

Activities of the

SCIENCE ADVISORY BOARD

**Annual Report to the
Minister of Health**

2002 - 2003

Message from the Chair



The Science Advisory Board was established in 1997. Its mandate is to provide the Minister of Health with timely, independent, credible advice on the science performed and used by Health Canada. It also provides advice on a variety of departmental activities from a scientific perspective.

It is my pleasure to serve with so many dedicated and distinguished individuals and to support Health Canada in its role to maintain and improve the health of Canadians.

On behalf of the Board, I am pleased to present this report of our activities during the past year.

A handwritten signature in cursive script that reads "Judith G. Hall".

Judith G. Hall, OC, MD
Chair, Science Advisory Board

Board Members 2002-2003

Chair: Dr. Judith Hall

Professor of Pediatrics and Medical Genetics
University of British Columbia

Vice Chair: Dr. Richard Lessard

Director of Public Health
Régie régionale de la santé des services
sociaux de Montréal centre

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Former Director, Bureau of Biologics
Health Protection Branch, Health Canada

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Director, Centre de recherches en infectiologie
Université Laval

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Department of English
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Neuropsychiatry Research
University of Saskatchewan

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University of Western Ontario

Dr. David Roy

Centre for Bioethics
Institut de recherches cliniques de Montréal

Dr. Elizabeth Jacobson

Consultant, FDA-regulated matters

Ms. Linda Lusby

Associate Professor, Environmental Science
Acadia University

Dr. Stuart MacLeod

Executive Director, BC Research Institute for
Children's and Women's Health

Ms. Kathryn O'Hara

Associate Professor, School of Journalism and
Communication
Carleton University

Dr. Rodney Ouellette

Directeur de laboratoire de recherche en
oncologie et pathologie moléculaire
Hôpital Dr. Georges L. Dumont

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Professor, Institut des nutraceutiques et des
aliments fonctionnels
Université Laval

Dr. Ardene Robinson Vollman

Adjunct Associate Professor
Faculties of Nursing, Medicine and Kinesiology
University of Calgary

Dr. Irv Rootman

Professor, Faculty of Human and Social
Development
University of Victoria

Operations

This year the Board examined and made recommendations to the Minister about its Terms of Reference to better reflect the mandate of the Department and lend clarity to the specific areas the Board may be called upon to provide advice. They also aim to promote diversity and encourage debate by requiring the composition of the Board to reflect a breadth of expertise and experiences relevant to the Department.

The Secretariat, working with the Board, also created a guidance manual to clarify provisions in the Terms of Reference and to consolidate practices into a single document.

Revisions to the Terms of Reference and the development of the guidance manual were based on a study of best practices and reflected the views of current, former and ex-officio members, including Assistant Deputy Ministers, on the operations and effectiveness of

the Board.

The new Terms of Reference and guidance manual address specific concerns raised, including how agendas are set, the role of ex-officio members and the Chief Scientist, and how meeting summaries are forwarded to the Minister.

Exit interviews were introduced as a means to gather feedback and improve the effectiveness of the Board. This practice is consistent with the recommendations of the Council of the Science and Technology Advisors in their report, *Reinforcing External Advice to Departments*.

The Board appreciates the increasing level of participation of ex-officio members at meetings and is pleased by increasingly focused presentations and departmental feedback on the advice it provides.

Scientific Themes

Presentations throughout the year highlighted Health Canada's research in several important areas:

- Infectious diseases
- Healthy living
- Environment and health

Infectious diseases

In the past year, the Board discussed the challenges in preventing and responding to infectious diseases and agents such as smallpox and the West Nile Virus. The emergence of SARS and BSE have underlined the importance and timeliness of this topic.

Responding to infectious diseases in crisis and ongoing situations requires resources, research, leadership and clear communications. It also requires a strengthened public health infrastructure. The Board encourages Health Canada to apply lessons learned and to work with its partners across government, the granting councils, and with other jurisdictions to prevent and control infectious diseases.

Healthy Living

While Health Canada's role in combating communicable diseases has received considerable attention, the Board is pleased to see that progress was made on the Healthy Living Initiative. The Board supports this and other initiatives that target the prevention of disease by encouraging good nutrition, physical activity, smoking, mental health, and awareness of environmental risks.

For this strategy to be effective, the Board believes that it is important to adopt long-term measures that address broader determinants of health such as economic and social inclusion. The Board encourages the Department to adopt a multi-disciplinary approach in developing its strategies and a holistic, community-based approach to helping Canadians make healthy lifestyle choices.

Environment and Health

Whether the issue is climate change or the quality of our air or drinking water, Health Canada requires research to develop a greater understanding of the

short and long-term health effects of the physical environment.

The Board recognizes the impact of the environment on health, and in particular, on the health of sub-populations and distinct groups including children, the elderly and First Nations and Inuit. The Health and

Environment Research Agenda will be valuable in developing baseline science and increasing our research capacity in this area. We are also pleased to see the development of the National Agenda on Workplace Health and would like to be kept apprised of the initiative's progress.

Science Management Issues

A number of science management issues were brought forward to the Board for advice:

- Partnerships
- Communicating science
- Risk management
- Framework for Science
- Human resources
- Enhancing the role and profile of social sciences
- Privacy

Partnerships

Over the years, the Board has seen the number of Health Canada partnerships multiply. Partnerships are fundamental means to secure necessary science and to expand Health Canada's research horizons.

The level of collaboration between Health Canada and the Canadian Institutes of Health Research (CIHR) is commendable. It is a fruitful partnership that attests to the importance and the benefits of integration. We are pleased to see such a high level of cooperation between the two organizations. In the past year, the Board has met with scientific directors from several Institutes and looks forward to other

meetings in the coming year.

Where there are gaps internally or across the national health research system, we encourage Health Canada to take a leadership role in addressing these needs. As a leader and a performer of science and research, it is uniquely placed to foster collaborative efforts. We encourage Health Canada to continually expand its partnership base to include organizations such as the Social Sciences and Humanities Research Council (SSHRC) and Genome Canada, while strengthening its own scientific activities.

Communicating science

The Board believes that Health Canada has an important role to play in making scientific information more accessible and understandable to Canadians.

In the past year, emerging issues such as SARS, BSE and West Nile Virus highlighted the importance of clear, consistent communications. The Board believes that it is essential that departmental communication strategies and messages are based on sound science.

Health Canada also has an important role in communicating about longer term issues such as the health impact of climate change and the role of genomics in public health.

A consistent approach to communicating science, especially in times of crisis, is very important to Canadians. Recognizable, knowledgeable, and credible Health Canada spokespersons, supported by others with technical expertise, should be used to convey clear messages to the public.

While crisis situations are often temporary, the knowledge gained from experiences is valuable in the long run. The Board is pleased to see that Health Canada applied the lessons learned from communications about the West Nile Virus to the SARS crisis.

An equally important audience is internal to the Department. Communicating the role and contribution of Health Canada science internally is necessary to ensure that science supports evidence-based decision making within the Department. The Board applauds efforts to highlight the role of science and raise the profile of departmental scientists and researchers within Health Canada.

The Board also understands that individual scientists can be enthusiastic proponents of essential science. It looks forward to the launch of the Science Ambassadors program.

Risk management

Informed decision-making requires calculation and analysis of risks and benefits. In many situations, decision makers are faced with scientific uncertainty or unknown risks. This leads to difficulty in identifying options for implementation, and assessing and managing situations.

Quantitative risk assessment, risk modeling and risk management frameworks can be powerful tools to limit knowledge gaps. The Board endorses a departmental risk management platform that would support the consistent integration of risk assessment, modeling and management in policy and program activities. It urges continued investment in improving risk assessment tools and techniques.

When communicating risks and benefits, it is important to consider that members of the public may have different perceptions. It is therefore important to engage citizens and stakeholders in discussions to gain understanding of public values and incorporate these into risk management strategies and decision making.

Framework for Science

Over the course of the year, the Board received several updates on the development of a departmental Framework for Science. The Board strongly supports the Framework for Science, knowing that it will provide an effective science planning process.

As part of this process, the Board emphasizes the importance of identifying gaps in the department's science capacity, particularly in the area of human resources.

A departmental science plan will support the Department's efforts to enhance value-added science collaborations across the national health science and innovation systems and internationally. The Board has agreed to play an active role in reviewing the draft science plan.

Human Resources

No matter the topic before the Board, almost every presentation highlighted a need for highly skilled scientific professionals at Health Canada and in partner organizations.

The Board is pleased that steps have been taken to address human resources requirements internally. The Postdoctoral Fellowship Program is a positive step in attracting highly trained and qualified professionals to work with prominent Health Canada researchers in a range of vital fields. However, much remains to be done.

Across the national health research system and within Health Canada, there is currently a need for skilled professionals in specific scientific fields, particularly in the areas of public health, genomics, and risk assessment and management. We urge Health Canada to foster partnerships with universities that support a strong human resources capacity.

Enhancing the role and profile of social sciences

Because of the breadth of Health Canada's mandate, the Department counts on the work of scientists in a range of fields, including the natural and life sciences and social sciences.

Social sciences research is necessary to provide a solid evidence base for Health Canada's decisions, particularly within public health. It provides critical information about important issues such as the economic burden of illness in Canada, the reasons some women choose natural health products as a substitute for hormone replacement therapy, and means to improve adverse reaction reporting, to name but a few.

It appears that there is a lag between research and the uptake of findings, particularly in social and human science research. The Board encourages Health Canada to be a model for the integration of social scientists in the work of the department.

Privacy

The Board is interested in the issue of privacy, particularly as it applies to the protection of personal health information and its relationship to health research and the public good.

We live in an era of large electronic databases that house large amounts of personal data that can be easily collected, maintained, used and

transferred. These databases also permit Health Canada to conduct its surveillance activities and support research. PulseNet, for example, is an impressive and valuable electronic tool for infectious disease surveillance and provides real-time detection of national and international outbreaks and epidemics. Long-term monitoring of health trends and outcomes is also necessary to inform policy decisions and the health care system.

We recognize the tension

between the right to privacy and the need to obtain health information that will contribute to the public good. We suggest that Health Canada, as a responsible steward of private information, develop a protocol for the responsible transfer and sharing of data. We also encourage Health Canada to consider how the Personal Information Protection and Electronic Documents Act (PIPEDA) might affect health research performed by Health Canada and other organizations.

Chief Scientist

Given the Board's role in advocating the creation of a Chief Scientist position at Health Canada, the Board has taken a particular interest in the activities of the Chief Scientist and his office. The Chief Scientist has done an excellent job representing the interests of Health Canada scientists, including social and human scientists, supporting the Department's science capacity, and advancing the use of sound science in departmental decision making. We urge the Chief Scientist and his Office to continue their advocacy on behalf of Health Canada's science.

The Science Advisory Board is particularly pleased with the work of the Chief Scientist and his Office on matters including the Postdoctoral Fellowship Program, the Innovative Science Competition, the Health Research Forum, and other initiatives, such as programmatic peer review and laboratory quality management, that are aimed at fostering scientific excellence.

We also commend the Chief Scientist and his Office for the creation of the Framework for Science.

Forward Planning

At the June meeting, the Board conducted a forward planning session to identify possible topics for the coming year. The Deputy Minister and Minister also identified areas where they wish to seek the Board's advice. Public health, especially including mental health, was identified as the most pressing

issue, followed by public understanding of science, and health inequalities. The Board also requested updates on children's health and environmental indicators, migration health, First Nations and Inuit health, and a number of other issues.

Year in Review

The Board appreciates the level of interaction with the Deputy Minister, the Associate Deputy Minister, and Assistant Deputy Ministers. We find the background information, guidance and responses they provide to be helpful in informing our deliberations.

At the June meeting, the Board was pleased to meet with the Minister informally and engage in a dialogue on communicating science and public health. We appreciate her feedback on the value of the Board's advice and look forward to meeting with her

in the coming year.

The Board had a unique opportunity to visit Health Canada facilities in Guelph in February. This visit allowed members to learn about the laboratory first hand. It also provided a valuable opportunity to interact with scientists and managers.

The Board is pleased to have the opportunity to serve Canadians and provide Health Canada with advice on pressing scientific issues.