



Child Health Evaluative Sciences

Vision 2020 and beyond

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A MESSAGE FROM THE PROGRAM HEAD



I am excited to present this first report detailing a summary of our Retreat on December 2, 2019 and plans for the strategic framework for the future of our program.

We aim to inaugurate a new and exciting direction over the next few years where we will focus on our goals and priorities thus, creating a plan for the future of CHES. I believe there is tremendous opportunity to break new ground and make an enormous contribution to the research community.

Our researchers are local, national and global leaders as demonstrated by their success in achieving successful grant applications, national and international awards, and their dedication to training the next generation of child health researchers. CHES researchers have demonstrated their expertise and leadership in recent months with the onset of the COVID-19 pandemic. Many affiliated scientists have rapidly pivoted to advance knowledge of the novel coronavirus and its impact on children, and to advocate for an evidence-informed policy response.

Our plan will continue to enable research projects, promote excellence in research for the years to come.

At the core of this plan, we will prioritize:

- Cultivating and recruiting high quality talent
- Integration and Alignment with strategic directions of SickKids and the Research Institute
- Innovation in Clinical Trials
- Population Health
- Engaging locally and internationally
- Data and methodological support
- Training and Education
- Knowledge Dissemination and Implementation
- Patient/Family/Citizen Partnerships

To help kick-off the development of the new strategic plan for CHES, we have refreshed our mission statement, created a framework that identifies the core content areas of expertise within CHES, along with cross-cutting themes that are relevant as tools, methods and approaches to ensure that research led by CHES scientists can achieve the mandate of being relevant to children and their families, along with improving pediatric health care systems and delivery.

We will remain committed to being a program that aims to think big, to innovate and to collaborate with our peers both locally and globally.

I want to thank our scientific staff for their contribution to the strategic planning process. The development of this plan involved immense time and effort commitments. I am hoping that these efforts have created a roadmap that will guide the CHES program in the coming years.

I look forward to working with my close colleagues as our program moves forward in the coming years.

Sincerely,

Eyal

CHILD HEALTH EVALUATIVE SCIENCES



Vision

Healthier Children. A Better World

Mission

Conduct research and translate findings into clinical practice, systems and policy to improve the health and well-being of children and their families.

Values

Excellence | Integrity | Collaboration | Inclusion | Innovation | Impact

About Child Health Evaluative Sciences

The Child Health Evaluative Sciences (CHES) program consists of a multidisciplinary group of researchers within the SickKids Research Institute united with a common aim: to improve the welfare of children by enabling healthcare decisions to be based on the best possible evidence generated through the integration of research, clinical practice and training, and the development and application of innovative and effective research methods. CHES scientists integrate research and clinical practice as well as develop and apply novel research methods.

Distinguishing strengths:

- Study spectrum from bedside to backyard | clinic to communities | patients to populations
- Expertise in many methodologies [i.e. Biostatistics, Clinical trials, Epidemiology, Health economics, Health services analysis, Measurement, Meta-analyses, Qualitative methods, Implementation Science etc.]
- Integrated with clinical services at SickKids
- Collaborative relationships with related groups
- Active in education of the next generation of scientists



How we got here | CHES Strategic Planning Retreat

PRE-RETREAT SURVEY RESULTS

CHES Faculty completed a survey prior to the retreat to promote thinking about our strengths, weaknesses, opportunities, and threats (SWOT). The survey consisted of the following questions:

1. If you had to pick 2-3 themes for CHES to focus on, what would they be? This can be current CHES themes (referred to in the reference material attached), or others that you think are important for us to focus on.
2. If you could advocate for CHES to hire new faculty in the RI, what methodological or content area would you recommend? As an example, our last search was for a Clinical Trialist.
3. Do you have any other comments on how we can improve the program?
 - a. What would you like to see more of?
 - b. What would you like to see less of?

The thematic analyses of the survey results are summarized as follows:

PEOPLE

- Analysts to support work with routinely collected data (e.g. ICES) to build in-house support
- Epidemiologists to support and help with study design and development

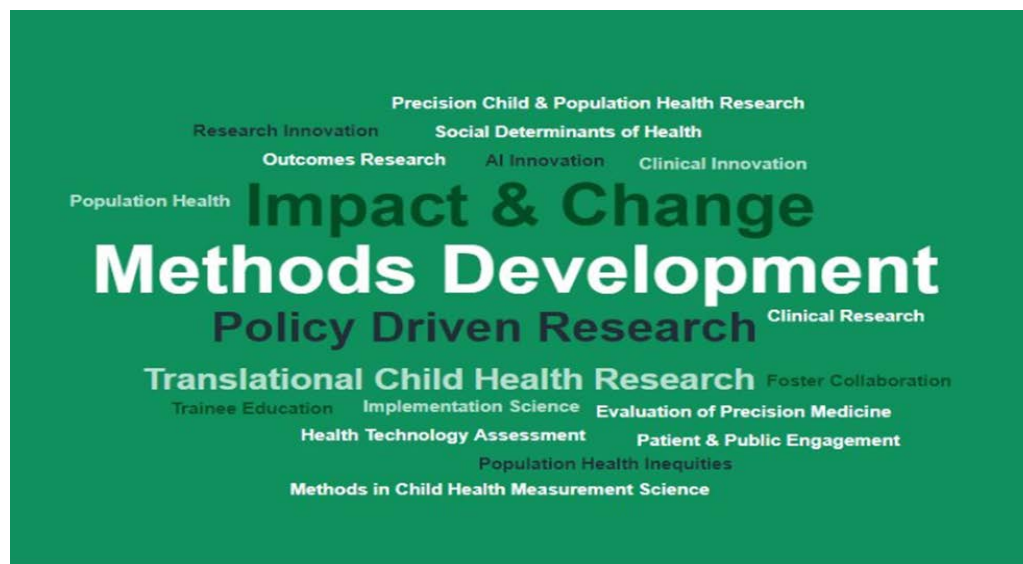
EDUCATION

- Additional invited speakers; latest research from CHES PIs; additional seminars such as journal club for trainees
- Venues for trainees to share their work/get to know each other's method workshops (hands-on), e.g. implementation science, qualitative methods, didactic rounds
- More opportunities for trainees to network within CHES
- Input from scientists on methods interest to feed into a series of CHES rounds (one per month) on new or interesting and relevant methods

OTHER

- More mixed methods and cross-program/PI collaboration
- Formal CHES engagement in the new Leong Centre for Healthy Children and the Child Health Institute
- Casual opportunities to understand more what other CHES scientists do and hear of their accomplishments
- Greater integration between research themes within the program
- More opportunities to collaborate and build effective trial programs

TOP KEY PHRASES FROM SURVEY THAT DEFINE CHES RESEARCH



OVERVIEW

CHES scientists, research and support staff were invited to participate in the December 2, 2019 strategic retreat. The agenda included opportunities for learning from SickKids and CHES leadership, with question and answer periods in plenary. This was then followed by open space where themes were drawn forth and small working groups on each theme deepened ideas from the open space. Small groups presented ideas, received feedback and the day concluded with a plenary discussion setting forth expectations and next steps.

KEYNOTE PRESENTATIONS

Dr. Mike Salter, Chief of Research, opened the day with a keynote presentation. This presentation emphasized that the hospital mission of 'healthier children, a better world' is not changing with the new focus on precision child health. Rather, Dr. Salter highlighted that CHES is uniquely positioned as a centre for clinically focused research to align closely with the new mandate of the hospital wherein every patient and family benefits from research, and it is not a silo of the organization. Dr. Salter suggested that hospital-wide investments in precision medicine and innovation break down the notion that research and clinical care are divided, and offer opportunities to embed research throughout the organization. The question and answer period which followed included a discussion of opportunities to build research capacity in the organization and measure impact using innovative metrics.

Dr. Eyal Cohen, Program Head, provided a brief history of CHES, along with a summary of survey results prior to the strategic retreat. Dr. Cohen articulated three current themes of CHES which were established in a 2016 strategic plan as 1) translational research, 2) methods development, and 3) impact and change. Dr. Cohen shared pre-retreat survey results which highlighted perceived strengths and weakness of CHES. The strengths are an established track record of impactful research led by a growing number of scientists, which is the largest grouping of scientists within the SickKids Research Institute (RI). However, the large numbers are also perceived as a that CHES lacks a clear focus and is seen as potentially too diffuse in research areas and expertise. This perception, which was highlighted in two consecutive external reviews, is likely due to the historical opportunistic convergence of clinical research scientists with diverse research foci without a clear overarching alignment. Unlike other research programs in the RI, the majority of faculty in CHES are hired directly through clinical departments in the hospital as clinician-scientists, the majority of whom are physicians, but also other important disciplines (e.g. nursing, social work, pharmacy and psychology). Staff survey results indicated opportunities to address the perceived lack of focus and core identity across CHES and to build upon the productivity and collaboration of this diverse group of CHES scientists.

Given that the majority of scientists with CHES affiliations hold accountabilities elsewhere such as those linked with their clinical specialties, there is an opportunity for CHES to focus on core areas to support diverse research programs. The group highlighted shared collective needs, and opportunities to build on CHES' strengths and move forward to support collective aims of individual research programs, including RI-funded scientific positions and core supports for research activities. Given the changing focus of SickKids to precision medicine and sophisticated analytics including the use of big data, artificial intelligence and machine learning, participants highlighted the importance of aligning CHES practices such as recruitment and hiring vis-a-vis these priorities. Further, given the focus on applied research, participants noted the need to demonstrate impact and applicability of research.



OPEN SPACE: CHES PRIORITIES

Following keynotes and plenary discussion, open space technology was used to engage participants in strategic planning exercises. Participants were asked the broad question of 'what is your top priority for CHES?' Asking to choose one priority can help to focus and draw forth areas of the highest need and interest from a diverse group. Participants were asked to individually write their selected priority on a post-it note. This was then followed by a plenary exercise whereby each participant shared their priority, which were clustered according to similarities by a facilitator. This exercise was repeated until all priorities had been shared or felt that the priority which they had proposed was included among the clusters which had been established. This exercise led to five clusters of priority topics:

1. Integration and alignment
2. Data and methodological support
3. Patient-oriented research
4. Training and education
5. Innovation in clinical trials

Participants were then asked to join one of five groups discussing a priority topic, and a 6th worked on developing a graphical representation of CHES strategic directions. The discussion was recorded by a designated scribe who also summed up respective discussions during a report back in plenary. Small groups had a template whereby they articulated the definition of the priority topic, attainable goals within the next five years, along with clear needs of how to achieve the goals. It was clarified that the goals should be realistic, and needs for attainment within the sphere of influence of CHES. Keeping the discussion grounded in pragmatic needs and goals ensured that conversations were productive and reflected genuine opportunities for CHES. Each small group discussion is summarized in (Table 1).



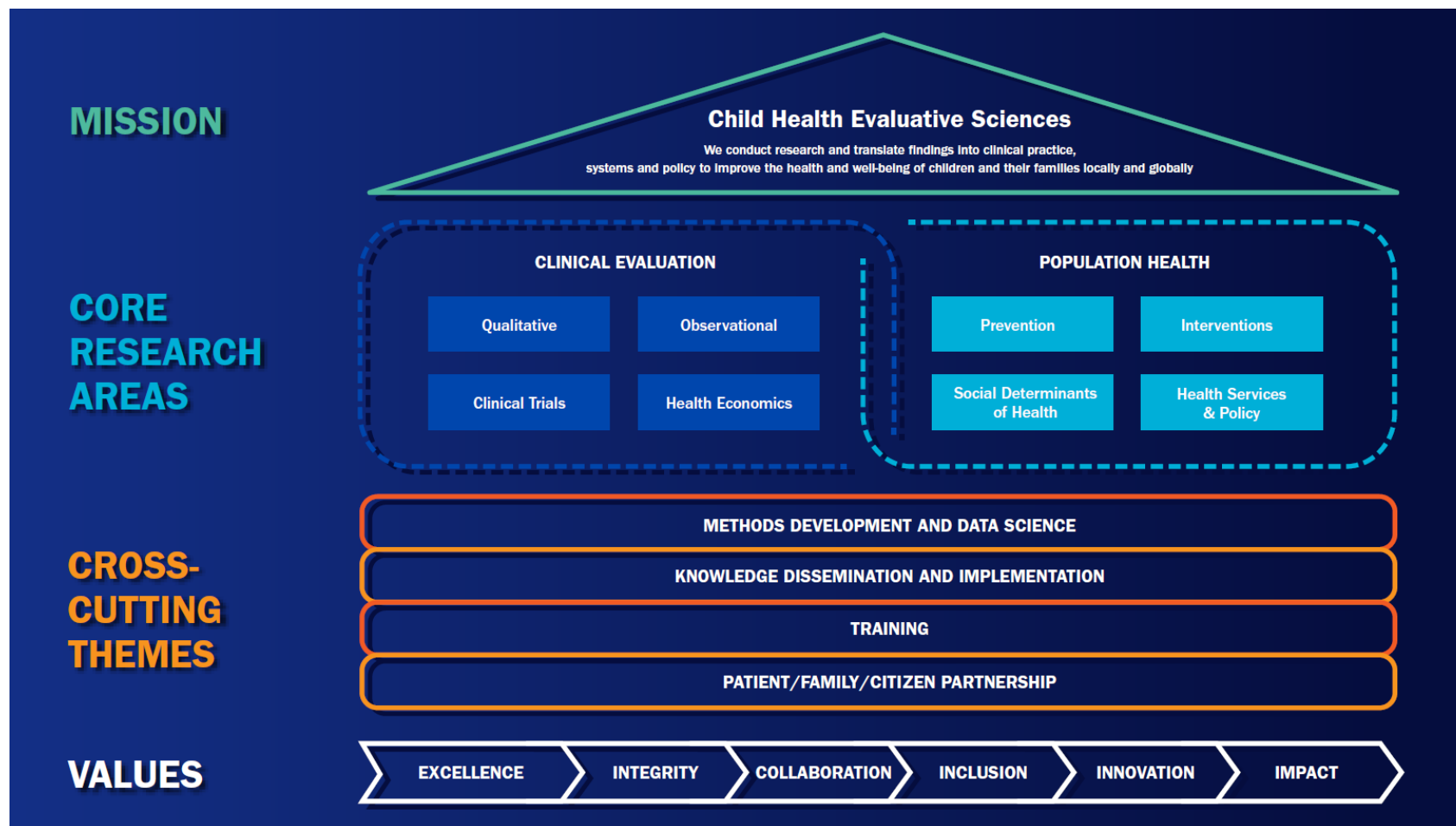
[Table 1]

CHES PRIORITIES			
Topic	Definition	Goals	What Steps Can Achieve Goals?
1. Integration and alignment	Find opportunities to link CHES with research entities and groups to strengthen research and impact	<ul style="list-style-type: none"> -Stronger collaborative relationships across the Research Institute (RI) -Seek out opportunities for CHES researchers to demonstrate skills and support others in RI (e.g. evidence synthesis, policy analysis). 	<ul style="list-style-type: none"> -CHES scientists should be integrated within RI organizational structures such as hiring committees, chairs, strategic planning and priority setting across RI -Enable CHES scientists to play bridging role through joint appointments, joint rounds, training etc.
2. Data and methodological support	Foster the development of a common resource which offers methodological and analytical support	<ul style="list-style-type: none"> -Develop a streamlined approach to access data, methodological and analytical support for CHES scientists -Identify means by which existing and new knowledge of methods can be shared and spread to benefit CHES scientists 	<ul style="list-style-type: none"> -Conduct a review of existing methodological expertise alongside a needs analysis to inform recruitment and hiring -Develop shared resources [including personnel] for methodological support.
3. Patient-oriented research	Facilitating impact and involvement of patients and their families in SickKids research, and establishing CHES as a leader	<ul style="list-style-type: none"> -Establishing mechanisms for patients and families to be engaged in research, supporting opportunities for sharing and learning about best practices in patient-oriented research -CHES is a leader for best practices, methods and evaluation of patient-oriented research for child health nationally and internationally 	<ul style="list-style-type: none"> -A culture shift within CHES and SickKids broadly which values patient engagement, this includes hospital leadership, clinicians and patients/families. -Developing an advisory or mentorship capacity which pairs experienced researchers and staff with those interested in doing more engagement
4. Training and education	Enact teaching and education mandate of SickKids through ensuring opportunities for ongoing continuing professional education of scientists, clinical research trainees, and research staff	<ul style="list-style-type: none"> -The development of a central resource which has a core suite of educational offerings, courses and resources geared towards specific needs -Develop resources which offer CHES scientists, staff and trainees access to existing opportunities at SickKids for education, training, professional development 	<ul style="list-style-type: none"> -Conduct a needs assessment to determine the education needs for various roles at CHES (e.g. staff, scientist, trainee) -Conduct an environmental scan to ascertain existing educational offerings -Conduct an analysis to ascertain gaps and opportunities for education given needs of CHES scientists
5. Innovation in clinical trials	Streamline implementation and methodological support for clinical trials	<ul style="list-style-type: none"> -Build internal capacity in applied biostatistics, clinical trial design, analysis and methodology in order to support scientists and teams conducting clinical trials -Efficient and effective solutions to reduce administrative burdens of clinical trials, shared resources will support and foster innovative clinical trials in child health 	<ul style="list-style-type: none"> -Launch working group to identify key issues and suggest solutions to improve clinical trial research (e.g. database management, research, information technology, privacy and security issues, research ethics) -Build in-house support to conduct clinical trials, shared resource which is used across multiple research groups which will support trial design, management, data management and contractual support -Share biostatistics research and expertise across CHES

CHES STRATEGIC DIRECTION

The sixth working group focused on creating a visual to articulate the overall CHES strategy which was informed by plenary discussions and questions, in addition to survey results prior to the strategic retreat. This working group identified that while CHES has a diversity of research, there are common needs and opportunities for collaboration and sharing of resources related to research support, approaches and processes. A revised strategic direction (*Figure 1*) can help to strengthen individual research programs as well as the collective. The framework identifies the core content areas of expertise within CHES, along with cross-cutting themes that are relevant as tools, methods and approaches to ensure that research led by CHES scientists can achieve the mission of being relevant to children and their families, along with improving pediatric health care, systems and delivery.

(Figure 1)



SUMMARY

This report was finalized in the middle of the unprecedented COVID-19 pandemic that has caused major upheavals globally. SickKids research has also been affected with priorities shifting rapidly to COVID-19, and causing delays in the conduct of research in the RI. Despite this uncertain time, the relevance of CHES is greater than ever. A research response to the pandemic requires integration of research methods, innovation in clinical trials, training, patient/family/citizen partnership, and knowledge dissemination. The pandemic also reinforces a renewed focus on population health and health policy, including addressing the social determinants of health. These are all areas which were highlighted in our retreat, and ones in which CHES will continue to be an important leader.

During our Retreat, CHES members supported the development of a strategic plan that will advance our program's mission by linking our goals to specific objectives. The priorities embedded within a core CHES strategic direction will help to develop an actionable and measurable plan that will be created to align with the upcoming RI strategic directions.

Our main objective as a research program is to create and sustain a high-quality program of research that builds on synergies among our faculty. Recruitment of faculty with expertise aligned with the CHES strategic direction will be a major priority to promote this agenda. We will continue to work with our scientific staff to assess their requirements for achieving success, whilst focusing on cross-cutting research opportunities with the potential to achieve excellence.

Our aim is to continue to focus on our strengths and opportunities, meeting our challenges head on and leveraging the best of CHES into the future.

PHOTO GALLERY



Thank you all for your support and participation!!



**CHILD HEALTH EVALUATIVE SCIENCES
RESEARCH INSTITUTE**

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THE HOSPITAL FOR
SICK CHILDREN

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