

# The Sustainability of Health Research within Patient Care & Educational Settings: Towards an Action Plan

Proceedings & Implications from the 2014 National Symposium on  
Academic Health Sciences Networks



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**A Message from the Presidents & CEOs  
of ACAHO-CHA and AFMC**

At the 2014 National Symposium, close to 100 senior leaders from across academic health sciences networks (AHSNs) in Canada met to discuss the sustainability of health research. At the heart of this discussion was the ability to generate and use research and innovation to transform health and health systems. The goal was an action plan that allows AHSNs to sustain health research in care and educational settings.

Why is this important? Health research is the life-blood of an evidence-informed healthcare system. It helps to make a good health system better. It is crucial to the academic mandate of care, training and research at the heart of the AHSN. It is also important to policy makers, politicians, and Canadians. Unless we are able to generate and use research and innovation in the care setting, we diminish our potential for alleviating the burdens of disease and disability.

However, we need to tell this story in no uncertain terms and then articulate the conditions nationally, provincially, and locally that we need to succeed. With this goal in mind, this proceedings paper is intended not only to capture the rich and powerful discussions that took place on site, but also to push the proceedings into the realm of their implications and a potential plan of action that can help to ensure the sustainability of health research *within* Academic Health Sciences Networks (AHSNs).

You will find the proposed action plan on page 5 of this paper. It begins with a proposed vision of *better care, better value and better health, through the integration of patient care, training and research*, which is part of the AHSN mandate. Its goals are to: (1) create a sustainable system of health research within AHSNs; (2) create the policy and funding conditions for AHSNs to fulfill their mandate; (3) create a business case and blueprint that will articulate the issues and importance of health research, and engage the public and policy makers in sustaining the role and function of AHSNs into the future.

These goals are followed by nine recommendations that help to establish implementation capacity, create the policy and funding conditions required for AHSNs to thrive in Canada, and advance the sustainability of the research enterprise.

We hope that these proceedings, their implications, and the proposed plan of action provide a useful blueprint for the road ahead. We look forward to your feedback and collaboration as the three missions of care, training and research yield a bigger and brighter future for the health and well-being of all Canadians.



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**About ACAHO-CHA and AFMC**

<b>Association of Faculties of Medicine (AFMC)</b>	<b>Association of Canadian Academic Healthcare Organizations &amp; Canadian Healthcare Association (ACAHO-CHA)</b>
<p>Founded in 1943, the Association of Faculties of Medicine of Canada represents Canada's 17 faculties of medicine and is the voice of academic medicine in this country.</p> <p>AFMC works to represent and support the mandates of our medical faculties - research, medical education, and clinical care with social accountability. Our advocacy initiatives are tailored to keeping these issues high on the federal government's agenda and ensure that Canada's faculties of medicine serve as important resources to decision makers in this country.</p> <p>Our Vision: National and international leadership in health education, research and care to meet the needs of all Canadians. Our Mission: To ensure the health of Canadians by promoting and supporting excellence in health education and research</p> <p>To learn more about AFMC, please visit: <a href="http://www.afmc.ca">www.afmc.ca</a></p>	<p>The Association of Canadian Academic Healthcare Organizations and the Canadian Healthcare Association merged on January 1, 2014, to form a new national health organization.</p> <p>The new organization is now the only organization of its kind in Canada that represents all types of patient care organizations as well as academic healthcare. The new organization will be the national voice and champion of innovative health organizations across the continuum of care, many of whom are vested in the academic health sciences network.</p> <p>ACAHO-CHA's focus is to advance an integrated, sustainable and accountable health system that provides Canadians with world-leading health services and to improve the health of Canadians through an evidence-based and innovative health system.</p> <p>To learn more about ACAHO-CHA please visit: <a href="http://www.acaho.org">www.acaho.org</a>.</p>

## **Executive Summary**

What would happen if we didn't sustain health research *within* patient care and educational settings? We would probably see a standard of care that lags behind comparator nations, little prospect of eradicating disease or bending the cost-curve, the exodus of the top clinicians and scientists, and the erosion of a culture that stimulates a knowledge economy. This is not what academic health science networks (AHSNs) – which are the networks through which patient care, training and research intersect - want. It is not what Canadians or policy makers want either. This was the central issue that the 2014 National Symposium was designed to address.

**Problem:** While valuation on the integration of care, training and research is strong, during the Symposium, we heard that future capacity in this area may be falling flat. This is particularly true when it comes to the national and provincial policy and funding frameworks that support and sustain health research within AHSNs. Frameworks that may not respond to current and future trends can result in tensions, rather than synergies, between the three missions. These can become as complex as achieving the intended outcomes themselves.

**Approach:** What should be done? Based on the Symposium discussions, perhaps the time has come to be more deliberate and focused in establishing the national and provincial conditions that allow AHSNs to thrive without diminishing the flexibility they need locally. Building on the seminal work of the 2010 National Task Force on the Future of Academic Health Sciences Centres (AHSCs) and focusing on national and international models, metrics, and the future of clinician researchers, the 2014 Symposium helped to identify close to forty elements of research sustainability within AHSNs that would need to be considered. The items were then grouped and assessed for their feasibility at the national level.

**Proposed Action Plan:** The resulting plan is summarized in Table I on page 5. It is based on a *vision* of better care, better value, and better health *through* the integration of patient care, training and research. It has three *goals*: (1) create a sustainable system of health research within patient care and educational settings (AHSNs); (2) create the policy and funding conditions for AHSNs to fulfill their mandate; (3) create a blueprint that describes what is needed to sustain health research in AHSNs and a business case for return on investment that engages the public and policy makers. The resulting *9 recommendations* fall into three groups (1) implementation and collaborative capacity including resources, a national roundtable, and future symposia; (2) proposals for creating the conditions that allow AHSNs to succeed, including an inventory of best practices, formal recognition for the national role of AHSNs, and capacity to address training issues; and (3) narratives and metrics to articulate the business case (return on investment) of health research in AHSNs, and a blueprint for what is needed for future success.

In conclusion, the 2014 National Symposium has resulted in a proposed action plan. We encourage you to review it and let us know what you think. Working together, we will achieve a vision of better health, better care, and better value *through* the integration of care training and research, to the benefit of all Canadians.

**Table I: A Proposed Action Plan for Ensuring Sustainability of Health Research within AHSNs. <sup>i</sup>**

<p><b>Vision:</b> better health, better care and better value <i>through</i> the integration patient care, training and research  <b>Goals:</b> (1) a sustainable system of health research within patient care settings; (2) the optimal policy and funding conditions for AHSNs to fulfill their mandate; (3) engagement of the public and policy makers in sustaining the role and function of AHSCs.</p>					
<p><b>Strategy 1:</b> Create the human and financial resource capacity to implement the recommendations</p>		<p><b>Strategy 2:</b> Create the policy and funding conditions nationally and provincially allowing AHSNs to succeed</p>		<p><b>Strategy 3:</b> Create a blue print and business case related to research in care that shows the vision, impact, what is required, and engages the public.</p>	
Recommendation	Details	Recommendations	Details	Recommendation	Details
<p><b>Recommendation 1:</b> Leverage up resources as <u>implementation capacity</u> needed for the recommendations in this proposed plan of action.</p>	<p>The proposed action plan will require staff and resources. A service bureau function would allow for its implementation.</p>	<p><b>Recommendation 4:</b> <u>Inventory the status of integration, goal setting, financing, and relationships</u> between AHSNs &amp; governments</p>	<p>The original 2010 National Task Force items remain relevant and continue to be implemented.</p>	<p><b>Recommendation 7:</b> <u>Create a blueprint for the sustainability of health research</u> that can be used at the strategic policy and operational levels.</p>	<p>What concrete measures are required to sustain health research and what will it achieve? Common messaging is required to align all stakeholders.</p>
<p><b>Recommendation 2:</b> <u>Create a national AHSN roundtable</u> with governments, granting councils and related stakeholders as a forum for strategic policy and collaboration related to the action plan.</p>	<p>AHSNs by definition require multi-stakeholder collaboration. A national roundtable could help to provide advice for the overall plan.</p>	<p><b>Recommendation 5:</b> Develop a proposal that could enable the federal government to identify and <u>leverage the national role of AHSNs in Canada</u> if pursued.</p>	<p>Considering the absence of a national policy framework to leverage AHSCs, draft the bones of what this could look like as a policy proposal.</p>	<p><b>Recommendations 8:</b> <u>Advance a stronger business case or return on investment</u> from research and its integration in care, for accountability and advocacy purposes.</p>	<p>Through a suite of products ranging from narratives, to metrics, pilots projects, studies and pathway, and building on best practices, show research impact.</p>
<p><b>Recommendation 3:</b> Reconvene regularly in <u>National Symposia</u> to monitor progress, advance issues, and exchange knowledge.</p>	<p>Meeting biannually with the goal of monitoring progress allows for focus, input and knowledge exchange.</p>	<p><b>Recommendation 6:</b> Ensure that <u>career training, incentives, and supply</u> are aligned with need, demand, and capacity.</p>	<p>For both trainees &amp; more advanced clinician scientists, ensure that career training, incentives, and supply issues are identified and addressed.</p>	<p><b>Recommendation 9:</b> <u>Develop an AHSN public engagement &amp; communications plan</u> to help patients, public and policy makers understand the role of AHSNs in their regions.</p>	<p>Once a blue print and business case or research impact products are developed, flesh out they will need to be communicated in lay terms. 6</p>

## I. INTRODUCTION

On March 12-13, 2014 close to 100 leaders from across Canada's healthcare, universities and government sectors met to discuss the sustainability of health research within the Academic Health Sciences Network (Appendix A). Their goal was to develop a shared plan of action that could help to sustain the generation of research in patient care settings for today and for the future. This document is a record of the proceedings, implications and proposed actions from the event.

We begin this paper with an overview of the seminal work upon which the 2014 national symposium was based. Following this section, readers will find summaries of the key note presentations on (1) metrics and benchmarks; (2) national perspectives; (3) international experiences; and (4) research training and capacity. A synthesis of the rich discussions that ensued on site is offered in part III. Finally, a proposed plan of action is offered as the Symposium's conclusion and next steps.

It is important to note that the 2014 AHSN Symposium builds on the 2012 symposium and on the seminal 2010 work of the National Task Force on the Future of Academic Health Sciences Centres. They first introduced the academic health sciences network concept within the Canadian context in *“Three Missions One Future: Optimizing the Performance of Canada's Academic Health Sciences Centres”*.<sup>2</sup> They defined the AHSN as a set of formal partnerships between healthcare organizations, universities and other partners involved in each of the patient care, training and research mandates. Their recommendations are summarized in Table 1:

**Table 1: Synopsis of Recommendations from the 2010 AHSC NTF Report (wording truncated)**

<b>Structuring Academic Health Sciences Networks</b>	<b>National and provincial AHSN policy and funding conditions</b>	<b>Knowledge transfer and best practices</b>
<ul style="list-style-type: none"> <li>• <b>Establish AHSNs:</b> Establish the structures and governance mechanisms required to move from AHSCs to AHSNs (rec. 1)</li> <li>• <b>Integration mechanisms:</b> Establish mechanisms for the integration of care, research and training and identify their visions &amp; performance measures (rec. 2)</li> <li>• <b>Coordination mechanisms:</b> Create mechanisms for the coordination of AHSNs and the provincial ministries involved (rec. 4)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>National resources:</b> Recognize AHSNs as national resources and work together on coordination and communication (rec. 5)</li> <li>• <b>Financing:</b> Work with governments to align goals and ensure that the appropriate financing is in place to achieve these goals. (rec. 6)</li> <li>• <b>Align goals and funding:</b> align goals &amp; funding as appropriate between AHSNs &amp; gov. (rec. 7)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Knowledge transfer:</b> Provide forums to facilitate relationship building and share lessons learned (rec. 3)</li> <li>• <b>Meeting place:</b> Create an international meeting place for global leaders' commitment to academic health sciences. (rec. 8)</li> </ul>

These recommendations remain a work in progress. The Symposium itself is a response to the call for knowledge exchange across the country (rec 3 & 8), in some provinces the structuring of AHSNs (rec 1, 2 and 4) is advanced. However, we have more to do when it comes to creating the national policy and funding conditions that allow AHSNs and the research within them to thrive. The 2014 Symposium and the proposed plan of action that follows contribute to these goals.

**II. WHAT WE HEARD**

**1. BENCHMARKS & METRICS: ACADEMIC EXPENSES & FUNDING**

*“What we measure, we manage and where we manage, we succeed”*

In a presentation from the Association of Academic Health Centres (AAHC), Dr. Steven Wartman describes an initiative designed to capture the true costs of research at US AHSCs and communicate them to policy-makers and other stakeholders. The data collection instrument the AAHC developed tracked information on the institution as well as financial data for each health profession school. The findings from the first set of data are described in Table 2.

**Table 2: Description of key findings from the AAHC Benchmarks & Metrics Initiative**

Compensation and grants:	Expenses in medical schools:	Multiplier effects:
<ul style="list-style-type: none"> <li>• % of faculty compensation for research is higher for medicine and public health compared to other health professions</li> <li>• Schools of public health and medicine are more dependent on grants and contracts than other schools.</li> <li>• External grants and contracts are the largest medical school funding sources.</li> <li>• The higher the research expenditure, the higher the % of faculty compensation total expenditures.</li> </ul>	<ul style="list-style-type: none"> <li>• Overhead decreases as the amount of research conducted increases.</li> <li>• About 35% of total research expenses are funded by medical schools with internal funds and 47% of academic expenses are attributable to research.</li> <li>• For each unit increase in faculty research FTE, total medical school expenditures of research increased by \$0.4 M.</li> </ul>	<ul style="list-style-type: none"> <li>• For every \$1.00 increase in research expenses funded by external grants and contracts, total medical school research expenditures increase by \$1.52.</li> <li>• For every \$1.00 increase in faculty compensation for research, total research expenditures increases by \$3.73.</li> </ul>

In discussing the implications, Dr. Wartman indicated that a number of challenges were yet to be resolved and also allowed for the introduction of new concepts. For example, AAHC is now developing working definitions of a “research and administrative FTE”, “faculty allocations for fellows, post-docs and staff”, and looking at “administrative and compliance expenses per FTE”. During the discussion that followed, the following key themes were noted:

- (1) The need for and importance of metrics initiatives
- (2) The risk of metrics not capturing the true trajectory of research
- (3) The need to use metrics alongside narratives
- (4) The need to go beyond what we can measure to what we should
- (5) The importance of demonstrating research impact

## 2. NATIONAL PERSPECTIVES ON HEALTH RESEARCH: ISSUES AND OPPORTUNITIES

*“When you have seen one AHSC, you have seen just one AHSC”.*

Despite the diversity of Canadian AHSC models, they have common issues and challenges. In this session, Dr. Jack Kitts, the President & CEO of the Ottawa Hospital; Dr. Vassilios Papadopoulos, the Executive Director of the McGill University Health Centre's Research Institute; and Dr. Beth Horsburgh, Vice President research and innovation at Saskatoon Health Region and University of Saskatchewan, discuss critical issues in how AHSCs are structured as well as the opportunities and the challenges that their organizations face. We begin with a summary of the presentations and then offer a summary of the discussion.

### 2.1 THE CHANGING ENVIRONMENT IN ACADEMIC HEALTH SCIENCES CENTRES

*“Does the tripartite mandate of care, research and training create competing priorities and conflicts for physicians or does it create benefits for patients and society?”*

Dr. Kitts kicked off the morning by making explicit the tacit challenge of academic healthcare organizations: the balancing of mandates and the following question: “Does the tripartite mandate of care, research and training create competing priorities and conflicts for physicians or does it create benefits for patients and society?” He noted that where once the tripartite mandate fell within a single portfolio, the three mandates have expanded with new pressures, considerations, and full departments behind them. Dr. Kitts provided an overview of the evolving considerations within each mandate which are presented in Table 2.

**Table 2: AHSC considerations in patient care, education, research sustainability and funding**

<b>Patient care</b>	<b>Education</b>	<b>Research sustainability</b>	<b>Research funding</b>
<ul style="list-style-type: none"> <li>• quality</li> <li>• patient experience,</li> <li>• efficiency/productivity</li> <li>• funding reform</li> <li>• split accountabilities</li> </ul>	<ul style="list-style-type: none"> <li>• service ratios</li> <li>• hours of work</li> <li>• competency-based learning.</li> </ul>	<ul style="list-style-type: none"> <li>• innovation in health system redesign;</li> <li>• focus on frail elderly</li> <li>• chronic disease</li> <li>• practice-changing research</li> </ul>	<ul style="list-style-type: none"> <li>• physician costs</li> <li>• decreasing AFPs</li> <li>• rising costs</li> <li>• less seed funding</li> </ul>

Dr. Kitts concluded with the questions and challenges that many organizations are facing in order to move forward: (1) what models incent the integration of training, research, and care? (2) what accountability models incent translation of research into the system? (3) what mechanisms enable innovation in health system redesign?

### 2.2 CHALLENGES FOR SUSTAINING HIGHLY COMPETITIVE RESEARCH

*“The research institutes of MUHC and CHUM employ over 4000 people - which makes them 4X as big as Quebec's largest pharmaceutical companies and approximately the size of Air Canada in Quebec”.*

Building on the challenges that Dr. Kitts provided in the context of health research, Dr. Vassilios Papadopoulos, Chief Scientific Officer of the McGill University Health Centre Research Institute provided a deeper dive into the research related issues

research institutes associated with health centre face when it comes to the sustainability of research. He began his presentation with the proposition that critical success factors are also critical challenges. For example: (1) biomedical organizations that cut across universities and healthcare; (2) public support (3) technology (4) the culture and capacity for diversity and innovation (5) consideration of the financial framework and (6) knowledge translation and commercialization processes. He then provided an overview of the challenges.

- **Insufficient funding:** Many research institutes have become very lean operationally (ex. \$0.17/\$1.00 at MUHC compared to \$0.35/\$1.00 on average).
- **Matching fund pressures:** Rather than being able to use grant funding to leverage other funds, granting councils are expecting matching funds up front.
- **Reliance on foundations:** Foundations can help start a new initiative however; it is not possible or appropriate to fund operations through foundation dollars.
- **Knowledge economy and wealth creation:** Most academics are not trained to straddle the knowledge and wealth creation spheres.
- **Increasing expectations:** Federal and provincial governments understand AHSCs are economic engines and their expectations for ROI are increasing.
- **Defining capacity and living within it:** We need to define capacity to support and sustain high quality research. It is better to maintain than to reconstruct.
- **Tax credits and accounting acumen:** The business model both in terms of tax credits and accounting does not leverage the potential of the research institute.

### 2.3 BRIDGING HEALTH CARE AND UNIVERSITY TO SUPPORT RESEARCH

A third perspective on research models and sustainability issues was offered in a slide deck prepared by Dr. Beth Horsburgh. Dr. Horsburgh has the unique role of VPR for both the University of Saskatchewan and the Saskatoon Regional Health Centre. Her team runs a joint office between the health centre and the university holding responsibility for research at both the medical and doctoral programs at the University of Saskatchewan and the Saskatoon Regional Health Centre. Here are a few highlights:

- **Mandate:** To improve health research and innovation, enhance a culture of evidence informed practice, and assist in recruitment and retention.
- **Goals:** Identify, develop and champion opportunities, respond to priority needs, cultivate partnerships, identify best practices and resolve barriers.
- **Projects:** Applications for a cyclotron, PET-CT scan, Canada Research Chair, developing the Centre for Clinical Trial research, SK SPOR Support Unit, research policies, and the MRSA, hospitalist and models of care programs etc.
- **Challenges:** Administrative, structural, resource, and cultural issues and difficulties in recruiting clinician scientists.

#### DISCUSSION & IMPLICATIONS

1. **Functional vs. financial integration:** Is the issue the functional integration of care and research or is it the funding sources for each mandate that are not integrated?
2. **Similarities nationally and internationally:** Challenges for Canadian academic health centres are similar to the challenges in other countries. The pressures are international.

3. **Metrics & ROI:** We all talk about the importance of metrics, are we prepared for the costs and genuinely willing to collect them and if so, what should we measure?
4. **Accounting acumen for AHSCs:** Do we have the accounting acumen that is required for the tripartite mandate? Is this an area that requires development in the field?
5. **Changes in practice:** If we invest in the integration of care and research are we prepared to change and pay for the standard of practice when appropriate?
6. **Operational idiosyncrasies:** How do we prevent operational idiosyncrasies arising because policy and operations are not coordinated?
7. **Governance, vision and goals:** Do we have the governance model right and are we sufficiently clear in our mission, vision and goals?
8. **Limits of practice and payment:** At what point do we say no to funding the tri-partite mandate considering that even research is paid for from organizational budgets?
9. **Public health and family medicine:** How do we bring public health and family medicine into the AHSN conversation, operations and impact?
10. **Language of return on investment:** Are we using the right language, terms and strategies are we showing the costs savings and improvements in quality and care? Are we taking advantage of short, medium and long term ROI discussion strategies?
11. **Alignment of CEO and VPR perspectives:** Can we establish a clear and consistent set of messages to help advance the alignment of messages and advocacy?
12. **What happens when research funding flat-lines:** Eventually rates of granting council increases will stop. Are we prepared for what happens at that point?

### 3. INTERNATIONAL PERSPECTIVES: A VIEW FROM THE US AND THE UK

#### 3.1 RESEARCH IN THE CONTEXT OF DISRUPTIVE INNOVATION

*"The value proposition of academic health centres is to apply knowledge to improve health and well-being and to build the knowledge economy and apply it in patient care".*

Dr. Wartman noted that the tripartite mandate assumes a virtuous cycle whereby clinical and academic missions reinforce each other. He noted the following challenges: (1) research and education may not be profitable in the short term; (2) efficiency is hard to measure (3) leadership has conflicting interests across the tripartite mandates and (4) multiple factors displace current AHSC systems and force innovation. The challenges Dr. Wartman identified in the US system are very similar to those that Dr. Kitts identified in the Canadian context. These pressures "displace" the current operating structures and create innovation by disruption. The education, patient care, and research "disruptions" are shown in Table 3.

**Table 3: AHSC considerations in patient care, education, research sustainability and funding**

Education	Patient care	Research disruptions
<ul style="list-style-type: none"> <li>• electronic/digitized education platform</li> <li>• tuition pressures</li> <li>• job market</li> <li>• information overload</li> </ul>	<ul style="list-style-type: none"> <li>• care in location of patient</li> <li>• real time monitoring</li> <li>• clinical datasets</li> <li>• technologies</li> <li>• patient empowerment</li> <li>• crowd vs. provider control</li> </ul>	<ul style="list-style-type: none"> <li>• rise of team science,</li> <li>• cloud/crowd sourcing</li> <li>• changing definitions of clinical trials,</li> <li>• huge datasets, and control of research</li> </ul>

It was also noted that in research sustainability, size matters. He noted that for the largest institutes, they will focus on getting a bigger slice of the pie, for the smaller institutes, they will experience business as usual, but the large group in the middle, will experience the greatest challenges. At the end of his presentation, Dr. Wartman offered the following recommendations:

- decide on the best mission balance for the organization
- prepare for era of no more open-ended funding,
- develop an integrated inter-professional vision,
- broaden understanding of what AHSCs do
- shift view from individual to population management and note the operational implications of responsibility for population health
- more consideration of the patient environment and outcomes research,
- find the right leaders

### 3.2 AHSCs AND AHSNs IN THE UK – WILL THEY PROSPER OR WITHER ON THE VINE?

During the Symposium, Professor David Taube from Imperial College, London, UK, provided a historical account of the evolution of the academic health sciences centres, networks and partnerships in the UK. Critical events included the following:

- 2007: Decision to develop AHSCs as centres of clinical-research excellence
- 2009: Cambridge, Kings, Imperial, Manchester, UCL formally designated.
- 2009: Academic health science partners created as larger versions of AHSCs
- 2013: Core objectives for AHSNs developed
- 2014: 6 AHSCs and 15 AHSPs/Ns developed each with 5 year designations

He also identified the four goals of AHSCs, which he noted as follows:

- (1) Focus on needs of patient and local populations
- (2) Build a culture of partnership and collaboration
- (3) Speed up adoption of innovation into practice
- (4) Create wealth through co-development, early adoption and testing.

For 2020, one of the AHSCs (Imperial College AHSC), has developed a vision of changing the nature and provision of care in north west London, improving the patient and student experience, adapting new innovations, redeveloping physical plant infrastructure, driving inner city wealth generation and creation, and creating new collaborations locally, nationally and internationally. The challenges include poor connectivity, funding, electronic records, public support, and cynicism.

#### DISCUSSION & IMPLICATIONS

13. **AHSN models:** Is there a best AHSN model, or is the best model based on the local needs of the organizations and populations. It is not a one-size fits all.
14. **Avoiding superstructures:** If there is a specific issue, address it, but don't create superstructures. It is not time to dismantle what is functioning well.
15. **Funding flows:** Can we create a proper audit trail of funding flows that appropriately links revenues and expenses.

16. **Patients in research and care settings:** Are we leveraging the fact that patients tend to like being treated in environments that are considered advanced and innovative?

#### **4. CLINICIAN SCIENTISTS & HEALTH HUMAN RESOURCES FOR RESEARCHERS**

##### 4.1 CLINICIAN INVESTIGATOR TRAINEE ASSOCIATION OF CANADA

Alongside the views of senior leaders and executives, Mr. Ghadi Antoun, Executive Secretary of the Clinician Investigator Trainee Association and MD/PhD Student at the University of Ottawa provided the results of a survey conducted by CITAC as well as his own perspectives.

- **Number of trainees:** The number of new trainees is not going down and it is unlikely that new trainees are becoming an endangered species.
- **Overall satisfaction:** The overall satisfaction considering financial support, program, quality of training and mentorship is relatively high.
- **Mentorship:** Level of CI trainee satisfaction is strongly associated with perceived level of mentorship and funding available
- **Financial support:** It was noted that 41% of trainees receive less than \$22,000 in financial support/year.
- **Recommendations:** focusing on financial support, mentorship, and clear transitions between different parts of the program.

##### 4.2 HEALTH RESEARCH CAREER OPPORTUNITIES

Over the past year, the Canadian Institutes of Health Research SPOR hosted an external advisory committee on clinical training. Ms. Michelle Campbell provided an overview of issues in health research and clinician scientist training, including the work of the recent SPOR External Advisory Committee on training and career development in patient-oriented research hosted by CIHR.

- **Changing landscape:** Clinical research is changing due to the complexity of questions, need for integrating research in practice, linkage across pillars, focus on impact, demand for research in non-traditional settings
- **Outcomes:** Best outcomes are associated with breadth of experience, networking, varied mentors, hands on practice, independence of senior trainees
- **Number of PhDs:** The number of PhDs is growing rapidly, post-doctoral period is lengthening, and the academic career success rate is only 10%.
- **Age of first grant:** Age of first grants and investigators growing, % of grants to young investigators shrinking, innovation and creativity are stifled, attribution among new investigators is growing.
- **Implications for training:** involve a transition from focus on quantity to focus on quality, from increasing supply to increasing demand, from investing in individuals to investing in environments, from narrowing training to broadening skills, from uni-dimensional experience to multi-dimensional ones.

DISCUSSION & IMPLICATIONS

17. **Clinical-research workload:** What consideration can we give to the amount of time that should be dedicated to clinical work and research work?
18. **Number of trainees:** Why are we dramatically overtraining individuals? Are we training clinician researchers as low cost labour?
19. **Stage of career issues-** Are the issues faced by trainees, the same as those faced by clinician who through their career have developed extensive research programs? Is it the trainees that we are losing or is it the more advanced scientists?
20. **Business models for clinicians:** Are we considering innovative models such as physicians who set up their businesses to benefit from SR&ED tax credits.

**6. PLANNING FOR ACTION & NEXT STEPS**

The 2014 national symposium was intended to lead to a plan of action. In the last session of the day, a number of moderators who are themselves AHSC deans and CEOs, offered their perspectives on the sessions they moderated. This section is intended to capture their discussion and comments from delegates. The discussion items are posed as questions.

21. **Balance of mandates:** How committed are we to excellence in each of care, training and research and to their synergies and integration?
22. **Protecting each mandate:** If care is evidence-based and research is integral to it, should there be protected funds for research in care and big-science?
23. **Governance structures:** What do we need in terms of the governance structures necessary to support the goals of integration of research in care?
24. **Is full integration a good idea:** Does full integration of the three mandates risk research succumbing to patient care pressures?
25. **Return on investment:** What is the best strategy for discussing return on investment? How do we leverage the fungible nature of our outcomes?
26. **Patient involvement in research:** Should patients in a research hospital be expected to always partake in research? Are we leveraging their interest?
27. **Balancing across the pillars of research:** How do we rebalance the division between wet and dry labs and population health research?
28. **Building the advocacy potential:** Is there opportunity to further discuss the outcomes of this meeting with the Council of Canadian Academies?
29. **Receptor sites for research:** Can we build receptor sites for research and close the gap that exists between research and implementation?
30. **Standard of care issues:** How do we address standard of care issues as the research evolves and becomes available and accepted?
31. **Planning for 2030:** Can we consider what will happen in the next 10 years and not just today?
32. **AHSC management skills:** How do we ensure that we have sufficient skill sets within the organization?
33. **Investigator skills:** What needs to be done to support the right mix of skills and training with the investigators?
34. **Common messaging:** What can we do to ensure that we speak with a consistent voice and that our advocacy messages are heard?

35. **Telling the research operations story:** Can we tell the story about the issues with matching and leveraged funds with common messages and stories?
36. **Research return on investment and metrics:** What should be the overall metrics approach to showing our return on investment?
37. **Building science in the interest of health:** How do we achieve, science in the interest of health and leverage up best practices and innovations?

## II. TOWARDS A PROPOSED PLAN OF ACTION

The 2014 National Symposium promised a plan of action to help AHSNs sustain health research so that they can achieve their visions of better health, better care, and better of integrating care, training and research to improve health and achieve economic returns. In this section we discuss five questions that we used to go from the very rich discussions that took place on site, to a proposed plan of action that is hopefully responsive and implementable. The questions addressed in this section include the following:

1. What themes & tensions appeared to recur and what can be done?
2. What other considerations might be relevant?
3. What is the proposed a plan of action?

### 1. WHAT THEMES & TENSIONS APPEARED TO RECUR IN THE DISCUSSIONS & WHAT CAN BE DONE?

In considering both the speaker presentations and the delegates discussions, we noted that most of the items appeared to relate to two major themes: (1) What conditions do AHSNs need to succeed from a structure, governance, operations, policy, funding and training standpoint? (2) What is the business case, vision, impact, and importance of research in AHSNs and how do we communicate this to those holding policy levers? In addition, we also identified six tensions between where we aspire to be and what we need and where we seem to be hampered.

- (1) **Aligning governance and accountability structure with intent:** We value the integration of patient care, training and research, ***but*** our funding, governance and accountability models are diverse.
- (2) **Demonstrating the impact on quality:** We believe that integrating research and training in care improves quality and outcomes of care, ***but*** we don't measure integration or quality, and we may not deliberately support them.
- (3) **Updating standards of practice with the research:** We value research & innovation, ***but*** when patients or providers ask for the products of those innovations do we have the will, capacity, change strategies, communication tactics, and importantly, funds to do it?
- (4) **Addressing the time horizon of research return on investment:** We know that research and innovation have a high return on investment over time, ***but*** there is an expectation for near term returns.

- (5) **Increasing our ROI measurement acumen:** we measure what we can, rather than what we should; we over-emphasize the data, and we don't leverage the fungible nature of research outcomes.
- (6) **Research valuation vs. research resources:** We know research and innovation are important and want to integrate them, **but** the costs of research are harder to justify when we pit them up against immediate patient care needs and we are not clear on who is paying for what and how much.
- (7) **Expectations of research in the knowledge economy:** We expect clinician scientists and researchers to behave as entrepreneurs **but** we do not train them as such, we impose antiquated incentive structures on them, and possibly train too many. We also value commercialization, but don't cover its costs.

We then considered what could be done to address these tensions and raised the following questions which again came up many times on site:

- (1) **Building a better business case and blueprint for health research:** As a community, should we describe in unison, the role of AHSNs re 'science in the interest of health' and demonstrate that by identifying the appropriate metrics, stories, indicators, and better align the advocacy messages and needs?
- (2) **Addressing costs, capacity, integration, governance, and accountability:** Do we have the knowledge needed to define capacity, and determine the best governance, funding, integration and accountability structures?
- (3) **Clarifying what policies are needed for success:** Can we define what it is that we want to sustain, how we want to sustain it, and what the roles of each party will be? Do we have the appropriate policy contexts to support AHSNs?
- (4) **Citizen engagement:** Are we talking to patients, citizens, and communities about what it is we do, why we do it, why it's important, their roles, and allow them to help build our case?
- (5) **Training considerations through career cycle:** How do we ensure that we are matching supply and demand both in quality and in quantity of training so that both new trainees and advanced clinician scientists can succeed in the knowledge economy, and do that AHSNs have the management and leadership acumen needed for the future?

## **2. WHAT OTHER CONSIDERATIONS MIGHT BE RELEVANT IN A PLAN OF ACTION IN THIS AREA?**

In addition to the above, we considered four implementation considerations.

- First, we note that this Symposium builds on the seminal work of the National Task Force (NTF) on the Future of AHSCs. The NTF's report contains recommendations that are in progress. They are likely to be regenerated if we think more about the policy and funding conditions needed to achieve success in the AHSN construct. As such, we include them moving forward.

- Second, that in this action plan we are not focusing solely on the sustainability of research, but on its sustainability within AHSNs. This leads to a broader set of recommendations than the issue of research sustainability on its own.
- Third, that as advised on site, we must ensure that our models and structures address local realities, so we have tried to avoid recommendations that lead to a one size fits all approach.
- Finally, we consider that unless we have both implementation resources and collaborative capacity, we may not be able to advance these issues.

### **3. WHAT IS THE PROPOSED PLAN OF ACTION?**

The proposed plan of action, summarized on table I page 5, is ultimately to achieve what AHSNs already have at the base of their existence and aspirations – we propose a **vision** of better health, better care, and better value through the integration of patient care, training and research. The proposed **goals** are then (1) a sustainable system of health research within patient care and educational settings (AHSNs); (2) the optimal policy, funding and operating conditions for AHSNs to fulfill their mandates; and (3) engagement of the public and policy makers in sustaining the role and function of AHSNs through a clear understanding of the impact and importance of health research and AHSNs, what they require and why it is needed. This is followed by 9 recommendations in three strategic areas:

**Strategy 1:** Create the human and financial resource as well as the collaborative capacity to implement the recommendations

**Recommendation 1:** Since no plan of action will succeed without resource and/or implementation capacity, the first recommendation is to leverage resources or a form of service bureau to implement the recommendations proposed, if accepted.

**Recommendation 2:** A national roundtable could help to provide advice for the overall plan and coordinate policy proposals and decision making. As such, the second recommendation is to create a national AHSN roundtable with governments, granting councils and related stakeholders as a forum for focused strategic policy discussion and collaboration.

**Recommendation 3:** Given the broad array of stakeholders and potential best practices, reconvene regularly in National Symposia to monitor progress, advance issues, and exchange knowledge. Meeting every six months with the goal of monitoring progress may allow for timely focus, input and knowledge exchange.

**Strategy 2:** Create the policy and funding conditions nationally and provincially allowing AHSCs to succeed and improve the health and healthcare of Canadians.

**Recommendation 4:** Inventory the status and variety of integration, goal setting, financing, and accountability relationships between AHSNs & governments. This carries over from the original 2010 National Task Force recommendations which came up again at the Symposium and remain relevant.

**Recommendation 5:** When we talk about AHSNs as national resources, we may need to explain what that means. This recommendation is to develop a proposal that could enable the federal government to leverage the national role of AHSNs in Canada in a more systematic fashion. Considering the absence of a national policy framework for leveraging AHSNs, this would draft the bones of a policy-proposal.

**Recommendation 6:** Ensure that recruitment and career training for students are aligned with future needs and capacity in health research, and knowledge economy. Also ensure that the needs of advanced clinician scientist are identified and addressed.

**Strategy 3:** Create a blueprint and business case related to health research that shows the vision, impact, what is required, and that engages the public.

**Recommendation 7:** Create a blueprint for the sustainability of health research that can be used at the strategic policy and operational levels. What concrete measures are required to sustain health research and what will it achieve? Common messaging is required to align all stakeholders.

**Recommendations 8:** Advance a stronger business case or return on investment from research and its integration in care (for both accountability and advocacy purposes). Show research impact through a suite of approaches from narratives, to metrics, pilot projects, studies, and pathways considering known best practices.

**Recommendation 9:** Develop an AHSN public engagement & communications plan to help patients, public and policy makers understand the role of AHSNs in their regions. Once a blue print and business case or research impact products are developed, flesh out they will need to be communicated in lay terms.

#### **IV. CONCLUDING REMARKS**

The 2014 national symposium began with the question: How do we ensure the sustainability of research within the academic health sciences network? It took us through national and international experiences and discussions on close to 40 key issues, and now culminates with a proposed plan of action for next steps.

To conclude this process, we would like to know what you think of the proposed plan of action. We ask you to consider if the goals, strategies and recommendations are reasonable and if you feel that there is sufficient need, opportunity, and appetite to make this happen, together. We also encourage any other comments you have. To this end, we welcome your feedback to Ms. Tina Saryeddine, Assistant Vice President Research & Policy Analysis [saryeddine@acaho.org](mailto:saryeddine@acaho.org) or Ms. Beatrice Keleher Raffoul, Vice President Public Affairs, [raffoul@acaho.org](mailto:raffoul@acaho.org) at ACAHO-CHA, or to Dr. Geneviève Moineau, President & CEO at AFMC [gmoineau@afmc.ca](mailto:gmoineau@afmc.ca).

Finally, we thank you for your contribution to this process. Through your leadership and insight, we look forward to finalizing and implementing a plan of action that will achieve the vision of better health, better care, and better value through the integration of patient care, training and research, for all Canadians.

## MEET THE PARTICIPANTS

On behalf of ACAHO-CHA and AFMC, we would like to thank the following individuals who registered for the Symposium, participated on site, or provided leadership on the panels. Any errors or omissions are unintended. In recognizing these individuals, please note that the content and analysis of these proceedings should in no way be interpreted as a reflection of their individual opinions or those of their organizations. Speakers, moderators and chairs are noted with an (\*).

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Mr. Ghadi Antoun\*  
Dr. Michael Apkon  
Dr. Bruno Battistini  
Dr. Robert Bell\*  
Ms. Komal Bhasin  
Dr. Pierre M. Bourgouin  
Dr. Jacques Bradwejn\*  
Ms. Michelle Campbell\*  
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### Organization

Canadian Medical Association  
Clinician Investigator Trainee Assoc. of Canada  
The Hospital for Sick Children  
New Brunswick Health Research Foundation  
University Health Network  
Centre for Addiction and Mental Health  
Université de Montréal  
University of Ottawa  
Consultant  
Provincial Health Services Authority  
Nova Scotia Health Research Foundation  
Office of the Hon. Dr. Hedy Fry, P.C., M.P.  
HDR Architecture  
Rx&D  
Alberta Health  
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Providence Health Care  
Council of Academic Hospitals of Ontario (CAHO)  
Canadian Critical Care Trials Group  
Queen's University  
IHSP - Johns Hopkins  
Association of Faculties of Medicine of Canada  
Canadian Medical Association  
Lawson Health Research Institute  
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ACAHO-CHA  
The Ottawa Hospital  
Federal NDP Office  
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<sup>2</sup> The 2010 Report of the National Task Force is available at [www.ahsn.ca](http://www.ahsn.ca)