National Collaborating Centre for Infectious Diseases

Centre de collaboration nationale des maladies infectieuses

Risk Communication

Meeting Notes

March 3, 2011
Toronto, Ontario

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Executive Summary

Risk communication is important in the everyday communication in public health as well as during a crisis for conveying information to members of the general public about protecting themselves and others. Training and skill development in risk communication for public health practitioners is variable and has been identified as a need which the National Collaborating Centres for Public Health (NCCPH), in collaboration with other public health agencies, can help address. The focus of this report is to summarize the issues of and training needs for risk communication in Canada discussed at a closed-door meeting with invited representatives from NCCPH, INSPQ, BCCDC and PHO.

This planning meeting, facilitated by Drs. Sandman and Lanard provided an opportunity for leaders of representative health organizations from across Canada, to discuss their current roles with regard to risk communication, and identify risk communication needs. These roles and needs are summarized in two tables. The transcript of the meeting was also coded and analyzed for emergent themes.

It became clear that the needs of health practitioners extended beyond the need for training. The identification of these needs provided the basis for establishing a long-term vision and possible next steps for the NCCs. The needs were organized into 5 categories in this report: skill building (training), issue clarification, compiling resources, networks and systems and message reach. The report concludes with a summary of next steps and possible opportunities for collaboration between NCCs and the Public Health Agency of Canada (PHAC). Based on the needs which were identified, the following points represent possible next steps:

- Conduct focus groups or short telephone interviews with practitioners in order to determine their risk communication training needs, incorporating examination of what is currently available through PHAC (issue clarification)
- Evaluate the effectiveness of existing risk communication strategies (issue clarification)
- Compile a list of risk communication experts in Canada (compiling resources)
- Determine the need for a platform that connects networks of risk communication experts and non-experts, to facilitate social learning through ongoing dialogue (networks and systems)
- Explore strategies for reaching/engaging certain sub-populations with health risk information (message ‘reach’)

The report concludes by suggesting future role(s) of the NCCID in cooperation with other organizations such as the other NCCs and PHAC, for conducting these next steps and working toward achieving their collective long-term goals.

Introduction

Risk communication is an important element of any public health response that involves conveying information about risk and uncertainty to the general public. The need for and purpose of risk communication was apparent during public health emergencies such as the recent influenza H1N1 pandemic.

The spatial reach of an infectious disease pandemic (as was the case with A/H1N1) can be international in scale. Effective communication is always important, involving channels at all levels of the system for sharing information about its risks and required behavioural responses from front line workers in public health, and the public. Although important during a crisis, risk communication is also indispensible in the daily interaction of public health practitioners with the general public. An example is information conveyed by a front line practitioner encouraging a client to breastfeed and/or to vaccinate her children. This behaviour can reduce the risks of infection for the child. However, communication of risk extends beyond the mere provision of information; it also means communicating about uncertainties which can invoke fear. Therefore, in order to ensure effective communication and appropriate response, the relationship between provider and receiver of the information must be based on trust. Establishing credibility as an individual and/or an organization for communication about risks is important at all levels of the system, in all directions.

Therefore, in order to improve the health of the general public, health practitioners at all levels must have a good understanding about the principles of risk communication. This includes being equipped with a coherent strategy for risk communication, but more importantly, the necessary individual competencies and skills.

Background

Risk Communication Activities at the NCCs

Risk communication is an important function of public health and it is reflected in the work of the National Collaborating Centres for Public Health (NCCPH). The National Collaborating Centre for Environmental Health has provided workshops to public health inspectors on communicating environmental health risks to the general public. The National Collaborating Centre for Methods and Tools (NCCMT) conducted a systematic review on the effectiveness of risk communication strategies. The National Collaborating Centre for Healthy Public Policy (NCCHPP) hosted workshops on ethical frameworks for decision-making during the 2009 influenza A/H1N1 pandemic, with implications for risk communication. Responding to appeals from public health practitioners following the 2009 pandemic, the National Collaborating Centre for Infectious Diseases (NCCID) also became interested in risk communication and was been exploring potential roles it can play in increasing frontline practitioners' capacity to communicate risk and uncertainty related to communicable diseases.

Risk Communication Workshop

On February 28 to March 2, 2011, Public Health Ontario (PHO, formerly the Ontario Agency for Health Protection and Promotion), in conjunction with the Dalla Lana School of Public Health at the University of Toronto, hosted a risk communication workshop instructed by Drs. Peter Sandman and Jody Lanard. This risk communication workshop was organized in response to a needs assessment of Ontario public health practitioners conducted by PHO following the 2009 influenza pandemic. This presented an opportunity for the NCC's to expand their role in risk communication; and together, the six Centres successfully secured additional year-end funding from the Public Health Agency of Canada (PHAC) to provide financial support to this workshop.

Workshop Format

The aim of the PHO Workshop was to provide attendees with a full understanding of and practical skills on risk communication for issues of public health importance. The risk communication approach covered in the workshop is based on principles developed by Dr. Sandman, with each day of the workshop focusing on a different risk communication scenario:

- **Precaution advocacy** – When hazard is high and outrage is low, the task is alerting insufficiently concerned people to serious risks. "This is dangerous, do something!"
- **Outrage management** – When hazard is low and outrage is high, the task is reassuring excessively distressed people about small risks. "Calm down."

- **Crisis communication** – When hazard is high and outrage is also high, the task is helping appropriately upset people cope with serious risks. “We’ll get through this together.”

Each of the above principles was illustrated with past and present public health case studies. Participants worked in groups to apply Sandman’s risk communication principles to practice scenarios and learn from one another through open plenary discussions.

Strategic Planning Session with Drs. Peter Sandman and Jody Lanard

PHAC year-end funding also provided financial support for event sponsors (NCCPH and PHO) to meet with Drs. Sandman and Lanard on March 3, 2011 in a closed private function. This meeting provided the opportunity for NCCPH and PHO to discuss with Drs. Sandman and Lanard about the current risk communication practice landscape in Canada, and to brainstorm activities for expanding the current risk communication initiative and for planning a long-term program that takes into account each organization’s mandate and areas of focus. This meeting was attended by fourteen individuals, including representatives from PHAC, PHO, Manitoba Health, and the NCCs (see Appendix 2). The meeting resulted in a 51 page transcript of the discussion, which was coded and analyzed for themes.

The meeting sought to answer the following questions:

1) *In the Canadian landscape of risk communication, are there deficits in understanding? In training?*
2) *Are there other unmet needs in risk communication? What are they?*
3) *What are the potential roles for the six NCCs (and PHO) to address some of the identified needs?*

Overview of Sandman's Model of Risk Communication

The meeting began with an overview of Dr. Sandman's model of risk communication. This model is comprised of two components of risk: technical risk (magnitude of potential for harm to human health) which he refers to as 'hazard', and cultural risk (reaction/fear based on the hazard) which he labels 'outrage'. These components are captured within Sandman's formula in which risk is a function of hazard and outrage:

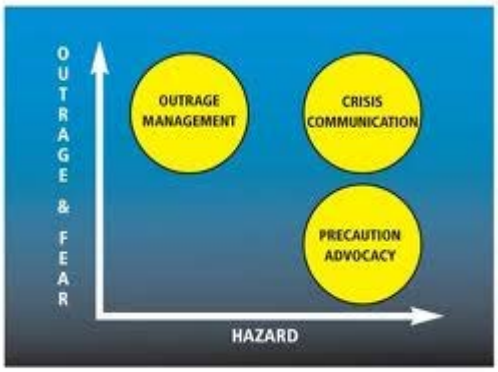
Risk = Hazard + Outrage

In Sandman's model, he articulates the differences in risk perception between experts and 'the public', which is defined as everybody except the experts). 'Experts' focus on the hazard (technical side of risk) and ignore the outrage (cultural side of risk). At the meeting, Dr. Sandman further explained the hazard vs. outrage risk communication matrix (or 'map'), which requires different types of risk communication depending on their relative levels. For example:

- high outrage + low hazard = outrage management,
- high outrage + high hazard = crisis communication, and
- low outrage + high hazard = precautionary advocacy (includes public relations, health and safety education, and activism).
- The ideal situation for communicating information about risks, Sandman states, is the 'sweet spot', where outrage and hazard intersect at the middle of the 'map'.

Participants were encouraged to remember that when using this model, the goal for risk communication is to "get outrage commensurate with the hazard". In other words, when the risk is high, the reaction or response should also be high (so people will be sufficiently concerned and motivated to behave accordingly), and when the risk is low, the response should similarly be low (so that people are not excessively concerned). It was noted that outrage management not only applies to an organization interacting with individuals outside of the organization, but also within an organization. In fact, this model suggests that "every controversy or communication task you face" can be located in the map for the purpose of determining whether outrage needs to be increased or decreased.

A number of problems with risk communication were highlighted. For example, perceptions about a hazard is often misplaced: 1) experts tend to focus on explaining technical matters while ignoring (sometimes legitimate) outrage, and 2) 'the public' focuses on the outrage and ignores (often technically sound) information regarding the hazard.



A hypothetical example of a manager consulting with the public about the risks posed by his 'dimethyl meatloaf' factory was used to illustrate the model in practice. In this example, the manager ineffectively tries to appease the public with scientific information to 'prove them wrong' about their fears. It was suggested that the manager should instead listen carefully to concerns that are raised and use techniques for diffusing the 'outrage'. It was noted that there is a difference between the small percentage of the public who cannot be convinced (activists), versus convincible critics (attentives), and different ways of interacting with each group were suggested.

A description of how to locate an issue on the 'map' and define which kind of risk communication is necessary based on its placement was given for the three scenarios; precaution advocacy, crisis communications, or outrage management.

- For *precaution advocacy* keeping the message short, interesting, and staying on message are key. For *outrage management*, the goal is to decrease the outrage so listening, and building a relationship with the public based on valid criticisms, while refraining from rebutting their misperceptions with factual information.
  For *crisis communication* the goal is not outrage management, rather, it is to guide people toward appropriate precaution-taking activities.

- The way you carry out the different types of risk communication will determine the level of trust the target audience have for your risk communication messaging. In the centre of the map is the *sweet spot* where outrage is high enough that people are interested but not overly emotional, and hazard is high enough that a discussion is warranted but not so high that crisis management procedures are in effect. In this ideal situation, it is possible to engage in productive, inclusive, multi-directional communication. Whatever the situation, when using this model, the risk communicator must be able to determine where the situation is located on the 'map' and apply the correct risk communication strategy accordingly.

Describing the Canadian Risk Communication Landscape

During the strategic planning meeting, each organization described their current and potential roles with regard to risk communication, and provided a brief case scenario as an example. Drs. Sandman and Lanard provided a reflection on the risk communication situation in Canada, in comparison with other developed countries. For example, the United States was cited as being more 'top down' in their approach than Canada, because of their focus on providing prescribed messaging for local communities to use from 'higher ups' like the Centers for Disease Control and Prevention (CDC). This approach was viewed to be advantageous for consistent messaging, but does not provide the opportunity for locals to think through the various aspects of an issue themselves.

Amidst the conversation about Sandman's types of risk communication, participants shared their own experiences concerning risk communication. In an example where locals had an opportunity to contribute to the discussion, successful 'outrage management' for public consultation occurred concerning wind turbines. The 'outrage' was significantly diffused by explaining the mandate of their organization in relation to other organizations and making a commitment to listen, record, and communicate the participants' concerns to the appropriate organization. In another example, messaging was the issue: it was stated that many of the 49 local health regions involved in the H1N1 situation indicated that the circumstances would have been improved if risk communication regarding H1N1 had included information concerning 'how' and 'who'. Yet another example was raised concerning a different target audience for risk communication; to parliamentarians and other policymakers and decision-makers. Although the information content would differ depending on the particular audience, Sandman's general model for risk communication was still seen to apply for influencing programming priorities for effective interventions.

All participants were then engaged in a general discussion concerning elements of particular relevance to their organizations. This included the contribution of ideas about how each organization fits into the overall Canadian risk communication landscape, based on their current and future roles. The following table represents these roles, as explained during the meeting:

Table 1. Relative roles of public health organizations in Canada concerning risk communication activities, as discussed during the March 3, 2011 meeting. Some sections in the table are supplemented by additional information obtained through websites and contacts.

Organization	Current and potential role in terms of risk communication
PHAC, Health Canada, and any health related ministry	Supports NCCs and provinces. Are providers of information to the public[1].
PHO (OAHPP)	Active in all three areas: outrage management (e.g. wind turbines, agent orange), crisis communication (e.g. pH1N1) and precaution advocacy (communicable disease department e.g. immunization) although most of this work is done by local health units
BC Centre for Disease Control	A provincial agency funded by government, operates on a level in between the policymakers (government) and the health regions which implement policies. Three main functions for BCCDC: 1) provide scientific information/evidence to government, either a) to support politicians in their public response to an emerging issue, or b) to support policy decision making; 2) provide education to the general public for the protection from risks such as heat waves, air pollution, etc., 3) provide advocacy support (e.g. provide evidence in support of regulating tanning beds). BCCDC also supports health units at the practice level by providing information about risks and how to mitigate them
NCCPH (the NCCs collectively)	Potential roles include providing opportunities and information for individuals in public health to start thinking about health issues in a more connected and systemic manner (e.g. providing clarity on the respective roles of different organizations during a pandemic, collaboration on every day issues, establishing a common coherent approach to risk communication). NCCs could play a leadership role in helping to normalize 'risk communication' to the extent that it is incorporated into every day practice (perhaps by the provision of a tool for doing so). Primary target includes public health practitioners, medical officers of health, health inspectors, regional and local public health units, and provincial policymakers.
NCCAH	Mostly do precautionary advocacy, targeting Aboriginal individuals and communities with regard to communication about behaviours which can reduce health risks
NCCHPP	Planning to organize a deliberative dialogue with multiple stakeholders (e.g. public health practitioners, decision-makers, and citizens, experts who conducted the systematic review), which builds upon the results of a systematic review of risk communication strategies about environmental health issues (that illustrated what works and what doesn't work in terms of risk communication strategies)
NCCDH	Unclear about what kind of role they may have in a risk communication strategy because there is uncertainty about how to effectively reach marginalized and other sub-populations

[1] PHAC: The Strategic Risk Communications Framework is intended to be flexible enough to address internal and external risk communications for all types of risk issues - from corporate- to health-specific risk issues. Risk communication training based upon this framework, which has been developed by PHAC's risk communication department, addresses both everyday and crisis communication needs. PHAC provides publicly accessible information concerning the range of public health risks under its mandate through traditional means such as media relations, its website, and journals such as the Canada Communicable Disease Report Weekly, and increasingly through new channels such as social media or web 2.0, and joint communication initiatives with provincial and territorial governments and non-governmental organizations.
Health Canada: The mission of Health Canada is to help the people of Canada maintain and improve their health. Health Canada addresses a wide range of risk issues. Rather than endeavoring to anticipate all possible issues, the Strategic Risk Communications Framework is designed so that each Agency, Branch and Directorate in Health Canada, and PHAC, can adapt it to the specific requirements of its roles and responsibilities for serving Canadians.
By working with others in a manner that fosters the trust of Canadians, Health Canada strives to prevent and reduce risks to health of individuals and the overall environment; promote healthier lifestyles; ensure high quality health services that are efficient and accessible; integrate renewal of the health care system with longer term plans in the areas of prevention, health promotion and protection; reduce health inequalities in Canadian society; and provide health information to help Canadians make informed decisions.

Identifying Canadian Risk Communication Needs

Initially, the discussion concerning risk communication needs surrounded the development of a risk communication training program. If the development of such a program were deemed necessary, the main target audience for risk communication training would be front line public health practitioners. It was suggested that tools should be provided to front line workers in all levels of public health for adaptation to their own contexts for their own programs/approaches and their own clienteles. By surveying the risk communication landscape in Canada, a strategy could be developed based on the approaches currently used by provinces and regions. Overall, the goal of such a training program would be to invoke a paradigm shift in the way individuals and organizations approach risk communication. In other words, it should create a culture that embraces risk communication as common practice for all front line practitioners. Other activities were discussed, including the possibility of developing resource materials (e.g. a desk reference guide) on risk communication in order to enhance knowledge and applied practice at the local level.

Training with reference to risk communication was recognized along several domains:

- general communication skills (e.g. internal vs. external organizational communication, clarity of messages)
- type of target audience (e.g. government, media, public),
- variability in training needs across health units (e.g. urban, rural, remote)

Overall, it was recognized that skill building for risk communication should be ongoing, and dialogue with experts would provide opportunities for both continuous improvement and for maintaining top-of-the-mind awareness regarding risk communication.

Following the discussion about how each organization fits into the current Canadian risk communication landscape, participants were engaged in a brainstorming session about risk communication needs and possible next steps. A number of tasks/activities were suggested to move the risk communication agenda forward. These activities fall under the following categories:

1) Issue clarification
2) Compiling resources
3) Skill building
4) Networks and systems
5) Message ‘reach’

Table 2 on the following page, provides further details on these categories.

Table 2: Categorized risk communication needs for public health in Canada[2]

Category of need	Description of risk communication need for Public Health in Canada
Issue clarification	Elucidate the various definitions for 'risk communication', according to practitioners
	Determine how this definition of risk communication fits within the mandate of public health organizations (e.g. depending on the organization, building awareness about risk communication could support an organization's mandate).
	Determine what practitioners believe they need in terms of training
	Find out what risk communication training is already being done and where (e.g. MPH schools, PHAC)
	Determine what kind of needs/gap analyses may have already been conducted by health departments in Canada
	Determine what evidence already exists regarding how to communicate risk, from Health Canada since the push to develop risk communication began in 2004
	NCCs should have a statement or view on risk communication on their website as a point of reference for organizations seeking to develop a risk communication strategy
	Conduct evaluations to determine effectiveness of risk communication strategies (could include assessment of diversity of values held by target audience/public)
	Identify values that may act as 'barriers' to effective risk communication, impeding the uptake of risk messages into behaviour change
Compiling resources	Create an inventory of risk communication experts in Canada
	Identify Canadian universities that conduct research on general communication analysis and processes, such as: Simon Fraser, University of British Columbia, University of Toronto, and Ryerson
Skill building	Understand how to read, understand, and respond to the policy context
	Understand how to engage the public in risk communication strategies, especially those which involve public/stakeholder consultation for decision-making
	Assist PHAC to disseminate the knowledge they have compiled on risk communication, improving front line practitioners' ability to use sound risk communication skills
	Develop channels for providing continuous skills improvement for risk communicators, such as an "intranet" or similar mechanism. This would facilitate co-learning through ongoing dialogue from colleagues with varying levels of expertise. Other suggestions which would encourage ongoing dialogue about risk communication, included a 'cross-country rounds' or a 'journal club' approach which would focus on specific issues or articles. This has already been done in South and Central America and the United States, but is not believed to have taken place yet in Canada
	General communication (e.g. use understandable language)
	Awareness and skills in risk communication among local heath jurisdictions is variable; smaller, rural, remote jurisdictions have the greatest challenges
Networks and systems	Shift some of the focus of risk communication strategies from emphasis on individual behaviour change, toward acknowledging the broader underlying system level issues which may impede behaviour change (e.g. poverty). This paradigm shift should ideally occur within multiple levels of the system, from managers to front line staff
	General communication (e.g. use local leaders to influence community networks)
	Determine what kind of networks already exist in terms of communication specialists in Public Health in various parts of Canada
	Informal discussions via telephone with other provinces about which approaches they are using for risk communication
Message 'reach'	Adapt current knowledge about risk communications to a First Nations, Inuit and Métis context and audience
	Determine how to reach marginalized and other sub-populations
	Mechanism or strategy for engaging 'apathetics' (unlike 'attentives; 'apathetics' remain uninvolved) for input on an issue, to balance opinions expressed by activists

[2] This is a themed representation of the information contained within the transcript of this meeting.

1) Issue clarification

In order to address gaps in risk communication training, it needs to be determined what practitioners mean by 'risk communication' and what they feel they are lacking. The idea of conducting a quantitative survey versus a qualitative focus group for this purpose was discussed, followed by a suggestion that focus groups would provide a more appropriate means for eliciting this information, such as:

a) what kind of training is already being offered;
b) what kind of needs assessment(s) have been previously conducted;
c) what core competencies are required for carrying out risk communications.

2) Compiling resources

It was suggested that an inventory of individuals and universities/organizations that specialize in risk communication be created.

3) Skill building

Skill development as ongoing professional development in public health was cited as an area of need, concerning general communication as well as communication specifically relating to risk.

4) Networks and systems

This category emphasizes the use of currently existing networks to maximize the successful communication of risk, as well as targeting change in at the broader system level.

5) Message 'reach'

Message 'reach' encapsulates the communication of risk to geographically distant regions, marginalized populations and populations communicating with specific languages (e.g. Inuit, Métis).

Next steps

Overall, the NCCs were recognized for having a unique position in the health care system for being able to review, synthesize, and compile research evidence to demonstrate how risk communication should ideally be approached in practice. At the close of the meeting, NCCID had been established as the risk communication project lead for NCCPH. With the committed support from the other NCCs and representative public health agencies, NCCID will begin with some of the groundwork needed for the long term planning of a risk communication training program. These activities could include:

- Preparing a Request for Proposal for focus groups or short telephone interviews with practitioners in order to determine their risk communication training needs
- Evaluate the effectiveness of existing risk communication strategies (issue clarification)
- Compile a list of risk communication experts and resources in Canada (compiling resources)
- Determine the need for a platform that connects networks of risk communication experts and non-experts, to facilitate social learning through ongoing dialogue (networks and systems)
- Explore strategies for reaching/engaging certain sub-populations with health risk information (message 'reach')

Potential roles for NCCs:

- Overall, health organizations across Canada may reconsider the approach to risk communication, from mere provision of information to 'fill a gap' to a more strategic paradigm shift in organizations for incorporating risk communication into everyday work;

- NCCs can facilitate knowledge transfer for: 1) tool development that addresses the process of risk communication, and 2) how to operationalize the appropriate tools for the appropriate situations;
- NCCs could engage in some collaborative work concerning cross-cutting strategies for risk communication that align well with PHAC's work, rather than picking a topic to focus on developing a risk communication strategy for;
- The NCCs could perform an evaluation to measure whether a given public health risk communication strategy had accomplished its objectives with regard to changing the behaviour of the target audience. The NCCs could assist in creating a culture for doing simple evaluations as a routine part of any risk communication project by, for example, providing a toolkit for this purpose.

What will be the impact of achieving these next steps?

- By establishing networks of individuals with varying levels of expertise in risk communication, not only can they learn from each other, but the 'experts' will become known resources for consultation when needed;
- By clarifying organizational and individual roles concerning risk communication in Canada (which contains important elements of 'knowledge translation'), this would create some 'gravitational focus' for collective achievement of clear roles and responsibilities for better coordination;
- By creating a culture for doing simple evaluations as a routine part of any risk communication endeavor, it will provide clarity concerning the effectiveness of certain strategies, thereby providing the basis for iterative improvement of risk communication strategies.

Conclusion

The purpose of this meeting was for the NCCs and OAHPP (now Public Health Ontario) to discuss their shared interest in undertaking activities concerning risk communication. On March 3, 2011, PHAC, PHO, Manitoba Health, NCCAH, NCCDH, NCCEH, NCCHPP, and NCCID met to explore their shared interest and potential role(s) in filling the training gap in risk communication in Canadian public health. The meeting resulted in the identification of several areas of training needs. In setting the groundwork, a more in-depth needs assessment with practitioners and a review of existing training opportunities are planned in order to facilitate a more narrow focus for future activities.

During the writing of this report, PHAC began reinvigorating their role in risk communications. NCCPH will aim to align the work of the collective with activities already underway at PHAC.

Appendix 1 – March 3, 2011 Meeting Agenda

8:00 – 8:30		Breakfast
8:30 – 8:45	Margaret Fast/ Ray Copes	Opening
8:45 – 9:45	Peter Sandman and Jody Lanard	Overview of the "Risk=Hazard+Outrage" risk communication approach
9:45 – 10:00		Break
10:00 – 12:00	All participants	Description of each organization's current and potential future roles in risk communication – 10 minutes per organization: Could include brief case scenario and "mini-consultation" • NCCAH • NCCEH • NCCDH • NCCHPP • NCCID • BCCDC • INSPQ • OAHPP • PHAC
12:00 – 1:00		Lunch
1:00 – 2:30	Peter Sandman and Jody Lanard All Participants	1. Reflection on the risk communication situation in Canada compared to other developed countries 2. General discussion regarding elements of particular relevance to the organizations present – how each organization fits in the overall Canadian risk communication landscape based on their current and future roles?
2:30 – 2:45		Break
2:45 – 3:45	All participants	3. Open discussion/brainstorming session about how to move the risk communication agenda forward
3:45 – 4:00	Margaret Fast/ Ray Copes	Wrap-up and next steps

Appendix 2 – Meeting Participants

1. Peter Sandman, workshop co-facilitator
2. Jody Lanard, workshop co-facilitator
3. Ray Copes, OAHPP, Director, Environmental and Occupational Health
4. Brian Schwartz, OAHPP, Director, Emergency Management Support
5. Margo Greenwood, National Collaborating Centre for Aboriginal Health, Academic Leader
6. Connie Clement, National Collaborating Centre for Determinants of Health, Scientific Director
7. Tom Kosatsky, National Collaborating Centre for Environmental of Health, Scientific Director
8. Margaret Fast, National Collaborating Centre for Infectious Diseases Scientific Director
9. Elizabeth Hydesmith, National Collaborating Centre for Infectious Diseases, Sr. Project Manager
10. Eve Cheuk, National Collaborating Centre for Infectious Diseases, Project Manager
11. Denise Koh, Manitoba Health, Environmental Health Branch, Medical Officer of Health
12. François-Pierre Gauvin, National Collaborating Centre for Healthy Public Policy, Agente de recherche
13. Lorie Root, Public Health Agency of Canada, Office of Public Health Practice, National Collaborating Centres for Public Health Contribution Program Manager
14. Russell Mawby, Public Health Agency of Canada, Office of Public Health Practice Policy and Partnership Division, Director