2011 Summary Report

Pacific Northwest Border Health Alliance Eighth Annual Bi-National Cross Border Workshop: *"The Health Impacts of Disasters: Infectious Diseases and Beyond"*

May 24-26, 2011
Victoria, BC

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Pacific NorthWest Border Health Alliance Eighth Annual Cross Border Workshop: *"The Health Impacts of Disasters: Infectious Diseases and Beyond"*

May 24-26, 2011
Victoria, BC

Alaska
British Columbia
Idaho
Oregon
Montana
Washington
Saskatchewan
Yukon

Electronic copies of this report are available on the Pacific NorthWest Border Health Alliance webpage (http://www.pnwbha.org/). For further information, please contact info@pnwbha.org

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// Acknowledgments

We of the Pacific NorthWest Border Health Alliance, the British Columbia Ministry of Health, and the Washington State Department of Health wish to extend our sincerest appreciation to the bi-national planning committee, facilitators, speakers and cross border public health partners for their support and commitment to the success of this workshop. Working together we can establish a seamless cross-jurisdictional public health system to quickly and efficiently track and respond to natural or intentional public health threats across domestic and international borders.

We also wish to thank the Public Health Agency of Canada and the US Centers for Disease Control and Prevention for providing financial assistance to conduct our eighth annual cross border workshop in the Pacific Northwest.

Member Jurisdictions

Acknowledgments (continued)

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Report preparation – Information presented during plenary and workgroup breakout sessions that appears in this report was collected and assembled by the Washington State Department of Health's team of facilitators – Laura Blaske, Larry Champine, Greg Nordlund and Cindy Marjamaa.

Electronic Copies of Workshop Materials

Electronic copies of this report are available on the Pacific NorthWest Border Health Alliance

webpage (http://www.pnwbha.org/).

Pacific NorthWest Border Health Alliance
Eighth Annual Cross Border Workshop
"*Health Impacts of Disasters: Infectious Diseases and Beyond*"

Introduction

The Pacific NorthWest Border Health Alliance (PNWBHA) held its eighth annual bi-national cross border workshop in Victoria, British Columbia on May 24-26, 2011. The workshop's theme, "Health Impacts of Disasters: Infectious Diseases and Beyond," focused on the PNWBHA's work of strengthening our ability to detect and respond to infectious diseases and disasters across borders of the greater Pacific Northwest region. Over 200 professionals attended from Canada (including Alberta, British Columbia, Saskatchewan, Yukon and the Canadian federal government), Canadian First Nations and Aboriginal Health, Native American tribes, and the United States (including Alaska, Idaho, Minnesota, Montana, New York, Oregon, Washington and the United States federal government), representing fields of epidemiology, public health laboratories, emergency management, emergency medical services, emergency response, communications and law.

New Attendees/Refresher Orientation

"Forging Ahead – Pacific NorthWest Border Health Alliance"

Sylvie Bérubé, EMBA, Regional Director, British Columbia - Yukon Region, Public Health Agency of Canada
Wayne Dauphinee, Executive Director, Pacific NorthWest Border Health Alliance
Wayne Turnberg, PhD, MSPH, Washington State Department of Health

This session provided an overview of the history of public health collaboration between Canada and the United States in the Pacific Northwest region. Participants also learned about current Pacific NorthWest Border Health Alliance activities, as well as some of the accomplishments of previous workshops.

Workgroup Meetings

This year, seven cross border workgroups convened on May 24, 2011, to discuss status of projects, new issues and next steps. Following are reports on each session:

Epidemiology and Surveillance Workgroup

The purpose of the Epidemiology Workgroup is to maintain preparedness for communicable disease events affecting Canadian and northwestern US jurisdictions by:

- Maintaining collaboration and communications between jurisdictions.
- Identifying, reviewing and resolving potential issues during interjurisdictional communicable disease response and other public health events.
- Developing and maintaining a data sharing agreement for common understanding of data sharing during interjurisdictional events.
- Developing and maintaining plans and protocols for responding to interjurisdictional communicable disease and other public health incidents. Planning coordination, communication and response for interjurisdictional communicable disease and other public health incidents.
- Planning for education, outreach and dissemination of plans to local health partners.

In the past year, the workgroup has:

- Added additional PNEMA member jurisdictions to the Memorandum of Understanding for data sharing and protection (Yukon, Alaska, Idaho and Oregon).
- Expanded participation of food regulatory agencies in Epidemiology Workgroup activities and began developing a Food Protection subgroup.
- Planned and conducted a tabletop exercise of a foodborne illness event requiring cross border response.
- Developed a preliminary proposal for an interjurisdictional respiratory virus situation awareness and surveillance system.
- Finalized the Epidemiology Workgroup Terms of Reference document.

Strategic objectives include:

The Pacific NorthWest Border Health Alliance (PNWBHA) is a cross border collaboration with a primary goal of integrating public health preparedness and response initiatives at all levels of government, including tribal and First Nations, throughout the Pacific Northwest in order to mitigate health impacts of public health emergencies. Five-year objectives include continuing to strengthen relationships, maintaining up-to-date contact and communication plans, documenting and expanding awareness of agreements for data sharing and protection, further developing cross border response protocols, and increasing reciprocal participation in cross border public health response exercises and case studies of public health events of interjurisdictional interest between PNWBHA member jurisdictions.

Next steps:

- Continue to add PNEMA jurisdictions to the Memorandum of Understanding on data sharing.
- Conduct further discussions of proposals for regional surveillance data sharing and situation awareness.
- Hold quarterly Epidemiology Workgroup conference calls to discuss the above-mentioned topics, additional topics of cross border interest and updates on any health events of cross-border interest.
- Plan and conduct a cross border call-down test; update and distribute contact list to participating jurisdictions.
- Establish a system of monthly Epidemiology Workgroup emails to alert members to potentially relevant exercises being conducted in neighbor jurisdictions, and other topics of interest.

Public Health Laboratories Workgroup

Attendees from: Oregon, Washington, British Columbia, British Columbia Centers for Disease Control, Alaska and the Canadian Public Health Laboratory Network

Opening discussion

The Washington Public Health Laboratories (WAPHL) has been undertaking several capital projects that are now coming to completion. A ribbon-cutting is scheduled on July 21 for the WAPHL's remodeled and enlarged area for receiving and packaging bioterrorism samples.

Memoranda of Understanding (MOUs)

Michael Skeels suggested the group address continuity of operations in its MOU discussion. He stated that requirements for US labs have changed radically for the upcoming emergency preparedness grant period.

Yolanda Houze said that much of what is required in the new grant is already in place in our labs but needs to be documented in plans.

Romesh Gautom discussed including California labs in MOUs that provide for information exchange and sharing of samples.

Next steps:

Generate discussion among laboratory directors about creating an agreement with California, possibly as an annex to current agreement between Washington, Oregon and British Columbia. Romesh Gautom will take the lead to involve the five Region X states. It was suggested that US labs make this an activity for year one of the new CDC emergency preparedness grant. Communications between cross border partners was excellent during the Olympics.

Blaine Rhodes: Japanese Radiation Event – Washington's Experience

Washington has been monitoring radiation levels since the 1950s due to the presence of Hanford. Washington's Shoreline lab is well-equipped to test for radiation, and processes 4,200 samples per year.

The Shoreline lab receives grants for two types of rapid radiation response: food testing and environmental testing.

Air sampling began at Shoreline almost immediately in response to the Fukujima incident. The lab sampled for I-131 which is uniquely produced by reactors. Sampling went from indicating some effect to indicating a potential problem in just a few days.

The lab began morning status meetings. The lab saw the Fukujima event as a public information emergency not a radiation crisis, so it worked with the state Department of Health Communications Office. The lab prepared information for public information officers, collected data, provided quality assurance, transferred data to daily situation reports, and helped the Communications Office present information to the public on the Web and elsewhere.

The lab was surprised that when the U.S. EPA reported Washington milk samples with I-131, our samples did not find significant levels.

The release of three separate plumes carrying I-131 caused spikes in Washington's readings. The lab analyzed soil and vegetation collected by the Office of Radiation Protection and found no significant results.

Some shipping containers from Japan carried elevated levels of radiation.

Communications with other states and BC, the University of Washington lab and the Office of Radiation Protection were excellent throughout.

Rhodes said challenges for the lab concerning future events include loss of staff positions, inadequate inventory of emergency supplies and a need to develop a standardized reporting form in advance.

Discussion followed about communications problems Oregon had in determining where to send radiation samples for testing. Washington and Oregon labs were not on the same page about whether or not to test food samples. Washington had decided not to test, which made it hard to grant Oregon's request to test samples.

Next steps:

There will be a discussion with the EPA about a Region 10 MOU with EPA to clarify protocol for future events.

Oregon's Laboratory Response Network (LRN) website - Rob Vega

At earlier cross border meetings, it was proposed that the site could be used as a place the workgroup could share information, but posting information on the site proved difficult. Rob is working to develop a new way to share information, possibly through SharePoint. He is looking at a simple password accessible site for the group to use to share MOU, procedures, links, etc. The group will stage an exercise using the site to share information.

This led to a discussion about how state or provincial labs communicate with their LRN labs, how they maintain contact lists and the prospective value of focusing on communicating with only advanced labs rather than every lab in the network.

There was a discussion about developing online systems lab partners could use for ordering sample kits and conducting other business.

Dr. Morshed discussed Lyme disease and surveillance of tickborne diseases and brought a proposal to the group.

Dr. Morshed is interested in developing better information about the prevalence of Lyme disease in the Northwest. In BC, there is much interest in Lyme disease with a large constituency that believes Lyme disease is far more widespread than existing surveillance suggests. Advocacy groups for this constituency tend to dismiss government-provided information and might not be easily persuaded to change their position in response to new studies and data. Some participants expressed concern that even if we learn more about Lyme disease prevalence we will not be able to put the information to effective use. “What will we ask people to do differently?”

Dr. Morshed brought a proposal to the group to collect and analyze ticks in BC, Idaho, Oregon, Saskatchewan, Washington, Montana and the Yukon. Methods would be the same in each state/province, and resulting data would be collected in a single spreadsheet and used to determine the range of Lyme disease positive areas in the Northwest, and to determine the range of ticks that could possibly carry and spread Lyme disease. Field studies could be conducted by graduate students.

Next steps:

Workgroup members agreed to talk to epidemiologists in their respective states to find out if there is support for this proposed tick surveillance project.

BC CDC LRN - Yin Chang

The first Canadian lab was connected to US LRN for Olympics followed by labs in Toronto and Quebec for other events.

There was discussion of communications between state or provincial labs and their lab partners. The Human Pathogens and Toxics Act is being rewritten in Canada with full input of Canadian labs. The act provides consistent guidance for tracking and exchanging samples. It requires a full inventory by labs of agents listed in the act, a labor intensive process.

The US tightly regulates selected agents and requires full inventory.

The group discussed the ways inventory is kept in various states and when to keep and get rid of select agents.

BC has developed a multiple entry permit for bringing samples into BC for analysis. Yin will send copies to the group.

Next steps:

A contact list will be circulated to obtain updated information and ask that people expand the list by adding information for contacts beyond lab director and bioterrorism coordinator.

Further discussion

Yolanda described Washington's efforts to increase flu surveillance. The state established sentinel labs and provided them with prepaid packaging for sending samples. It got 300 samples this year compared to 60 in the prior year. The project helped build relations with clinical labs.

The group discussed serology and the use of Bioplex, which BC uses now and Washington is looking at.

Next steps:

Dr. Morshed will help connect Blaine Rhodes with radiation lab counterparts in BC.

Emergency Medical Responders Workgroup

Facilitator: Mike Smith, Washington State Department of Health, Emergency Medical Services (EMS) Terrorism and Disaster Response Consultant

Purpose:

- Identifying potential issues
  - Patient Care Protocols – Oversight (Medical oversight/control)
    - Licensure
  - Interoperable Communications
  - Cross border response capabilities
  - Hospital Plan Cross Walk
  - Border Patrol

- Developing integrated contingency plans for responding to potential interjurisdictional public health incidents.
  - British Columbia Ambulance Service (BCAS) Mutual Aid Agreement (MAA) and National Incident Management System (NIMS) boiler plate.

- Create and maintain current contact list for each jurisdiction/involved agencies.

- Providing leadership and direction for the development of integrated exercises to validate contingency plans; and
  - Jurisdictional representatives, exercise coordinators.

- Clarifying roles and responsibilities between cross border health stakeholders;
  - Update state/province/territory points of contact.

- Developing and ensuring ties and joint sessions with the Emergency Management Workgroup.

- Reviewing and/or resolving cross-jurisdictional health emergency responder issues.

This year's achievements:

- Incorporated more jurisdictions (Alberta, Oregon, Washington State EMS, Northern Region BCAS, Interior Region BCAS, 4 Airevac jurisdictions).
- Updated contacts of membership.
- Developed terms of reference as a basis to send to members.
- Began to build an inventory list of resources.
- Held working group conference call prior to workshop.
- Facilitated discussion on Air Ambulance clearance and radio use.

Strategic objectives:

- Pursue a plan for interoperable cross border telecommunications.
- Participate on the exercise committee under the Emergency Management Workgroup if and when established.

Next steps:

- Hold regular conference calls with workgroup.
- Homework assignment to complete resource capability worksheet.
- Communicate and confirm membership of other jurisdictions.
- Discuss identification and tracking of patients.
- Help facilitate agency specific MAA, i.e. template/boiler plates.
- Continue collaboration with Public Health Law Workgroup.
- Discuss Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) Capability, Hazardous Materials Response and Decontamination.

Emergency Managers Workgroup

Leads: Ken Back (Washington State Department of Health); Dan Banks (Washington State Department of Health); Melia Kelly (BC Ministry of Health); Christopher Smith (BC Ministry of Health)

Subgroups
The group announced that it had established two working subgroups—one focusing on exercise-related topics and one about stockpile issues. These two subgroups will now focus on their topics and stay in touch with each other throughout the year and formally at the Cross Border Workshops. Both groups are finalizing their membership.

The stockpile group will be called the Medical Logistics Workgroup and will begin to write a plan putting into practice the lessons learned from the Vancouver Olympics, including movement of pharmaceuticals, equipment and people.

There has been discussion about incorporating the work of the Emergency Medical Services Workgroup and this group. Would it be wise to merge the two and create a third subgroup focusing on EMS?

With this new structure in place, it was noted that other subgroups may be needed to be established to look at additional topics like patients' need (patient movement, clinical care and hospital surge) or one incorporating research, training and academia to help nurture students for careers in emergency management. If not, where do these issues get addressed?

Also discussed was:

- The ideas of sharing experiences between jurisdictions through temporary exchanges or reassignments. This would continue to help better understand the functions and divisions of each others' agencies and recognize the advantages and possible hurdles.
- Credentialing of health emergency workers based on job and urgency.
- The inclusion of both US and Canadian border agencies.
- Deciding what to do long term with agricultural and food safety issues. Do they belong with another group?

The issue of patient movement looms large. The law group is taking initial steps, but there are issues that will require this group's attention. This includes patient tracking as well as physical movement/transportation.

The experience of the Japanese earthquake/tsunami/reactor meltdown was discussed although it was pointed out that for us in North America, it was a public information emergency and not a public health crisis.

The session ended with a joint session with the Emergency Medical Responders Workgroup.

Communications Workgroup

Co-Leads Laura Blaske (Washington State) and Laura Neufeld (British Columbia) were joined by representatives from Oregon, Washington, British Columbia and federal governments at this year's meeting. (Out-of-state/province travel is difficult in these challenging economic times, and many of our communications colleagues were not able to attend.)

Purpose

The purpose of the Communications Workgroup is to create a system that allows us to:

- Share communications products and best practices.
- Collaborate on shared issues.
- Quickly coordinate messages in emergency situations.

2011 Highlights

- Members discussed communications issues related to Japan earthquake and subsequent nuclear event. It was interesting to hear how public/stakeholder interest varied across the

region. Members used this event to highlight what works/what needs work in our cross border communications system.
- Provinces and states presented overviews of communications lessons learned and best practices from the last year.
- Working session on Communications Terms of Reference and Work Plan for the Pacific NorthWest Border Health Alliance Strategic Plan.

Action Plan

Resource challenges and emerging issues made it difficult to have as many conference call meetings as the group intended last year, but workgroup members did have several opportunities to share information. The workgroup will continue to build on these in the coming year:

- Contact all border provinces and states to make sure they are represented.
- Make workgroup participation part of all partner communication plans to help assure continuity regardless of staff turn-over.
- Schedule conference calls to continue to work on building information sharing channels for both emergency and non-emergency outreach issues.

Finalize our workplan, including input from provinces/states unable to attend this year's workshop.

Public Health Law Workgroup

Purpose:

The purpose of the Public Health Law Workgroup is to advance cross border collaboration to better prepare, respond and protect the public health, safety and welfare throughout the region by:

- Developing or reviewing Memorandums of Understandings (MOUs).
- Providing risk management advice and guidance to the Joint Coordination Committee (JCC) and other working groups.
- Identifying legal barriers to the US, Canadian and tribal collaboration, and working toward reducing, removing or mitigating the legal barriers.
- Strengthening working relationships among legal counsels for the states, provinces and tribes to enhance the ability to work quickly and effectively to protect the public throughout the region.

Membership

The working group composition may include representatives from but not limited to:

- Pacific NorthWest Border Health Alliance (PNWBHA) member jurisdiction.
- Public Health Agency of Canada (BC/Yukon Region).
- US Department of Health and Human Services (DHHS), Region X.

- Tribal governments/councils.

Operations

A Canadian and US co-lead will be selected from the membership.

The working group will meet at the call of the co-chairs, and the format of the meeting (teleconference, in-person, etc.) will be decided by the co-chairs.

Reporting

The working group shall be responsible to the JCC.

Administration

Administrative support will be provided by the Pacific NorthWest Border Health Alliance secretariat.

Indigenous Health Workgroup

This year marked the first meeting of the Indigenous Health Workgroup. After eight years of cross border workshops, the need for a group addressing issues faced by indigenous cultures became apparent.

Sovereign nations don't always have the resources necessary to deal with emergencies, and in general there may be a lack of harmony in all services—emergency response, health care and otherwise—provided for indigenous people.

Any decisions within the Pacific NorthWest Border Health Alliance about sharing information, resources or personnel on behalf of First Nations and tribes must be owned by those communities' members. The alliance will support this work but not facilitate it; First Nations and tribal representatives need to be invited to join the workgroup.

It is vital to keep the momentum of the workgroup going, promoting it and looking for ways to exploit connections. The first step is developing a list of contacts between the US and Canadian governments, First Nations and tribes. Also important is determining where the natural relationships are, starting with northwest Washington/southwest British Columbia and building from there.

Guidelines should be put in an indigenous health context in concrete ways. For example, in the case of the tribal canoe journeys, discussion topics could include whether everyone should wear life jackets; the use of Sani-Cans to avoid overtaxing the Indian Health Service septic systems; providing drinking water in hot weather; who to contact if a Canadian citizen gets sick in Makah country (or a US citizen on First Nations land); etc.

The workgroup's goal is to convene an indigenous group by this time next year to discuss developing public health guidelines for canoe journeys and other indigenous events.

Next steps:

- Develop a list of contacts for US and Canadian governments, First Nations and tribes.
- Develop an understanding of how these groups are organized.
- Develop mapping of health preparedness throughout the region.
- Explore public health impacts from canoe journeys.
- Develop best practices and identify gaps.

Plenary Session Summaries

Opening Remarks
John Lavery
Co-chair of the Pacific NorthWest Border Health Alliance
Executive Director, Emergency Management Unit, British Columbia Ministry of Health Services, Canada

Welcome
John Erickson
Co-chair of the Pacific NorthWest Border Health Alliance
Director of Emergency Preparedness and Response, Washington State Department of Health
Dr. Eric Young
Deputy Provincial Health Officer, British Columbia Ministry of Health Services
Mary Selecky
Secretary of Health, Washington State Department of Health

United States/Canada – The Federal Perspective – The Path Forward

Kathryn Howard
Assistant Deputy Administrator, Emergency Management and Corporate Affairs, Public Health Agency of Canada

Howard outlined health emergency management in Canada, noting how things shift in government and that there is more horizontal collaboration across agencies now.

The Public Health Agency of Canada (PHAC) supports citizens through collaboration in times of emergency. Health and emergency management cross all lines in the agency—there's rarely an emergency that doesn't have a public health impact these days. A small agency with a broad mandate, PHAC is comprised of six regional offices in 16 locations across Canada, with a staff that includes scientists, epidemiologists, veterinarians, communicators, policy analysts, and emergency preparedness and response coordinators.

The Centre for Emergency Preparedness and Response (CEPR) is Canada's focal point for public health preparedness and response. It is a robust emergency management program that maintains the safety and national health security of Canadians through emergency

preparedness and response, and protection from all hazards, including natural and human-caused disasters.

She also mentioned the Canada-US Pan-Border Public Health Preparedness Council, which facilitates regional border collaborations such as the PNWBHA. The council has resulted in good federal, state and provincial/territorial collaboration on border issues, and it continues to improve information sharing on best practices and lessons learned.

Rear Admiral Patrick O'Carroll
Regional Health Administrator, Region X, US Department of Health and Human Services

Since 2003, the Department of Health and Human Services (HHS) has funded the US Border State Early Warning Infectious Disease Surveillance (EWIDS) project, facilitating collaboration for infectious disease surveillance. However, funding for EWIDS has been dramatically reduced and may be in danger of ending.

O'Carroll's presentation focused on how to get through times of limited funding. We should concentrate on the core business of the PNWBHA, which he described as "the collective effort of a set of cross border public health related working groups with members of federal, provincial, state, tribal and First Nation governments supported by a regional bi-national organization to foster cross border collaboration."

In these lean times, what should we do to prepare? O'Carroll listed three fundamental tasks:

1. Be prepared to survive on our own for a while.
2. Make a plan (determine emergency contacts, a meeting place, community contacts and preparation for specific risks).
3. Know the facts.

The alliance is about fostering the ability to work across borders, and there is a lot of history and trajectory from the work that has already been done.

For more information:
www.pnwbha.org
www.pbphpc.org

Social Media & Technology in EM/PH Management

Therese Mickelson, ABC
Internationally Accredited Business Communicator, Mickelson Consulting Inc, Canada

Mickelson spoke about the importance of incorporating social media tools into your daily work, and especially into your emergency plans.

Speed and accuracy are crucial to maintaining authority and trust. However, the two can work against each other and it's important to balance them properly to maximize the effect of your messages.

During the Japan earthquake, there was a flood of information and it was important to be one of the voices that people could rely on for the latest and best information. It was also crucial to monitor other sources so you could correct or clarify that information.

Using video can be powerful; this and other multimedia tools can help you communicate in new and interesting ways for your audience. Any message can be connected to other background or information to flesh out and reinforce your messages.

It's rarely enough just to send a press release. They need to be followed up with other tools—Web, Facebook and Twitter—using those appropriate to the situation. Developing protocols and tactics about how you use them will help assure you are using them consistently and effectively.

The relative ease and cost of using these tools is a major advantage to implementing these strategies. Writing them into your emergency plans and developing strategies now puts you in a position to be able to launch messaging quickly during an event. And educate your leaders. Often our political and elected leaders have a vague familiarity with these tools, and explaining how they are used and why it's important can help break down potential barriers.

Cross Border Telecommunication: Interoperability and Compatibility

Superintendent Pascal Rodier
British Columbia Ambulance Service, South Frasier District, Canada

Almost all emergencies will involve multiple agencies across local, regional and national boundaries. As this interoperability becomes more prevalent, it is more crucial for local, regional, state/provincial and federal agencies to maximize the ability to communicate quickly and accurately with each other.

As always, national hurdles are the most difficult to overcome. Creating relationships between agencies at the local, regional and state/provincial levels not only helps during an emergency but becomes the foundation of any future nation-to-nation agreements.

Interoperability of systems, regulations and equipment continues to be the main challenge among the jurisdictions. Creating complementary radio systems is a first step to bridging the communication gaps between fire, police, EMS and other response agencies.

Canada has begun to streamline the 700 MHz band for use and compatibility.

Next steps for the group:

- EMS responder agreement.
- Work on draft work plan.
- Pursue 700 MHz bandwidth coordination.

Mobile Medical Unit: An Innovative Health Sector Resource

Leanne Appleton, Director
Clinical Operations, Mobile Medical Unit British Columbia Provincial Health Services Authority

Appleton described the creation of BC's mobile medical unit (MMU) for the 2010 Olympics and its ongoing development as a resource providing hospital services as part of an emergency response or replacing lost services when a hospital is damaged, closed or evacuated. It can also be used for large events or for training purposes.

The MMU consists of several trailers and tractors, a truck and a large tent equipped with both monitored and non-monitored bays, a one-table operating room, ultrasound, x-ray and other diagnostic equipment. The MMU can operate independently or be used to supplement existing hospital services.

During the Olympics, the MMU operated in conjunction with a PolyClinic located in Whistler's Athletes Village. It was staffed by volunteers who were certified through Vancouver General Hospital.

The MMU is now a resource of British Columbia's Ministry of Health, owned by Provincial Health Services Authority (PHSA), and its use is governed by a board that includes—among others—BC's six health authorities. Planning for staffing, training and usage is now underway.

Practice-Based Research: Opportunities and Challenges

Jack Thompson
University of Washington School of Public Health, Washington, USA

Thompson introduced the two speakers, whose presentations highlighted examples of the collaboration between academia and practice (as related to emergency preparedness).

Susan Allan, MD, JD, MPH
Director, Northwest Center for Public Health
Associate Professor, Department of Health Services, University of Washington School of Public Health, Washington, USA

In her presentation titled "Developing an Evidence Base for Public Health Preparedness," Dr. Allan talked about three evidence-based research projects.

The first project focused on effective emergency communications with Limited English Proficiency (LEP) populations and extending emergency response skills to LEP communities.

Pilot studies show that 9-1-1 is not always effective during LEP calls. Some of the barriers include language dialects, cultural differences around what an "emergency" is, concerns about cost, prior bad experiences and a general fear of government.

The research resulted in evidence-based information on how to effectively serve LEP communities in emergency situations using phone-based communication systems, and included the development of training and guidelines, protocols and educational strategies.

The second project (REACH) aimed to determine:

1. Which communication methods are most effective between public health agencies and health care providers.
2. What effect public health alerts have on provider-initiated disease reporting.

The third project—Short Message Service (SMS) Text Messaging—focused on new technologies and how to get people to use them. Goals of this project were to answer these questions:

1. How do target populations use texting?
2. What do health departments need to know to develop texting programs?

Bonnie Henry, MD, MPH, FRCP(C)
Director, Public Health Emergency Services British Columbia Centre for Disease Control
Assistant Professor, School of Population and Public Health, University of British Columbia, Canada

Dr. Henry described the structure of practice-based research in British Columbia, which includes the regional health authorities British Columbia Centre for Disease Control (BCCDC), University of British Columbia (which has close ties with BCCDC), Simon Fraser University and other research partners.

The philosophy of this research revolves around risk detection (surveillance), risk intervention and risk analysis (applied research). Researchers have tried to make these an integral part of their work at BCCDC.

An example of applied research was a tuberculosis (TB) study in which homeless people were the contacts. It was challenging because researchers had to look for alternative ways to contact the subjects for information. They had to look at settings rather than individuals and conduct a social network analysis of the TB outbreak, determining who was in contact with whom and how the disease was transmitted. Rates of transmission were very high, and researchers determined the socio-environmental factor that led to the outbreak exploding was likely crack cocaine use.

Challenges to this research:

- Knowing the right questions to ask.
- Using the right approach for the situation.
- Speeding up genomics support.
- Funding
- Getting the right team/HR support.

Opportunities:

- Develop expertise in broader group.
- Use modeling for advanced pandemic planning.
- Have experience on hand for next outbreak.
- Create strong connections and collaborations with academic partners.

Pandemic Influenza H1N1 – Lessons Learned in Canada and the United States

Bonnie Henry
Public Health Emergency Services BC

We expected a novel virus to appear in Asia, but H1N1 began in Mexico and by the time we knew what it was, it was here.

Messaging was complex because the virus hit different parts of Canada at different times. Plans were built on a more virulent form of virus.

Even though this was a less severe event than we might have expected, it had an intense impact on hospital intensive care units, and BC's lab was pushed to the brink.

Communications lessons learned:

- Need to work harder to get media to understand when risk assessments are revised.
- Need to provide all relevant resources on one website.
- Need to monitor and consider interaction with new information sources such as blogs, Facebook and Twitter.

Suggested further evaluation of measures such as use of masks, handwashing and use of antivirals. Stated it is important to continue seasonal flu campaigns.

Tony Marfin, MD, MPH
Washington State Department of Health

Dr. Marfin described reporting of diseases in Washington State by health care facilities, physicians and labs.

He stated flu does not always get reported because there are so many cases involving flu-like symptoms that it is time-consuming to report them, and even if a case is confirmed as flu it cannot be easily treated.

Before 2009 we did not seem to need real-time flu surveillance, but now we need to know vaccine efficiency in real time, evaluate outreach to high-risk groups, track changes in the virus and anticipate the impact flu will have on health care providers and facilities.

After collecting a great deal of information in its reports during the first year of increased flu surveillance, Washington decided to limit the information it collected to what was essential. This made it easier to report and use data. Dr. Marfin emphasized that local health departments should use flu data to determine effectiveness of public health initiatives rather than for individual interventions.

Washington has seven new surveillance systems: sentinel lab network, mandatory flu death reporting, pneumonia and flu mortality electronic Death Registry (eDR), statewide sentinel influenza-like illness (ILI) surveillance, Public Health Reporting of Electronic Data (PHRED), Public Health Reporting of Aggregate Influenza Data (PHRAID), and limited flu hospital surveillance in Spokane using Health Information Exchange (HIE).

Dr. Marfin described Washington's system of reporters sending information to a central Department of Health hub, and the Department of Health sending collected data to local health jurisdictions and discussed the state's move toward more widespread use of Health Information Exchange.

Monika Naus
British Columbia Centre for Disease Control

Canada used Arepanrix Adjuvanted H1N1 vaccine, which had been approved in 30 countries but not previously used in Canada. The vaccine was chosen in part because it brought about a quick immune response and provided better protection for very young and old ages, but it was known to present the possibility of adverse reactions including anaphylaxis and Guillain-Barre syndrome. Changes were made to the BC reporting system to help track adverse events and baseline data were collected. Four hundred seventy-eight adverse events were reported but there were no events that caused concern. Washington used a different vaccine but had similar results. The vaccine's protection rate in Canada was very high: 93 percent.

Canada needs a system for collecting vaccine safety comparable to that used in the US.

During future events, health workers who are early recipients of vaccine should be assessed to give us early data, even though they provide a limited sample size.

Jeffery Duchin
Public Health – Seattle King County

Local health departments in the US had early guidance from the CDC, but it was based on a large-scale event that did not mesh with the epidemiology of H1N1.

CDC's constant changes in dates it provided for vaccine availability made messaging to the public difficult. Promise of early availability raised expectations and created a demand that could not be met. Even though vaccine was available early, it was available to only 8 percent of the public. When the outbreak peaked at the end of October the amount of vaccine received was enough for only 17 percent of the Advisory Committee on Immunization Practices (ACIP) target population. Additional confusion resulted with prioritization guidelines.

Duchin raised two questions for consideration:

- Would we be better off without prioritization of those who can get vaccine?
- Should vaccine availability be standardized across all jurisdictions?

Duchin cited several additional challenges associated with H1N1 vaccine distribution:

- Although a national child immunization program is in place, there is no analogous program for adults.
- Certain target populations are hard to reach.

Some vaccines could be used only with certain members of the population, complicating availability and messaging.

Deep Water Horizon: A Public Health Perspective – Impact of the BP Gulf Oil Spill on Louisiana

Doris G. Brown, M Ed, MD, RN, CNS
Louisiana Department of Health and Hospitals, Office of Public Health, Community Preparedness

Brown spoke about the challenges of responding to the explosion of the Deep Water Horizon oil rig and the resulting oil spill and recovery.

The explosion itself was the first hurdle—responding to, rescuing and treating the injured. This was followed by economic and social damages that needed resources as well. An all-hazards plan was put into place that used resources from multiple agencies and organizations.

Economic impacts were huge—especially to the fishing, oyster harvesting and tourism industries. For many in these affected communities, times were already hard with many people unemployed and in need of aid. The new influx of those unemployed by the spill was testing an already strained response system of government programs, and community and charitable organizations.

Many questions loomed over the communities and responders:

- What would be the impacts to health and water quality?
- Would hurricane season make a catastrophic incident even worse?
- How would dispersants affect wildlife, sea life, the ecology and relief workers?

The psycho-social needs in the communities were tremendous. Teams of behavioral therapists were sent to communities to triage patients and schoolchildren.

New media—Twitter, Facebook, YouTube and Flickr—were used broadly to deliver news and messages. Surprisingly, socio-economics did not appear to be an impediment. Many people had access through mobile phones.

Long-term monitoring plans have been put in to place to assure that the environment and shellfish continue to be safe. The Louisiana State EOC was still on partial activation in May 2011.

Cross Border Movement of Healthcare Disaster Responders

Charles W. Cunningham
US Customs and Border Protection Office of Field Operations

Jeffrey Goddard
Emergency Management Coordinator Program and Communication Division, Pacific Region Canada Border Service Agency, Canada

Cunningham, chief at the Blaine border crossing in Washington State, had one main message about health care disaster responders crossing the US/Canada border: Communication is key.

“If you just show up at the border without talking to someone, you might not get across,” he said. Advance notice is necessary when transporting the following across the border:

- Injured patients – advance notice is needed to clear a lane.
- Equipment or materials – email first to find out whether you can bring it across.
- Money – call the Blaine command center.

The new Peace Arch crossing has 10 lanes southbound, making entry into the US easier. Ambulances should use the Emergency Vehicle Only lane, which is the lane closest to the building; it’s not normally staffed but it is always open.

Health care disaster responders—especially ambulance drivers—must have radio frequency identification (RFID). Passports are not considered RFID and won’t work for ambulance drivers.

Patients in ambulances are allowed through on a conditional entry. Border crossing personnel will know where they’re going and can send someone to the hospital to clear them. The main goal is to get the ambulance across the border as quickly as possible.

If there is a declared emergency by the US, disaster responders will not be stopped at the border; the same applies if Washington emergency workers are invited by British Columbia. The agreement is to assist each other, government to government.

Goddard echoed Cunningham’s statements. The border crossing agreement is same on both sides of the US and Canadian border. “If we have advance notice, we can make your crossing pretty painless,” he said.

Adaptive Response: Bridging the Divide Between Climate Change and Health Emergency Management

Emily Nixon
Manager, Social Policy and Programs, Emergency Management Unit, British Columbia Ministry of Health Services

The changes in Earth’s climate will dictate the types of emergencies we will see more often and need to respond to in the near future.

The two biggest changes will be rising sea levels and increased temperatures.

The rise in sea level will create ongoing challenges like erosion, storm surge intensity, changes to habitat, and saltwater intrusion in rural and urban communities.

Precipitation will also change, and the areas that get less precipitation will experience more flooding and landslides when it does rain. Some areas will be less rainy, and incidences of drought and forest fire will increase.

The changes in planning for and responding to these sorts of emergencies are important, but anticipating potential disasters and putting resources into place are equally as important.

Oil pipelines are an example. As the climate changes begin to alter the geography and topography, the pipeline could be subjected to changes in heat, erosion and the thawing of permafrost turning firm ground to soft mud—already occurring in the some parts of the Arctic. Preventing the inevitable breaks, leaks and damage will be an ongoing challenge.

Getting our leaders on board and engaged in preparation is a crucial next step.

Early Warning Systems EPI-X, CPNHI

Dr. Shamnir N. Mukhi, EPng
Chief Engineer, Canadian Network for Public Health Intelligence (CNPHI), National Microbiology Public Health Agency of Canada

Jim Schwendinger
Office of Public Health Preparedness and Response, Centers for Disease Control and Prevention

This session contrasted the Canadian Network for Public Health Intelligence's public health alerts (PHA) system and the CDC's Epi-X system.

Both are used to send alerts to epidemiologists and other subscribers when important surveillance information is available, but Epi-X also provides areas for information sharing forums, and for reporting and surveillance.

Other key differences:

- The use of Epi-X is centrally controlled. Posting on PHA is controlled at the local user level.
- PHA forms are customized for each module. Epi-X uses a single flexible form.
- Epi-X distributes alerts according to geographical area or health role, while PHA distributes to specified teams or workgroups with consideration of the sensitivity and urgency of the alert.

PHA has several cross border teams, including one for BC and the Pacific Northwest.

Migrant Ships: A Multi-Jurisdictional Approach to Planning and Response

Caitlin Harrison
Public Health Agency of Canada, BC/Yukon Region

Harrison gave the situation overview: in late July 2010, the Royal Canadian Mounted Police confirmed the vessel MV Sun Sea was bound for British Columbia from Sri Lanka with an estimated 200-500 people aboard. The ship had been at sea for several months, and the

condition of the passengers was unknown. Health partners expected severe conditions such as tuberculosis, typhoid and chicken pox, as well as malnutrition, dehydration, pregnancies, births and deaths.

The arrival date and location were unclear, and partners knew they'd need translation services, food, clothing and shower facilities for the migrants. Multi-jurisdictional planning required flexibility to respond to a variety of situations; it also required various streams of information sharing on the federal, provincial and local levels.

On July 28, the first integrated health planning meeting took place, including US representatives. On Aug. 12, the ship reached the Canadian coast. Those on board were in remarkably good health and, after being treated at Victoria General Hospital, were transported to the lower mainland of British Columbia.

Ivan Peterson
West Coast & Yukon District, Canada Border Services Agency

Peterson talked about the role and responsibilities of Canada Border Services Agency (CBSA) during this response:

- They had to act quickly to meet the immediate personal and health needs of the migrants while protecting the safety and security of the Canadian public (two-fold).
- At the earliest opportunity, CBSA had to assess the demographic makeup and condition of passengers and worked closely with health partners to identify and prioritize any serious health cases.
- Once it was determined safe to do so—for both the migrant population and personnel—CBSA processed these individuals in an efficient manner and according to Canadian laws (immigration processing).

Challenges and lessons learned included:

- The dynamic nature of the event—there were many moving parts.
- Pre-event duty to maintain secrecy versus duty to notify (rigid controls over information).
- Innovation and keeping the operating platform efficient—contingencies became the options.
- Getting passengers off the ship in a timely manner—there were 492 on board (with one death) and it took 34 hours to get the final migrant off the dock. It took longer than anticipated because the goal was to get people delivered into a controlled environment while keeping families together.
- Importance of planning and plan sharing.
- Tested limits of CBSA capacity.

Bob Gallaher
Director Operations BCAS, Vancouver Island

Gallaher gave a health perspective on the vessel MV Sun Sea. Health considerations included:

- Public health protection, including the need for TB screening.
- Responding to the psychosocial needs of migrants and responders.
- Hygiene care (showers) for migrants.

- Providing care to a potentially large number of patients, including the development of integrated contingency plans.
- Translation services for assisting in the provision of health care.
- The creation of surge capacity for immediate health needs response.
- The deployment of National Emergency Stockpile System (NESS) supplies and associated logistical considerations.
- Use of health facilities, both fixed and temporary.
- Creation of surge capacity for longer acute care needs.
- Staffing emergency operations/coordination centers.
- Situational awareness and notification.
- Funding for health activities (provided by Citizenship and Immigration Canada).
- Potential for dangerous commodities exposure.

British Columbia Ambulance Service's roles and function during the event:

- Accept the sick or injured passengers and continue with triage, treatment and transport.
- Provide onboard medical assessment, treatment and extrication advice.
- Provide a medical tent to house BCAS staff and other medical personnel.
- Each patient will be triaged, treated as required, and transported to Victoria General Hospital.
- Patients will be decontaminated by a BCAS team before entering the building.
- The decontamination process may be bypassed for critical patients.
- Adhere to the principles of the BC Emergency Response Management System (BCERMS).
- Ensure the safety and health of all responders.
- Save lives by providing appropriate treatment and transport of migrants with a variety of medical conditions.
- Coordinate with other agencies.

Lessons learned:

- More planning could be conducted on developing a surveillance/monitoring process regarding migrants' health.
- There was a need for a clear command and control structure dockside to assist in information sharing.
- There should have been more consideration for the need for showering and other hygiene facilities onsite as part of the disembarkation process.
- Agencies working dockside should have an understanding of personal protective equipment (PPE) requirements and use.
- It was very useful having multi-language flashcards when an interpreter wasn't available.

Norma Jones
Vancouver Island Health Authority

The Vancouver Island Health Authority (VIHA) had a short timeline to work within—the first teleconference took place about a week and a half before the ship arrived.

Victoria General Hospital was chosen for treating the migrants because of specialty services it offers, such as neonatal care. There were vacant areas in the hospital due to reconstruction, so those areas needed to be quickly cleared out and cleaned.

VIHA’s mandate was health, though they weren’t forcing any health care workers to take the job. Only volunteer doctors, nurses and other personnel were used.

Challenges included:

- A need for more timely information—there was so much information and some of it couldn’t be shared.
- The potential burden of disease.
- The amount of people involved, including multiple internal and external stakeholders.
- Set up (refurbishing, supplies, equipment, staffing).
- Media scrutiny due to fears that the migrants were terrorists.

Lessons learned:

- Security needs.
- Physician compensation.
- Communication (there can never be too much).
- Space issues (lucky to have vacant areas at Victoria General Hospital).
- Dockside vs. hospital diagnostics/treatment.
- Joint messaging with unions and professional licensing.
- Importance of celebrating success.

Kirsten Brown
Planning, Emergency Management Unit Ministry of Health

Planning and response successes:

- Cooperation between all organizations involved, plus integration between federal, provincial and regional entities, made a big difference.
- Response was aided by the use of available facilities, particularly the Victoria General Hospital.
- Early request and subsequent use of NESS mini-clinic highlighted the value of this new resource and the partnerships between federal and provincial agencies.

Lessons learned:

- Response does not end once the dockside operations have been completed.
- Recognized benefit of enhancing information sharing and coordination between all organizations involved.
- Plans should consider several contingencies to account for the uncertainty that exists as the vessel arrives in Canadian waters.
- There is a need to incorporate innovation and flexibility in the response.

Moving forward:

- Convened a meeting of stakeholder organizations to review after action report and incorporate lessons learned into a revised Integrated Health Response Plan for Migrant Vessel Arrivals.

- Two working groups established to further address (1) an infectious disease scenario and (2) clarification of health needs, roles and responsibilities following dockside operations.
- Continuing to build on the successful relationships established during the event.

Geo-Spatial Data Display: A Potential Health Preparedness Tool

Kristopher Hayne
Ministry of Public Safety and Solicitor General, Emergency Management British Columbia Telecommunications and Specialty Systems

Hayne spoke about new technologies that will allow for collaborative mapping that can be used before, during and after a disaster.

The technology would allow mapping (2D and 3D) of natural things like terrain and overlay mapping of other types of things, like buildings. These two sets of information may be on different systems, and geo-spatial display would allow those to be “fused” together by multiple parties.

It would also allow for response workers and even citizens to report on conditions of roads, buildings or other items affected by the disaster, as well as information from aerial surveillance and monitoring social media. The systems could offer a myriad of other uses beyond emergency response.

A joint US/Canada exercise will be held later this year simulating an earthquake in the Salish Sea off Vancouver Island.

Public Health Cross Border Collaboration

Eric C. Blank, Dr. P.H.
Senior Director, Public Health Systems Association of Public Health Laboratories

Blank spoke about the evolution of collaboration between labs in the US, Canada and Mexico.

National labs in the three countries have not allowed for great exchange between facilities. The US/Canada collaboration began to formalize in 2004 when an MOU was signed by both countries. The two countries have now built relationships with labs on the other side of the border and collaborate on a regular basis

The first real test of this collaboration was the H1N1 outbreak, and relationships and protocols created by the MOU helped tremendously in sharing information and resources across the border.

Both countries brought Mexico into the fold in 2010 and will have their initial meetings in 2011.

Response to a Communicable Disease Identified at a Land Border Crossing

Richard Buck
Border Health Manager and First Nation Liaison, New York State Department of Health

Buck discussed the lessons learned from an exercise conducted at a US/Canada land border crossing.

The East Coast Border Initiatives conducted an exercise that tested a communicable disease scenario at a land crossing between the US and Canada. Airports and water ports have traditionally developed emergency planning that ignores land crossings.

The scenario involved a bus of people with at least one person exhibiting symptoms of monkey pox. Several things would be tested: the process for detaining the bus; processing the riders; evaluating them; caring for riders during the long confirmation period; transporting them to a safe place or to health care facilities; and coordination between local health agencies, the border agency and quarantine offices.

The process did not go as smoothly as they anticipated. As a result they made several changes to their plans. The improvements included; better collection of patient data; simplification of forms; better preparation and communications to be able to deal with the medical, physical and emotional need of the detainees; improvements to translations and preparation for detainees speaking a foreign language.

Cross Border Movement of Pharmaceuticals, Biological Substance and Medical Devices

Chantz Strong
Manager, Strategic Planning, Compliance and Enforcement, British Columbia Health Region, Health Canada

Strong talked about Health Canada's role in regulating and transporting pharmaceuticals, biological substances and medical devices across the border.

Health Canada's scope of regulations covers the safety, efficacy and quality of drugs, pharmaceuticals, food and veterinary drugs, as well as the import/export of controlled substances and "precursors" (substances essential for production of illegal street drugs, such as decongestant for making methamphetamine). As a regulator, Health Canada looks at the full continuum, including the authorization of clinical trials.

If a drug is found compliant, it receives a drug identification number (DIN). Medical devices are categorized based on risk associated with their use, ranging from Class I (thermometers – no license needed) to Class IV (pacemakers).

Some exemptions are granted, such as when conventional therapies have failed, and for some veterinary drugs and medical devices (example: an unusually large number of stents). In the case of controlled substances such as opiates, a Section 56 exemption is granted for human clinical trials and research purposes.

Interim orders valid for 14 days are issued by the Health Minister's mandate when there is significant risk to safety, health or equipment. For example, during the H1N1 pandemic, immediate distribution of vaccine was allowed even though the drug hadn't gone through the full regulatory process and was not authorized for sale in Canada. It was on the condition that the public had had significant exposure to the virus and immediate action was required.

In March 2011 a proposed amendment, Extraordinary Use New Drugs (EUND), would allow people to market and buy drugs and products needed for chemical/biological/radiological/ nuclear (CBRN) events. The sale of these substances would be limited to government officials. This is a regulatory work in progress.

For more information go to www.hc-sc.gc.ca

Cross Border Integrated Response: An Emergency Management and Health Perspective

Christopher Smith
Director, Planning and Programs Emergency Management Unit, Ministry of Health Victoria, British Columbia

Kenneth Back
Director Emergency Preparedness Unit, Public Health Emergency Preparedness and Response, Washington State Department of Health

Dr. Terry Egan
Planning, Exercise and Training Management Unit, Emergency Management Division, Washington State Military Department

Cam Filmer
Executive Director of Strategic Planning, Policy and Legislation Emergency Management BC

The presenters described the Pacific Northwest Emergency Management Arrangement (PNEMA), the ways it can be used in the British Columbia and Washington State response models, how it relates to health care, and the future of the agreement.

PNEMA replaced a hodge-podge of agreements and MOU intended to coordinate regional emergency preparedness and response efforts. Annex B, relating to public health activities, was added in 2007. It addresses licensing and certification of personnel operating across borders, workers compensation issues and reimbursement. The agreement can be implemented by its parties without a formal declaration of emergency.

The agreement has many useful features that we must build upon by:

- Developing and exercising operational plans.
- Working with border security to facilitate the free flow of supplies, personnel and patients.
- Engaging First Nations to bring them into PNEMA's framework.
- Expanding PNEMA to include all PNWBHA jurisdictions.

- Cataloging existing agreements, determining how they interact, and determining which need to be expanded determining which new agreements need to be created to fill gaps.

During the discussion session that followed it was pointed out that existing agreements can be found on the PNWBHA website http://www.pnwbha.org/

There was some debate about the need to prioritize activities. Some stated that it is important to focus on moving personnel and supplies across the border during an emergency but not patients.

There was some discussion of adding a health care workgroup during future conferences.

The group discussed the fact that PNEMA and other cross border agreements have traditionally had an emergency response focus and that public health concerns have received less attention. The group was urged to continue to bring public health issues forward in cross border preparedness forums.

Cholera Epidemic in Haiti, Threat to the Western Hemisphere

Dr. Daphne Moffett, PhD
Epidemiologist and Deputy Director for the Health System Reconstruction Office, Centers for Disease Control and Prevention

Dr. Moffett gave a lunchtime presentation describing the agency's activities during a cholera outbreak in Haiti following the 2010 earthquake.

Early Warning Infectious Surveillance for Health Information Exchanges

Tony Marfin, MD, MPH
Washington State Epidemiologist for Communicable Diseases, Washington State Department of Health

Dr. Marfin described public health's historical shift from a focus on intervention to a focus on surveillance, and more recently to surveillance as a means to evaluate the effectiveness of public health measures.

In 1942, the Office of Malaria Control was formed with one mission: "kill mosquitoes." This agency became the Communicable Disease Center in 1946 (and after several name changes became the CDC in 1980). In 1946, the agency expanded its work beyond malaria control. Alexander Langmuir, the agency's first head epidemiologist, raised the importance of surveillance and ended mosquito eradication programs by declaring malaria was no longer present in the South. Langmuir also created the Epidemic Intelligence Service, which was responsible for training many epidemiologists. Surveillance became public health's number one priority.

The emphasis on surveillance began to lessen around 1999 during a West Nile virus outbreak in New York City. During the outbreak Dr. Duane Gubler of the CDC stated, “Surveillance never saved one human life.” He suggested collecting and disseminating information as quickly as possible to determine effective action.

Dr. Marfin discussed the creation of ArboNET to collect information about West Nile virus and described it as the forerunner of Health Information Exchange.

Dr. Marfin described federal efforts to gather comprehensive patient and consumer health related information. He described the ways in which staggering amounts of data are being collected and shared along with efforts to put the data to meaningful use.

In Washington, the Health Information Exchange program is moving forward. Similar efforts have been taking place since before 1998 but without public health input. Now public health is at the table. Dr. Marfin urged epidemiologists to get involved in the design of patient information systems to make sure public health can collect the data it needs.

World Café

The **World Café** is designed as an informal opportunity for agencies and organizations to highlight their public health/resiliency programs, as well as being a great networking opportunity for Cross Border participants. Exhibits are intended as an educational/awareness opportunity, rather than a vendor-based forum.

This year’s World Café poster presentation was intended to provide individual attendees an opportunity to showcase a particular project or program. Final selections were based on innovation, workshop theme, topic relevance, diversity and their visually appealing and educational nature.

Presenters included:

Laura Vonnahme
Centers for Disease Control and Prevention, Seattle Quarantine Station, Washington State

Poster title: “Evaluation of Tuberculosis Surveillance System Utilized in Washington State for Migrant Populations”

Meagan Kay
Public Health – Seattle and King County, Washington State

Poster title: “2009 Pandemic Influenza A (H1N1) Vaccination among Pregnant Women”

Jeanie Knight
Thurston County Public Health and Social Services, Washington State

Poster title: “Preparedness among Vulnerable Populations – A Local Public Health Demonstration”

Poster title: “Health Impacts of Climate Change – Introduction to a Public Health Work Force A NACCHO Local Public Health Capacity Building Project”

Sarah Paliulis
Northwest Center for Public Health Practice, Washington State

Poster title: “Public Health in the Northwest: Looking at History to Look to the Future”

Katie Miller
Washington State Department of Health

Poster title: “Cross Border Collaboration in Response to the Emergence of Cryptococcugattii in the Pacific Northwest”

Stephanie Massay
Alaska State Public Health Laboratory

Poster title: “Implementing and Maintaining Surge Capacity for Influenza PCR in the Alaska Public Health System”

David Kerschner
US Health and Human Services, Assistant Secretary for Preparedness and Response

Poster title: “U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response (ASPR): Responsibilities and Programs”

Laura Blaske
Washington State Department of Health

Poster title: “Public Health/Tribal Partnerships in Washington State”

Jason Madrano
University of Washington, Seattle

Poster title: “Psychosocial Approaches in Pacific Northwest Border Communities Before, During and Following a Communicable Infectious Disease Outbreak”

Amanda Evanson
US Department of Health and Human Services

Poster title: “Centers for Disease Control and Prevention, EPI-X”

Appendices

Appendix A - Workshop Agenda

Appendix B - Speaker Biographies

Appendix C - Workshop Evaluation

Appendix D - List of Registered Participants

Appendix A

Workshop Agenda

Pacific NorthWest Border Health Alliance
Eighth Annual Pacific NorthWest Cross Border Workshop

Health Impacts of Disasters: Infectious Diseases and Beyond

Delta Victoria Ocean Point Resort and Spa
Victoria, British Columbia

May 24-26, 2011

Day 1
Tuesday, May 24, 2011

8:00 - 5:00 Registration

10:30 - 11:30 New Attendees Refresher/Orientation Session
A summary of previous years' workshops, our cross border collaboration work

Wayne Dauphinee, MHA, Executive Director, Pacific NorthWest Border Health Alliance

Wayne Turnberg, PhD, MSPH, Program Manager, Epidemiology,
Public Health Emergency Preparedness and Response, Washington State Department of Health, Pacific NorthWest Border Health Alliance

Sylvie Bérubé, EMBA,
Co-Chair, Canada-U.S. Pan-Border Public Health Preparedness Council
Regional Director, British Columbia - Yukon Region
Public Health Agency of Canada

11:30 - 1:00 Lunch on Your Own

1:00 - 5:00 Workgroup Breakout Sessions

- *Track 1 Epidemiology and Surveillance*
- *Track 2 Public Health Laboratories*
- *Track 3 Health Emergency Management*
- *Track 4 Emergency Medical Services*

- *Track 5 Communications*
- *Track 6 Public Health Law*
- *Track 7 Indigenous Health*

1:00 - 4:00 Poster Display

5:00 Dinner on Your Own

5:15 - 6:45 BY INVITATION ONLY

Pacific NorthWest Border Health Alliance (PNWBHA)
Joint Coordination Committee (JCC) Business Meeting

Day 2
Wednesday, May 25, 2011

7:00 – 8:00 **Registration/Continental Breakfast**

8:00 – 8:50 **Opening Remarks from the Pacific NorthWest Border Health Alliance**
John Lavery, Co-Chair, Pacific NorthWest Border Health Alliance
Executive Director, Emergency Management Unit, British Columbia Ministry of Health, Canada

John Erickson, Co-Chair, Pacific NorthWest Border Health Alliance
Director of Emergency Preparedness and Response, Washington State Department
of Health, USA

Welcome *Perry Kendall,* MBBS, MHSC, FRCPC
Provincial Health Officer
British Columbia Ministry of Health, Canada

8:50 - 9:40 **Canada/United States – The Federal Perspective - The Path Forward**
Moderator*: Mary Selecky,* Secretary, Washington State Department of Health, USA

Kathryn Howard, Assistant Deputy Administrator, Emergency Management & Corporate Affairs, Public Health Agency of Canada

Rear Admiral Patrick O'Carroll, Regional Health Administrator, Region X (Alaska, Idaho, Oregon, Washington) United States Department of Health and Human Services

9:40 - 10:40 **Keynote Speaker**
Social Media and Technology in Emergency Management/Public Health Management
Introductions: *John Lavery,* Co-Chair, Pacific NorthWest Border Health Alliance

Therese Mickelson, Internationally Accredited Business Communicator (ABC) Communication Consultant, Mickelson Consulting, Inc, Canada

10:40 - 11:00 **Networking /Transition Break**

11:00 - 12:00 **Concurrent Breakout Sessions**

Session 1 **Cross Border Telecommunication: Interoperability and Compatibility**
Introductions: *Mike Smith*, Workgroup Lead, Public Health Emergency Medical Responders

Superintendent P.B. (Pascal) Rodier
British Columbia Ambulance Service, South Fraser District, Canada

Session 2 **Mobile Medical Unit: An Innovative Health Sector Resource**
Introductions: *Ralph Jones*, Workgroup Lead, Public Health Emergency Medical Responders

Leanne Appleton, Clinical Operations Director, Mobile Medical Unit, British Columbia Provincial Health Services Authority, Canada

Session 3 **Practice-Based Research: Opportunities and Challenges**
Moderator: *Jack Thompson,* Principal Lecturer, Department of Health Services Faculty, Northwest Center for Public Health Practice, University of Washington School of Public Health, Washington, USA

Bonnie Henry MD, MPH, FRCP(C), Director, Public Health Emergency Services British Columbia Centre for Disease Control, Assistant Professor, School of Population and Public Health, University of British Columbia, Canada

Susan Allan, MD, JD, MPH ,Director, Northwest Center for Public Health, Associate Professor, Department of Health Services, University of Washington School of Public Health, Washington, USA

12:00 – 12:15 Transition Break

12:15 - 1:15 Plated Networking Lunch

1:30 - 2:30 **Pandemic Influenza H1N1 – Lessons Learned in Canada and the United States**
Moderator***:*** *Wayne Dauphinee,* Executive Director, Pacific NorthWest Border Health Alliance

Bonnie Henry MD MPH FRCP(C),Director, Public Health Emergency Services BC Centre for Disease Control and Assistant Professor, School of Population and Public Health, University of British Columbia, Canada

Monika Naus, MD, Associate Medical Director, Epidemiology, Medical Director, Immunization Programs, British Columbia Centre for Disease Control and Associate Professor, School of Population & Public Health, University of British Columbia, Canada

Jeffrey Duchin, MD, Chief of Public Health's Communicable Disease Control, Epidemiology and Immunization Section, Public Health – Seattle and King County, Washington, USA

Tony Marfin, MD, MPH, Washington State Epidemiologist for Communicable Diseases, Washington State Department of Health, USA

2:30 - 3:15 **Deep Water Horizon: A Public Health Perspective – Impact of the BP Gulf Oil Spill on Louisiana**
Introductions: *Mike Harryman,* MA, BS, AA, Preparedness Director, Oregon Public Health Emergency Preparedness, USA

Doris G. Brown, Public Health Executive Director, Center for Community Preparedness, Louisiana Department of Health and Hospitals, Office of Public Health, USA

3:15 - 3:30 Networking/Transition Break

3:30 - 4:30 Concurrent Breakout Session

Session 4 Cross Border Movement of Healthcare Disaster Responders

Introductions: *Rod Salem*, Workgroup Lead, Public Health Emergency Medical Responders

Jeffrey Goddard Emergency Management Coordinator
Program and Communication Division, Pacific Region, Canada Border Service Agency, Canada

*Charles W. Cunningham***,** Agriculture Chief, United States Customs and Border Protection, Office of Field Operations, Port of Blaine, Washington

Session 5 Adaptive Response: Bridging the Divide between Climate Change and Health Emergency Management

Introductions: *Christopher Smith*, Workgroup Lead, Public Health Emergency Management

Emily Nixon, Manager, Social Policy and Programs, Emergency Management Unit, British Columbia Ministry of Health, Canada

Session 6 Early Warning Systems- EPI-X, CPNHI

Introductions: *Muhammad Morshed*, Workgroup Lead, Public Health Laboratories

Dr. Shamnir N. Mukhi, EPng, Chief Engineer, Canadian Network for Public Health Intelligence (CNPHI), National Microbiology Public Health Agency of Canada

Jim Schwendinger, MSN, MPH, NP, Director
EPI-X and Team Lead, EPI-X and HAN Team
Office of Public Health Preparedness and Response Center for Disease Control and Prevention, USA

4:30 – 6:30 World Café – Posters Presentations & Networking Opportunities

*The **World Café** is designed as an informal opportunity for agencies and organizations to highlight their public health/resiliency programs as well as being a great networking opportunity for Cross Border participants. Exhibits are intended as an educational/awareness opportunity, rather than a vendor-based forum*.

6:30 Dinner on your own

Day 3
Thursday May 26, 2011

7:00 – 8:00 Registration/Continental Breakfast

8:00 – 8:10 Welcome and Opening Remarks from the Pacific NorthWest Border Health Alliance:
John Erickson, Co-Chair, Pacific NorthWest Border Health Alliance
John Lavery, Co-Chair, Pacific NorthWest Border Health Alliance

8:10 –9:10 Migrant Ships: A Multi-Jurisdiction Approach to Planning and Response
Opening Remarks*: Sylvie Bérubé*, EMBA,
Co-Chair, Canada-United States Pan-Border Public Health Preparedness Council
Regional Director, British Columbia - Yukon Region, Public Health Agency of Canada

Caitlin Harrison, Regional Emergency Preparedness & Response Coordinator, Public Health Agency of Canada, British Columbia/Yukon

Ivan Peterson, Director, West Coast & Yukon District, Canada Border Services Agency, Canada

Bob Gallaher, Director of Operations, British Columbia Ambulance Service, Vancouver Island, Canada

Norma Jones, RN, BScN, MA,Enc (c),Corporate Director, Emergency Management and Business Continuity, Vancouver Island Health Authority, Canada

*Kirsten Brown***,** Manager, Planning, Emergency Management Unit, Ministry of Health, Canada

9:10 – 9:40 Geo –Spatial Data Display: A Potential Health Preparedness Tool
Introductions: *Patrick O'Carroll*, Regional Health Administrator, U.S. Public Health Service, Region X, Washington

Kristopher Hayne, BSc Business Area Expert, Telecommunications and Specialty Systems, Emergency Management British Columbia, Ministry of Public Safety and Solicitor General

9:40 - 10:10 Public Health Cross Border Collaboration
Introductions: *Romesh Gautom*, Director, Public Health Laboratories, Washington State Department of Health, USA

Eric Blank, Dr.P.H., Senior Director, Public Health Systems, Association of Public Health Laboratories, USA

10:10 – 10:25 Networking Break

10:25 - 10:55 Response to a Communicable Disease Identified at a Land Border Crossing
Introductions**:** *John Erickson,* Co-Chair Pacific NorthWest Border Health Alliance

Richard Buck, Border Health Manager/Tribal Liaison, Office of Health Emergency Preparedness, New York Department of Health

10:55 – 11:25 Cross Border Movement of Pharmaceuticals, Biological Substances and Medical Devices
Introductions**:** *Garnet Matchett***,** Director of Operations, Saskatchewan Ministry of Health, Canada

Chantz Strong, Manager, Strategic Planning, Compliance and Enforcement, British Columbia Region, Health Canada, Canada

11:25 -12:20 Cross Border Integrated Response:
An Emergency Management and Health Perspective
Introductions: *Wayne Dauphinee,* Executive Director, PNWBHA

Christopher Smith, Director, Planning and Programs
Emergency Management Unit,
Ministry Of Health, Victoria, British Columbia, Canada

Dr. Terry Egan, Planning, Exercise and Training Management Unit
Emergency Management Division
Washington State Military Department, USA

Kenneth Back, Director, Emergency Preparedness Unit
Public Health Emergency Preparedness and Response
Washington State Department of Health, USA

Cam Filmer, Executive Director of Strategic Planning, Policy and Legislation
Emergency Management, British Columbia, Canada

12:20 – 12:30 Transition Break

12:30 - 1:30 Luncheon Speaker - Cholera Epidemic in Haiti, Threat to the Western Hemisphere
Introductions *John Erickson*, Co-Chair, Pacific NorthWest Border Health Alliance

Dr. Daphne Moffett, PhD, Epidemiologist and Deputy Director for the Health System Reconstruction Office at the Center for Disease Control and Prevention, Atlanta, Georgia, USA

1:30 - 1:40 Transition Break

1:40 – 2:10 Early Warning Infectious Surveillance from Health Information Exchanges
Introductions: *Mary Selecky,* Secretary, Washington State Department of Health

Tony Marfin, MD, MPH, Washington State Epidemiologist for Communicable Diseases, Washington State Department of Health, USA

2:10 – 3:20 Reporting Out – Workgroup Leads

- *Track 1 Epidemiology and Surveillance*
- *Track 2 Public Health Laboratories*
- *Track 3 Health Emergency Management*
- *Track 4 Emergency Medical Services*
- *Track 5 Communications*
- *Track 6 Public Health Law*
- *Track 7 Indigenous Health*

3:20 – 3:30 Next Steps/Closing Remarks from Pacific NorthWest Border Health Alliance

John Lavery, Co-Chair
John Erickson, Co-Chair
Wayne Dauphinee, Executive Director

3:30 Workshop Ends

Appendix B

Speaker Biographies

(in alphabetical order)

Susan Allan
Associate Professor
Northwest Center for Public Health Practice

Susan Allan has been the Director of the Northwest Center for Public Health Practice since July 2008. Prior to coming to the University of Washington, she worked in state and local public health for more than 23 years, including three years as Public Health Director and State Health Officer for Oregon, and 18 years as the Health Director for Arlington County, Virginia. In Arlington, she was responsible for programs for behavioral health and substance abuse programs. She is a Fellow of the American College of Preventive Medicine.

She served on the Institute of Medicine committees that produced the reports "Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century" and "Training Physicians for Public Health Careers." She is currently a member of the Board on Population Health and Public Health Practice of the Institute of Medicine, and is Vice President of the Council on Education for Public Health.

Leanne Appleton
Operations Director
Perioperative Services Vancouver

Leanne, first educated in Alberta (Foothills School of Nursing), possesses 25 years of experience working within Health Care, including leadership positions within nursing practice, education, and Health Care Administration. Leanne's past positions have included supporting quality patient care as a Clinical Nurse Specialist (Trauma and Orthopedics), and improving Trauma Systems as Trauma Program Manager, as well as Patient Services Manager - Perioperative Services within Vancouver, Vancouver Coastal Health (VCH).

Over the past 6 years Leanne has provided senior management support and development as Operations Director, Perioperative Services Vancouver - VCH. Leanne was seconded in 2009/2010, as the Director Olympic and Paralympic Planning, Vancouver - VCH. Her focus was centered on the planning and implementation of the Mobile Medical Unit (MMU) - which provided Surgical and Critical Care capacity during the 2010 Winter Games. In April 2011, Leanne commenced a new position within PHSA as the Clinical Operations Director - MMU.

Ken Back, Director, Emergency Preparedness Unit
Public Health Emergency Preparedness
Washington State Department of Health

Ken is currently the Director of the Emergency Preparedness Unit (EPU) at the Washington State Department of Health where he has worked in the preparedness program since 2002. Among other functions the Emergency Preparedness Unit is responsible for the operation of the Departments Emergency Operations Center and its emergency alert and notification system. Mr. Back also oversees emergency planning, including continuity of operations planning, training and exercise are part of the responsibilities of the EPU. Managing the Strategic National Stockpile is also with EPU; management of the state's system of identifying and registering health and medical volunteers including the Medical Reserve Corps.

Prior to coming to the Department of Health Ken spent ten years as a program manager at Washington State Emergency Management where he participated in the state's response to numerous disasters including the Nisqually earthquake. He has a Masters Degree in Public Administration from the Wharton School at the University of Pennsylvania and his undergraduate degree is in economics.

Sylvie Bérubé, EMBA
Regional Director
British Columbia - Yukon Region
Public Health Agency of Canada

Sylvie Bérubé has over 20 years of public sector experience both in Ottawa and in Vancouver with most of her career within the health portfolio. She holds an MBA from Simon Fraser University (2002) and a BA with Distinction in Sociology from Carleton University (1996).

Ms. Bérubé held a series of positions in Health Canada from 1987 to 2004, where she played a variety of roles of increasing seniority addressing strategic planning, policy analysis, managing community-based programs, conducting evaluations and developing frameworks and agreements addressing public health issues involving three levels of governments. In October 2006, she was appointed the Regional Director, BC/Yukon Region, for the Public Health Agency of Canada.

From April 2004 to October 2006, Ms. Bérubé was the Executive Director of the Pacific Federal Council. As of April 2007, Sylvie is serving as the Pacific Federal Council's Official Languages Champion.

Ms. Bérubé volunteers on the Vancouver chapter of the Institute of Public Administration of Canada which provides a way to influence broader public administration initiatives that transcend jurisdictions.

Eric C. Blank, Dr. P.H.
Senior Director, Public Health Systems
Association of Public Health Laboratories

Dr. Blank's holds a current position at the Association of Public Health Laboratories (APHL).as the Senior Director, Public Health Systems. Dr. Blank received his B.S. degree in Bacteriology from Utah State University in 1973. He took a position with U Assistant Laboratory Director for the Missouri State Public Health Laboratory and became the Director of that institution in 1987.

He retired from that position in 2008 and worked as a consultant until 2011 when he assumed his

Throughout his career, Dr. Blank has been engaged in professional activities with APHL and the Association of State and Territorial Health Officials (ASTHO). He served on the Exploring Accreditation National Committee which drew up the framework for accreditation of health departments in the US. He also has extensive experience in international work having provided consultations and assessments in sub-Sahara Africa, China, and South America and has served on a WHO consultation. He served as the APHL/US liaison to the Canadian Public Health Laboratory Network (CPHLN) and is currently the APHL representative to the US/Mexico Bi-national Health Commission.

Doris G. Brown, M Ed, MS, RN, CNS
Public Health Executive Director (Center for Community Preparedness)
Louisiana Department of Health and Hospitals-Office of Public Health-Community Preparedness

Doris Gray Brown has been a registered nurse for 35 years and has over 30 years of experience in public health nursing, education and health care administration. Currently, she is serving as the Public Health Executive Director for Community Preparedness. In this leadership role Doris provides oversight for several public health programs Emergency Preparedness & Response (Pandemic Flu, Cities Readiness Initiative, Strategic National Stockpile, Medical Social Services, Community Outreach, Emergency Systems for Advanced Registration of Volunteer Health Professionals (ESAR-VHP), Workforce Development and most recently the H1N1 Response efforts.

During the past few years, Doris has been instrumental in meeting the planning and training needs of the Louisiana Department of Health and Hospitals emergency preparedness efforts. The biggest test of her leadership came during 2005 hurricane season. Doris was on the forefront of the hurricane preparation, response and recovery efforts serving as part of the Unified Command Staff for DHH/OPH.

Doris was one of 20 nurses in executive leadership roles nationwide selected as 2006 Robert Wood Johnson Executive Nurse Fellowship program. In 2006, she received the American Heart Association: Woman with Heart Award for her spirit of “Heart.” In January 2008, Doris was inducted into the Louisiana Nursing Hall of Fame by the Louisiana State Nurses Association.

Kirsten Brown
Manager, Planning, Emergency Management Unit,
Ministry of Health

Kirsten Brown is currently the Manager, Planning for the Ministry of Health’s Emergency Management Unit. She began working with the Ministry in 2008 and since that time, has been involved in numerous emergency planning and response activities. In addition, Kirsten acts as the Business Continuity Advisor for the Ministry of Health and is an Associate Business Continuity Planner, certified through the Disaster Recovery Institute.

Kirsten began working in the field of emergency management in 2003 in a volunteer capacity with the City of Victoria. In 2006, she joined a delegation of emergency planners on a visit to

New Orleans following Hurricane Katrina to research disaster recovery, an experience that has shaped her work in emergency management. Kirsten holds a Masters of Public Administration (2008), a Bachelor of Laws (2008) and a Bachelor of Science (2004), all from the University of Victoria.

Richard Buck
Border Health Manager and First Nation Liaison
Office of Health Emergency Preparendess
New York State Department of Health

Richard Buck is the Border Health Manager and First Nation Liaison working in the Office of Health Emergency Preparedness which is part of the New York State Department of Health and located in Albany, New York.

Richard has been working in the health emergency preparedness field for the past six years. His portfolio includes a focus on both a disease surveillance, alerting and communication project with emphasis on the CA/US international border region and, health emergency planning and preparedness with eight American Indian Nations across the state.

Charles W. Cunningham
Agriculture Branch Chief
US Customs and Border Protection
Office of Field Operations
Area Port of Blaine, Washington

Charles Cunningham is the U.S. Customs and Border Protection Agriculture Branch Chief and Assistant Emergency Manager for the Area Port of Blaine, Washington. Mr. Cunningham has managerial oversight over the 50 Agriculture Specialists working on the Washington State – British Columbia border and they are responsible for the inspection, analysis and regulation relating to the importation or exportation of plants, plant products, animal products and by-products and miscellaneous articles of restricted or prohibited agricultural commodities in personal baggage, foreign mail and commercial conveyances.

Chief Cunningham is responsible for the Pandemic Preparedness planning and training of the Customs and Border Protection Officers ensuring that they are prepared to respond to any outbreak of Highly Pathogenic Avian Influenza (A/H5N1) or Pandemic Influenza (A/H1N1).

Mr. Cunningham retired from the U.S. Navy, graduated with a BA in Biology from the University of Rochester, earned a MA in National Security Affairs from the US Naval Postgraduate School, and is a graduate of the US Army Command and General Staff College. Chief Cunningham has worked as a Plant Protection and Quarantine Officer and CBP Agriculture Specialist since 2000.

Wayne Dauphinee, BPE, MHA
Executive Director
Pacific NorthWest Border Health Alliance

Wayne Dauphinee is the former Executive Director, Emergency Management Branch, Ministry of Health Services, Victoria, British Columbia. He is a qualified health services administrator with over 40 years experience in the field.

While with the Ministry of Health Services Mr. Dauphinee was responsible for providing leadership in the implementation of a strategic planning process for emergency management, including maintaining the momentum, which BC has displayed in leading numerous pan-Provincial and pan-Canadian public health preparedness initiatives. In this regard, he was a driving force in the creation and operationalization of the Pacific NorthWest Border Health Alliance fostering improved dialogue and collaboration on the management of bi-national cross-border public health preparedness. Most recently, as a Contract Service Provider, he assisted in guiding the British Columbia health sector planning for the 2010 Olympic and Paralympic Winter Games.

He is a former co-chair of the Federal/Provincial/Territorial (F/P/T) Emergency Preparedness and Response Expert Group and the F/P/T Pandemic Preparedness Health Operations Working Group and was a member of the National Pandemic Influenza Committee. He also served as chair of the F/P/T Council of Health Emergency Management Directors.

Mr. Dauphinee and wife Nancy (nee Trowell) have two grown children, Michelle and Jason, who together with their families all live in Victoria BC.

Jeffrey Scott Duchin, MD
Chief of the Communicable Disease Epidemiology & Immunization Section
Public Health – Seattle & King County, Washington

Jeff Duchin is Chief of the Communicable Disease Epidemiology & Immunization Section for Public Health – Seattle & King County, Washington, Associate Professor of Medicine, Division of Infectious Diseases, and Adjunct Associate Professor in the School of Public Health and Community Medicine at the University of Washington.

Dr. Duchin trained in internal medicine at Thomas Jefferson University Hospital in Philadelphia. He completed a fellowship in general internal medicine and emergency medicine at the Hospital of the University of Pennsylvania and infectious disease subspecialty training at the University of Washington. After several years on the faculty at the University of Pennsylvania, he joined the Centers for Disease Control and Prevention's (CDC) Epidemic Intelligence Service (EIS) program, assigned to the National Center for Infectious Diseases. After completing the CDC's Preventive Medicine training, he worked for CDC as a medical epidemiologist in the Division of Tuberculosis Elimination and the HIV/AIDS Special Studies Branch before assuming his current position.

Dr. Duchin is a current member of the US Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (ACIP) and previously served and the liaison to the ACIP from the National Association of County and City Health Officials (NACCHO). His is a member of the Institute of Medicine's (IOM) Forum on Microbial Threats and the Forum on Medical and Public Health Preparedness for Catastrophic Events. Dr Duchin is a Fellow of the Infectious Disease Society of America (IDSA) and the American College of Physicians. He is a member of the IDSA's National and Global Public Health Committee and Pandemic Influenza Task Force and is past-Chair of the IDSA's Bioemergencies Task Force.

Dr. Terrence M.I. Egan, Ed.D.
WA Military Department
Emergency Management Division

Terry joined Washington State Service in 1990 after serving for over 20 years in the US Air Force in a variety of command and staff positions retiring from active service with the rank of Lieutenant Colonel. His first state position was with the Washington State Department of Transportation (WSDOT) as the Maintenance and Operations Training Program Manager. He joined the Emergency Management Division (EMD) of the Washington Military Department In April 1997. He is currently the Manager of the Planning, Exercise and Training Unit where he has the lead for development of critical infrastructure protection strategies for Washington State.

Terry is a past-Chair of the Emergency Management Assistance Compact (EMAC) Executive Task Force. EMAC is the nation's mutual aid compact signed by all 50 states,3 territories, and Washington, DC. He is currently the Chair of the Pacific Northwest Emergency Management Arrangement, a mutual aid compact of Northwest states, British Columbia, and Yukon Territory. He was also the principal investigator for a NASA research grant for integration of remotely sensed data into emergency management operations where he spearheaded the enhancement of EMD's Geo-spatial Information System capabilities. Terry has a Bachelor of Arts degree in Political Science, a Master of Arts in Public Administration, and a Doctorate in Education.

John Erickson, Special Assistant
Washington State Department of Health,
Director of the Public Health Emergency Preparedness and Response Program

John Erickson is a Special Assistant to the Secretary of the Washington State Department of Health and Director of the Public Health Emergency Preparedness and Response program. In this role he coordinates the overall agency work on emergency preparedness and response. He also administers the cooperative Centers for Disease Control and Prevention and Assistant Secretary for Preparedness and Response agreements As such he is involved in all aspects of natural, biological, chemical and radiological emergency planning with Washington State's hospitals, local public health agencies, tribal and other federal, state and local partners.

Prior to this he was the Director of the Department's Division of Radiation Protection. John joined the Washington program in 1982 as an environmental health physicist. He moved up through the ranks within the Division becoming the Director in 1996. John received his training at the University of California at Los Angeles and the University of Washington. He holds an MS degree in nuclear chemistry.

Cam Filmer, Executive Director
Emergency Management
Canada

Cam Filmer is the, Executive Director of Strategic Planning, Policy and Legislation, Emergency Management in British Columbia, Canada.

Jeffrey Goddard , Emergency Management Coordinator

Canada Border Service Agency, Canada

Jeffrey Goddard is the Emergency Management Coordinator for the Program and Communication Division, Pacific Region at the Canada Border Service Agency, of Canada.

Bob Gallaher, Director Operations
British Columbia Ambulance Service, Vancouver Island

Bob Gallaher has been working in EMS for over 30 years. He started with BCAS as a part time paramedic in remote BC. He then joined the fledging Edmonton Ambulance Authority during its inception and subsequently graduated from NAIT with an honours diploma as an Advanced Care Paramedic. Bob was the onsite medical coordinator during the Edmonton Tornado. He also worked with a First Nations ALS service in Hobbema, Alberta and the Shock Trauma Air Rescue Society (STARS). Bob was lured back to BC as the Dispatch Manager for the Interior and Northern BC. He is credited with introducing Advanced Medical Priority Dispatch System to BC during his tenure in this position.

Bob went on to hold positions as a Superintendent, A/ Regional Director, then Executive Director of the BCAS for the Interior. He led a multi-disciplinary team during Firestorm 2003 for BCAS and assisted the Health Authorities during this crisis. Bob, along with Interior Health, brought the first ground based Critical Care Paramedic Program to the Interior, which provided support to rural and remote medical facilities for trauma and complex care patients. He was also instrumental in implementing the first integration project between a Health Authority and BCAS in Midway. Bob helped develop the EMS Accreditation Standards and was responsible for the piloting the standards in BC.

Caitlin Harrison
Regional Emergency Preparedness & Response Coordinator
Public Health Agency of Canada, British Columbia/Yukon

Caitlin Harrison is a Policy Research Advisor within the Public Health Agency of Canada's BC/Yukon Regional Office. Her interest in emergency management developed in 2005, during the aftermath of Hurricane Katrina.

Since that time, Caitlin has contributed to health emergency management within the Vancouver Island Health Authority, the City of Victoria's Emergency Social Services, the University of Victoria, Public Safety Canada, and the Public Health Agency of Canada. Caitlin holds a B.A. with Distinction in Anthropology from the University of Victoria, and is proud to call Canada's west coast "home."

Mike Harryman, BM, AA
Emergency Preparedness Manager
Oregon State Public Health Division
Oregon Health Authority & Department of Human Service

Mike Harryman has served as the Preparedness Manager of the Oregon Department of Human Services Public Health Division Emergency Preparedness Program since February 2006. Within

the preparedness program for Oregon, both the CDC-PHEP and ASPR-HPP cooperative agreement grants are managed at the state level within Mike's program.

Prior to this assignment, he was the program support manager for the Office of Public Health Systems where he managed administrative operations for the Drinking Water, Emergency Medical Services & Trauma, Radiation Protection Services, Environmental Toxicology, Health Care Certification and the Food Safety programs.

Mike is a veteran of the 91'Gulf War and retired after a 22-year career at the rank of a Master Sergeant from the US Army/Oregon Army National Guard in 1999. During his deployment to Saudi Arabia in support of Operation Desert Shield/Storm, he served as the Platoon Sergeant of the 97-member Ground Support Platoon in the 2186 Maintenance Company.

Mike is currently enrolled in the American Military University Master's program for Emergency and Disaster Management and is due to complete the program in November 2010. He holds a B.S. in Business Management from the University of Phoenix and an A.A. from Vincennes University in Indiana.

Mike was born and raised in Oregon, is married and he and his wife are raising two sons.

Kristopher Hayne, BSc Business Area Expert
Ministry of Public Safety and Solicitor General
Emergency Management British Columbia
Telecommunications and Specialty Systems

As a Business Area Expert and GIS Specialist, Kristopher brings over five years of experience in GIS and three years in the design, implementation and integration of enterprise emergency management systems in government.

He has been involved in the planning and operational support of major events and crisis situations utilizing system development and implementation projects at Provincial and National levels; including public safety planning and response system implementation for the Vancouver 2010 Olympics Games and a variety of major emergency events and exercises within the Province of BC.

Bonnie Henry MD, MPH, FRCP(C)
Columbia Centre for Disease Control

Bonnie Henry is the Director of the Public Health Emergency Services British at the Columbia Centre for Disease Control, University of British Columbia, Canada.

She is also an Assistant Professor at the School of Population and Public Health, University of British Columbia, Canada.

Kathryn Howard
Assistant Deputy Minister,
Emergency Management and Corporate Affairs Branch

Kathryn Howard is Assistant Deputy Minister (ADM), Emergency Management and Corporate Affairs of the Public Health Agency of Canada. Before joining the Agency in June 2010, Ms. Howard was the Assistant Deputy Minister, Service Innovation and Technology, at Citizenship and Immigration Canada, a position she held since 2008. There, she led the Department's business and service transformation agenda; major transformation initiatives include e-services, biometrics and a global case management system.

Ms. Howard worked for the Canadian Red Cross under the Government of Canada Fellowship Program.

Ms. Howard served as Executive Director of the Shared Services Office at Natural Resources Canada, where she designed, launched and led the Shared Services Office, a pan-departmental administrative business unit responsible for delivering client services.
She was at Industry Canada as Director General, Life Sciences Branch, where she helped to advance the economic growth and international competitiveness of Canadian life sciences industries.

Ms. Howard holds a Master's degree, Business Administration (University of Ottawa) and a Bachelor of Arts (University of Waterloo).

Norma Jones RN, BScN, MA, ENC (C)
Corporate Director, Emergency Management and Business Continuity
Vancouver Island Health Authority

Norma Jones has worked for the Vancouver Island Health Authority, in its various forms, for over 28 years. In that time she has held many advancing positions ranging from Staff nurse, to Clinical Educator to Manager to Director. Throughout the years Norma has also been involved in the development of the Emergency Management program within the health authority by providing the clinical perspective and clinical expertise to this program. In January 2010 she became the Corporate Director of Emergency Management and Business Continuity.

Norma's educational background includes a Masters in Leadership, certification in both Emergency and Critical care nursing specialties as well as Emergency Management.

John Lavery, Director
Emergency Management Unit
Ministry of Health
British Columbia, Canada

John Lavery is the Executive Director of the Emergency Management Unit at the Ministry of Health Services in British Columbia and was previously the Director of Emergency Management at the Provincial Health Services Authority in Vancouver.

Prior to moving to British Columbia, he spent 10 years in Manitoba in a variety of emergency management positions including as the Director of the Office of Disaster Management with Manitoba Health, and an Emergency Management Advisor with the Manitoba Emergency Measures Organization.

Anthony (Tony) Marfin, MD, MPH
Washington State Epidemiologist for Communicable Diseases
Washington State Department of Health

Dr. Marfin is the Washington State Epidemiologist for Communicable Diseases and a Clinical Professor with an appointment in Epidemiology at the University of Washington. In addition to this academic and clinical training, he served as a Medical Epidemiologist for 13 years with the Centers for Disease Control and Prevention's Division of Vector-Borne Infectious Diseases, Division of Global Migration and Quarantine, and the Division of STD Prevention. Over the past 25 years, his primary epidemiology study interests have been the study of bacterial and viral pathogens causing encephalitis and meningitis and the use of non pharmaceutical interventions for the control of diseases with pandemic or epidemic potential.

Dr. Marfin served for two years with Centers for Disease Control and Prevention's Influenza Division and was assigned to the U.S. Naval Medical Research Unit in Cairo, Egypt as a regional influenza subject matter expert. Dr. Marfin has also served as the Program Director for the HIV/AIDS, STD, and TB Prevention Program at the Oregon Health Division and a Medical Officer for the Indian Health Service in southern Arizona. Dr. Anthony Marfin earned a medical degree from the University of California Davis and a Master of Public Health degree from the University of California (Berkeley).He is specialty and sub-specialty trained in Internal Medicine, Infectious Diseases, and Pulmonary/Critical Care Medicine.

Therese Mickelson, ABC
Accredited Business Communicator
Mickelson Consulting Inc, Canada

Therese Mickelson is an internationally Accredited Business Communicator who has managed a wide range of public relations issues and initiatives in both the public and private sectors over the course of 20 years.

She has successfully implemented strategic communications involving issues management and crisis situations, from labor disruptions and major condominium fires involving evacuations, to natural disasters like the 100-year flood in Manitoba. As the former Manager of Corporate Communications for the City of Coquitlam, she has an extensive understanding of the issues, opportunities and challenges facing local government, and she has also provided her communications expertise at a provincial level and in the private sector. She has been recognized with multiple professional awards, counseled both political and non-political staff and served as the City of Coquitlam's media strategist and spokesperson.

Therese now applies her expertise as a communications consultant, delivering communication advice and implementation support, including specializing in social media, issues management and crisis communication. Therese also provides related services such as strategic planning, strategic branding, website development, event management, and education and training services.

Dr. Daphne Moffett
Epidemiologist and Deputy Director
Health Systems Reconstruction Office
CDC's Center for Global Health

Dr. Moffett is the Deputy Director for the Health Systems Reconstruction Office in the CDC's Center for Global Health. She is responsible for coordinating public health strengthening efforts in Haiti. Immediately following the January 12, 2010 earthquake, she deployed to Haiti to serve as the agency expert in environmental health, sanitation, and toxicology. Since then she has been on multiple tours of duty to Haiti serving as the Cholera Team Lead and Acting CDC-Haiti Country Director.

She is a Commissioned Officer in the US Public Health Service and holds the rank of Captain. She has been an officer for 11 years holding multiple leadership positions within the US Public Health Service and served as Chairman of the Board of Directors for the National Commissioned Officers Association. She has worked in the arenas of Tribal health, environmental health, injury prevention, emergency preparedness, HIV research and prevention, and global health.

Captain Moffett has published book chapters and manuscripts in the areas of toxicology, environmental health, injury prevention and HIV. She has been recognized by her agency for her expertise on chemical weapons of mass destruction and industrial chemicals and has served as an on-call expert during national events.

Dr. Shamnir N. Mukhi, EPng, Chief Engineer
Canadian Network for Public Health Intelligence (CNPHI)
National Microbiology Public Health Agency of Canada

Over the last decade, Dr. Mukhi has gained vast experience in the development and implementation of national, provincial and regional systems in various areas within the human, animal and environmental health informatics arena including disease surveillance, data analysis, response and communications.

He is the founding architect and the engineer behind the cutting edge technology of the Canadian Network for Public Health Intelligence (CNPHI) platform developed in the wake of SARS that is improving response and management to public health issues across the country.

He is currently the Chief Engineer of the CNPHI program and continues to direct the development of its capability to improve public health informatics in Canada.

Monika Naus, MD, Associate Medical Director, Epidemiology
Medical Director, Immunization Programs
British Columbia Centre for Disease Control

Dr. Monika Naus is the Medical Director of Immunization Programs at BCCDC and the Acting Medical Director of the Communicable Disease Prevention and Control Service at BC Centre for Disease Control. She is associate professor at the School of Population and Public Health at UBC. She trained as a public health physician at the University of Toronto and worked at the provincial ministry of health in Ontario in communicable disease control for 11 years prior to arrival in BC including 4 years as the provincial epidemiologist.

She was also a member of the National Advisory Committee on Immunization, which issues statements for recommended use of vaccines in Canada and publishes the Canadian Immunization Guide, and chaired it for the 4 years ending 2007.

Emily Nixon
British Columbia Ministry of Health

Emily Nixon is the Manager of the Social Policy and Programs for the Emergency Management Unit of the British Columbia Ministry of Health in Canada.

Rear Admiral Patrick O'Carroll, MD, MPH
Regional Health Administrator
US Department of Health and Human Services, Region X

As Regional Health Administrator, RADM O'Carroll serves as the region's principal federal public health physician and scientist representing the Assistant Secretary of Health and the U.S. Department of Health and Human Services (HHS). On behalf of the HHS Assistant Secretary for Preparedness and Response, he also serves as the Pandemic Influenza Senior Federal Official for Health, for Department of Homeland Security Region E (USPHS Regions IX and X). Since November 2008, he has also served as Acting Regional Director, HHS Region X, on behalf of the HHS Office of Intergovernmental Affairs.

RADM O'Carroll received his medical degree and his Masters in Public Health from Johns Hopkins University in 1983. As Associate Director for Health Informatics at Center for Disease Control and Prevention's Public Health Practice Program Office, he defined, developed and directed Center for Disease Control and Prevention's national Health Alert Network. During his 24 years with USPHS, as an epidemiologist, informaticist, program director and leader, RADM O'Carroll has worked in on a great variety of health and policy challenges, including immunization; chronic disease; maternal and child health; environmental health; infectious disease epidemic control; behavioral health; global health and disease surveillance; and bioterrorism and disaster preparedness.

Ivan Peterson, Director
West Coast & Yukon District,
Canada Border Services Agency

Ivan Peterson works with the Canada Border Services Agency and is the Director for the West Coast and Yukon District. He has been with the Public Service since 1986. During this time, he has worked in numerous locations including, Vancouver, Beaver Creek Yukon, Prince Rupert, Victoria and a couple of assignments with the CBSA National Headquarters in Ottawa. Within the Lower Mainland, Ivan has held management positions at Vancouver International Airport, Pacific Highway and Metro Vancouver Marine Operations. He is currently stationed in Victoria.

Ivan has been involved with numerous projects including the lead manager in evaluating a prototype gamma ray inspection technology - specifically, the Mobile Vehicle and Cargo Inspection System (VACIS) for use in marine ports. Ivan was selected to join a Canadian delegation to participate in exercise Maru in New Zealand. Operation Maru was a Proliferation Limitation Initiative exercise that focused on dealing with proliferation of weapons of mass destruction. More recently, Ivan had involvement with the two mass migrant arrivals on Vancouver Island. Ivan was the C.B.S.A. event Commander for the arrival phase of the Sun Sea.

Superintendent Pascal Rodier
British Columbia Ambulance Service
Canada

Superintendent Rodier began his career as a Paramedic with the British Columbia Ambulance Service (BCAS) in 1988. In August 2002, he was promoted to Paramedic Chief and accepted his first posting in the City of Richmond. In 2008 he was promoted to Superintendent and he was assigned to the Lower Mainland Regional Headquarters Operations Section. He is currently the Officer in Charge of the Lower Mainland's South Fraser District.

Superintendent Rodier was one of the original planners of, and has been, the BCAS' project team leader for the province-wide expansion of the Combined Events Radio Project (CERP) since 2003. He is a member of CITIG and was a part of the national working group that wrote, the recently approved, Communications Interoperability Strategy for Canada and the Communications Interoperability Action Plan for Canada. Also, he is currently the EMSCC Representative and Co-Chair on the Tri-Services Special Purpose Committee on 700 MHz Broadband for Mission Critical Public Safety Data.

Superintendent Rodier was presented with the Governor General's Emergency Medical Services Exemplary Service Medal in 2010. He has a Master of Arts, in leadership with a specialty in health, from the Royal Roads University in Victoria BC

Jim Schwendinger
Center for Disease Control and Prevention

Jim Schwendinger, MSN, MPH, NP is the Director of the EPI-X and Team Lead for the EPI-X and HAN Team for the Office of Public Health Preparedness and Response at the US Centers for Disease Control and Prevention.

Mary C. Selecky, Secretary
Washington State Department of Health

Mary C. Selecky has been Secretary of the Washington State Department of Health since March 1999, serving under Governor Chris Gregoire and former Governor Gary Locke. Prior to working for the state, Mary served for 20 years as administrator of the Northeast Tri-County Health District in Colville, Washington. Throughout her career, Mary has been a leader in developing local, state and national public health policies that recognize the unique health care challenges facing both urban and rural communities.

As secretary of health, Mary has made tobacco prevention and control, patient safety, and emergency preparedness her top priorities. Mary is known for bringing people and organizations together to improve the public health system and the health of people in Washington. Mary has served on numerous boards and commissions; she is a past president of the Association of State and Territorial Health Officials, receiving the 2004 McCormack Award for excellence in public health, and is a past president of the Washington State Association of Local Public Health Officials. A graduate of the University of Pennsylvania, she's been a Washington State resident for 35 years.

Christopher Smith, MA, CBCP, P.Geo.
Director, Planning & Programs
Emergency Management Unit
Population & Public Health Division
Ministry of Health

Chris has worked for the Province of British Columbia for over 20 years and specifically with the health emergency management program in the BC Ministry of Health for the past 15 years.

His university education includes an undergraduate degree in the earth sciences and leadership training at the graduate level. Chris has recently been appointed to work on the cross border file and is very excited to continue to work on enhanced planning in this area. During his off time, you can find Chris playing golf and he is happy to note that his golf course has done some cross border planning having a number of reciprocal arrangements with many of the nice golf courses in Washington State.

Chantz Strong
British Columbia Region
Health Canada, Canada

Chantz Strong joined Health Canada's Compliance and Enforcement Directorate as the Manager of Strategic Planning in March 2011. Prior to that he worked at Public Safety Canada where he worked on issues related to the movement of goods and people at the border, critical infrastructure protection, and immigration issues. He has worked at the Privy Council Office, Finance Canada, and in the private sector as a management consultant. Chantz has degrees from MIT and McGill University and currently lives in Vancouver BC with his wife.

Jack Thompson, MSW
Senior Lecturer
Department of Health Services
University of Washington
Washington State

Jack Thompson has been on the faculty of the Department of Health Services since 1994. From 2000 to 2008, he served as the Director of the Northwest Center for Public Health Practice. Prior to his appointment, Thompson was employed by the Seattle-King County Department of Public Health for ten years, and was the Director of the Seattle Health Services Division from 1986 to 1994.

Before coming to the Seattle-King County Department of Public Health, Thompson was Executive Director of Neighborhood Health Centers of Seattle, a consortium of community health centers, for six years. Prior to his Lecturer and Senior Lecturer appointments, he served as a Clinical Instructor in the Department of Health Services for six years.

Wayne Turnberg, PhD, MSPH
Epidemiology Preparedness and Response Program Manager
Washington State Department of Health's

Office of Communicable Disease Epidemiology

Wayne Turnberg currently serves as the Epidemiology Preparedness and Response Program Manager with the Washington State Department of Health's Office of Communicable Disease Epidemiology. Since 2004, Wayne has worked closely on bi-national cross border infectious disease surveillance and response issues in the Pacific Northwest.

He received his Bachelor of Science degree from the University of Massachusetts, and his Master of Science in Public Health degree from the University of Washington. In 2006, he received his Doctor of Philosophy degree from the University of Washington, School of Public Health, focusing study on respiratory infection control practices among health care workers.

Appendix C

2011 Pacific Northwest Border Health Alliance Workshop Evaluation

Response Rate = 41% (72/176)

QUESTION 1. Where is your work location?

Alberta	1	1.4%
British Columbia	29	40.9%
Saskatchewan	0	0%
Yukon Territory	0	0%
Alaska	4	5.6%
Idaho	0	0%
Montana	0	0%
North Dakota	0	0%
Oregon	2	2.8%
Washington	33	46.4%
Canada First Nation	0	0%
US Tribe	1	1.4%
Other:	1	1.4%

QUESTION 2. What type of organization/agency do you work for?		
Local/Regional Government	12	16.7%
State/Provincial/Territorial Government	35	48.6%
Federal/National Government	8	11.1%
Hospital or Community Clinic	3	4.2%
Military	2	2.8%
First Nation / Tribal Affiliation	2	2.8%
College or University	3	4.2%
Business	1	1.4%
Other:	6	8.3%

QUESTION 3. What days/sessions of the workshop did you attend ?		
Tuesday AM, May 24 (Orientation Session)	38	53.5%
Tuesday PM, May 24 (Workgroup Breakout Session)	60	84.5%
Tuesday PM, May 24 (PNW Border Health Alliance Meeting)	25	35.2%
Wednesday May 25 (Workshop Day 1)	67	94.4%
Thursday, May 26 (Workshop Day 2)	66	93.0%

QUESTION 4. What workgroup breakout session did you attend on Tuesday, May 24?

Epidemiology and Surveillance	13	18.3%
Public Health Laboratories	7	9.9%
Emergency Management	13	18.9%
Emergency Medical Services	12	16.9%
Communications	3	4.2%
Public Health Law	4	5.6%
Indigenous Health	7	9.9%
Floated between different workgroup meetings	3	4.2%
I did not attend a workgroup breakout session	9	12.7%

QUESTION 5. The workshop workgroup breakout session that you attended provided a valuable forum for exchange of ideas and information.

Strongly Agree	29	42.0%
Agree	27	39.1%
Undecided	4	5.8%
Disagree	1	1.5%
Strongly Disagree	1	1.5%
I did not attend a workgroup breakout session	7	10.1%

QUESTION 6. There was enough time during your workgroup breakout session to meet its objectives.

Strongly Agree	14	20.3%
Agree	35	50.7%
Undecided	5	7.3%
Disagree	7	10.1%
Strongly Disagree	1	1.5%
I did not attend a workgroup breakout session	7	10.1%

QUESTION 7. There was enough unstructured time during the workshop to informally converse with colleagues.

Strongly Agree	17	24.6%
Agree	42	60.9%
Undecided	5	7.3%
Disagree	5	7.3%
Strongly Disagree	0	0%

QUESTION 8. This workshop was useful in strengthening public health preparedness and response partnerships across borders.

Strongly Agree	37	52.9%
Agree	29	41.49%
Undecided	3	4.3%
Disagree	1	1.4%
Strongly Disagree	0	0%

QUESTION 9. The World Cafe Poster Session provided a valuable forum for learning and exchanging ideas with colleagues.

Strongly Agree	8	11.3%
Agree	38	53.5%
Undecided	11	15.5%
Disagree	1	1.4%
Strongly Disagree	0	0%

QUESTION 10. If a cross border workshop is held next year, I plan to attend.

Strongly Agree	32	44.4%
Agree	20	27.8%
Undecided	18	25.0%
Disagree	2	2.8%
Strongly Disagree	0	0%

QUESTION 11. Please indicate the format you would like to see for the next cross border workshop.

3 day workshop (same as this year's workshop)	45	63.4%
2 day workshop	24	33.8%
1 day workshop	1	1.4%
Other:	1	1.4%

QUESTION 12. What cross border issues would you like to see addressed at the next cross border workshop?

1. a) Environmental Health; b) Healthcare system surge; c) Noninfectious disease public health issues
2. A more in depth look at the development of Operational Plans under PNEMA including developing and prioritizing a strategy to do this work.

3. Concrete examples of incidents/examples where multiple agencies worked together on response. What worked, what didn't.
4. Continued work with colleagues to improve how we may respond together.
5. Coordinated Communications between LE, EMS, Fire,EM & Canadian partners
6. Cross border interoperable communication.
7. Cross Border Mutual Aid - Hazmat/decon etc.
8. cross-border mutual aid
9. Cross-comparison of similar plans (e.g., multi-casualty response coordination, or patient decontamination, or public health emergency plans, or... etc), and discussion of how our joint efforts could improve those plans. Identification of priority joint planning projects - i.e., discuss the relevant shared risks and the relevant plans, before we try to talk about training and exercises.
10. Environmental Health related topics with environmental health staff as well as epidemiologists.
11. Food safety regulatory activities.
12. Global health and connecting the Alliance to the rest of the world
13. Health information exchange.
14. I think it is important that:
    - Agendas for the working groups be followed
    - Some information be available about work done and what the expectations are of the group. I did not have a clear understanding of this when the group session ended.
15. I think we should address how we will sustain this over time--not only financially but with our people resources. Many of us are approaching retirement and would like to see this work continue.
16. I would like to se some cross border research projects happening in addition to the policy which is great BTW
17. I would love to see more involvement from the food safety groups (multi-jurisdiction recalls, outbreaks).
18. Imported/ Exported Food Products, traceability/ food safety issues, food recalls, etc/
19. Keeping all this work going as funding cuts continue.
20. -Lessons learned/successes and failures
    -Environmental health
    -Include presentations from other PNWBHA Alliance partners (Alaska, Yukon, Montana, Sask, Manitoba,etc)
    -Sharing of roles and responsibilities of partners (very high level and generic).
21. Medical surge planning
22. Mobile health, electronic health records, new technologies, community health/
23. More emphasis on actual incidents rather than exercises, drills, and processes.
24. More on interoperability - Face to face/voice/data
25. Non- infectious issues. Smoke impacts from agricultural burning, fraser valley airshed, cross border river issues.
    Related to any threat - are we clear on how to manage an event at the border? As a probable early responder with responsibility. I'm not sure I can answer that question
26. Pan border agreements/
27. Possibly "healthcare migration"? (e.g. US citizens crossing border for cheaper care, Canadian citizens crossing border for specialty care)
28. Presentation on Tribal/State/Federal and First Nations/Provincial/Federal chain of command.
29. Progress updates on the many items identified during this session. More on mobile medical assets like FMS and ways to potentially move them across international

borders. Would like to see greater involvement from the respective Customs and Border protection agencies.
30. Psychosocial preparedness of HCW
    Psychosocial response initiatives for HCW
31. Radio Communications.
32. Recovery might be a good theme: recovery to floods, fires, etc. Often we focus on response, but after the response we need to return people and equipment, do cost recovery, etc.
33. The strengthening of international agreements and federal support of both the U. S. and Canada.
34. The usefullness of health information exchanges for cross border public health surveillance.
35. Undecided.
36. What are the respective federal government partners doing to enhance the province to state working relationships?
37. Would like to see more opportunity for Healthcare Emergency Management issues.

QUESTION 13. What did you like most about this workshop?

1. a) Hearing from policy makers at federal and state/province level; b) Meet the attendees and learn more about what and how they do similar work in their region, province, country. Good collaboration.
2. a) Workshop venue; b) Quality of speakers; c) Range of topics
3. All.
4. Breakout and plenary sessions were excellent. Victoria is a lovely if pricey place to hold the meeting but it meant that many Canadians could attend which was a real plus. Lots of great networking opportunities. The beer was really good too. Building lasting connections and friendships with our colleagues in other states and provinces.
5. First time for me, I appreciated learning about the issues and the steps being taken to address the issues!
6. Flexibility to exchange ideas with colleagues and networking
7. Good opportunity to work with Canadian colleagues.
8. Great diversity of speakers; Round table seating for all sessions great for encouraging conversation
9. I find what others are doing fascinating.
10. I like the mix of work groups and panelists for learning.
11. I loved the location, the mingling with our Canadian friends
12. I really liked the variety of topics presented. I thought the two presentations on Social Media were particularly useful in my own work and is an challenge/opportunity everyone needs to become more aware of.
13. Interaction to discuss many public health issues of common nature.
14. It is always good to see our colleagues face to face and to meet folks who are representing their sites for the first time.
15. It was very well organized. I also appreciated the inclusion of the Indigenous Health workshop.
16. Learning about the agreements about sharing information and other resources, the tribal/LHJ agreement, international issues
17. a) Lessons learned, b) c) Continued development of the Alliance, d) Breadth of sharing.

18. Meeting partners in other jurisdictions and levels of government. Learning about the current research in disease surveillance. Fostering partnerships for effective response. Learning what others are doing about different aspects of the disaster and emergency management process.
19. Meeting some of our cross-border colleagues.
20. Meeting with colleagues.
21. My first time to attend. I was impressed with the entire workshop: information presented, work group discussions, unstructured time to network with colleagues/counterparts from other government agencies.
22. Networking.
23. Networking and meeting regional partners.
24. Networking and the candid presentations.
25. Networking opportunities; learning about what is happening in other sectors and other geographic areas.
26. Networking with colleagues. extremely beneficial.
27. Opportunity to continue building relationships. Relevant issues.
28. Opportunity to meet and re-meet people.
29. Opportunity to network
30. Presentations and poster session, and networking opportunities
31. Presentations involving multiple speakers from different agencies speaking on one incident response (e.g. Tamil migrants, Victoria)
32. Presentations on disasters that have occurred...the Louisiana event, the public health events, all breakout sessions presentations.
33. Presentations that highlighted the progress made over the last few years.
34. Strong commitment from partners to address challenges.
35. The diversity in topics addressed.
36. The epidemiology breakout session brought food safety into the mix - very good addition.
37. The mix of participants, variety of topics addressed.
38. The networking opportunities were helpful. The technical operational presentations were helpful as well. Haiti outbreak and how they dealt with their mission.
39. The networking possibilities. Also, I enjoyed the Sun Sea presentation.
40. The opportunity to network with cross border partners.
41. The Work Group. Things get decided on direction and planning and logistical issues in these groups.
42. The workgroup breakout session
43. the Workgroup session
    diversity of general session topics
44. Variety of topics and ability to network with other partners.
45. Venue, networking
46. Workgroup breakout session
47. Workgroup session.

QUESTION 14. What suggestions do you have for improving the next cross border workshop?

1. Additional Work Group and Sub Group times.
2. Bring in federal partners knowledgeable on legal issues that are important for cross border work.

3. Consider not scheduling luncheon speakers. This year's May 25th luncheon speaker cancelled which instead gave us time for informal discussions with our colleagues around the lunch table.
4. Do away with any religious references or activities whether they be western or native.
5. Don't have panel presentations with large numbers of speakers. 2-3 speakers maximum in an hour, and leave time for questions and discussion.
6. Don't see a lot of value in poster session or workgroup report-outs. Workshop could be compacted to 2 days.
7. Due to budget cuts, I suggest the workshop be cut to two days. It should mainly be focused on the workgroup activities with only a couple of speakers. First day could be opening remarks and a couple of presentations in the AM and workgroup sessions in the PM. Second day could be workgroup report out and discussion in the AM and closing speaker in the early PM.
8. Expand the Orientation Session to provide an overview of the US and Canadian health systems, focusing on the similarities and differences
9. Fewer but longer sessions. Some sessions seemed a bit rushed and there was a lot of information/topics addressed in one day, particularly the final day of the workshop.
10. Good workshop!
11. I had problems deciding which breakout sessions to attend. Some of my choices occurred at the same time.
12. I think a two-day workshop would be plenty.
13. I thought it was an excellent workshop.
14. I thought the conference was extremely well done. Maybe a couple less presentations in total would have allowed it to feel a little less rushed between presentations.
15. It would be good to rethink the binders: many of the dividers were empty and there was a lot of wasted paper. Also would be helpful to have orientation to US/Canadian healthcare systems.
16. Just a general comment. I really appreciate having been invited to attend and hope that I am invited in the future. Thank you! I would love to connect folks up with groups such as the Association of Food & Drug Officials and its affiliate, the Western Association of Food and Drug Officials (www.wafdo.org)
17. Keep doing the kinds of things you did this year. IMHO this was the best cross borders conference ever. Even if funding is dramatically reduced try to continue the momentum even if conference cutbacks are necessary. Eliminate the big notebooks and put out a brief agenda document. Have all the bios and presentations on the website rather than hard copy.
18. less expensive location to get to - Victoria was beautiful but limited on means to get there within a travel budget.
    Even with that said, it was worth the cost to attend!
19. Lessons learned in states/provinces that have experienced a recent disaster response. Cross boarder nuclear threat: risks and vulnerabilities identified; mitigation plans.
20. More networking opportunities/windows between sessions and presentations
21. More posters
22. More presentations on disasters that have occurred and lessons learned to be shared on a greater scale. If there are working groups and the intention is to continue those groups away from the conference, information should be sent out prior to the conference so attendees can be aware.
23. More small group/breakout discussion time.
24. None apparent - Thanks
25. Orientation on day one should be more of a review of action items from the previous year.
26. Reduce the amount of sessions on the agenda and allow for more networking time.

27. Should have some free time so that we can catch up things
28. Some presentations were too specific for the plenary. More generic (not so many acronyms) presentations would have been more useful.
29. The EM workgroup session was very unfocused and unsatisfactory. It was not time well spent, and it was obvious that the Chairs were stretched to find a conclusion for the afternoon's discussion. To sum it up by saying that "we need to re-evaluate what Health Emergency Management is and does" misrepresented the lack of dialogue, and leaves the impression that we don't understand our own field. Rather, it could have been a very interesting dialogue if we even simply shared our 'successes' (in terms of plans, exercises, training sessions, etc) and challenges - and then asked for ideas and input and the loaning of resources from our other colleagues. That could have created a very positive, synergistic, interesting and collaborative environment. On the positive side, the 'plenary' sessions were interesting, in terms of being an audience member.
30. The schedule of presentations was a bit tight with lots of lecture type presentations. Adult learning is improved with more interactive opportunities.
31. This is such an excellent format that blends working sessions with interesting speakers that I would not change a thing. Thanks to the organizing committee for another successful workshop.
32. This was really a disappointing meeting for me, probably because it's mainly for people in the emergency preparedness field. The presentations were about plans, processes, exercises, drills, etc. rather than actual incidents or outbreaks. For example: 5 panelists talking about ~500 people arriving in a "migrant ship" but not a word about the health problems they had - just how they set up dock-side tents, dealt with immigration issues, and processed people. A potentially interesting story made boring, in my view. Another example: "Communicable disease identified at a border crossing" turned out to be a description of a monkey pox exercise rather than a real health problem. I don't plan to attend this meeting again unless the focus shifts away from the emergency preparedness processes, plans, drills, etc.. There was not much new information and surprisingly little relating to actual cross-border collaboration, considering the name of the meeting.
33. This workshop is still struggling with concrete work products. There is value to unstructured networking, but eventually that has to lead to a defined deliverable.
34. Trying to increase Native American and First Nation member participation
35. Two day event. Scenario based presentation identifying real world response infectious disease outbreak. Demonstrations of software application, ie. CDC had a static presentation and it would have been nice if they were linked up to show how it works. Social Media policy and procedures with success story.
36. We need to figure out how to get this back to a meeting that is inclusive of staff responsible for making all of this work in the event of an issue. It has largely over time become a meeting for administrators, directors, senior staff, and policy makers with diminishing representation from less senior staff much like what has happened with the WA ST Joint Conference. There is real danger in structuring things that way. It is a great conference. I always walk away with new tidbits of information. Continued attendance will depend not only on fiscal resources but staff resources to cover the department duties.
37. Workgroup breakout session - I did not attend as I had been warned that these sessions can feel overwhelming as a new comer. It would be great to obtain a summary of previous work, agenda for the session, and expectation of the new participant prior to the sessions so that as a newcomer I may feel a little prepared.
38. World Cafe venue was a little tight/crowded, consider a bigger venue for next time.