



Canadian Academy of Health Sciences
Académie canadienne des sciences de la santé

CAHS Forum Summary:
The Return on Investments in Health Research:
Defining the Best Metrics

Montreal, Quebec
September 18, 2007



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**CAHS Forum:
Return on Investments in Health Research: Defining the Best Metrics**

Tuesday, September 18, 2007

<u>Location:</u>	Opus I and II, Delta Montreal, 475 President Kennedy Avenue, Montreal, Quebec	
<u>Objective:</u>	The Academy is launching a Major Assessment on this subject. This full-day Montreal Forum, open to Fellows and Assessment Sponsors, will set the stage for the Assessment Panel to undertake its future work.	
<u>Co-Chairs:</u>	Cy Frank, Martin Schechter, Andreas Laupacis	
07:00-08:00	Breakfast	
08:00-08:30	Welcome and Assessment background	Paul W. Armstrong, Martin Schechter Andreas Laupacis
	Introduction of Keynote Speaker	Cy Frank
08:30-09:15	<i>"First experiences in capturing Return on Investment in Health Research from the Netherlands"</i>	Keynote Speaker: Professor Chris van Weel, Head, Department of General Practice, University Medical Center, Nijmegen, Netherlands
09:15-10:00	Open discussion / questions	Moderator: Cy Frank
10:00-10:15	Break	
10:15-11:30	Plenary Group: Reflections on Return on Investment: A Four-Quadrant External Perspective	Moderators: Andreas Laupacis and Claude Roy Speakers: <ul style="list-style-type: none">a) The Honourable John P. Manley, P.C.; former Deputy Prime Minister, Minister of Industry, Minister of Foreign Affairs and member of Parliament; currently Senior Counsel, McCarthy Tétrault LLPb) Borys Chabursky, President and Founder, Strategic Health Innovationsc) Stephen C. Schoenbaum, M.D., Executive Vice-President, Commonwealth Fund, USAd) André Picard, Public Health Reporter, The Globe and Mail
11:30-12:30	Open discussion / questions	Moderators: Andreas Laupacis, Claude Roy

12:30-13:30	Lunch	
13:30-14:30	Plenary Group and Questions: Reflections on Return on Investment: Perspectives from Major Sponsors	Moderators: Paul W. Armstrong and Catharine Whiteside Speakers: <ul style="list-style-type: none"> a) Sister Elizabeth M. Davis, Chair, Board of Trustees Canadian Health Services Research Foundation, (Sisters of Mercy of Newfoundland and Labrador, St. John's, Newfoundland.) b) Alan Davis, Vice President, Scientific Affairs, Nycomed Canada Inc (representing Canada's Research Based Pharmaceutical Companies [Rx&D]) c) Alain Beaudet, MD, PhD, Président-directeur général, Fonds de la recherche en santé du Québec (representing NAPHRO) d) Frank Plummer, Scientific Director General, National Microbiology Laboratory, Public Health Agency of Canada
14:30-16:00	Break out groups: It is expected that a framework for measuring what society receives from investments in health research will emerge across a variety of domains. As a starting point, break-out groups will be asked to focus on return on investment in one of the following domains: <ul style="list-style-type: none"> • Knowledge production • Research targeting and capacity • Informing policy • Health and health sector benefits • Economic impacts 	Moderator: Cy Frank Chairs and Reporters: To be determined
16:00-16:50	Feedback from each group, discussion and summary	Moderators: Cy Frank and selected Assessment Panel members
16:50-17:00	Closing Remarks	Cy Frank, Andreas Laupacis

List of Attachments

- Presentations
 - “First Experiences in Capturing ROI in Health Research from the Netherlands,” Dr. Chris van Weel
 - “Remarks for the Canadian Academy of Health Sciences,” The Honourable John Manley, P.C.
 - “Industry Perspective on Valuing Health Research: One Conceptual Measurement Tool,” Borys Chabursky
 - “Obtaining Value from Health Care Research,” Dr. Stephen C. Schoenbaum
 - “Return on Investments in Health Care Research,” Elizabeth M. Davis
 - “Reflections on Return on Investment (ROI) of Health Research – Defining the Metrics,” Dr. Alan Davis
- Speaker Biographies
- Panellist Biographies

Introduction

The third annual meeting of the Canadian Academy of Health Sciences (CAHS) was held in Montreal, Quebec, from September 17 – 19, 2007. The full-day CAHS Return on Investment (ROI) Major Assessment Forum was held on September 18, with the participation of approximately 140 individuals. The forum marked the official launching of the Assessment: it included presentations from representatives of different sectors involved or affected by health research (patients and the public, clinicians and the health care system, government, the Biotech Industry, economists and investors, and researchers) as well as several sponsors of the Assessment. CAHS fellows contributed their thoughts and suggestions to the chair of the panel, Dr. Cy Frank.

Why was ROI chosen as a topic?

Return on Investment is a timely topic for CAHS to pursue for many reasons:

- Commonly discussed issue in Canada and in the G-20 (the federal funding agencies);
- Lack of public understanding on the relevance and value of health research;
- Increasing recognition that health research and its outcomes are multi-sectoral;
- Concern about the declining number of health care professionals who go into research careers;
- Need to find the balance between discovery-investigator and targeted-strategic research;
- Focus on innovation as the primary avenue along which Canada will improve productivity and standard of living;
- Uncertainty about the Canadian level of spending on research versus the levels of spending in other developed nations;
- We live in an environment with growing concerns about accountability and are under increased scrutiny;
- At the provincial level, health care and health research are viewed as cost-drivers;
- To discover the domains other than cures and diseases where we are getting Returns on Investment;

- This is a global question: a common understanding is required to prevent adversarial relationships between researchers and policy-makers, etc.;
- The public has increasing expectations of immediate and tangible results from research;
- The scientific community needs to improve methods of:
 - measuring the benefits of applied research
 - disseminating information to the public
 - placing multiple disciplines on the same page.

This is not an assessment to demonstrate that research is a good investment. Its purpose is in determining a framework by which we measure the returns that have been and will continue to be made in health research.

The topic of ROI in health research is perceived in various ways from different components of society. Each differing perspective was represented at the forum:

- Clinicians and the Health system (Dr. Chris van Weel *Keynote)
 - Clinicians want immediate solutions while the Health System has to evaluate, on a grand scale, what methods are effective in the long-term.
- Government (The Honourable John P. Manley)
 - “Why is Canada not more competitive with the rest of the world? Why are we lagging in R&D and in the business sector?”
- Patients and the Public (André Picard)
 - People want tangible results now – like a cure for cancer.
- Biotech Industry (Borys Chabursky)
 - “Where are the opportunities to commercialize entities that will bring value to customers and companies while creating a positive cycle of innovation?”
- Economists and Investors (Dr. Stephen C. Schoenbaum)
 - “If we invest appropriately, we will get a positive return. What does this look like and what is the evidence that we are getting a big return in this domain?”
- Researchers (CAHS Fellows)
 - Researchers are busy looking for questions, causes, cures, and discoveries and publishing as much as possible. ROI means discovering something new and being able to share it with others.

Our Assessment will attempt to:

- address all of the perspectives listed above;
- address gaps in the current CIHR framework;
- address the needs of the sponsors;
- be practical for organizations;
- be an objective look at what exists in the field;
- be robust with no gaps;
- consider both quantitative and qualitative approaches in order to get the full picture;

- consult with stakeholder groups;
- generate the key metrics to create an optimal framework with the intention of making it globally accessible;
- take the topic to a new level, starting with what has already been done;
- not be an advocacy exercise;
- not provide detailed data in all domains.

Evolution of Frameworks

Four frameworks were focused on.

The Balanced Scorecard approach was developed in the early 1990s and is currently supported by the Ontario Neurotrauma Foundation. This approach focuses on:

- Organizational Process (knowledge production and mobilization)
- Organizational Learning/Growth (capacity-building and knowledge brokerage)
- Funder/Financial Results (financial return and system improvements)
- Stakeholder/Consumer Results (evidence-based practise and improved quality of life)

In the early 1990s, Martin Buxton generated the Payback Model, which included the following domains:

- Knowledge Production
- Research Targeting and Capacity
- Informing Policy
- Health and Health Sector Benefits
- Economic Benefits

The 2005 CIHR Framework was based on the Payback Model but used slightly modified language:

- Knowledge Production
- Research Targeting and Capacity Building
- Informing Policy
- Health and Health Sector Benefits
- Economic Benefits

CIHR further revised the 2005 framework to the following, which will be presented to the OECD in September 2007:

- Advancing Knowledge
- Informing Decision-Making
- Health and Health Sector Benefits
- Economic Benefits

This forum focused specifically on the 2005 CIHR Framework in order to further identify gaps and missing thematic issues/language. This is the primary Framework after which the ROI Major Assessment will be based upon.

Keynote Address: Dr. Chris van Weel

“First Experiences in Capturing Return on Investment (ROI) in Health Research from the Netherlands”

Dr. Van Weel is a family physician and Professor of General Practice from the Rabhoud University Medical Centre, the Netherlands. He is an expert in chronic disease management and discussed the first experiences in capturing ROI in health research from the Netherlands.

Introduction

In the Netherlands in the early 1990s, the government began to ask questions of the research community: “What are you doing? How is this helping?” and specifically, “How do you measure the success of funding for primary care?”

Dr. Van Weel emphasized societal impact: the research community has an obligation to address how health research affects the community. He used the examples of Dutch primary care, and the health-policy perspective to demonstrate his points.

- In the 1980s, a program was launched to stimulate the development of the family physician researcher:
 - Resulted in medical research being subject to an ongoing, rather than episodic, external review process
 - Resulted in financial cutbacks: groups and disciplines that did not perform according to the guidelines in the assessment lost financial support.
 - External reviews hold the danger of opening the door for so many criteria, therefore they cannot be all strengthened;
 - External review opens a dialogue beyond the science and gives a more complete picture of what you are doing;
- Public health agenda: changing demands for health care, preserving quality of life, speeding up the implementation of resources and new developments, promotion of self-care to counter the rising costs of health care (emphasis on the short-term);
- As researchers, we should be looking at the lasting effects of research;
- Applied health sciences do have a huge impact on society; this can be measured;
 - Markers of research success include: international publications, research funding, and number of trained Ph.D.s
 - The impact of primary care is divergent: it doesn't affect just one ailment;
- Investment in practice-based research is essential to produce research that will have a societal impact or present a ROI;
- We need to be aware that all indicators can be potentially perverse;
 - It is best to approach this problem from a qualitative viewpoint and not just numbers

Summary

- Science helps support vital decision-making;
- Research indicates how practice should change;
- Dialogue is very important:
 - “Governments are political animals, they have a short life and the flavour of the day comes back to a crisis. We need outcomes that are very meaningful. The scientific community causes more confusion than clarification. Policy will be democratically influenced. We must give a coherent and open view of what public health can expect from research.”

Plenary Group: Reflections on Return on Investment: A Four-Quadrant External Perspective

The Honourable John Manley (Government)

John Manley represented the viewpoint of the government, having served as a Member of Parliament, Minister of Industry, Minister of Finance, and Deputy Prime Minister.

Government...

- ...is not a business: it must accommodate the needs of a variety of stakeholders;
- ...is reluctant to give money if there are no short-term benefits;
- ...is multi-dimensional: science policy does not exist in a vacuum (the politician must explain how funding for research translates into impact, i.e. does it create jobs?)
- ...can sometimes mistake the *immediate* for the *important*

Review of Science & Technology (S&T) in Canada

- 1995: Federal Budget
 - cut federal expenditures drastically
 - expenditures of the Ministry of Industry were to be reduced by 50 percent
 - granting councils lost approximately 14-15 percent of funding
 - good programs had to be cancelled so better ones could survive
 - led to the report, *Science & Technology For the New Century*
 - called for greater accountability
 - prioritized federal funding
 - resulted in the creation of annual reports on federal S&T activities; 6 reports written from 1997-2003
 - outlined three goals :
 - Sustainable job creation and economic growth
 - Improved quality of life
 - Advancement of knowledge
- 2007: Canada's New Government issued a new strategy, *Mobilizing Science and Technology to Canada's Advantage*
 - emphasis on private research
 - emphasis on job creation, standard of living, and economic strength
 - focused on finding better methods to measure the impact of research, thereby increasing government accountability
 - did not list obvious metrics to validate expenditure

How to measure R&D effectiveness?

- Speed and velocity: the capability to deliver products
- Innovation (patent disclosures)
- Highly Qualified Personnel (HQP)
- Monetary measures: the market (private sector) tells us if the government has spent money wisely
- Reuse: build a platform once and reuse it many times
- Public policy context
 - Key expectations: better health, greater life expectancy, informed public information, etc.

Summary

Mr. Manley concluded his discussion with warnings to the scientific community that government focuses on short-term impact, but emphasized that it is long-term impact that is more important. He reminded the Fellows that there is a larger political agenda that must be met: improving productivity, creating jobs, and improving Canada's global competitiveness. Policy-makers are concerned about how Canada is lagging behind other developed nations (specifically the United States) in the areas of innovation, science and technology.

The scientific community needs to take into account the contemporary governmental context that we are operating in: post-Gomery Ottawa where money is tracked much more closely and accountability is the buzzword of the day.

Borys Chabursky (Biotech Industry)

"Industry Perspective on Valuing Health Research: One Conceptual Measurement Tool"

- What does research mean for different sectors?
 - Government: provides the infrastructure for research: wants a social impact
 - Academia: provides the research expertise, innovation capacity, and knowledge: wants translational research capacity
 - Industry: wants growth and return on the dollar investment
 - Non Profit: can bring forward coordination (patients, research dollars, access groups): wants socioeconomic output
- All four groups need to move together;
- Everyone is in concurrence that although health research is valuable, there is no effective measure on how to assess its impacts (commercial, health, job creation, intangible spill-over effects, etc.);
- The investment that is made has to have economic and social benefits that outweigh the costs of either.

Key Points

- Dissemination of research is vital: doing fantastic research and then not disseminating it destroys the value you have created;
 - Besides ROI, we also have to look at how research will be used: this is where the impact will be;
 - No research is pursued in isolation, rather it is global;
 - Accountability is absolutely critical.
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Stephen C. Schoenbaum (Economists and Investors)

"Obtaining Value from Health Care Research"

The Commonwealth Fund, founded in 1918, is one of the oldest private nonpartisan foundations in the United States that supports independent research on health and social

issues and makes grants to advance research. Dr. Schoenbaum spoke about how the “Fund” goes about Grant-Making.

Introduction

- When looking at research funding, the US is the world leader (per capita and GDP) when compared to other developed nations;
- Developed countries are spending more on R&D today than ever before;
- 2005: Commission on High Performance Health System
 - what is the purpose of having a health care system? To help people live longer, healthier, more productive lives
 - goals for a high performance health system?
 - high quality care, access and equity for all, etc.
- The object is not to put a number on the return but to keep improving the grant-giving process.

Grant Making

- Two types of health care research
 - Information: survey, acquisition, other data
 - Action Projects: how one develops, evaluations, trials, projects to disseminate change
- We can enhance the value of information:
 - Comparative data with benchmarks
 - Data for which there is a standard of performance
 - Data intended to examine/assess potential associations

Summary

- It is better to think of health services research as an investment – there are risks and benefits;
 - We should try and think about it as an improvement process.
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André Picard (Patients and the Public)

André Picard is a Public Health Reporter and Bureau Chief for the Globe and Mail in Quebec. Mr. Picard was asked to address the question, “What is the public’s attitude toward health research?”

The public...

- is generally supportive of research
- wants accessible information on developments in research
- has high expectations: wants tangible, concrete results for the billions of dollars spent on research
- feels that a lot of research is unnecessary and repetitive

- is sceptical and cynical:
 - there is an assumption of inefficiency and waste in research
 - People wonder, “What are the administrative costs?”
 - there is an assumption of greed towards the private sector
 - People think, “Companies develop drugs to get rich.”

What is the solution?

- These views must be changed through effective communication with the public
- the public needs to see how the benefits of research will affect their lives now, rather than twenty years in the future;
- The scientific community must improve:
 - transparency
 - the accessibility of research literature - written in lay language
 - individual and collective communication skills
 - education: research should be discussed thoroughly in schools

Key Points

- The vast majority of research is funded by tax dollars – scientific community owes explanations to the public;
- Research should be measured by social terms and should not be valued in monetary terms;
- Government: science should not be purely reactive, long-term investments are the ones that pay off;
- “Popular” topics should not be getting all the funding (ex. Lung cancer research will not get more money if we go on popularity).

Plenary Group: Reflections on Return on Investment: Perspectives from Major Sponsors

Sister Elizabeth M. Davis

“Return on Investments in Health Care Research”

Sister Elizabeth represented the Canadian health services.

Introduction

- How do we show that the research that we are doing is helping?
- There are multiple perspectives when we talk about any health research. Sometimes they conflict and sometimes they are synchronized;
- What is the new knowledge gained through health services research and how do we assess its scientific quality?

Health Services Research – Many Uses

- Instrumental
- Conceptual: generating new policy ideas
- Strategic: set a direction and see a focus for our government, companies
- Legitimize: endorsing positions we already have
- Warning: what not to do
- Enlightenment: challenging old ideas, providing new perspectives, helping re-order the policy agenda

Capacity Building

- We need to increase the capacity within the decision-making world to access research, to adapt it and then apply it;
- We need to build the capacity within the media so that it is a successful conduit to the public.

Summary

- Research cannot make a difference until you change the culture (health care organization, government, academic organizations, media, general public, etc.).
 - We have to be careful that we use language that opens us to possibility;
 - We need to support the public in becoming knowledgeable about health research.
 - We as an organization are absolutely adamant that we can only be accountable to the public if we can find the tools and the paradigms that help people better understand the effectiveness of what we are doing.
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Alan Davis

“Reflections on Return on Investment (ROI) of Health Research – Defining the Metrics”

Dr. Alan Davis represented Canada’s research-based pharmaceutical companies (Rx&D)

- From the private sector, the largest single source of health R&D Research is in the business enterprise sector;
- We always need to come back to patients;
- Challenges:
 - Disseminating information to the public is an enormous problem;
 - The vast majority of research is incremental but yet the public wants immediate results.
 - Canada is not as competitive as it should be on the global stage. How do we increase our productivity?
 - We need to incorporate the international nature of health research into collaborations.
- Metrics:
 - Societal Impact: Patient outcomes
 - Publications, grants, patents
 - Focus on direct and indirect costs

- Prosperity
 - Jobs: health research creates high value jobs. Health care is not something that can be outsourced;
 - Jobs bring prosperity and one indicator of good health care is prosperity.

Alain Beaudet

Dr. Alain Beaudet represented the National Alliance of Provincial Health Research Organizations (NAPHRO).

Why measure ROI?

- To be accountable to stakeholders;
- To monitor the impact of what we are funding at large (health research and economic impact)
- To inform the public in an improved way;
- Organizational evaluation: are programs on target?

How do we measure this?

- Direct impact measurements: publications, patents, leverage, collaborations;
- Second level of impact (more difficult to measure): prevention of disease, improved health care, lower health care costs, innovations, use of new medical technologies, commercialization, job creation, job market for HQP;
- Third level of impact: improved health, higher life expectancy, stronger economy, improved competitiveness;
- Both the second and third levels have major societal impact: in short, we want long, healthy lives in a rich country;
- We have to be careful when measuring impacts: think local;
- The potential for commercialization could be a measure. Should this be considered?

Research

- Bulk of research is on hospital campuses rather than university campuses;
- In Quebec, more than 80% of health research is being done in hospital research centres;
- Research should be developed in the community (i.e. research can be hospital based but should go out into the community).

Summary

- The provincial point of view is that there are two orders of impact:
 - The impact on health and the impact on economy.
- Cost is *always* a very critical factor and it is crucial for us to demonstrate costs now will actually decrease the cost in the long-run.
- We must be careful with wording:
 - “Return on Investment” has a financial connotation
 - It is pertinent to define this concisely

- Consumers are completely absent and therefore we must be sensitive
 - Alignment with governments is a reality: they are open to learning;
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Breakout Groups

It is expected that a framework for measuring what society receives from investments in health research will emerge across a variety of domains. As a starting point, break-out groups were asked to focus on return on investment in one of the following domains (based on the 2005 CIHR framework):

- Knowledge Production
- Research Targeting and Capacity
- Informing Policy
- Health and Health Sector Benefits
- Economic Impacts

Groups were asked to:

- Discuss the existing CIHR framework (2005) and identify thematic gaps;
- Identify key metrics for the domain which they were assigned.

Conclusions of the Breakout Groups: Improvements to the 2005 CIHR Framework

- General Conclusions:
 - The domains are acceptable but could be fine-tuned:
 - Plain language should be used: we need to be careful of terms and language;
 - “ROI” was viewed as a cold and monetary term with industry-oriented connotations; “Societal Impact” was looked to as a more positive and inclusive term
 - There was a consensus that we need to assess the impact of health research in a holistic way:
 - The different domains may not effectively capture the collective impact of ROI;
 - Environmental Issues and Impact should be addressed (could be under Health and Health Sector Benefits);
 - Social and Societal Impacts should be addressed (could be under Health and Health Sector Benefits);
 - Ethical Issues and Changes in Values should be addressed;
 - The effect that research has on the discipline itself should be addressed;
 - The four domains (based on the 2007 CIHR definition) should be represented in a circle, as a constant feedback loop;
 - The weighting of these categories needs to be based on who we are trying to communicate them to (i.e. the public, the government, etc). There will have to be reflection on the specific weighting we give each category in terms of who the audience is;
 - Chronology and the temporal sequence will influence whether we are measuring leading or lagging indicators, and measures of incremental or disruptive and transformational research

- Domain-Specific Conclusions:
 - **Research Targeting and Capacity**
 - This language needs to be clearly defined
 - **Informing Policy**
 - **Health and Health Sector Benefits**
 - When it came to health impacts, there was a missing link. We need to mention the importance of improving health in the population. This is through prevention, diagnosis, treatment. Health Impact to Impact on Health: Health Determinants and Health Equity
 - Individuals, communities, and population health
 - Population health language
 - Gaps: the need to expand the theme for health and health sector benefits; to include the impact of health research; changes in built environments; changes in the environment as a whole that could be stimulated by health research;
 - **Economic Impacts**
 - More should be said to measure economic activity;
 - Change “Economic Impacts” to “Socio-Economic Impacts”
 - Categories: relevance of the economy; the economic impact was present in all three categories; if we have a health impact then we will have an economic impact; not all these categories were at the same level.

1. Knowledge Production (Metrics):

- Patents, publications, and citations;
 - A limitation is the fact that in basic science, the only current metric is high impact journal publication. *We have to find good metrics other than publication regulated metrics.*
- Number of clinical researchers in institutions;
- Number of infrastructures (new structural organizations);
- Education: the core knowledge generation impact by university; there is an asymmetry of universities across the country and this will have to deal with provincial investment in research;
- National Profile: impact of Canadian researchers’ work on global health;
- Retrospective stories: stories of discoveries or inventions by Canadians (eg. the pace maker) are powerful ways to show significance:
 - Would highlight the impact of health research in a way the public could understand but also can help us understand what the metrics that we need to use should be;
- The added value of research culture on the development of discipline.

2. Research Targeting and Capacity Building (Metrics)

- Training of practitioners and administrators;
- Indicators and building-research capacity;
- Systematic review: what do we know about increasing systematic capacity?
- Capacity and targeted research area: compared to several years ago, are there more researchers asking more complex questions? Are there more researchers engaged in knowledge transfer in a serious way?

3. Informing Policy (Metrics)

- The degree to which the research engages decision-making across a continuum (family, community, provincial, federal, UN ,WHO): these are all relevant;
- In addition, we will have to pay attention to what will be the perceived pathway of influence, starting from research. If we are trying to influence clinicians, we need to know what type of information is helpful. Much more thinking will have to be put into these specific pathways.
- Time frame restrictions pose issues: if we are trying to measure the impact of research on decision-making you have to take into account time and the evaluation process.

4. Health and Health Sector Benefits (Metrics)

- “Health” and “Health Sector” are not synonymous and must be separated
 - Health: this should be health care itself, must be disease specific and address morbidity and mortality and answer the challenge from FRSQ on how the levels of attribution should be assigned
 - Health system: access issues, wait lists, health human resources, quality and safety, patient satisfaction, cost issues

5. Economic Benefits (Metrics)

- Change “Human capital gains” to “HQP”;
- Indicators can vary for public, government, treasury board, etc.;
- Investments: bring a huge amount of money into Canada (eg. Genome Canada, CFI); analyze the impact of this money
- Productivity:
 - Difficult to measure
 - Talk about business expenditure rather than the Grants for Industrial Research and Development (GIRD) measurements
 - It is an outcome measure: the more that foreign countries are spending on research in Canada to do research, the better the end result may be.
- Tax incentives:
 - Tax credits: a standard in most countries and are very important for most biotech companies.
 - Forgiveness of tax for intellectual property (currently under scrutiny by the federal government).
- Rather than measuring patents, Prorat and FDI should also be measured
- Quality jobs in health care: increase in quality jobs should be measured
- Holistic measurements: everything is intertwined:
 - There is a significant correlation between productivity and health (healthy societies are more productive)
- Global measurements: we should not only measure domestic uptake but also global input for disembodied technologies.

Forum Summary

Several themes manifested themselves throughout the day. The following points were reiterated by several speakers and CAHS Fellows:

- Government and the public is focused on short-term impact (job creation and the economy);
- The scientific community should continue to focus on the long-term impact but must improve transparency of its activities;
- The scientific community must be held accountable to the public;
- Activities involving health research and its results need to be communicated more effectively to the public;
- Canada is lagging on the global stage in terms of innovation, science, and technology;
- “Return on Investment” is a polemical term that has financial connotations;
- “Societal Impact” should be addressed in the Assessment Framework

Dr. Cy Frank, Chair of the Major Assessment, “The Return on Investments in Health Research: Defining the Best Metrics,” concluded with a summary of the day’s results. He noted that the domain of “Societal Impact” was a major gap in the CIHR 2005 Framework. He acknowledged that new metrics need to be defined and that the scientific community needs to develop a closer relationship with the public.

Dr. Frank noted that there were several questions to address before the Assessment framework was determined. Should it use a balanced scorecard approach? Should we passively monitor or create targets? Should international benchmarking be used? He acknowledged that benchmarking is a multidimensional exercise and has the potential to lose information in the vast amount of numbers.

The forum was deemed a success and provided detailed information and suggestions that will improve the process of the first Major Assessment of CAHS.



Major Sponsors

- Canadian Health Services Research Foundation (CHSRF)
- Canadian Institutes of Health Research (CIHR)
- Canada's Research Based Pharmaceutical Companies (Rx & D)
- Public Health Agency of Canada

Sponsors

- Alberta Heritage Foundation for Medical Research (AHFMR)
- Association of Canadian Academic Healthcare Organizations (ACAHO)
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- BIOTECCanada
- Canadian Agency for Drugs and Technologies in Health (CADTH)
- Fonds de la recherche en santé du Québec (FRSQ)
- Government of Ontario, Ministry of Research and Innovation and Ministry of Health and Long Term Care
- Heart & Stroke Foundation of Canada
- Manitoba Health Research Council
- Michael Smith Foundation for Health Research (MSFHR)
- National Cancer Institute of Canada
- Newfoundland & Labrador Centre for Applied Health Research
- Nova Scotia Health Research Foundation
- Ontario Neurotrauma Foundation
- Research Canada
- Saskatchewan Health Research Foundation
- Western Economic Diversification Canada

Contributors

- Canada Foundation for Innovation
- Canadian Medical Association