



INSTITUTE OF
HEALTH ECONOMICS
ALBERTA CANADA



Health Innovation in Canada: Federal Role Roundtable

The Institute (IHE):

The Institute of Health Economics (IHE) is a non-profit Alberta-based research organization committed to producing, gathering, and dissemination evidence-based findings from health economics, health policy analyses, health technology assessment and comparative effectiveness research to support health policy and practice. Established in 1995, it is a unique collaborative arrangement among government, academia, and industry.

More detailed information on the IHE is available on our website. (www.ihe.ca).

Eli Lilly Canada Inc.:

Eli Lilly and Company Inc. (Lilly) has been in business more than 135 years. Its first link to Canada was in the 1920s when Lilly's research labs collaborated with the University of Toronto's Drs. Frederick Banting and Charles Best to purify and stabilize their ground breaking invention, insulin, to bring a treatment for diabetes, a then fatal illness, to the world.

Lilly Canada was founded in 1938, and has since grown into a leading research-based pharmaceutical company. Eli Lilly Canada built its first facility in 1946 and the Canadian headquarters are still located on this site in Toronto, Ontario. Today, the company employs more than 550 people across the country.

Eli Lilly Canada plays an integral role in the company's global Research and Development division, Lilly Research Laboratories (LRL). About 1/5th of Lilly Canada's employees work in the R&D division. In 2013, Lilly Canada conducted 69 clinical trials at 403 sites across the country, investing more than \$46 million in R&D in Canada. In 2004, Lilly became the first pharmaceutical company to voluntarily launch an online clinical trial registry.

Eli Lilly Canada Inc. is currently a sitting member on the IHE Board of Directors.

For more information on Eli Lilly Canada Inc., please see the following link: <http://www.lilly.ca/>

The Institute for Health Services and Policy Research (IHSPR):

The [Canadian Institutes of Health Research \(CIHR\)](http://www.cihr-irsc.gc.ca) is Canada's major federal funding agency for health research. Its objective is to excel in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products, and a strengthened Canadian health care system.

CIHR's Institute of Health Services and Policy Research (IHSPR) has attempted to respond to the myriad of challenges entailed in its broad mandate to address problems and opportunities relating to:

- health services and policy research capacity in the country
- the research resources needed to undertake high quality, relevant research
- research gaps and emerging issues
- the CIHR-wide priority being placed on timely knowledge translation

For more information on CIHR or IHSPR, please follow the following link: <http://www.cihr-irsc.gc.ca/e/13733.html>

Purpose:

The purpose of this roundtable is to gather a small, select group of thought leaders to engage in informed discourse, which will be summarized in a report that will be submitted to the new federal Healthcare Innovation Advisory Panel.

For more information about the Healthcare Innovation Advisory Panel, please see the following link:
<http://www.hc-sc.gc.ca/hcs-sss/innovation/index-eng.php>

Location:

Fairmont Château Laurier
1 Rideau Street
Ottawa, Ontario K1N 8S7
Tel : (613) 241-1414
Fax : (613) 562-7030

Agenda:

Monday, November 17th, 2014

- 2:00pm Roundtable begins (Tudor Room, Fairmont Chateau Laurier).
**Coffee, tea, an assortment of juices and water will be available.*
- 2:00-2:20pm Introduction by Mr. John Sproule, Senior Director of Policy, Institute of Health Economics, followed by brief remarks by Ms. Lauren Fisher, Vice President, Corporate Affairs, Eli Lilly Canada Inc..

Mr. John Sproule to introduce Glenn Brimacombe, CEO of the Canadian Psychiatric Association and former CEO of the Association of Canadian Academic Healthcare Organizations to kick off discussions.
- 2:20-3:45pm Session 1: What can the federal government do to promote and support innovation in the healthcare system?
- Each participant will be given 4-5 minutes to discuss Canada's strengths and weaknesses, and identify the key elements under federal jurisdiction. They can build or comment on a former participants views at any time but should ensure that they use their time allocation to put their particular position into play at the table. The remaining time period for the session will be used to discuss what has been raised.
- 3:45-4:00pm Coffee/bathroom break.
- 4:00-4:45pm Session 2: Which approaches have the greatest potential to deliver improved value for money?

- Each participant will be given 4-5 minutes to which approaches under federal jurisdiction have the greatest potential to deliver improved value for money.

4:45-5:00pm Closing remarks by Mr. John Sproule, Senior Policy Director, Institute of Health Economics.

5:00-6:30pm Networking Reception (Gatineau Room, Fairmont Chateau Laurier).

Please note: Several federal political representatives will join us for this portion of the program.

** Beverages and hors d'oeuvres will be offered.*

Participant Role:

The two sessions outlined in the agenda above will begin with introductory remarks. Following these remarks, each participant will have approximately 4 – 5 minutes to outline their thoughts on the session topic/question. Participants will then have the opportunity to discuss any contributions raised, identifying strengths, weaknesses and levels of importance.

Please try to be as specific and succinct in your recommendations and thoughts as possible.

Overview:

This roundtable, created in response to the Federal Healthcare Innovation Advisory Panel's call for stakeholder input, is an exciting opportunity to provide policy makers and political representatives with recommendations on how to use innovation as a means to reduce costs and improve the quality of healthcare. The background material following is presented to provide general informational support, upon which discourse for the roundtable can be built. Materials presented below are not all encompassing and discourse may go beyond the particular details or general themes highlighted in this brief.

The Federal Role:

Support for innovation development can occur at a federal level through the use of various legislative and policy levers including, for example, intellectual property, tax, regulation, and support for research and development. Some examples are the following:

- There are several National agencies. (e.g., CIHI, CADTH, CIHR, CFHI, CHI, PMPRB) and pieces of legislation which support and/or regulate health innovation.
 - The Patent Act: is one of the main pieces of Canadian legislation governing patent law in Canada. As such, it sets a framework for intellectual property protection in Canada. It sets out the criteria for patentability, what can and cannot be patented in Canada, the process for obtaining a Canadian patent, and provides for the enforcement of Canadian patent rights.

- Canadian Institute for Health Information (CIHI): CIHI engages in the development and maintenance of comprehensive and integrated health information that informs policy and health system management. (www.cihi.ca).
 - Canadian Agency for Drugs and Technologies in Health (CADTH): CADTH provides health care decision-makers with credible, impartial advice and evidence-based information about the effectiveness and efficiency of drugs and other health technologies. (www.cadth.ca).
 - Canadian Institutes of Health Research (CIHR): CIHR is Canada’s federal funding agency for health research. Composed of 13 Institutes, CIHR provides leadership and support to more than 13,200 health researchers and trainees across Canada. (www.cihr-irsc.gc.ca).
 - Canadian Foundation for Healthcare Improvement (CFHI): CFHI supports healthcare leaders from different jurisdictions to work together on common improvement priorities, providing opportunities to share and implement evidence-informed solutions across regions, provinces and territories. (www.cfhi-fcass.ca).
 - Canadian Health Infoway (CHI): CHI works with the health care community, Canadians, government, and the technology industry to improve access to health information for better care in Canada. Of note, there are concerns that progress to implement electronic health record infrastructure will be seriously jeopardized without renewal of funding for Canada Health Infoway. Provincial and Territorial Health Ministers have announced that they are united in calling for the federal government to renew funding for Canada Health Infoway.
 - Patented Medicine Prices Review Board (PMPRB): PMPRB ensures that the prices of patented medicines sold in Canada are not excessive and reports on pharmaceutical trends. (www.pmprb-cepmb.gc.ca).
- The federal government’s National Research Council’s Industrial Research Assistance Program (IRAP) program provides early funding for research and development to small and medium-sized Canadian businesses.
 - The Scientific Research and Experimental Development Tax Incentive Program (SR&ED) is a federal tax incentive program, administered by the Canada Revenue Agency (CRA), which encourages Canadian businesses of all sizes, and in all sectors to conduct research and development (R&D) in Canada. The SR&ED Program gives claimants cash refunds and / or tax credits for their expenditures on eligible R&D work done in Canada.
 - International trade can be used as a lever - strengthening intellectual property protection legislation was recently highlighted in the Comprehensive Economic Trade Agreement (CETA) between the European Union and Canada.
 - The federal government can increase capacity of Canada’s regulatory agencies to help increase the speed of the regulatory approval system. Or they can also iron out inefficiencies in the approval process by ensuring that there are no duplication of services (e.g. the “one project, one review” approach to environmental regulations).

- National strategies can be created and outlined by the federal government, similar to the Science and Technology Strategy at Industry Canada, outlining federal priorities and intent, which can stimulate growth and investment.
- The Federal government has the power to commission surveys and reports through Statistics Canada. Information derived from those surveys could, in turn, inform policy that would lead to process innovation, etc.

Backgrounder Brief:

Healthcare innovation is “...the introduction of a new concept, idea, service, process, or product aimed at improving treatment, diagnosis, education, outreach, prevention and research, and with the long term goals of improving quality, safety, outcomes, efficiency, and costs.”¹

Increasingly, the goal of the health system is to be “patient-centered” and innovations in how we organize, fund and deliver services around that concept will, perhaps, be the most significant innovation. The health system is very slow to adopt measures which would improve productivity through information technology or consumer/people/patient participation in their own health care and self-management. The business model for health care is often organized more so around the needs of highly specialized providers than what might be a more logical and responsive customer-focused model of services. Probably the biggest innovations we might see in health care will be from the organizational design and incentives mechanisms which are truly patient centered. There are significant organizational barriers to do what we know is appropriate based on best evidence, a lack of real-time information supports for providers, and a significant lack of market segmentation in the health system to target programs for specific populations geared to their particular needs. It is estimated that about 5% of the population utilize 65% of resources and most of those would greatly benefit from new models to organize services to deal with their complex needs.

Innovation can improve the way services are delivered, which in turn may increase quality, efficiency and the cost effectiveness of the health care system. Efficient and innovative healthcare systems, in turn, support a healthy populous, which not only increases productivity, but also stimulates economic growth and prosperity².

Besides logical design of delivery models and incentives which support more patient-centered care – a key solution to sustainable health care will be through the advancement of science. It is through such healthcare innovation that we may find methods for enhancing life expectancy, quality of life, and diagnostic and treatment options.

Unfortunately, the approval, adoption and protection processes for healthcare innovation in Canada can be slow, costly, and unpredictable, which means we may not be realizing its full potential. The Canadian

¹ Omachonu, Vincent K., Einspruch, Norman G., “Innovation in Healthcare Delivery Systems: A Conceptual Framework,” *The Innovation Journal: The Public Sector Innovation Journal*, Vol. 15(1), 2010.

² Department of Health, NHS Improvement & Efficiency Directorate, Innovation and Service Improvement, “Innovation Health and Wealth: Accelerating Adoption and Diffusion in the NHS,” *NHS Chief Executive Innovation Review: Call for Evidence and Ideas*, (Dec 2011).

regulatory process is often attributed to be a significant barrier to the adoption of innovation.³ According to [BIOTECanada](#), a biotechnology product can take approximately 10-15 years and cost \$1.5 billion dollars to commercialize.

With respect to product innovation, there are some products that are real breakthroughs, with a dramatic improvement of survival or outcomes. There are other examples where improvement in outcomes relies on small, stepwise improvements, which add up to significant improvements overtime. This leads to controversy over the appropriate valuation of each of the incremental steps, largely reflected in difficult pricing negotiations and demonstrating the need for more innovative and nuanced approaches to reimbursements to address uncertainty of evidence at the time of launch.

Once a new technology is introduced, critical insights from healthcare providers during what is often called a “post-marketing surveillance” phase can help researchers to properly assess value and appropriate utilization and to incorporate new insights into broad system impacts, interactions with other therapeutic interventions, arising safety issues, appropriate dosing etc. Breast and colon cancers are good examples of incremental innovation, where a series of relatively modest gains resulted in significant improvements over a 10 to 15 year period.

Finding ways to ensure patients have access to new therapeutic developments is essential for such step-wise progress to occur and support what is often called a “learning health system.” At the same time, affordability and value for money are key drivers within the public health system that must play an essential role in appropriate funding for innovation. A basic concept in economics is that opportunity cost and funding spent on health care cannot be spent on other valuable areas, so demonstrating value for money is an increasing demand for all health systems. This need must be supported through appropriate investments in infrastructure to allow such assessments to take place.

If innovation is generally a critical component of business productivity and competitive survival, then healthcare innovation will not only help make a more prosperous, successful, and efficient health care system, but can also help manage growth of provincial and federal health care related budgets. Although total health expenditure in Canada has doubled in the last decade, rising from approximately \$100 billion to more than \$200 billion, growth has moderated since 2005.⁴ Federal and provincial governments must now work within their constrained fiscal frameworks to control spending and find efficiencies and savings, in order to continue enhancing the health care system to meet the growing needs, demands, and expectations of Canadians.

Greater still are the fiscal pressures created by an aging population and chronic illness. Increased longevity is, to a great extent, a sign of success of past efforts in innovation. The Canadian population is getting older, and will in turn, increase the demand and cost of the healthcare delivery. Seniors are the largest user group of healthcare services and have the greatest per capita spending per hospital visit than any other demographic.^{5,6} By 2036, the percentage of people aged 65 or older in Canada is expected to

³ Hall, Linda, Bagchi-Sen, Sharmistha, “A study of R&D, innovation, and business performance in the Canadian biotechnology industry,” *Technovation* 22 (2002) 231-244.

⁴ Canadian Institute for Health Information, *National Health Expenditure Trends, 1975 to 2013*, (2013), extracted from https://secure.cihi.ca/free_products/NHEXTrendsReport_EN.pdf.

⁵ Canadian Institute for Health Information, *Health Care Cost Drivers: The Facts. Ottawa: Canadian Institute for Health Information*, (2011), extracted from https://secure.cihi.ca/free_products/health_care_cost_drivers_the_facts_en.pdf.

⁶ Canadian Institute for Health Information, “National Health Expenditure Trends, 1975 to 2013,” (2013), extracted from https://secure.cihi.ca/free_products/NHEXTrendsReport_EN.pdf.

be at least 23% (up from 15% in 2011, or 8% in 1960)^{7,8}. There is also growing evidence of the need for early intervention and investment in children to create a ‘healthy life trajectory’. Investments in this area will only be possible if we are able to more effectively manage the growth of overall health spending.

Federal Healthcare Innovation Advisory Panel:

The Canadian Ministry of Health announced the creation of the Advisory Panel on Healthcare Innovation on June 24, 2014, to examine innovative health care ideas and approaches that exist in Canada and internationally. The Panel’s directive is to determine what approaches hold the greatest potential for Canadians and to create recommendations on how the Federal government can support those approaches.

In September, the Panel made a call for stakeholder input⁹ on healthcare innovation. More specifically, the assessment of current or potential practices, as well as determination of need and identification of gaps.

Of the questions posed by the panel in their request for stakeholder feedback, the roundtable will address the following:

- 1) What can the federal government do to promote and support innovation in the healthcare system? Current mechanisms include tax and other incentives, regulation, support for research and development, and support for a number of federal and/or pan-Canadian agencies.
 - Which specific mechanisms/levers are most critical to federal support for innovation in the healthcare system?
 - What changes to current federal tools and programs should be made to better support innovation?
 - What new mechanisms should be put in place to improve support for innovation in the healthcare system?
- 2) Thinking about the range of areas in healthcare that are undergoing change, which approaches have the greatest potential to deliver improved value for money (e.g. process improvement, data analytics, payment models, chronic disease management, electronic records, consumer incentives, pharmaceutical and/or device development, diagnostics, workforce management)?

This roundtable seeks to inform these questions and provide input in the form of a summary report for the Advisory Panel’s consideration.

⁷ Statistics Canada, “Population Projections for Canada, Provinces and Territories, 2009-2036,” *Catalogue 91-520-X*, (Ottawa, Statistics Canada 2009).

⁸ Statistics Canada, “The Canadian Population in 2011: Age and Sex,” *Catalogue 98-311-X2011001*, (Ottawa, Statistics Canada 2012).

⁹ For more information on the Panel and associated stakeholder consultation, please see the following link - http://www.hc-sc.gc.ca/hcs-sss/innovation/cons/_2014/chi-cis/consult-eng.php.

Types of Innovation:

Discourse will not be restricted to any particular form of innovation. Depending on your vantage point/background, you are encouraged to provide input and speak to any or all types of innovation.

Chatham House Rules and Summary Report:

The event will follow Chatham House rules and respondent's individual comments will be confidential but key issues raised will be summarized in a summary report.

The summary report will be submitted to the Federal Healthcare Innovation Advisory Panel once completed.

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