

# **Summary of Discussion Science Advisory Board Meeting**

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**May 18 - 19, 2004**

## Participants

<p><b>Science Advisory Board Members</b></p> <p>Judith Hall          Keith Bailey          Mark Goldberg          Karen Grant          Linda Lusby          Kathryn O’Hara          David Roy (May 18)          Dixie Snider          Stanley Vollant          Ardene Robinson Vollman</p>	<p><b>Ex Officio Members</b></p> <p>Ian Green (May 18)          Janice Charette (May 18)          Scott Broughton (May 18)          Susan Fletcher          Geoffrey Gurd for Marcel Nouvet          Kevin Keough</p>
<p><b>Secretariat</b></p> <p>André La Prairie          Susan Tessier          Danielle Hawkins          Jordan Schoenherr</p>	<p><b>Regrets</b></p> <p>Lorne Babiuk          Robert Brunham          Patricia Clements          John Kelton          Chris Loomis          Paul Paquin          Janet Rossant          Alan Bernstein          Patrick Borbey          Diane Gorman          Pierre-Gerlier Forest          Ian Potter          Ian Shugart</p>

**May 18, 2004 Morning  
Emergency Operations Centre  
100 Colonnade Road, Ottawa**

**Opening Remarks  
Dr. Judith Hall, Chair**

Dr. Hall opened the meeting by thanking Health Canada for the opportunity to visit the Emergency Operations Centre (EOC). She acknowledged the environment of change, vis-à-vis the announcement of a new Public Health Agency, and affirmed that the agenda looked very interesting.

**Opening Remarks  
Mr. Ian Green, Deputy Minister and Ms. Janice Charette, Associate Deputy Minister**

The Deputy Minister (DM) welcomed the Science Advisory Board (SAB) and paid tribute to departing members.

Kevin Keough was thanked for his work as Health Canada's Chief Scientist. He will be remembered for implementing a number of important practices such as the Research Forum, a post-doctoral fellowship program, peer review of science and the Research Ethics Board. He has shown leadership in strengthening science partnerships with the Canadian Institutes for Health Research (CIHR) and developing the first corporate science planning process for the department.

Judith Hall was thanked for chairing the SAB and serving as an advocate for science in the Department. Her representation on the Council of Science and Technology Advisors (CSTA) has helped forge linkages with other federal departments doing science. She has helped to increase the involvement of CIHR at SAB meetings and to include all Associate Deputy Ministers as *ex-officio* SAB members, and improving advice useful to the Minister and across the Department. During her tenure, Dr. Hall has engaged Health Canada staff in the regions and introduced new SAB operating procedures and the updated Terms of Reference. Her expertise as a pediatrician and geneticist will be missed.

Ardene Robinson Vollman was recognized for her passion for public health and women's health issues in particular. Paul Paquin was thanked for providing expertise in food science, nutrition and functional foods.

The DM noted that the SAB remains vital to the department in this time of change. Health

Canada continues to provide a coherent and strategic direction for health, working with a number of other important bodies that also contribute to health care. The recent announcement on the creation of a new Public Health Agency (PHA) suggests a distributive model that builds on existing expertise across Canada.

The Agency will have 2 main pillars, Winnipeg and Ottawa, and will work with a network of specialized centres across the country. Winnipeg will coordinate the Agency's infectious disease functions, including epidemiology, and will have a critical function in the event of an infectious disease outbreak. Ottawa offices will be responsible for emergency planning, preparedness and response to national public health emergencies as well as health promotion chronic disease and injuries. Six National Collaborating Centres for Public Health, each with a specific health focus, will be established using an initial investment of \$15 million over two years.

Dr. Frank Plummer, the scientific director of the National Microbiology Laboratory and Director General of Health Canada's Centre for Infectious Disease prevention and Control, has agreed to Act as the Chief Public Health Officer (CPHO) until a permanent replacement is found. A search committee is managing the search for a CPHO who is expected to be in place by end of summer 2004.

The federal ten year health plan has the overall objective of ensuring the health care system provides quality care in the most appropriate setting is sustainable for the next generation and includes mechanisms to allow performance to be measured and reported. Canadians need to have the confidence in timely, quality health care when needed; otherwise the demand for different kinds of systems will grow. A long-term agreement that guarantees predictable and reliable funding to the provinces will support the evolution of home and community care services and the development of a national pharmaceuticals strategy. The system's foundations, such as the outdated regulatory frameworks, need to be modernized and renewal efforts must include the principles of transparency and accountability.

Health Canada policy initiatives recognize the growing role of evidence-based science in assessing and managing risk. We are committed to designing 21<sup>st</sup> century national policy approaches to emerging tools such as genetics and nanotechnology. We recognize that rapid advances in health related science and technologies, such as assisted human reproduction, require a responsible regulatory approach.

### **Discussion Summary:**

- The Board was encouraged to advise on any science issues they might foresee in moving to a PHA. The Board advised that Health Canada's Chief Scientist and Science Framework are important resources for the new PHA.
- It was clarified that the budget of Health Canada's Population and Public Health Branch (PPHB) will form the basis of the new PHA. There will be an initial investment of \$15 million over two years to establish six National Collaborating Centres. Health Canada

- was urged to avoid duplicating existing structures and efforts.
- The PHA will seek to align first with other parts of Health Canada through a series of agreements on overall management, and then interdepartmental and intergovernmental relations will be considered. The vision encompasses the existing health portfolios as well as emergency preparedness, security, housing, environment, agriculture, employment and other determinants of health.
  - The federal role is to provide support in building a public health system with the provinces. Careful thought must be given to building networks that support and build on existing relationships and common goals.
  - The immediate concern is the threat of infectious disease and this is where initial investments are being made. It is recognized that chronic diseases must be considered in the longer term.
  - It was agreed that, to ensure public confidence, operational staff must be ready to manage simultaneous health threats across jurisdictional and geographic boundaries.
  - The search for a replacement is ongoing and it is hoped that a new Chief Scientist will be in place by the time the SAB next meets.
  - The Deputy Minister awarded certificates of appreciation to Drs. Hall and Robinson Vollman.

## **Public Health Update**

### **Mr. Scott Broughton, Assistant Deputy Minister, Population and Public Health Branch**

Scott Broughton, who is leading the transition to a PHA, introduced Paul Gully and Robert Fowler as members of his internal steering committee. He described one of their first tasks of grappling with the challenge of common corporate services such as human resources, information technology and communications. With respect to science needs, some new money is being directed to laboratories working on infectious disease. Deliberations are ongoing as to how collaborating centres could quickly gather the necessary expertise then transfer the knowledge to those who need it. The use of SWAT teams is being proposed as one process for moving health professionals readily around the country in the event of a crisis.

#### **Discussion Summary:**

- Investment in networks is essential to promote rapid response to public health issues in a fractured system. Health Canada will play a role in research investment, knowledge translation, health promotion, coordinating expertise and emergency response, as the provinces remain responsible for the delivery of public health programs.
- Long and short-term health priorities, overarching goals and strategies will be determined. The PHA will be a convener of a number of different elements of society around set of priorities in health promotion and protection. There must be a balance

between acute infectious and chronic disease.

- A pan-Canadian health strategy must be evidence-based.
- It was agreed that practitioners must be connected to improve public health at the local level and feedback information. Systems for sharing information will be important such as the electronic linkage of public and private laboratory networks with infection control professionals and epidemiologists.
- The health perspective must be articulated in the context of daily living to enable people to make their contributions in their work and community services. Communications should target improving the public's understanding of science and acceptance of what science can and cannot do.
- Education and training for workforce development is allocated in the budget.

## **Health Canada's Emergency Operations Centre**

Ron St. John, Director General Centre for Emergency Preparedness and Response (CEPR), stated that the EOC was created in July 2000. It brings together many departmental activities around public protection from risks to health. CPER works closely with the newly created Department of Public Security and Emergency Preparedness Canada as well as local, provincial and territorial authorities that support health promotion and disease prevention. CEPR is organized into five specialized offices: Office of Emergency Preparedness, Planning and Training; the Office of Public Health Security; the Office of Laboratory Security; the Office of Emergency Services and the Office of the Executive Director.

Health risks are categorized into natural events and disasters such as floods, earthquakes, fires and highly dangerous infectious diseases and accidents or criminal and terrorist acts involving explosives, chemicals, radioactive substances or biological threats. The Board challenged Health Canada to consider disasters of a social nature to ensure that resources are allocated appropriately.

Dr. Colin Harwood led the SAB on a tour of the physical facility. Members are pleased to know that such a facility exists and recommended that Canadians be aware of its existence.

## **Trans Fatty Acids: A Risk Management Case Study**

**Mary l'Abbé, Director, Bureau of Nutritional Sciences, HPFB**

**Paul Mayers, A/Director General Foods, HPFB**

*(Please refer to presentation slides)*

Dr. l'Abbé gave short overview of trans fatty acids in foods: their function, dietary intake, health concerns and recommendations. Nutrition labelling, trans fat alternatives and risk management

options and strategies were considered. SAB members were asked for their comments on the

**May 18, 2004 Afternoon  
Boardroom 0115C Brooke Claxton Building  
Tunney's Pasture Ottawa**

approach taken by Health Canada to reduce the intake of trans fatty acids by Canadians.

**Discussion Summary:**

- Health Canada is addressing the risk of coronary heart disease (CHD) by proposing the reduction of trans fatty acid in foods and including them in nutrition labelling. It is expected to reduce fatty acid intake and reduce levels of LDL, a biomarker for this disease.
- There was discussion about the use of epidemiological data directly linking trans fatty acids to CHD. The SAB requested presentation of quantitative information, in order that advice could be derived and offered.
- Board members were assured that Health Canada is well connected to researchers in the field of lipids. The US Institute of Medicine concluded in 2002 “there is a positive linear trend between trans fatty acid intake and LDL cholesterol and therefore increased risk of CHD”.
- The Danish experience of reducing trans fatty acid intake could be monitored as a source of helpful data.
- Industry reformulation and consumer choice will be monitored. A total diet survey in Canada will analyze food groups and composites to evaluate whether the food industry is reducing trans fats. Periodic sampling of breast milk, a good indicator of intake of trans fatty acids, will provide a biological surveillance indicator.
- The public will be informed through a revised Canada Food Guide and extensive education on nutrition labelling which includes a kit developed for health professionals.
- Consumers are continuously bombarded with health information, both positive and negative.
- The public should be encouraged to make healthy lifestyle choices rather than expecting the government to protect them from all health problems.
- Health Canada must ensure that it has the systematic studies and data to support and direct education and regulatory options.

**Records of Previous Meetings**

The records of the February 18-19, 2004 meeting and April 6, 2004 teleconference were adopted as circulated.

**May 19, 2004**  
**Boardroom 0115C Brooke Claxton Building**  
**Tunney's Pasture, Ottawa**

**Opening Remarks**  
**Dr. Judith Hall, Chair**

Judith Hall acknowledged that there has been an amazing increase in the appreciation of science at Health Canada during Kevin Keough's tenure as Chief Scientist (CS). Thanks to his efforts, Departmental scientists have come to feel a sense of professional pride, proving that a single person can make a difference in a large organization. Dr. Keough, as Vice Chair of the CSTA, has been a moving force in providing outlines for an enhanced basis for science in government at the request of Cabinet. The SAB feels very proud because they recommended the creation of the CS and Office of the CS and believes it will be important in the future for the SAB to continue to contribute to their roles and monitor the progress of the CS and OCS.

**Update From Health Canada's Chief Scientist**  
**Dr. Kevin Keough, Chief Scientist**

Kevin Keough stated that he felt privileged in his career because of the support from the remarkable people he has worked with. He noted that his recent experience continues in that vein. At Health Canada he has encountered exceptional colleagues - from the senior management group at Health Canada to the scientists to the staff in the Office of Chief Scientist (OCS). He thanked the Board for their trust and ongoing support.

He noted that the job of the CS is to question people about whether or not the processes of science have been taken into account in their work. He noted that he continually had to resist giving specific science advice unless it was based on his expertise. He wants to push people to be creative in developing standards and managing transparency.

He felt he and the OCS have made a significant contribution in his role as advocate for science and technology through profiling science activities at Health Canada, building partnerships with other scientific organizations, instituting the REB and peer review processes. The role of science is now embedded in Departmental planning, priority setting, evaluation and policy development.

Dr. Keough felt he has not gone as far as he would like to, however he is confident that he has been listened to both by Health Canada staff and members of the SAB. He acknowledged that it is difficult to turn things around in a large organization and urged Board members to support those in similar positions, such as the National Science Advisor Dr. Arthur Carty.



Dr. Keough has enjoyed the job of CS. He forecasts the creation of more agencies and a health portfolio model for the Department. In this scenario, managing and shepherding science advice will become an even bigger challenge. However, he is confident that we have gotten it right, having an SAB and CS in place for the Minister of Health and a National Science Advisor to the Prime Minister. The SAB continues to be an important part of the process of obtaining expert science advice.

## **Science Framework Progress Report**

### **Dr. Kevin Keough**

*(Please refer to presentation slides)*

The mapping of Health Canada science has produced an inventory of 303 descriptions of existing science activities and confirmation that quality of science performed in Health Canada is better than the impression many people have. The OCS has gone through an internal exercise interviewing Directors General and senior staff in science programs to determine current and future science needs. There will be a second round of talks in order to validate these findings and obtain more details for a planned Science Report. This report will describe and appraise the science mapping findings, address dialogue with scientists and look to the future planning. It is difficult to plan for science because there are events out of Health Canada's control and a diversity of science priorities. This is a complex undertaking that requires additional time to review the variety of departmental frameworks and integrate with other departmental initiatives. Dr. Keough invited the Board's comments on the Science Framework.

### **Discussion Summary**

- There are 165 scientists in the Department whose classification and primary activity is research and who regularly publish quality evidence-based work in quality journals.
- Social scientists who do research may be involved in policy development and spend much of their time reporting to parliamentarians. Others do risk- and impact- analysis studies in the management of health promotion. A culture change needs to occur whereby the Health Canada community of social scientists is recognized (by both themselves and others), promoted and connected.
- The science of epidemiology is also underplayed in Health Canada. These are the people who know the tools to gather data to support decision-making and evaluation.
- It was observed that Health Canada social scientist researchers are not well represented in communication materials targeted to the public.
- Social scientists should be specifically targeted for participation in the Health Canada Science Forum.
- The diversity of scientific disciplines speaks to the importance of interconnectivity of

- systems.
- A large portion of money is transferred outside Health Canada in the form of grants and contributions (G&C). The evaluation of this work is not seen to be of adequate quality or quantity.
  - Young people are used to, and expect to be, working in multi-disciplinary teams rather than silos. This mode of working will be useful if the Department moves towards a health portfolio model. Government needs to be more flexible in creating *ad hoc* teams.

## **Health and Environment Strategy Update**

### **Mr. Paul Glover, Director General Safe Environments Programme, HECS**

*(Please refer to presentation slides)*

The Board was provided with an overview of the work done to date, including a Health Canada Departmental Health and Environment Research Report and an environmental scan. It was asked to advise on additional analyses that could be done and what to consider when sorting through competing science needs and priorities. The population health approach has been adopted which incorporates science based risk analysis and management. The challenge lies in prioritizing issues to ensure sustainable development and at the same time balance with emerging technologies, trends and issues. This is a broad horizontal file, on which Health Canada has the lead, which cuts across many departments dealing with the health of people, the environment and ecosystems.

#### **Discussion:**

- The Health Canada Science Framework in Health Canada is a useful tool towards identifying and planning for the science required.
- Canadian Environmental Protection Act's (CEPA) review of toxic substances will be useful.
- Biological indicators, disease outcomes, susceptible individuals and populations and interaction of chemicals in the environment should be monitored.
- Risk assessments should embrace new technologies such as nanotechnology.
- Communities other than health will order priorities differently depending on their perspectives.
- Issues that affect us on a daily basis are urgent.
- Public opinion often sets priorities for Health Canada.
- Mapping should be performed on the interaction points between human health and the environment and to identify where the risks are and who is working on this.
- Health Canada is good at classifying substances (23,000) but not at managing risks to the environment that are regulated by different jurisdictions (e.g. water and air are managed differently although both may be impacted by benzene).

- Lessons we are learning about environmental dangers should be better communicated.
- Results of risk assessment studies in aboriginal communities regarding indoor air quality, toxicity in the food chain, housing issues and tobacco are neither evident nor seen as being translated into improvements.
- It is difficult to do risk assessments when there are data gaps. For instance gene environment interactions are not being studied.
- It was suggested that HECS establish a specific expert committee to advise on environmental health issues.

### **Assisted Human Reproduction**

**Ms. Caroline Weber, Director General Policy, Planning and Priorities Directorate, HPCB**

*(Please refer to presentation slides)*

The presentation provided an overview of the *Assisted Human Reproduction Act* which received Royal Assent in March 2004, and information on planned next steps towards developing the regulations. SAB members were asked to advise on specific assisted human reproduction (AHR) scientific regulatory issues such as embryo research, pre-implantation genetic diagnosis (PGD) and laboratory practices.

### **Discussion**

- SAB members raised the issues of: potential for germ line alteration in PGD, use of material for research without donor consent, commercialization and confusion over the role of the AHR Agency, Health Canada and the Provinces/Territories regarding service delivery
- It was noted that the openness of the registry will be influenced by the rights to privacy vs. the right to know biological origins.
- AHR science and its application need to be explained to the public, along with an awareness of how to prevent infertility.
- Costs of negative outcomes to the health care system must be understood.
- Concern was expressed that AHR numbers are estimates and that information is missing. It was clarified that outcomes data will be collected through mechanisms such as periodic surveys; however absolute mandatory reporting cannot be enforced.
- Embryos may not be used for research purposes without consent. Once they are used, they are no longer considered an embryo.
- The Board thought that stem cell/embryo research and pre-implantation selection are important ethical debates; however they are outside of the AHR Act. The Act encompasses from manipulation of the sperm/egg to the implantation of the zygote.

**Forward Planning**  
**Linda Lusby, SAB Vice Chair**

Linda outlined the plan for the session. Members were asked to reflect on the past year, considering the appropriateness of agenda topics. Then the Board gave their suggestions for potential topics for the coming year. Proposed meeting dates for the coming year are:

September 21 – 22, 2004

November 16 – 17, 2004

February 15 – 16, 2005

May 17 – 18, 2005.