>
<p>Astrid Guttman CIHR Applied Chair in Child Health Services and Policy Research; Senior Scientist and Program Leader, Institute for Clinical Evaluative Sciences; Staff Physician, Hospital for Sick Children; Associate Professor of Paediatrics and Health Policy, Management and Evaluation, University of Toronto</p>	<p>Bernard Robaire Professor, Departments of Pharmacology and Therapeutics, and Obstetrics and Gynecology, McGill University</p>
<p>Ellen Hodnett Professor, Lawrence S Bloomberg Faculty of Nursing, University of Toronto</p>	<p>Reg Sauve Professor, Department of Community Health Sciences, University of Calgary</p>
<p>Stephen Lye Associate Director, Lunenfeld-Tanenbaum Research Institute, Mount Sinai Hospital; Professor, Departments of Obstetrics and Gynaecology, and Physiology, University of Toronto</p>	<p>Erik Skarsgard Professor, Department of Surgery, University of BC; Surgeon-in-Chief, BC Children's Hospital</p>

EXTERNAL PARTICIPANTS

<p>Denise Albrecht Director, Partnerships and Advocacy Children's Hospital of Eastern Ontario (CHEO)</p>	<p>Margaret Gillis Senior Director, Division of Children, Seniors and Healthy Development, Centre for Health Promotion</p>
<p>Jeannine Auger Functional Manager, Mother and Child Services Branch, Ministry of Health and Social Services, Government of Québec</p>	<p>Nicola Jones Staff Gastroenterologist, Gastroenterology, Hepatology and Nutrition, The Hospital for Sick Children; Professor, Department of Paediatrics, University of Toronto; Principal Investigator, Canadian Child Health Clinician Scientist Program</p>
<p>Marni Brownell Senior Research Scientist, Manitoba Centre for Health Policy; Associate Professor, Department of Community Health Sciences, Faculty of Medicine, University of Manitoba</p>	<p>Anne Junker Scientific Director, Maternal Infant Child & Youth Research Network (MICYRN)</p>
<p>Denis Daneman Professor and Chair, Department of Pediatrics, University of Toronto; Paediatrician-in-Chief, The Hospital for Sick Children</p>	<p>Stephen Matthews Ernest B and Leonard B Smith Professor and Chair, Department of Physiology; Professor, Physiology, Obstetrics & Gynaecology and Medicine, Faculty of Medicine, University of Toronto</p>
<p>William Fraser Professor and Canada Research Chair in Perinatal Epidemiology, Faculty of Medicine, Department of Obstetrics and Gynecology, Université de Montréal; Associate Director of Clinical Research, CHU Ste- Justine Research Centre</p>	<p>Maureen O'Donnell Executive Director, Child Health BC</p>
<p>Frank Gavin National Liaison, Canadian Family Advisory Network</p>	<p>Vassillios Papadopoulos Executive Director, Research Institute of the McGill University Health Centre; Professor, Department of Medicine, McGill University</p>

STAFF

<p>Shoo K Lee Scientific Director CIHR-IHDCYH</p>	<p>Sarah A De La Rue Assistant Director CIHR-IHDCYH</p>
<p>Elisabeth Fowler Assistant Director, Partnerships and International Relations CIHR-IHDCYH</p>	<p>Lynne Renaud Project Officer CIHR-IHDCYH</p>
<p>Rhiannon Renaud Project Officer CIHR-IHDCYH</p>	<p>Cynthia Yeh Acting Assistant Director CIHR-IHDCYH</p>
<p>Nerizza Matignas Administrative Assistant CIHR-IHDCYH</p>	

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Available on the Web in PDF and HTML formats
© Her Majesty the Queen in Right of Canada (2013)
Cat No MR2-26/2013E-PDF
ISBN 978-1-100-23010-8