



**After-Action Review of
Alberta Health and Wellness response
to H1N1 Influenza**

July 10, 2009

**Government
of Alberta ■**

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Executive Summary

This report outlines the lessons learned from the response to H1N1 Influenza and contains recommendations for improvements to the response capability of Alberta Health and Wellness (AHW) and the province as a whole. This report does not comment upon the merit of the public health system response itself, but rather provides recommendations for the improvement of the emergency management capability of AHW. The recommendations were based upon the findings of over 16 after-action reviews (AAR) conducted with 70+ individuals who were involved in Alberta's response to the H1N1 Influenza virus. It should be noted that Alberta Health Services (AHS) was unable to attend the AAR sessions due to the short timelines on this report, but is conducting a review of the H1N1 response from their own perspective.

The recommendations contained in this report are the opinions of Linc Group Corporation (Linc Group);¹ and, it is expected that AHW will review, revise, and prioritize these recommendations for inclusion into future planning activities.

Background

In April and May of 2009 Alberta Health and Wellness (AHW) activated its Emergency Operations Centre (EOC) to coordinate the provincial response to the outbreak of a novel influenza virus known as H1N1 Influenza.² The Public Health Emergency Coordination Group (PHECG), in partnership with the Emergency Planning Office (EPO), operated the AHW EOC until the outbreak stabilized and subsided.

At this time, Alberta Health Services (AHS) was in the process of adjusting to its new role as Alberta's single health region following a significant reorganization of Alberta's health system.³ The logistics of this restructuring of Alberta's health system prevented AHS from being able to effectively activate their own emergency operations centre. AHW extended an invitation to AHS to set up their EOC in the same building where the AHW EOC had been activated (i.e., the 20th floor of TELUS Plaza North). This arrangement proved to be highly effective and gave AHW and AHS the close contact and resource sharing that would have been impossible under the previous multi-region configuration. It should be noted that there were significant challenges that AHW staff (and vendors such as IBM, CGI, Tonko, etc.) had to overcome to make the situation workable.

¹ Linc Group is a provider of business continuity and crisis management services. Linc Group has worked closely with AHW in the past to develop business continuity, crisis management, and communicable disease response capabilities.

² The boardrooms on the 20th floor of TELUS Plaza North had previously been configured and retrofitted as an EOC by the Emergency Planning Office (EPO) as part of AHW's well established emergency management program.

³ Alberta Health Services (AHS) was officially and legally established on April 1, 2009, just three weeks prior to the H1N1 outbreaks.

Overall, the departmental emergency response was a success due to the mildness of the virus itself, the skill and dedication of the individuals involved, the pre-established EOC by the Emergency Planning Office, and the forethought that went into the [Alberta Pandemic Influenza Plan](#) (APIP). The PHECG and EPO also recognize that the success of this response was partly circumstantial and that the lessons learned from this event must be incorporated into future plans and capabilities. The next communicable disease emergency may be no more than a few months away.

Summarized Recommendations

The recommendations below are grouped into categories and roughly prioritized in terms of the potential impact upon the successful response of Public Health Emergency Coordination Group in future public health emergencies.

AHW Crisis Management

- a. [Strike a task force to expedite updates to the APIP.](#)

Recommendation: It is recommended that a task force be established to prioritize and implement the recommendations of this report into the next version of the Alberta Pandemic Influenza Plan (APIP) prior to the coming flu season.⁴

- b. [Frame the APIP within a Public Health Emergency Response Program that is designed to activate before a crisis is evident.](#)

Recommendation: It is recommended that the PHECG position the APIP within a broader Public Health Emergency Response Program aimed at managing all forms of public health and communicable disease emergencies.

- c. [Expedite effective and timely communication during emergency situations.](#)

Recommendation: It is recommended that the PHECG utilize the structure of the Incident Management System to expedite response, decisions, and communications during emergencies.

- d. [Manage expectations with technical briefings in the early days of public health emergencies.](#)

Recommendation: It is recommended that the PHECG proactively manage the expectations of key audiences by conducting technical briefings to be delivered at the earliest possible opportunity during an emergency.

⁴ This recommendation is currently being implemented in the form of the Pandemic Planning Steering Committee, a joint effort between AHW and AHS.

- e. Activate business continuity plans during public health response.

Recommendation: It is recommended that the decision to begin activation of AHW's business continuity plans be made very early during a public health crisis to better reflect altered priorities and reassign key staff to assist with response activities.

Integrated response between AHW and AHS

- f. Implement colocated emergency response structures for AHW and AHS.

Recommendation: It is recommended that AHW and AHS colocate their emergency response structures to facilitate effective collaboration and communication.

EOC Operations

- g. Implement more aspects of the Incident Management System (IMS) for the PHECG.

Recommendation: It is recommended that the PHECG employ more of the basic IMS principles into the operations of the EOC.

- h. Expedite approval process for all communications.

Recommendation: It is recommended that the approval process for various types of documentation be clearly defined prior to activation to expedite the rapid development, approval, and release of key messages and guidelines.

- i. Identify stress-points or congestion within the operational flow of the AHW EOC.

Recommendation: It is recommended that an IMS process expert be assigned to the EOC to provide advice, coaching, and corrective guidance to all EOC staff including the Incident Commander and Section Chiefs.

- j. Enhance the technology and facility capabilities for the AHW EOC.

Recommendation: It is recommended that AHW anticipate the coming influenza season and implement preparations and plan for the activation of the AHW and AHS emergency operations centre for fall 2009.

- k. Need to improve the message centre processes.

Recommendation: It is recommended that the Message Centre procedures be enhanced to improve the flow of information and the tracking of EOC Communications.

- l. Coordinate a standardized meeting schedule with all key stakeholders.

Recommendation: It is recommended that the AHW EOC establish a daily and weekly meeting schedule that is developed in coordination between AHW, AHS, Public Health Agency of Canada (PHAC), the Federal/Provincial/Territorial (F/P/T) Special Advisory Committee (SAC), Medical

Officers of Health (MOHs), Provincial Laboratory, and other key stakeholder groups to maximize the appropriate attendance and the efficient dissemination of information.

m. **Implement a consistent version control system for all documents and communications.**

Recommendation: It is recommended that AHW develop a clear and consistent version control system for all documents and communications to be implemented within the AHW EOC; further, AHW should insist that its partners (e.g., PHAC, AHS) follow a similarly rigorous version control standard.

Communications with AHW and Government of Alberta (GOA) employees

n. **Improve communications with AHW employees.**

Recommendation: It is recommended that the information needs of AHW employees be anticipated to develop communiqués regarding the activation and operation of the AHW EOC during response.

o. **Improve communications with GOA employees**

Recommendation: It is recommended that AHW coordinate with Public Affairs Bureau (PAB) and Corporate Human Resources (CHR) to develop and publish status reports and communiqués regarding public health response for GOA employees.

External Communications

p. **Pre-establish the level of detail that will be communicated to the media and public.**

Recommendation: It is recommended that AHW clearly specify the level of detail that will be released during communicable disease response and include this specification in the technical briefings to be delivered to the media and other key audiences.

q. **Establish the AHW EOC as the author for GOA communications regarding public health emergency response.**

Recommendation: It is recommended that the AHW EOC and PAB work collaboratively to author public messages during public health emergencies whereby the AHW EOC provides final approval on context prior to publishing/dissemination by the PAB.

r. **Evaluate which agencies should speak to the media during an emergency.**

Recommendation: It is recommended that AHW, AHS, and the GOA spokespeople pre-establish who should speak to the media during a public health emergency.

Coordination with GOA and F/P/T partners

- s. PHECG to establish working relationships with counterparts in key GOA ministries.

Recommendation: It is recommended that the PHECG engage their counterparts across the GOA (e.g., Alberta Emergency Management Agency, CHR, Alberta Employment and Immigration, Alberta Education, Alberta Agriculture and Rural Development) to establish strong working relationships for emergency response and solidify response plans and procedures during public health emergencies.

- t. Ensure linkage with Regional PHAC.

Recommendation: It is recommended that the PHECG establish a mechanism for regular communication and engagement with the regional PHAC command centre during public health emergencies.

Next Steps

The next steps are for AHW (specifically the PHECG and the EPO) to refine, prioritize, and implement the recommendations in this report to enhance AHW response capability prior to the coming influenza season in the fall of 2009.

1 Introduction

This report outlines the lessons learned from the response to H1N1 Influenza and contains recommendations for improvements to the response capability of Alberta Health and Wellness (AHW) and the province as a whole. This report does not comment upon the merit of the public health response itself, but rather provides recommendations for the improvement of the emergency management capability of AHW. The recommendations were based upon the findings of over 16 after-action reviews (AAR) conducted with 70+ individuals who were involved in Alberta's response to the H1N1 Influenza virus. See

Appendix A for a description of the AAR process, a schedule of the workshops, and the list of the individuals involved. It should be noted that Alberta Health Services (AHS) was unable to attend the AAR sessions due to the short timelines on this report, but is conducting a review of the H1N1 response from their own perspective.

The recommendations contained in this report are the opinions of Linc Group Corporation (Linc Group);⁵ and, it is expected that AHW will review, revise, and prioritize these recommendations for inclusion into future planning activities. This report provides a discussion of the highest priority and strategic recommendations; an additional list of tactical and lower priority recommendations can be found in Appendix B.

It should be noted that the AAR sessions were extremely well received. The attendees went out of their way to clear their calendars and attend the scheduled sessions. Many of them expressed their appreciation for being able to share their observations in a forum that encouraged frank discussion.⁶

2 Background

In April and May of 2009 Alberta Health and Wellness (AHW) activated its Emergency Operations Centre (EOC) to coordinate the provincial response to the outbreak of a novel influenza virus known as H1N1 Influenza.⁷ The Public Health Emergency Coordination Group (PHECG), in partnership with the Emergency Planning Office (EPO), operated the EOC until the outbreak stabilized and subsided. The EOC was gradually deactivated as the response to H1N1 became manageable through the normal business processes within AHW and the health system as whole.

As this report is being written there are still new cases of H1N1 appearing within Alberta; however the virus has to date proven to be less virulent and communicable than seasonal influenza outbreaks. It is important to note that the World Health Organization (WHO) officially declared a H1N1 influenza pandemic on June 13, 2009, which was long after the outbreak emergency had stabilized and subsided, and several days after the AHW EOC had been deactivated. To date, impacts of H1N1 Influenza have been far less severe than they could have been. The virus continues to spread across the world and is a source of heightened concern regarding the severity of the coming flu season. This concern, and the best practices of emergency management, obligates AHW to conduct an after-action review (AAR) to

⁵ Linc Group is a provider of business continuity and crisis management services. Linc Group has worked closely with AHW in the past to develop business continuity, crisis management, and communicable disease response capabilities.

⁶ This report was expedited by the effective organization and support of the AHW Emergency Planning Office. Special acknowledgements to Krista Berezowski, Tina Maslyk, and the AAR scribes: Bruce Kroker, Patrick Martin, Mariyam Syed.

⁷ The boardrooms on the 20th floor of TELUS Plaza North had previously been configured and retrofitted as an EOC by the Emergency Planning Office (EPO) as part of AHW's well established emergency management program.

assess the response to H1N1 in the interests of being better prepared for future communicable disease emergencies.

2.1 What did we set out to do?

AHW is the lead agency for communicable disease response within the GOA. As with any communicable disease emergency, AHW's obligation and intent is to participate in a timely and effective response to outbreak situations through coordination and communication with all aspects of Alberta's health system, the Government of Alberta (GOA), Federal/Provincial/Territorial (F/P/T) partners, and the people of Alberta themselves. In preparation for an outbreak of a novel influenza virus, AHW has developed the [Alberta Pandemic Influenza Plan](#) (APIP) with the specific goal *to implement an effective and timely response to this public health emergency to:*

- *reduce morbidity and mortality, and*
- *minimize societal disruption in Alberta by providing access to appropriate prevention measures, care and treatment.*⁸

The APIP specifies the structure, composition, and role of the Public Health Emergency Coordination Group (PHECG) which has the authority and responsibility to lead GOA response to communicable disease emergencies.

⁸ Alberta Pandemic Influenza Plan for the Health System, April 2008

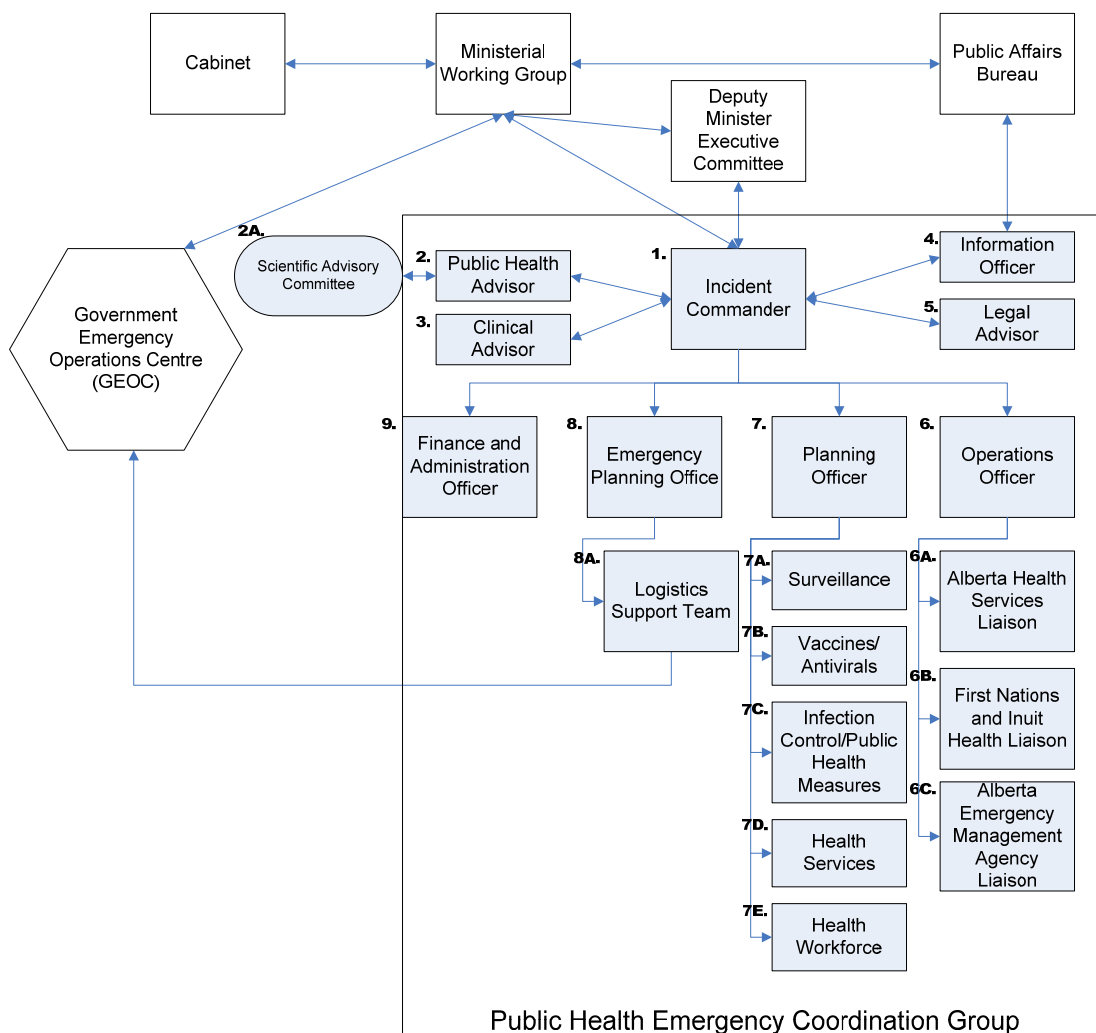


Figure 1: Structure and linkages of PHECG within GOA

Figure 1 depicts the PHECG, based upon the Incident Management System (IMS), and its relationship to other agencies within the context of GOA response and executive leadership. It should be noted that prior to the H1N1 emergency the membership of the PHECG had not been fully developed.

2.2 What actually happened?

In the early days of the global outbreak, prior to the virus appearing in Alberta, the public health professionals within AHW assessed the situation and initiated the normal response procedures for dealing with the imminent threat of communicable disease outbreaks. AHW monitored the latest information from the Public Health Agency of Canada (PHAC), as well as the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC). AHW issued the appropriate communiqués to the health system and called for heightened awareness and increased disease surveillance. As the situation escalated and additional information about the virus became available, AHW initiated preparations for activating the AHW EOC and the APIP.

While the morbidity and mortality rates of the virus were difficult to assess in the early days of the outbreak in Mexico and the United States of America (USA), there was sufficient cause for anxiety among the global public health community, governments, and the media about the potential for a severe pandemic influenza. Prior to the appearance of the H1N1 virus in Alberta, the public health professionals within AHW called for the activation of the EOC; the PHECG was convened to execute a coordinated response to the growing threat of this novel virus. It is important to note that, for reasons that will be discussed below, the APIP was not formally activated.

Once the AHW-EOC was activated the PHECG initiated extended operations with full staffing from 7am-7pm, seven days a week; and, on-call coverage from 7pm-7am in the event of an urgent development. Over the subsequent days the H1N1 virus continued to present with mild symptoms and a low rate of spread. This global trend combined with a concern about inciting panic and excessive response prevented the WHO from officially declaring a pandemic (Phase 6): the WHO went so far as to declare phase 5 on April 29, 2009. For similar reasons in Canada, the nation's pandemic plans were used to provide a rough framework for the response activities, but they were never formally activated.

Despite the lack of a formal pandemic declaration, the pressures upon the health system were mounting. Increasing cases and surveillance, public anxiety, and the needs for clinical guidance stressed all aspects of Alberta's health system. For example, a spike in the number of laboratory tests for influenza put the Provincial Lab network into high-gear as they worked around the clock to test all suspected H1N1 samples as well as maintain their normal workload.⁹

At this time, Alberta Health Services (AHS) was in the process of adjusting to its new role as Alberta's single health region following a significant reorganization of Alberta's health system that consolidated the nine regional health authorities into one entity with all of the health service delivery obligations to Albertans.¹⁰ The logistics of this restructuring of Alberta's health system prevented AHS from being able to effectively activate their own emergency operations centre. AHW extended an invitation to AHS to set up their EOC in the same building where the AHW-EOC had been activated (i.e., the 20th floor of TELUS Plaza North). This arrangement proved to be highly effective and gave AHW and AHS the close contact and resource sharing that would have been impossible under the previous multi-region configuration. It should be noted that there were significant challenges that AHW staff (and vendors such as IBM, CGI, Tonko, etc.) had to overcome to make the situation workable.

AHW and AHS continued to operate the collocated EOC's for the duration of the crisis. Both were eventually deactivated once the outbreak stabilized and the emergency subsided. Overall, the departmental emergency response was a success due to the mildness of the virus itself, the skill and

⁹ In the absence of a pandemic declaration, the Provincial Lab network was obligated to maintain their normal service levels in addition to the net increase in testing attributed to H1N1 surveillance.

¹⁰ Alberta Health Services (AHS) was officially and legally established on April 1, 2009, just three weeks prior to the H1N1 outbreaks.

dedication of the individuals involved, the pre-established EOC by the Emergency Planning Office, and the forethought that went into the APIP plan. The PHECG and EPO recognize the tenuous nature of this successful response. The lessons learned from this event must be incorporated into future plans and capabilities. The next communicable disease emergency may no more than a few months away.

2.3 What went well, and why?

Collaboration between AHW and AHS

The greatest success of Alberta's H1N1 departmental emergency response was the close collaboration between AHW and AHS during the event. The collocation of the two EOC's facilitated a degree of interaction that would not have been possible otherwise. This collaboration was further enhanced by the similarity between the incident management systems used by AHW and AHS. Several participants in the AAR sessions commented that the coloured vests and similar position names crystallized the value of an incident management system. During the response, both groups were able to focus upon their own domains of responsibility but still communicate and collaborate effectively on the issues that affected them both (such as the refinement of clinical guidance).

Working Relationships

The heart of this response was the good working relationships that AHW maintains with AHS and the GOA ministries. Without these relationships the level of communication and collaboration across the health system and the GOA would have been greatly diminished. The decision between AHW and AHS to operate out of the same facility was a perfect example of the benefits of these relationships. Conversely, the challenges that were observed between AHW and some ministries were due in large part to a lack of communication and strong working relationships. There is a maxim in emergency management that *an EOC is not the place to be exchanging business cards* – AHW has effectively cultivated their working relationships.

Extraordinary Commitment of Staff

It should also be recognized that many staff with AHW, AHS, and the GOA went to extraordinary lengths to support or lead the response to H1N1 while also balancing the demands of their normal duties. While it is recognized that this workload would not have been sustainable for a prolonged event, the level of commitment is a testament to the calibre of people involved.¹¹

Emergency Management Infrastructure at AHW, AHS, and GOA

Underlying this successful response is AHW's longstanding commitment to, and investment in, emergency management. The Emergency Planning Office (EPO) is directly responsible for all of the pre-

¹¹ A special mention must be given to the staff of the Provincial Laboratories who managed the influx of influenza testing and the normal workload that they process. This effort must be appreciated as an integral part of the health system's response.

planning and effort that made it possible to rapidly convert two conference rooms into the emergency operations centres that hosted the PHECG and the AHS team. The EPO oversees the business continuity and crisis management programs within AHW and has conducted several exercises within the AHW EOC that have led to successive improvements to the capacity of these facilities and a deep understanding of the incident management system that provides the structure and processes to facilitate an effective response.¹²

¹² The EPO has built one of the most mature and effective emergency management programs in the GOA.

3 Recommendations

The recommendations below are grouped into categories and roughly prioritized in terms of the potential impact upon the successful response of Public Health Emergency Coordination Group in future public health emergencies.

3.1 AHW Crisis Management

3.1.1 Strike a task force to expedite updates to the APIP

The PHECG recognizes the need to rapidly address the lessons learned from the H1N1 response (including the recommendations in this report), given the continued threat of pandemic influenza and the expectation of a resurgence of outbreaks in the fall 2009 flu season.

Recommendation: To this end it is recommended that a task force be established to prioritize and implement the recommendations of this report into the next version of the Alberta Pandemic Influenza Plan (APIP) prior to the coming flu season.¹³

3.1.2 Frame the APIP within a Public Health Emergency Response Program that is designed to activate before a crisis is evident.

This H1N1 incident uncovered some assumptions about how the next pandemic would manifest and how the public health response would be activated. In brief, *all* pandemic plans, starting with the WHO and PHAC, assumed either explicitly or implicitly to be for use during a more severe pandemic influenza outbreak (implied by the H5N1 Avian Influenza strain) rather than the mild H1N1 virus that presented.

The current terminology and activation assumptions of the APIP seem to hamper the activation of AHW's well developed public health response in the event of a mild disease outbreak. The APIP is an excellent plan but it must be recognized as part of AHW's communicable disease response capability, not its entirety. AHW should look upon all outbreak situations as an opportunity to begin gradual activation of its public health response capability. There is no better training opportunity than a real event, and early activations will not incite alarm if AHW portrays this activation as evidence of its preparedness.

AHW should implement an overarching public health and communicable disease response program whereby the APIP would be a specific case. This would better allow for an early activation of the communicable disease response plans and a gradual escalation of activities. This may address a concern of some during the AAR debrief sessions that the activation of the

¹³ This recommendation is currently being implemented in the form of the Pandemic Planning Steering Committee, and, is a joint effort between AHW and AHS.

PHECG and the AHW EOC seemed to be “an all or nothing” activity; there was a preference for a gradual escalation that may not have been possible given the intensity of the situation once the AHW EOC had been activated.

Recommendation: It is recommended that the PHECG position the APIP within a broader Public Health Emergency Response Program aimed at managing all forms of public health and communicable disease emergencies.

3.1.3 Expedite effective and timely communication during emergency situations.

Many staff within AHW (and the GOA) normally operate in a consultative and inclusive manner that is not conducive to rapid response and decision making. During the AAR sessions there were several comments about the delays in crafting documents and public messages such that the timeliness and effectiveness of the final product was diminished.

AHW should employ the Incident Management System (IMS) that is at the core of the operational structure of the PHECG to expedite responses without letting ‘the perfect get in the way of the good’. The PHECG has a formal decision making structure (i.e., chain of command) with authorized and strong leadership to expedite approval; further, by setting timelines that reflect the needs and pressures of the situation the PHECG can limit undue consultation and produce guidance, key messages, etc. that are ‘good enough’ and timely. It is recognized that beyond the normal consultative style of AHW, there are also political considerations that must be balanced against the overriding need to provide an effective response. It is imperative that the expectations of response be clearly communicated well in advance and during the crisis to prevent unnecessary delay.

Recommendation: It is recommended that the PHECG utilize the structure of the Incident Management System to expedite response, decisions, and communications during emergencies.

3.1.4 Manage expectations with technical briefings in the early days of public health emergencies.

One of the significant learnings from the AAR sessions was that it is imperative to begin managing the expectations of all stakeholders early on. This is especially relevant to the media but also applies to GOA employees, GOA departments affected by the crisis, federal/provincial/territorial contacts, key stakeholder groups, and the Deputy Ministers. It is recommended that the PHECG arrange for targeted technical briefings to each audience as early in the response timeline as possible to set a baseline expectation for both what can and cannot be expected on topics of interest to each audience.

Recommendation: It is recommended that the PHECG proactively manage the expectations of key audiences by conducting technical briefings to be delivered at the earliest possible opportunity during an emergency.

3.1.5 Activate business continuity plans during public health response.

One of the most common statements during the AAR sessions was that the effort to maintain the AHW EOC would not have been sustainable if the H1N1 event had continued on for several weeks. The personal sacrifice and effort of all those involved in the activation was a major factor in the success of the response. Many individuals would work a shift in the EOC and then return to their desks to complete the normal work that had accumulated during the day. Likewise, the expert staff assigned to the EOC dedicated a considerable amount of resources responding to non-urgent Action Requests (AR's), memo's, and briefing notes that should have been reprioritized in the context of the H1N1 emergency.

AHW has a well developed business continuity program with detailed plans for each business function. These business continuity plans identify time-critical business processes and strategic priorities in the event of a crisis like a communicable disease emergency. Once again, the reluctance to activate plans served to hamper the efficient response that AHW is capable of in such an emergency. It is recommended that the business continuity plans be activated early in a communicable disease emergency to aid with the reprioritization of normal work tasks; shut down or delay business processes that are not time-critical; and, to reassign expert staff to work directly on the emergency or back-fill roles for individuals who have been temporarily seconded for response.

Recommendation: It is recommended that the decision to begin activation of AHW's business continuity plans be made very early in during a public health crisis to better reflect altered priorities and reassign key staff to assist with response activities.

3.2 Integrated response between AHW and AHS

3.2.1 Implement collocated emergency response structures for AHW and AHS.

The collocation of AHW's and AHS' EOCs greatly facilitated the coordination between the senior leadership (and command staff) of AHW and AHS. This collocation was not part of the established plans of either AHW or AHS but became necessary due to the fact that AHS had not had time to design its emergency response structure since its inception a few weeks prior to the H1N1 outbreak.

There are many logistical challenges that would need to be resolved for AHW and AHS to collocate their response structures; however, the success of the H1N1 departmental emergency response indicates great synergies from collocation. These should be explored as joint planning between AHW and AHS proceeds through the next few months. Some of these challenges are as follows:

- identify and consolidate duplicate functions;
- develop communications collaboratively;

- augment and share technical expertise;
- synchronize IMS terminology and processes;
- develop federated information technology environments; and
- establish appropriate facility(ies) for collocation.

This recommendation does not suggest a *unified command* whereby the AHW and AHS would merge their response structures. The observations from the H1N1 response and the feedback from the AAR sessions do not support a unified command approach at this time; however, there may be significant benefits to this approach over time.

Recommendation: It is recommended that AHW and AHS collocate their emergency response structures to facilitate effective collaboration and communication.

3.3 EOC Operations

3.3.1 Implement more aspects of the Incident Management System (IMS) for the PHECG.

AHW already employs the Incident Management System (IMS) which builds upon the incident command system (ICS) as a management framework for responding to all-hazards. The IMS is a robust management process that provides a structure to facilitate efficient and effective response within the EOC.

During the H1N1 response there were situations where the IMS principles of *manageable span of control, management by objectives, consolidated incident action planning, unity and chain of command, common terminology, integrated communications, and delegation of authority* were not followed and substantive inefficiencies were observed.

These principles should be made familiar to all participants in the AHW EOC through advance training and reminders during activation.

Recommendation: It is recommended that the PHECG employ more of the basic IMS principles into the operations of the EOC.

3.3.2 Expedite approval process for all communications.

There were many instances where the approval process for key messages and guidelines was delayed by extensive routing of documents to various groups for approval prior to being delivered to the Incident Commander. This seemed to be a symptom of AHW's normal consultative style being carried over into the EOC.

The PHECG is well staffed with the technical and communication expertise required to generate the necessary messages. Consultation may well be warranted in some cases; however, the appropriate experts should be engaged on developing the content so that documents can be quickly developed and then sent to the Incident Commander for approval. Given the nature of public health emergencies, the Chief Medical Officer of Health (CMOH) was often needed to

complete the sign-off process; this requirement should be built into the approval process only where necessary.

The risk of streamlining the approval process is that the PHECG will release communications that are less than perfect. The risks of this are offset by the impacts of prolonged delays. Specifically, the communication delays cause confusion among the target audiences as they gathered their information from sources other than AHW or AHS or from outside of the country.

Recommendation: It is recommended that the approval process for various types of documentation be clearly defined prior to activation to expedite the rapid development, approval, and release of key messages and guidelines.

3.3.3 Identify stress-points or congestion within the operational flow of the AHW EOC.

Many of the participants in the AAR sessions commented upon breakdowns or bottlenecks in the flow of information and decision making within the EOC. Several of these breakdowns were traced to a deviation from the roles and responsibilities of key members of the PHECG. Specifically, many members wore numerous hats and this led to confusion about who needed to be engaged in certain activities. In other situations, there were questions about the level of activation that was maintained throughout the incident. The IMS is a powerful tool for emergency management but it can be complex to those who are unfamiliar with it. There is a need to place an IMS expert into the operations of the EOC whose role would be to provide guidance to the key members of the EOC (e.g., Incident Commander and Section Chiefs) on the effective and efficient operations of the EOC. This process expert must not be engaged in the response itself; they should serve in the capacity of a sideline coach who can advise on opportunities to use the IMS strategically and improve the overall operations of the EOC. This individual must have no authority within the EOC other than to provide expert advice on the IMS. Their advice must be dispensed with subtlety and never undermine the authority or credibility of the staff working within the EOC.

Recommendation: It is recommended that an IMS process expert be assigned to the EOC to provide advice, coaching, and corrective guidance to all EOC staff including the Incident Commander and Section Chiefs.

3.3.4 Enhance the technology and facility capabilities of the AHW EOC.

The technology and facility requirements to establish an emergency operations centre are substantially more involved than simply delivering computers and telephones to a conference room. The Emergency Planning Office (EPO) has worked closely with the information technology and facilities teams over the past several years to pre-establish the current capacity that made the activation of the AHW and AHS EOCs possible. Even with this planning, there were many requirements that were met only by extraordinary measures that might not be duplicated in future activations.

The information technology and facility teams have developed detailed lists of issues that must be addressed to facilitate future activations of the EOC.

Recommendation: It is recommended that AHW anticipate the coming influenza season and implement preparations and plan for the activation of the AHW and AHS emergency operations centre for fall 2009.

3.3.5 Need to improve the message centre processes.

The Message Centre plays a critical role within the EOC. It monitors the primary AHW-EOC email address and phone line. During the response the Message Centre performed extremely well but there are opportunities for improvement. For example, to track EOC Communications the Message Centre printed and filed all email communications in paper binders; this provided an important record of EOC communications but there are electronic solutions that would improve the utility of this effort. The following list of improvements should be considered:

- Minimize printing of email communications by employing an electronic storage and retrieval system that can be accessed (in read-only mode) by all EOC staff.
- Develop a method to track outbound email communications that are relevant to maintaining an awareness of EOC communications. For example, apply a rule in Microsoft Outlook to *carbon-copy* all outbound emails to the AHW EOC mailbox.
- Develop a system to clearly assign *actions* and *owners* to messages received by the Message Centre.

Recommendation: It is recommended that the Message Centre procedures be enhanced to improve the flow of information and the tracking of EOC Communications.

3.3.6 Coordinate a standardized meeting schedule with all key stakeholders.

The EOC staff commented upon the significant burden of meetings and various teleconferences they were required to attend. Some of this burden could be reduced by adhering to strict meeting guidelines such as advance notice of all meetings with clear agendas that distinguish between informational items and decision points; in addition, action items and meeting minutes should be rapidly distributed following each meeting.

Recommendation: It is recommended that the AHW EOC establish a daily and weekly meeting schedule that is developed in coordination between AHW, AHS, Prov Lab, PHAC, SAC, MOHs, and other key stakeholder groups to maximize the appropriate attendance and the efficient dissemination of information.

3.3.7 Implement a consistent version control system for all documents and communications.

There was significant confusion caused by the lack of a clear and consistent version control system for documents that were circulating within the AHW EOC and received from PHAC. This seemingly trivial administrative matter has massive implications when the EOC teams,

physicians, and others cannot determine which messages or clinical guidance documents they should be using.

Recommendation: It is recommended that AHW develop a clear and consistent version control system for all documents and communications to be implemented within the AHW EOC; further, AHW should insist that its partners (e.g., PHAC, AHS) follow a similarly rigorous version control standard.

3.4 Communications with AHW and GOA employees

3.4.1 Improve communications with AHW employees.

AHW employees should expect to be informed of issues and events affecting the department and the health system – especially emergencies. The timeliness of this information is a means for AHW leadership to maintain credibility with the general employee base. During the H1N1 response, employee updates of the initial steps that the PHECG were taking to respond to the growing situation were delayed. Specifically, meeting rooms were taken off-line, equipment from across the department was commandeered and relocated to the EOC, ADM meetings with staff were cancelled – all without explanation. This behavior led to rumours and anxiety among employees that could easily have been avoided with improved communications.

As the response continued many employees who were supporting the EOC by providing work from their desks found it difficult to get access to situation updates or feedback from the EOC staff about the status of tasks they were working on. Also, employees who work in reception or received incoming calls/emails about the H1N1 response were not clearly instructed on how to handle and/or route those calls/emails to the AHW EOC.

Recommendation: It is recommended that the information needs of AHW employees be anticipated to develop communiqués regarding the activation and operation of the AHW EOC during response.

3.4.2 Improve communications with GOA employees

Similar to the recommendation on communication with AHW employees it is imperative that GOA employees be provided adequate updates about the response of AHW specifically and the GOA in general. Participants in the AAR sessions noted examples where messages were relayed to GOA departments that were not then efficiently disseminated to GOA employees. There is an established process and expectation that each GOA department will disseminate messages it receives to its employees. This did not always happen in a timely manner.

Communication to GOA employees is not the responsibility of AHW, rather it is the Public Affairs Bureau (PAB), Corporate Human Resources (CHR), and the departments themselves that must

disseminate messages. AHW should endeavour to craft timely communications for distribution to GOA employees.

Recommendation: It is recommended that AHW coordinate with PAB and CHR to develop and publish status reports and communiqués regarding public health response for GOA employees.

3.5 External Communications

3.5.1 Pre-establish the level of detail that will be communicated to the media and public.

In concert with the recommendation to provide technical briefings to the media (and other key audiences), AHW must pre-establish the type of information that will and will not be released. There were inconsistencies in the information published or released that caused significant challenges during the H1N1 response. Specifically, there is sensitive information about individual cases that AHW possessed that was, at alternate times, divulged and then not divulged. Some of this inconsistency was due to a lack of clarity between AHW and the PAB (this will be discussed in a separate section below); however, it is clear that the expectations for what information would be available was not widely understood or agreed. This created pressure to publish information that may not have been appropriate.

AHW must set the level of detail regarding communicable disease cases and response activities that the media can expect to receive at various levels of disease severity. AHW must balance the concern for public health with the rights of individuals.

Recommendation: It is recommended that AHW clearly specify the level of detail that will be released during communicable disease response and include this specification in technical briefings to be delivered to the media and other key audiences.

3.5.2 Establish the AHW EOC as the author for GOA communications regarding public health emergency response.

There was significant confusion between AHW and the PAB about the content of messages developed in the AHW EOC. The technical experts within the AHW EOC developed key messages or public updates and submitted these to the PAB for publication; however, in some cases the PAB made edits to the messages that altered the intent or meaning of the messages. It is normal for the PAB to edit content prior to publication during normal operations but the development cycle is usually much longer than in emergencies and it allows for mutual review cycles prior to publication. During the H1N1 response the AHW EOC did not expect the PAB to edit content; the expectation was for the PAB to publish/disseminate only. In a highly technical context such as communicable disease response, the technical experts should have final say on message content.

This situation clearly highlights the dilemma of responding to the H1N1 crisis without activating the APIP. During a public health emergency the AHW EOC needs to have primary authorship and sign-off on all communications. AHW and the PAB were operating in a quasi-activated manner and expectations and responsibilities were not clearly understood.

While the AHW EOC needs to be the final author of GOA communications regarding public health emergencies it is vital that the expertise of the PAB be pulled into the authoring process as a collaborative effort. The core functions of the PAB are to craft messages for public consumption and publish/disseminate those messages. The publishing function does not need to be incorporated into the AHW EOC, but the crafting of messages for maximum effect needs to be tied to the content of the technical experts.

It should be noted that there was a process whereby the technical experts worked with communications experts from PAB in drafting messages, but this process often broke down when message content was later edited prior to publication.

Recommendation: It is recommended that the AHW EOC and PAB work collaboratively to author public messages during public health emergencies whereby the AHW EOC provides final approval on context prior to publishing/dissemination by the PAB.

3.5.3 Evaluate which agencies should speak to the media during an emergency.

During normal operations there are multiple groups that often speak to the media (e.g., CMOH, MOHs, other AHW spokespeople); however, during H1N1 response the AHW EOC curtailed much of these normal channels of communication in favour of the CMOH being the primary spokesperson. This is likely appropriate because it ensures a consistent message is delivered to the public and represents the health system and the GOA with one voice. The difficulties arise when this has not been clearly agreed to and communicated prior to the emergency.

Recommendation: It is recommended that AHW, AHS, and the GOA spokespeople pre-establish who needs to be able to speak to the media during a public health emergency.

3.6 Coordination with GOA and F/P/T partners

3.6.1 PHECG to establish working relationships with counterparts in key GOA ministries.

AHW maintains excellent collaborative relationships with other GOA ministries during normal operations but the PHECG needs to forge similar relationships with their emergency management counterparts to ensure some degree of consensus on mutual responsibilities and expectations.

AHW has strived to incorporate the expectations of other ministries into the APIP; however, there were several instances that arose during the H1N1 response that were not anticipated or

fully appreciated. The richness of these mutual expectations exemplifies the benefits of conducting after-action reviews (AARs) to develop a list of ‘lessons learned’ – the conditions that these learnings arise out of are difficult (if not impossible) to simulate during exercises of the pandemic plans.

Specifically, the leadership of the PHECG should focus upon the following GOA partners and topics in preparing the coming flu season when the risks of pandemic are expected to peak:

- Public Affairs Bureau (PAB) – as mentioned in a separate recommendation, the PHECG should integrate the communication expertise of the PAB into the development of key message content.
- Alberta Emergency Management Agency (AEMA) – the PHECG should coordinate with the AEMA on the roles of the AHW and AEMA in coordinating the engagement of the GOA ministries in response to a public health emergency. AHW is the lead agency for public health response but they need to work in close partnership with AEMA (support agency) to provide timely communication to GOA departments and management of issues that are beyond the sphere of responsibility of AHW during emergency response in the province (e.g., emergency equipment or service procurement, coordinating GOA consequence management during increased absenteeism). It is recommended that the PHECG integrate an AEMA liaison officer into the AHW EOC to ensure a close linkage during response.
- Corporate Human Resources (CHR) – the PHECG and AEMA should jointly engage CHR to confirm mutual expectations and develop clear plans for managing the impacts of pandemic influenza upon GOA employees. Consideration must be given to the information and policy issues that will directly impact GOA employees, such as overtime policies, doctor’s confirmation of illness, and infection control procedures.
- Alberta Employment and Immigration (AEI) – the PHECG should engage with the subject matter experts at AEI to provide joint guidance on occupational health and safety issues affecting health care workers in the workplace.
- Alberta Education (AED) – the PHECG should coordinate with AED to establish the level of detail that will be released about students and schools impacted by influenza; and, the PHECG should confirm the appropriate notification procedures with AED when information is released.
- Alberta Agriculture and Rural Development (AARD) – the PHECG and AARD needed to exchange information regarding the H1N1 outbreak on a swine farm in central Alberta. The PHECG needs to engage AARD in planning how similar situations will be handled in the future.

Recommendation: It is recommended that the PHECG engage their counterparts across the GOA (e.g., AEMA, CHR, AEI, AED, AARD) to establish strong working relationships for emergency response, and solidify response plans and procedures during public health emergencies.

3.6.2 Ensure linkage with Regional PHAC.

The regional office of the Public Health Agency of Canada is the local link for AHW with their federal counterparts. AHW enjoys a close working relationship with PHAC and the regional office. The regional office is responsible for providing the federal perspective to its partners in the Alberta/NWT region. During the H1N1 response, the regional office activated their emergency operations centre but the communication linkage to the PHECG could have been more formalized.

Recommendation: It is recommended that the PHECG establish a mechanism for regular communication and engagement with the regional PHAC command centre during public health emergencies.

4 Next Steps

The next steps are for AHW (specifically the PHECG and the EPO) to refine, prioritize, and implement the recommendations in this report to enhance AHW response capability prior to coming influenza season in the fall of 2009.

Appendix A – The After-Action Review Process

Alberta Health & Wellness (AHW) activated its public health emergency response and emergency operations centre during the H1N1 Influenza outbreak in April-May 2009. The coordinated response of AHW and its stakeholders demonstrated the current capability of Alberta's public health response.

It is consistent with the best practices of emergency management to conduct an after-action review of this event. The review will be disseminated to improve existing plans and incorporate lessons learned from the response activities.

The after-action review development team consists of:

- Tyler James
- Barb Hansen
- Krista Berezowski
- Sue Kessler
- Dean Blue
- Bruce Kroker
- Tina Maslyk
- Mariyam Syed
- Sean Lawson – Linc Group

Lessons Learned Objectives:

The Lessons learned objectives include:

- debrief stakeholders and compile an aggregated summary of response activities
- assess the correlation between planned response and actual response
- recommend improvements and changes to planned response

Lessons Learned Outcomes:

Successful completion of the lessons learned will be evaluated on the basis of achieving the following outcomes:

- participation of major stakeholders
- achievement of objectives as stated above
- identification of material changes and improvements to be incorporated into the planned response for future public health emergencies
- the assessment will be completed in accordance with agreed timelines

Lessons Learned Themes and Core Questions:

From the analysis of initial evaluations and the Emergency Planning Office's previous lessons learned reviews the following themes and questions will be used to facilitate and focus the groups.

Themes

- AHW EOC Operations (scheduling, location, facility, meetings)
- Communications – Internal to AHW (approvals)
- Communications – External to AHW
- Roles & Responsibilities (training, orientation, PHECG Structure)
- Integration with the AHS
- Documentation (guidelines, message management, version management)

Core Questions

- What was expected to happen?
- What actually occurred?
- What went well, and why?
- What can be improved, and how?

Format Approach:

The after-action review sessions will last approximately 1 to 1.5 hours and will guide participants through a facilitated discussion of the themes listed above to answer the core questions.

Total time for participants 1 - 1.5 hours.

This Lessons learned will **NOT**:

- Contain deep detail on solutions of issues identified
- Interview all stakeholders that AHW interacted with during the event
- Provide recommendations or decisions on technical health system issues

After-Action Review Sessions:

A total of 16 AAR sessions were conducted as follows:

Date	Time	Location	Section	Attendees
June 15	8:00-9:00am	11A	Incident Command Staff	Margaret King Dr. Corriveau Glenn Monteith Susan Williams
June 15	9:00-10:30am	11A	Planning Section	Barb Hansen Joan Berezanski Ruth Mitchell Sue Kessler Linda Mattern Theresa St.Jean Larry Svenson Pamela Steppan Cindy Dribnenki Patti Kowalski Dean Blue Rosa Orleski Carolyn Soloman
June 15	10:30am-12:00pm	11A	Corporate HR/PAB	Garnet Lewis Marilyn Wararuk Tim Hajar
June 15	1:30 – 3:00pm	11A	Information Team	Kathy Ness – rescheduled to June 26 John Tuckwell Brenda Christianson Eileen James Irene Mazurenko

Date	Time	Location	Section	Attendees
June 15	3:00-4:30pm	11A	EOC Logistics	Tina Maslyk Bruce Kroker Wally Tarnawsk Jack Semtoiuk Menizes MacAllister Mariyam Syed Karen Gordon – provided written feedback Justin Cenako Ilona Kosovoa Deb Lakusta
June 19	9:00-10:30am	11A	Operations, Finance & Admin	Tyler James Pearl Morrison Brooke Dougherty Krista Berezowski Tina Maslyk
June 19	10:30am-12:00pm	11A	AEMA	David Hodgins – Rescheduled for June 26 Jonathan Klein Brad Andres
June 19	12:00-1:00pm	11A/Teleconference	Provincial Lab	Jutta Preiksaitis Valerie Silliphant
June 19	1:00-2:30 pm	11A	Education	Dan Ferguson Dan Coffin Doreen Lupaschuk
June 19	3:00-4:30pm	11A	AEI	Karlene Johner Dr. Karpluk
June 26	8:00-9:00am	11A	Information Team – cont'd	Kathy Ness
June 26	9:00-10:30am	11A	Agriculture	Dr. Hauer Val Bohaychuk Ole Sorensen
June 26	10:30am-12:00pm	11A	Federal Contacts	Dr. Yacoub – provided written feedback Sue Olsen Nancy Thornton
June 26	1:00-2:00pm	11A	AHW Deputy Ministers Office/Legal	Martin Chamberlain
June 26	2:30-3:30pm	11A/teleconference	Scientific Advisory Team	Dr. Keays Dr. Johnson Dr. Corriveau
June 26	3:30-4:30pm	11A	AEMA cont'd	David Hodgins

Lessons Learned Evaluation

Upon completion of the after-action review sessions a written report will be compiled outlining the lessons learned and the recommendations for future Pandemic Plan changes. This will be completed by June 30, 2009.

Appendix B – Additional Recommendations

- i. Investigate the value of obtaining top secret clearance for members of the PHECG to assist with federal collaboration.
- ii. Pre-established key messages based upon learnings from H1N1.
- iii. Implement a consistent document filing system within the EOC.
- iv. Implement a workflow tracking system within the EOC.
- v. Improve navigation within the EOC and the ability to locate the right people quickly.
- vi. Minimize the potential for distraction and undue noise within the AHW EOC.
- vii. Establish regular team meeting schedule for each sub-team in EOC (e.g., Information, Vaccine, Workforce, Logistics)
- viii. Need method of creating, tracking, and closing tasks.
- ix. Consider establishing an EOC secretariat to provide cover-off for EOC scribe and enhances services.
- x. Develop and deliver an operational briefing for those working in the AHW EOC.
- xi. Engage alternates early in the activation of the AHW EOC to prevent people from burning out.
- xii. Improve the quality of teleconferences by upgrading equipment and enforcing teleconference etiquette among attendees.
- xiii. Provide adequate computer access (possibly wireless) for non-AHW staff who are invited into the EOC.
- xiv. Reinforce the need to maintain confidentiality outside of the EOC.
- xv. Need to pre-establish distribution lists or methods of communication to specific audiences.