Public Health Agency of Canada    Agence de la santé publique du Canada

# AUDIT REPORT

## Emergency Preparedness and Response

## Audit Services Division

## June 2010

**Approved by Chief Public Health Officer**
**on June 22, 2010**

Canada

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# Executive Summary

1.   The overall objective of this audit was to provide Public Health Agency of Canada (PHAC or the Agency) management with an independent assessment of the extent to which the Agency's emergency preparedness and selected response activities are being managed with due regard to effectiveness, efficiency, timeliness and risks. It was also to determine if these activities fully meet the Agency's mandate, and the needs of its partners and stakeholders.

2.   The audit work was conducted between February and June 2010 and it included interviews with PHAC key personnel and program partners and stakeholders, the review of relevant documentation, analysis and testing and site visits of warehouses and depot centres.

3.   The audit examined the Agency's emergency preparedness and response governance, management framework and accountability structure, plans, processes, systems and practices. It reviewed whether activities were effective, timely and took into consideration risks and assessed whether the personnel deployed were qualified and properly trained. The audit also assessed whether there were proper controls of assets used for emergency preparedness and response, and, if they were managed with due regard to effectiveness and efficiency, and were effectively deployed. Our audit criteria and sub-criteria (Appendix A) were derived from applicable legislation, Treasury Board policies, generally accepted management practices and the Office of the Comptroller General's Core Management Controls.

## Audit Findings

4.   From a governance perspective, while PHAC's general emergency preparedness and response roles and responsibilities are appropriately defined and documented, emergency preparedness and response mandate related to certain stakeholder groups requires clarification. This includes a clarification of PHAC's mandate in responding to international emergencies; PHAC's role in support of federal government organizations that deliver direct health care to Canadian citizens; as well as, and PHAC's approach and capacity towards serving Canada's north.

5.   In addition, the audit found that the integration of emergency preparedness and response activities and coordination of those activities within the Health Portfolio requires continued focus. This includes clarifying the roles and responsibilities of Health Canada and PHAC in emergency preparedness and response; and, clarifying the roles of PHAC headquarters and regional functions in working with emergency preparedness and response stakeholders.

6.   From an emergency planning and preparedness perspective, PHAC has a defined surveillance program; however the sharing of health intelligence information with

partners and stakeholders requires improvement in order to address their needs and continue to meet *International Health Regulations* (IHR2005) obligations.

7.    We also found that current emergency preparedness and response risk management processes are overly "event" driven. Furthermore, PHAC has yet to develop long term, comprehensive risk and threat assessment processes and an "all hazards" risk management plan to support emergency preparedness and response efforts and address legislative obligations. In particular, the Minister of Health has statutory responsibilities related to emergency management pursuant to the *Emergencies Management Act* (2007) that must be fulfilled.

8.    Conducting training and exercise represents a core consideration of emergency planning and preparedness and is another Ministerial responsibility under the *Emergency Management Act.* While PHAC has undertaken significant efforts relating to emergency preparedness and response training and has participated in a number of emergency exercises, we found that PHAC has not yet developed a long term training and exercise plan, nor has it conducted a comprehensive training needs assessment. In addition, PHAC has not yet planned and conducted a large-scale public health/infectious disease exercise which will assist in testing and validating emergency preparedness and response plans, policies and standard operating procedures. Addressing these issues will assist the organization in moving from its current reactive training and exercise approach to a more proactive approach.

9.    From an emergency response perspective, we noted that PHAC lacks the human resource surge capacity to appropriately support an expanded Emergency Operations Centre (EOC) during an emergency or event.  In addition, we noted that while the Agency's Incident Command System (ICS) continues to evolve, continued management focus is required. There remain potential alignment issues since ICS is more suited to a "first responder" organization and PHAC is not a "first responder"

10.   The mandate of the National Emergency Stockpile System (*NESS*) requires renewal in order to more appropriately reflect its current health emergency response role. In addition, program management attention is required to address issues related to NESS acquisition practices, supply and equipment maintenance processes, inventory valuation, control and record keeping systems and processes, inventory obsolescence processes and information management capabilities.

11.   With respect to the Health Emergency Response Teams (*HERT)* program, we noted that a transformation of this program has been initiated without the benefit of a risk and threat assessment and without a clear and formal mandate. Furthermore, this transformation has not so far been well coordinated with the other surge capacity development efforts, namely the development of the single window PHAC Public Health Reserve (PHR).

12. The audit identified a need for National Microbiological Laboratories (NML) roles and responsibilities in relation to PHAC emergency response activities to be clarified in order to ensure an integrated and coordinated response during emergencies, particularly in relation to the manner in which the NML and Health Portfolio Emergency Operations Centres interact during emergencies.

13. From an emergency recovery perspective, the audit focused on PHAC emergency preparedness and response knowledge management practices and found that PHAC has not yet developed a robust method for systematically identifying and acting upon lessons learned from emergency preparedness and response efforts. In addition, it is unclear whether there is alignment between improvement actions identified in lessons learned exercises and from PHAC's emergency preparedness and response training focus.

14. From a support function perspective, we noted the following human resource planning and management issues: A number of emergency preparedness and response key positions have been staffed on a temporary basis by acting appointments or have only been recently staffed. In addition, there were no documented staffing and succession plans in place for key positions.

## Audit Conclusion

15. While the Agency was able to respond to emergencies, we are concerned that many issues identified in this report need to be addressed to ensure the Agency fully meets its mandate of protecting and promoting the health of Canadians. PHAC needs to maintain its focus on building emergency preparedness and response capacity and to deliver its response activities in the most effective, efficient and timely manner. Management attention is required to:

- articulate, document and communicate clearly an emergency preparedness and response mandate, strategies, operational goals and plans, and roles and responsibilities;
- develop long term, comprehensive risk and threat assessment processes and an "all hazards" risk management plan to support emergency preparedness and response efforts addressing legislative obligations;
- develop surge capacity models and provide mandatory emergency management training to build a response capacity that is appropriately trained and qualified; and
- manage and deploy assets with efficiency, effectiveness and timeliness.

## Statement of Assurance

16. In my professional judgment as Chief Audit and Evaluation Executive, sufficient and appropriate audit procedures have been conducted and evidence gathered to support the accuracy of the audit conclusion provided and contained in this report. The audit conclusion is based on a comparison of the conditions, as they existed at

the time, against pre-established audit criteria (see Appendix A) within the scope described herein.

Christian Asselin, CA, CMA, CFE
Chief Audit and Evaluation Executive

## Management Response

17.  The Agency's management agrees with our findings and recommendations and a management action plan is presented in Appendix B.

# Background

18. The Public Health Agency of Canada (PHAC) was created within the federal Health Portfolio (HP) to deliver on the Government of Canada's commitment to help protect and promote the health and safety of all Canadians and to increase its focus on public health. Events like the emergence of Severe Acute Respiratory Syndrome (SARS) in 2003 and the increasing likelihood of wide spread pandemic disease outbreaks due to globalization demonstrated the need for Canada to have a national point of focus for public health issues. In response, PHAC was established in September 2004. One of the Agency's key roles is to provide a clear focal point for federal leadership and accountability in managing public health emergencies.

19. Threats in the current environment are broad and complex. They include both natural events such as floods, earthquakes, and dangerous infectious diseases as well as accidents, criminal activity or terrorist acts involving explosives, chemicals, radioactive substances or biological threats. All such events potentially present a significant health risk dimension to Canadians at home and abroad.

20. Against this backdrop, PHAC has evolved significantly since its inception, and continues to undergo reorganization and change. Several recent major events, both planned and unexpected, have fully engaged the Agency. PHAC spearheaded the preparation of a national pandemic plan, and dealt with the H1N1 influenza, building on the lessons learned in the first wave of this outbreak in order to deal with the second wave. PHAC, through regional and headquarters involvement, also deployed medical personnel and resources on site for the 2010 Olympic Games in Vancouver, contributing to the success of this international event. The upcoming G8 and G20 events in Ontario represent additional, current responsibilities and challenges for PHAC.

21. PHAC must execute its mandate in a landscape filled with many stakeholders: including the World Health Organization (WHO), international partners, other Federal departments, Provincial, Territorial and local authorities, Nongovernmental Organizations (NGOs), and others. Often, events must be dealt with in a time-sensitive, politically-charged environment.

22. Through its regional structure, PHAC maintains relationships with the Provinces and Territories (P/Ts), and regional staffs have contributed to the development of Provincial health-related planning efforts. PHAC has also participated in various major exercises, notably related to 2010 Olympic planning; which included the bronze, silver, gold series of simulation exercises. It is also clear that much effort has been invested towards making improvements to various aspects of training within the organization.

23. All of the activities that have involved PHAC in recent months have reinforced the fact that dealing with complex and unpredictable events requires an organization which is robust, adaptable and responsive.

24. The Agency's efforts related to building emergency preparedness and response capacity have been undertaken in an environment that has recently featured high profile natural disasters plus increasing risk factors such as the risk of infectious disease spread due to increasing global traffic. In this environment, the Agency will need to maintain its vigilance and focus on building an emergency preparedness and response capacity.

25. Emergency preparedness and response efforts within PHAC are conducted under the overarching guidance provided by the Privy Council Office (PCO), Treasury Board Secretariat (as the employer), Public Safety Canada (PSC) which is responsible for both the *Emergency Management Act* and the Federal Emergency Response Plan (FERP)

26. FERP focuses primarily on the response aspect of emergency management. It functions as the Government of Canada's "all-hazards" response plan. This plan, along with event-specific and departmental sectoral emergency plans forms a suite of plans used to guide the federal response to emergencies. As FERP evolves, it will include annexes to address specific threats, international emergencies and the National Emergency Response System (NERS), which describes a harmonized joint federal, Provincial and Territorial response to emergencies.

27. The *Emergency Management Act* states that each minister accountable to Parliament for a government institution must identify the risks that are within, or related to, his or her area of responsibility including those related to critical infrastructure. Furthermore, in accordance with the policies, programs and other measures established by the Minister to prepare emergency management plans in respect of those risks, they need to maintain, test and implement those plans as well as conduct exercises and training in relation to those plans. The current draft of the Health Portfolio Emergency Preparedness Policy (HPEPP) states its objective is to "…ensure the federal Health Portfolio has an effective and appropriate emergency preparedness and response capacity, and is able to provide the Minister of Health with robust, comprehensive, seamless and integrated emergency management architecture."

28. PHAC, on behalf of the Health Portfolio, acts as the "…principal public health advisor to the Minister and is responsible for the delivery of his or her responsibilities in emergency management" and it is also statutorily responsible for public health emergency preparedness and response pursuant to the *Public Health Agency of Canada Act (2006 PHAC Act).* The Centre for Emergency Preparedness and Response (CEPR) is clearly identified as the focal point for dealing with emergency planning and response. Among its many responsibilities, CEPR:

    - develops and maintains national emergency response plans for the PHAC and Health Canada ;
    - monitors outbreaks and global disease events;
    - assesses public health risks during emergencies;
    - contributes toward keeping Canada's health and emergency policies in line with threats to public health security and the general security for Canadians, in collaboration with other federal and international health and security agencies;
    - is responsible for important federal public health rules governing laboratory safety and security, quarantine and similar issues, and;
    - is the health authority in the Government of Canada on bio-terrorism, emergency health services and emergency response.

29. Reporting to CEPR, the Office of Emergency Response Services (OERS) provides a 24/7 medical response capacity that includes health care personnel, along with health and social services emergency supplies and equipment to its government and non-government partners. It manages the National Emergency Stockpile System (NESS), which includes medical, pharmaceutical and related emergency supplies. OERS has also established a national health emergency surge capacity in the form of Health Emergency Response Teams (HERT) which are currently being transformed to a new program known as the National Medical Reserve (NMR) to assist P/Ts that request help in dealing with medical emergencies and health effects resulting from disasters.

30. In accordance with the Minister's responsibilities outlined in the *Emergency Management Act*, OERS is responsible for the development and delivery of emergency management training and conducting related exercises.

31. Emergency preparedness is an essential part of fulfilling PHAC's mandate. The consequences of a failure of this function would be severe. Emergency preparedness includes planning, response capacity development, stakeholder communications, training and the conduct of exercises in anticipation of a likely emergency. The goal of these preparedness activities is to ensure the government is ready and able to respond quickly and effectively in the event of an emergency affecting public health.

32. As of February 2010, the Centre for Emergency Preparedness and Response expenditures for the fiscal years 2008-09 were $24.8 million and they are estimated at $27.3 million for 2009-10.

# About the Audit

## Objectives

33. The objectives of this audit were to:

   - assess the PHAC management framework, plans, processes, systems and practices for preparing for and responding to emergencies, in collaboration with its key partners and stakeholders, against relevant legislation, policies and mandates;
   - assess whether the Agency's emergency preparedness and response programs and activities were effective, efficient, timely, took into consideration risks and ensured that the personnel deployed were qualified and properly trained;
   - assess whether there were proper controls of assets used for emergency preparedness and response, and, determine if they were managed with due regard to effectiveness and efficiency and that they were effectively deployed; and
   - identify relevant opportunities and best practices for improvement.

## Scope

34. The scope of this audit included an examination of PHAC emergency preparedness and selected response activities including Health Emergency Response Teams (HERT) and the National Emergency Stockpile System (NESS) programs. Specifically the audit specifically addressed the following elements:

   - governance, mandate and strategic directions;
   - management framework;
   - operational planning;
   - human, financial and materiel resources; and
   - its relationship with partners and stakeholders.

35. The audit scope excluded internal and external communications, pandemic preparedness and response, quarantine services, business continuity planning and surveillance activities as these activities were the subject of previous or upcoming audits.

**Approach and Methodology**

36. This audit was conducted in accordance with the Treasury Board (TB) Policy on Internal Audit and the Institute of Internal Auditors' (IIA) International Standards for the Professional Practice of Internal Auditing, except that no complete external assessment was performed to demonstrate full compliance with the IIA Standards. This audit was approved by the Audit Committee as an audit project for 2009-10 and performed between February and June 2010.

37. Applicable legislation, TB policies, generally accepted management practices and the Office of the Comptroller General's Core Management Controls were used to develop the audit criteria, sub-criteria and the audit program (Appendix A). Audit methods included an assessment of processes, procedures and management practices related to emergency preparedness and response (including NESS and HERT). The audit team also conducted interviews with PHAC key personnel as well as representatives of programs' partners and stakeholders; reviewed documents and; conducted on site-visits of warehouses and depot centers.

# Audit Findings and Recommendations

## Mandate, Governance and Strategic Direction

38. We expected that essential elements such as a mandate, internal coherence, appropriate governance structure, and alignment with outcomes were in place within the emergency preparedness and response program in order to provide effective strategic direction.
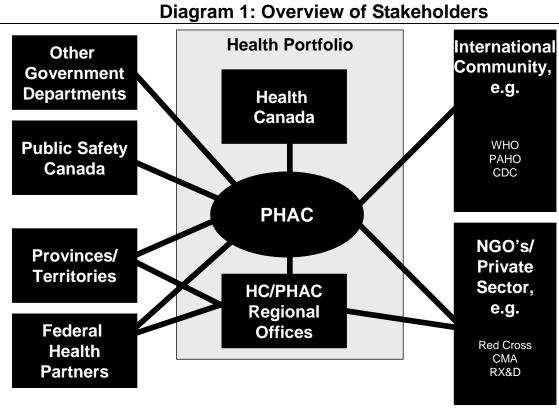
### Overview of Stakeholders

39. As defined in the May 2007 draft of the Health Portfolio Emergency Preparedness Policy (HPEPP), PHAC's mission related to emergency preparedness and response is:

> *"to promote and protect the health of Canadians through leadership, partnership, innovation and action in public health. Its vision is "Healthy Canadians and communities in a healthier world."*

> *"Included in this mission is a responsibility to respond to emergencies that may have negative impacts upon the health or social well-being of Canadians. In addition to ongoing activities conducted through their normal duties, Health Portfolio organizations are obliged to fulfill their missions during times of emergency when the threat to human health and safety is more acute and thus the need to be prepared for rapid response is paramount. Various pieces of federal legislation mandate the Health Portfolio (PHAC & Health Canada) to support other departments in emergency situations, or to take the lead in others. The provinces and territories may call upon the Health Portfolio for assistance*

*during times of emergency".*

40. In fulfilling this mission, PHAC must work collaboratively with a complex set of internal and external stakeholders. Descriptions of these key stakeholders and relationships are provided below and are also shown in diagram 1.

41. Centre for Emergency Preparedness and Response (CEPR) is the Health Portfolio focal point for marshalling, coordinating and providing a wide range of preparedness services. The Director General is responsible for coordinating portfolio emergency preparedness activities including planning, training and exercising, and for coordinating the health portfolio emergency preparedness arrangements with other federal departments, Provincial/Territorial governments and other stakeholders.



Diagram 1: Overview of Stakeholders

42. Health Canada (HC) is the federal department responsible for promoting and protecting the health of Canadians. HC is PHAC's partner in the Health Portfolio (HP). Canada's Minister of Health has the primary responsibility for developing and maintaining the federal HP emergency plans for national public health threats or events such as major disease outbreaks, natural disasters or major chemical, biological or radiological-nuclear events.

43. HC/PHAC Regional Offices – HC and PHAC are represented by the Regional Directors General (RDG) and Regional Directors (RD), respectively, in the regions during an emergency. PHAC RD's take the lead on regional emergency

preparedness and response issues. Each PHAC region has an Emergency Preparedness and Response Coordinator.

44. P/Ts – PHAC, as part of the HP, assists in the coordination of resources that support the P/Ts in meeting their emergency health and emergency social services responsibilities, as requested. The HP also has specific federal responsibilities in certain circumstances (e.g. to provide resources and coordination for a health event affecting multiple jurisdictions or international boundaries).

45. Federal Health Partners – Federal Health Partners represent those federal organizations that provide direct health care to Canadians (e.g. Correctional Services Canada for incarcerated Canadians, the Department of National Defence for Canadian Forces personnel, etc.).

46. Public Safety Canada – PSC has developed the Federal Emergency Response Plan (FERP) in consultation with other government departments.  PSC manages the Government of Canada Operations Centre (GOC) and Regional Operations Centres and provides the overall coordination for an integrated Government of Canada emergency response.

47. Other Government Departments – PHAC, as part of the HP, works with a number of other government organizations (e.g. Canadian Food Inspection Agency, Canadian Border Service Agency, etc.) in carrying out its emergency preparedness and response activities.

48. International Community – PHAC, as part of the HP liaises with multiple international organizations to exchange information on international health emergencies including international coordination with the World Health Organization (WHO), the G8, G20 and the Global Health Security Action Group (GHSAG).  PHAC is also the national focal point to provide information to the WHO on events that may constitute a public emergency or international concern, pursuant to its obligations under the *International Health Regulations* (2005)

49. **PHAC's emergency preparedness and response mandate related to certain stakeholder groups requires clarification.**

50. The Health Portfolio Emergency Response Plan (HPERP) and the Emergency Support Functions (ESF 5) documents describe general roles and responsibilities. However, we noted several areas related to PHAC's mandate and supporting roles and responsibilities that require clarity as described below. This lack of clarity in the mandate and supporting governance structure may lead to inefficient and ineffective delivery of program services.

51. **PHAC's International Mandate** – As referenced from the HPEPP, PHAC's mission is: to promote and protect the health of Canadians through leadership, partnership,

innovation and action in public health. Its vision is "Healthy Canadians and communities in a healthier world".

52. From an emergency preparedness response perspective, PHAC has actively responded to a number of international emergency response efforts in recent years (e.g. the Haiti earthquake, Asian tsunami, etc.). It appears that the objective for PHAC's participation was broader than "to promote and protect the health of Canadians". Other than recognition that the Minister may carry on activities abroad, subject to the limitation that these activities relate to Canada and the health of its people, PHAC's mandate related to international situations is not formally or explicitly recognized. Thus, it is not clear that emergency preparedness and response activities extend beyond Canadian borders. Accordingly, this should be addressed in order to provide clarity on the full scope of PHAC emergency preparedness and response activities.

53. **PHAC support of Federal Health Care Providers** – In Canada, there are approximately one million citizens including First Nations and Inuit who receive their primary health care from federal government organizations such as First Nations and Inuit Health Branch (Health Canada), Correctional Services Canada, Veterans Affairs Canada, Canadian Forces and the Royal Canadian Mounted Police (RCMP).

54. The emergency preparedness and response focus to date has been on supporting P/Ts, as primary health care providers, and has not yet adequately identified or addressed the emergency preparedness and response needs of its Federal Health Partners. Although PHAC actively participates in the Federal Health Partnership (a forum that represents the federal health care providers), Federal Health Partnership stakeholders indicated that PHAC needs to understand and respond to their unique emergency preparedness and response expectations and needs.

55. **PHAC support of Canada's North** – PHAC, through the Health Portfolio, currently supports Canada's Territories via regional operations in British Columbia (Yukon), Alberta (North West Territories) and Ontario (Nunavut). We noted the unique challenge of servicing the emergency preparedness and response needs of the North, which justify additional PHAC investment in supporting these jurisdictions. Immediate needs include the development of Territory specific Memoranda of Understanding (MOU) to clarify the roles and responsibilities and provision of additional resources by PHAC in assisting the Territories with the development of emergency preparedness and response capacity.

56. **Integration of emergency preparedness and response activities and coordination within the Health Portfolio requires continued focus.**

57. PHAC has recently announced in February 2010, a new organizational structure. Under this structure, the Director General, Centre for Emergency Preparedness and Response (DG CEPR) now reports to a new Assistant Deputy Minister position; Emergency Preparedness and Response and Corporate Affairs. In emergency

situations and declared emergencies, however, the DG CEPR reports directly to the Chief Public Health Officer (CPHO). This varied accountability may create a challenge in administering the governance and communication structures that support emergency preparedness and response.

58. We noted an overlap of responsibilities related to emergency preparedness and response activities. For example, within the Health Portfolio, there are several Director Generals (DG's) who have responsibilities related to the four cornerstones of emergency management – prevention, preparedness, response and recovery which are aligned with the Incident Command System (ICS). In organizations that have prime responsibility for emergency preparedness and response, responsibility for planning and operations (response) is typically clearly divided as per those four cornerstones.

59. In spite of a DG level Coordinating Committee within the HP, there is no compelling evidence that HC and PHAC function as a unified federal organization with respect to emergency preparedness and response activities. For example, pandemic preparedness, sporadic infectious disease outbreaks in the Provinces, the Food-borne Illness Response Protocol (FIORP), and the Federal Nuclear Emergency Response Plan (FNERP) are all dealt with outside CEPR, the lead coordination organization.

60. In addition, we noted several examples that demonstrated a lack of organizational unity between headquarters' office (PHAC and HC) and the regional offices. These observations include:

- resources *(both financial and human)* are concentrated towards headquarters as opposed to the regions where emergency response is typically affected. Most regional offices have only three employees involved in emergency preparedness and response activities (a coordinator, an officer and administrative support);
- regional offices are not in a position to promptly share information with the Provinces, or federal partners, leading to delays in information dissemination and potential confusion during times of emergency. This was the case particularly during the H1N1response. The role of regions in the sharing of information is not well understood; and,
- PHAC regional staff relies heavily on Pan-Canadian meetings of Regional Emergency Preparedness and Response Coordinators to set their program priorities. Roles and responsibilities and expectations from regional staff with respect to emergency preparedness and response activities are not well defined and need to be clarified.

61. The lack of well defined roles and responsibilities within PHAC, including Regional Operations and between PHAC and its partners, could lead to ineffective emergency preparedness and response service delivery, inappropriate involvement of partners

and stakeholders, duplication of effort, or failure to meet PHAC's legislative obligations.

## Conclusion

62. PHAC's mandate and strategies related to its involvement at the international level and its support to federal health care providers and in Canada's North need to be revisited. In addition, management attention is required to clarify emergency prevention, preparedness, response and recovery roles and responsibilities within PHAC, including regional staff.

## Recommendation

63. The Assistant Deputy Minister, Emergency Preparedness and Response and Corporate Affairs in cooperation with key partners and stakeholders should re-examine the emergency preparedness and response mandate and supporting roles and responsibilities in order to appropriately address the Agency's:

- role in relation to international emergencies;
- role in support of Federal health partners;
- role in support of Canada's Territories; and
- expectations of regional offices vs. available resources.

## Opportunities for Improvement

64. The Assistant Deputy Minister, Emergency Preparedness and Response and Corporate Affairs should consider aligning the emergency preparedness and response management structure in accordance with the Incident Command System model in order to provide a clear accountability on emergency preparedness and response activities for:

- prevention (emergency preparedness and response policy, surveillance, risk assessment, legislative initiatives and other mitigation programs);
- preparedness (development of plans, training, exercises, management of the Emergency Operations Centre, preparing for surge capacity, the National Emergency Stockpile System, the new Health Emergency Response Teams, Public Health Reserve, etc.); and
- response and recovery (activation of the Emergency Operations Centre, activation of deployable resources such as the Health Emergency Response Teams and National Emergency Stockpile System , Incident Command System/Incident Management System, response management for emergencies, events, recovery, etc.)

65. At a minimum, the Assistant Deputy Minister, Emergency Preparedness and Response and Corporate Affairs should review the job descriptions of the Director

Generals and Assistant Deputy Ministers to ensure that a clear line of responsibility exists for prevention, preparedness, response and recovery activities.

## Planning and Preparedness

66. We expected that risk management mechanisms existed to support the identification, assessment, monitoring, mitigation and reporting of strategic and operational risks and that ongoing activities, tasks and systems to develop, implement and maintain effective emergency management capacities were in place.

67. The Planning and Preparedness section has the following sub-sections: surveillance, risk management, planning and preparedness, training and exercises programs, the Health Portfolio Emergency Operations Centre (HPEOC) Operations Manual and relevant Standard Operating Procedures (SOP).

### Surveillance

68. Surveillance is a fundamental activity in emergency preparedness and response that includes ongoing environmental scanning, collection and analysis of epidemiological data and information, as well as observation and reporting on evidence and trends that could indicate "early warning" of an impending threat to public health. It is therefore essential for ensuring Canada meets its obligations under the *IHR* (2005). The surveillance function is also an integral part of an ongoing emergency response that manifests itself in the daily preparation and dissemination of situation reports during an emergency or event.

69. Surveillance activities have already been the subject of a separate Office of the Auditor General audit in 2008. Consequently, the observations and findings in this audit are mainly related to the external environmental data and information provided to decision makers in support of emergency planning and responses mechanisms.

70. **PHAC has a defined surveillance program. The Public Health Daily Intelligence Reports are well managed. However, the sharing of this information with various partners and stakeholders needs to be improved.**

71. We observed that PHAC has a defined surveillance program. Its Public Health Daily Intelligence Reports describe the status of current public health issues and the actions being taken by PHAC responsibility centres. The Agency takes a proactive approach in the compilation and distribution of surveillance information at the headquarters level. Surveillance issues are discussed at daily morning meetings of headquarters' DG's and concerns are quickly raised to senior management.

72. Some regional offices reported that lack of sharing intelligence information with their Provincial counterparts was perceived to be detrimental to Federal–Provincial/Territorial relationships. Regional officials of PHAC need to share relevant nationally compiled surveillance data and reports with their provincial colleagues.

73. It was not readily evident that PHAC makes use of intelligence and situation reports from PSC which reports daily on federal government-wide issues of concern through the Government Operations Centre (GOC). For example, Officials from the GOC reported delays in receiving situation reports from PHAC during Phase 1 of the H1N1virus, thereby constraining the GOC from reporting the government-wide response to H1N1on a timely basis.

74. PHAC management reported a general level of satisfaction with daily surveillance information. However, the nature and extent of follow-up actions was highlighted as an opportunity for improvement. The example of emerging zoonotic diseases and food safety issues, requiring coordination with the Canadian Food Inspection Agency, was cited. CEPR needs to regularly check the triggers identified in the Health Portfolio Emergency Response Plan (HPERP) for example, the potential health impacts, cross provincial boundaries, high visibility event/emergency etc. and take appropriate response action, including issuing alerts to the P/Ts about a potential threat, tapping into international networks, and providing required information to the WHO as required under *IHR* (2005).

75. Information management systems supporting surveillance require attention. The development of a new consolidated surveillance information system (Panorama project) has not yet been implemented. PHAC has access to a number of databases, such as E-Team, but faces issues with respect to interconnectivity and interoperability. These systems are not well integrated from a logistical or data perspective. As a result of data and information system deficiencies, PHAC is unable to answer basic questions such as the rate of spread/incidence of H1N1, or related cause/effect relationships.

76. The surveillance function in the Health Portfolio Emergency Operations Centre (HP EOC) requires clarification. Standard Operating Procedures (SOP) have been developed for both surveillance and risk assessment but it is not clear whether these SOPs are consistently applied.

**Risk Management**

77. Risk analysis involves three major activities - risk assessment (a determination of the degree of risk involved); risk management (establishing what, if any, measures are required to mitigate the risk); and risk communication (ensuring that stakeholders are involved in this process).

78. **The current risk management process is event driven. PHAC has not yet developed a long term comprehensive risk and threat assessment process, and an "all hazards" risk management plan to support emergency preparedness response efforts.**

79. Responsibilities of the Federal Ministers with respect to risk management were identified in the background section. Furthermore, the federal government can

invoke the *Emergencies Act* with regard to comprehensive, 'worst case scenarios' leading to "national emergencies" This legislation provides federal powers, through emergency orders and regulations, to take control of the emergency response and bring to bear all of the resources available to the government. There was no evidence presented to us that PHAC is conducting 'worst case scenario' risk assessments, nor that it is preparing emergency orders and regulations for the health sector to be ready for a declared national emergency.

80. We found that the risk analysis process for emergency preparedness and response including risk assessment, risk management and risk communication for PHAC, is not well defined. Although this function is fundamental to the Agency's capacity to identify and mitigate public health threats, it has not yet documented, nor implemented a comprehensive risk management process across the organization.

81. The lack of a comprehensive and documented risk assessment process (i.e. for identification, assessment, mitigation and monitoring) could lead to an inability to take appropriate actions to mitigate or eliminate risks. Insufficient response to a changing risk environment can also lead to ineffective or inefficient responses in emergencies.

82. An ongoing risk assessment appears to be carried out on an "ad hoc and reactive" basis. This observation holds true for HERT, NESS, management of the EOC portfolio, and the CEPR training and exercise programs. There was also no compelling evidence that a comprehensive risk assessment was being used in support of ongoing policy and plan development and program management.

83. Some Provinces reported that risk assessments were ongoing by Provincial/Territorial authorities, particularly with respect to the public health consequences of natural and man-made disasters, but less so on infectious diseases.

84. PHAC regional officials indicated that they actively participated in provincial risk assessment development and assisted in preparing provincial emergency management plans and in prioritizing provincial programs. However, they were not involved in the preparation of PHAC risk assessments.

85. PHAC relies extensively on risk assessments prepared under the DND Chemical Biological, Radiological and Nuclear Emergency (CBRNE) Program. These assessments are useful, but restricted to issues affecting national security and counter-terrorism, and do not necessarily have a public health focus.

86. There is a clear distinction to be made between event-based risk assessments and "all hazards" risk assessments. The former are rapid assessments meant to be used operationally to guide response considerations. The latter are more complex assessments that are used strategically to help with planning activities. Both require professional and specialized analytical skills.

87. PHAC is in the early stages of determining staff qualifications and skill sets for determining emergency response capacity requirements. Such rosters of qualified staff could also be used to identify staff capable of participating in public health risk assessments.

### Recommendation

88. The Director General Centre for Emergency Preparedness and Response should develop a long term comprehensive threat and risk assessment process, and an "All Hazards" Risk Management Plan to support emergency preparedness and response efforts.

### Planning and Preparedness

89. Planning and preparedness consists of ongoing activities, tasks, and systems to develop, implement, and maintain emergency management program capabilities. Planning is required for all four phases of emergency management (prevention, preparedness, response and recovery). Preparedness activities include programs such as the development of emergency plans, contingency plans, development of ICS/IMS management structures and frameworks, ongoing management of the HP EOC, development of Standard Operating Procedures (SOP), training and exercises, evaluation, gap identification, After Action reporting and documentation/sharing of "best practices."

90. **Strategic objectives and broad based governance considerations are appropriately defined and documented.**

91. The FERP and Emergency Support Function (ESF5) are the primary means by which the HP links to the Government of Canada emergency management, public safety and security programs.

92. FERP focuses primarily on the response aspect of emergency management. It functions as the Government of Canada's "all-hazards" response plan. This plan, along with event-specific and departmental sectoral emergency plans, form a suite of plans used to guide the federal response to emergencies. As FERP evolves, it will include annexes to address specific threats, international emergencies and the National Emergency Response System (NERS). NERS describes a harmonized joint federal, Provincial and Territorial response to emergencies.

93. FERP was approved by Cabinet in December, 2009 as the federal government's "all hazards" emergency response plan. PHAC staff and senior management participated actively in the development of FERP and, along with all federal departments and agencies submitted their Emergency Support Function (ESF5) for Public Health and Essential Human Services.

94. Emergency Support Function (ESF 5) for "Public Health and Essential Human Services" is an Annex to FERP. Its purpose is to coordinate the provision of national emergency health, and emergency social services resources and to augment local health care capacity to the affected Province(s) and/or Territory (ies) as requested. This recent document dated April 12, 2010, addresses PHAC along with the HP's responsibilities in FERP. It contains a comprehensive summary of how PHAC emergency preparedness and response operates in the federal response framework.

95. In addition to FERP and ESF 5, the HP has developed a draft Health Portfolio Emergency Preparedness Policy (HPEPP) which provides the policy framework to guide emergency preparedness planning across the HP and with partners; it also describes broad objectives and roles and responsibilities.  The HPEPP was developed in May 2007. This document contains a comprehensive statement of emergency preparedness roles and responsibilities for PHAC and HC. The current version is almost three years out-dated and is in need of revision and updating, particularly in light of PHAC's experience in responding to major incidents/events in the 2008-10 periods. The revised emergency preparedness policy should also reflect the content of the recently approved HP ERP.

96. In addition to the HPEPP, the HP has also finalized the Health Portfolio Emergency Response Plan (HPERP).  This plan outlines operational and planning guidelines for the portfolio's role to provide medical, scientific, and technical advice, assistance, materiel, advisories, alerts and warnings to Provincial, Territorial, other federal departments and international partners. It was completed in September 2009, and approved by senior PHAC management in February 2010. This is a key document in the HP's emergency preparedness and response program. Because this is a new plan, HP ERP has not been used for recent incidents such as the H1N1 response. We consider HPERP to be comprehensive, complete and an excellent plan that incorporates most of the elements of best practices.

### Recommendation

97. In cooperation with Health Canada, the Director General Centre for Emergency Preparedness and Response should revise the current version (2007) of the Health Portfolio Emergency Preparedness Policy, particularly in view of the PHAC experience in responding to major incidents/events in the 2008-10 time frames such as H1N1.

### Training and Exercises Programs

98. **There are no comprehensive multi-year training and exercise plans as required under the *Emergency Management Act*.**

99. CEPR provides emergency management training for the HP and P/Ts. Traditionally, training programs were developed and delivered for external stakeholders in the Public Health Network. Since early 2008, training for the HP staff has become a

priority. It was estimated by training managers that attendance at those training sessions has been split 50% among HP staff and 50% among delivery partners and Provincial/Territorial stakeholders.

100. PHAC has not yet undertaken a training needs assessment for the training program. In addition, we found no evidence of any risk assessments undertaken to identify the training needs population and program content. That being said, the training group is currently participating in a national consultation process led by PSC to assess among other things, the training needs of the P/Ts under the national CBRNE initiative (i.e. the first responders/receivers training program).

101. Incident Command System (ICS) and Incident Management System (IMS) training is provided in Ottawa and the regions. For many staff, this training was observed to be too generic and not job-specific as staff is not trained in their emergency functions. On the other hand, job-specific/functional training was developed and offered by the training group to the HP staff in advance of the Vancouver 2010 Winter Games. These sessions were developed in response to a gap identified in the "After Actions Report" following the Winter games exercise series and will required further refining in order to effectively build capacity to support the HP IMS structure.

102. PHAC has not yet developed a comprehensive, multi-year training program. Funding is provided for events (e.g. Olympics/G8-G20) and also comes from a variety of sources, including the PHAC operating budget, event budgets (e.g. Olympics), and external sources (e.g. Defence Research, the CBRNE program). Given the sporadic nature of funding, there is a need for the development of a longer term funding horizon in support of training programs.

103. Exercises are developed for planned events to prepare the HP to be on standby. For example, exercises have been used to support preparedness for the 2010 Olympics and upcoming G8/G20 meetings. There is a generally restricted use of exercises in PHAC and the HP. Although these exercises are useful, additional focus is required to meet the requirements in the *Emergency Management Act.* This Act requires that all Ministers must identify risks within or related to their areas of responsibility and then train personnel and develop exercise plans in response to those risks.

104. PHAC participation in "all hazards" exercises is usually limited to exercises of opportunity managed by PSC or the Provinces. There is a notable lack of comprehensive public health oriented and infectious disease exercises that would truly test the delivery capability of PHAC to meet its primary public health protection mandate.

105. There is a need to develop and execute comprehensive public health exercises to test newly developed plans and arrangements such as FERP, the PHAC Emergency Support Function, the HP Emergency Response Plan and the HP Emergency Preparedness Policy.

106. PHAC regional staff actively participates in provincial exercises and consider them very useful, albeit lacking in public health content. PHAC regions also participate in event-driven exercises run from Ottawa. Most PHAC regional managers acknowledged the need for broader and better exercise planning and delivery.

107. Overall PHAC "exercise" capacity and infrastructure is evolving. At this point in its evolution, there are gaps related to the governance of exercises in particular. For example, PHAC does not yet have a clearly defined structure for exercises covering planning, conduct and follow-up. Currently, the Joint Emergency Preparedness Committee (JEPC) is the default governance body. JEPC is a Health Portfolio Emergency Planning Group with the mandate of ensuring that a coordinated approach to emergency response is in place. JEPC has approved the creation of a training subcommittee, but it has not yet been established.

108. PHAC would benefit from the development of a longer term view of exercises (e.g. a three to five year exercise plan.) that includes a progression of emergency operations drills, table top exercises, functional exercises, and "on the ground" field exercises.  This focus would aid in moving PHAC from its current reactive exercise approach to a more proactive approach.

109. Exercise planning must respond to the "all hazards" risk assessment focus. CEPR needs to develop more robust risk assessments and related plans which would then lead to training and exercises to validate those plans.

110. PHAC exercise planning and execution tools and documentation need to be standardized. (e.g. a player's briefing handbook, controller handbook, and evaluation handbook which list criteria, After Action reporting templates, identification of gaps in planning, and documentation of best practices).

### Recommendation

111. In cooperation with key partners and stakeholders, The Director General, Centre for Emergency Preparedness and Response should:

- develop and implement public health exercises to test newly developed plans and arrangements such as the Federal Emergency Response Plan, the PHAC emergency support function,  the Health Portfolio  Emergency Response Plan, and the Health Portfolio  Emergency Preparedness Policy;
- develop and implement  comprehensive multi-year training and exercise plans; and
- secure training and exercises funding requirements.

### HPEOC Operations Manual and Relevant SOPs

112. The EOC Operations Manual is currently under development. An Operations Manual and supporting SOPs are the key to supporting successful training and readiness for

Emergency Operations Centre (EOC) staff as well as surge PHAC staff, who will be required to work in the EOC when it is activated on a 24/7 basis. Mini exercises or drills are also required for trained staff to practice operations under different emergency scenarios.

113. The partially completed Operations Manual was reviewed by the Audit Team. It is comprehensive in scope and, when complete, will be an important document for staff orientation and training as well as for staff managing and operating the HPEOC. This manual does not include a section on surge capacity requirements, either in the EOC during a high level activation or to supplement PHAC resources during an emergency/incident response.

114. A review of the EOC Emergency Operations Plan also identified some issues in relation to well-established command and control principals:

- having one position (individual) identified as responsible for managing emergencies is critical towards ensuring a consistent and knowledgeable response to emergencies and crises. The EOC plan refers to an "Emergency Manager (EM)" who is selected depending on the type of emergency. This plan eventually identifies that person as being either the DG of the CEPR or the HC DG of the Office of Emergency Preparedness as the normal EM. It would be beneficial and prudent to identify the DG CEPR as the primary person responsible for this function and therefore named as such throughout the document, in order, to eliminate confusion and ensure consistency; and
- there are four EOC activation levels identified in the Emergency Operations Plan. In addition there are three response levels identified in the HP ERP. While this is intended to reflect different aspects of crisis management, this different terminology could lead to confusion during response events.

**Opportunity for Improvement**

115. The Director General Centre for Emergency Preparedness and Response should continue the current development efforts on the Operations Manual and the Standard Operating Procedures.

**Conclusion**

116. The sharing of intelligence with Provincial and Territorial counterparts is a challenge. The Agency has not developed a long term comprehensive risk and threat assessment process, and an "all hazards" risk management plan to support emergency preparedness response efforts. Generally, the broad based governance considerations are appropriately defined and documented. Management attention is required to implement comprehensive multi-year training and exercise plans and also to secure funding requirements. A focus effort to complete the EOC Emergency Operations Plan is required. A comprehensive public health exercise is a priority to test the newly approved Health Portfolio Emergency Response Plan.

## Response Activities

117. We expected that immediate and ongoing tasks, programs, and systems were in place to manage the effects of an incident that threatens public health, human life, property, operations, or the environment.

118. PHAC response activities and programs include the activated HP Emergency Operations Centre, the ICS/IMS management framework, NESS, the provision of surge capacity health human resources including a new approach for the HERT, and other PHAC response functions activated during an incident or event.

119. **There is a lack of human resources surge capacity to work with an expanded HPEOC during an emergency or event.**

120. PHAC has developed EOC surge capacity models and personnel qualification rosters have been prepared to deal with excess capacity. However, these are recent developments and their completion needs to be treated with urgency. PHAC human resources planners have recently been involved in an initiative to create surge internal capacity but their support is required on a sustainable basis to address the lack of such capacity. PHAC representatives interviewed indicated that there was a challenge in convincing staff to accept EOC duty. Management is also experiencing challenges in training and motivating staff (especially professionals) to recognize and accept the responsibilities of this excess capacity function. Consequently, there is an ongoing challenge to recruit qualified people to work in the EOC during both ongoing and activated operations. This lack of sufficient capacity including both qualified personnel and resources, related to preparedness activities and/or response activities could reduce the Program's ability to achieve its objectives.

121. The HP EOC currently does not have the full 24/7 capability needed to run on a 24/7 basis. Currently, there is only a limited after hours watch officer function in place. Given the magnitude and potential severity of public health issues in Canada, PHAC needs to have a 24/7 capacity for surveillance, risk assessment, notification, and activation. This would parallel the 24/7 capacity that exists in the PSC's Government Operations Centre (GOC).

122. Management direction is required with respect to the usage of the E-Team software in the EOC. This initiative represents a significant investment of time and money and a decision is required on its future use. Standardized EOC software is a necessity to handle large amounts of complex data and information. A commitment is required to ensure that managers and staff are trained in its use.

### Recommendation

123. The Director General, Centre for Emergency Preparedness and Response should continue the development of Agency surge capacity models; make a decision on the usage of a common software; and provide mandatory emergency management

training to Emergency Operations Centre employees and to surge personnel to ensure that they are fully trained and qualified to respond to emergencies or significant events.

### National Emergency Stockpile System (NESS)

124. The National Emergency Stockpile System (NESS) program is designed to provide surge capacity to Provincial and Territorial systems in the event of health emergencies resulting from natural disasters or human caused events. The value of NESS inventory is estimated by program management to be $300 million.

125. Included in NESS are medical and social service supplies ranging from beds and blankets to advanced paediatric ventilators. NESS also houses supplies of pharmaceuticals, including antibiotics and vaccines. NESS also has field hospitals procured in the 1950's which are positioned throughout the country.

126. The NESS inventory is stored within ten federal warehouses and approximately 1,300 additional pre-positioned supply centres across Canada. These pre-positioned sites which operate under the combined management of the Provinces and federal government are intended to support a 24 hour response time to Provincial and Territorial requests.

127. NESS has been used to support a number of emergencies, both in Canada and internationally. For example, pharmaceuticals, supplies and equipment were provided to P/Ts during the H1N1 crisis. Internationally, pharmaceuticals, supplies and equipment were provided as part of the Government of Canada's response to the south-east Asia tsunami crisis.

128. As of February 2010, NESS Expenditures were $5.1 million for the fiscal year 2008-09 and they are estimated at $5.1 million for 2009-10

129. **The mandate and strategic objectives of NESS require clarification**

130. NESS was created during in the 1950's in response to civil defence risks arising from the "Cold War". Changes in the social and political environment, in international travel patterns and the possible spread of infectious disease represent new risks for which Canada must have the appropriate response capability. This changing risk profile has resulted in a need to transform the NESS from a civilian defence model to one that has modern equipment and supplies and is ready to respond rapidly to public health events and emergencies across jurisdictions.

131. In support of this need for modernization, in 2006, PHAC undertook a strategic review of NESS. This review lead to the development of recommendations related to the NESS content, its functions, life cycle and distribution processes.

132. While thorough in nature, there is no evidence that this strategic review has ever been translated into a clear operational mandate, objectives or strategies for the

NESS program. Nor is there evidence that PHAC senior management has agreed with, or agreed to act upon the recommendations included in the strategic review.

133. NESS management have identified three priorities for 2010-11 including:

- implementation of a modern inventory system;
- renewal of NESS inventory; and
- implementation of evidence-based decision making for acquisition and disposal.

134. While this prioritization represents a positive and necessary step in the evolution of NESS, the fact remains that neither a comprehensive long term strategic plan, nor a near term business plan have been developed for the program that can be endorsed by PHAC senior management.

135. In developing a clear mandate and supporting strategic plan, there are a number of questions related to the NESS mandate and authorities that must be clarified such as:

- **The NESS mandate related to international deployment** – NESS assets have been deployed in multiple international emergencies since its inception. However, NESS' role with respect to international deployments is unclear. Under the current mandate of the NESS program, there is no specific authority addressing the international deployment of assets.  As a result, other authorities (e.g. s.61 of the *Financial Administration Act*) are used to support these deployments.

- **NESS capacity to support domestic demands** – Program expectations for NESS are rapidly expanding domestically. Recent response examples include the 2010 Olympics Games, upcoming G 8 and G 20 meetings, and national pandemic preparedness activities such as H1N1.  Given the diverse range of health events that NESS is expected to serve, and the historical legacy of its current inventory centers, it is unclear whether there is an appropriate alignment between the current NESS inventory and the expected response needs of its stakeholders.

- **The role of P/Ts in the management of NESS assets** – NESS currently maintains 1,300 pre-positioned sites across the country under the joint management of PHAC and the P/Ts. Based on our review of available documentation, the rationale behind the choice of pre-positioned sites is unclear, nor is it clear who would be responsible for rationalizing the choice of pre-positioned sites in accordance with the modernization of NESS. Current Provincial Memoranda of Understanding (MOUs) date back to the 1960's and there are no current MOUs between PHAC and any of the Territories. There is also little or no information available on the holdings of P/Ts, thus making surge capacity requirements difficult to define.

- **The role of NESS in relation to federal asset stockpiles maintained by the international community** – The United States maintain emergency asset stockpiles. Given the inherent risk of asset obsolescence in stockpile management, NESS representatives and stakeholders identified potential synergies and benefits associated with integrating/leveraging NESS stockpiles with those of international partners. Currently NESS maintains informal relationships with key international partners. The need for formal arrangements would need to be considered as part of the exploration of this mandate.

136. **NESS program management has not fully implemented an evidence-based acquisition process.**

137. NESS acquisition practices since the Agency's creation have been primarily driven by specific events or by the presumed need to replenish expired or deployed inventory items, with limited justification available to support these expenditures. However, recent purchases made in support of national pandemic preparedness provide an example of an "evidence-based" process.

138. Furthermore, NESS acquisitions in the recent past have also been driven by established budgets and available funds, as opposed to being based on more comprehensive needs analyses. As a result of these practices, the rationale supporting the size, content and acquisition strategy of the current inventory is questionable.

139. In response to these issues, program management is in the process of developing a more comprehensive needs assessment process in support of evidence-based acquisition decisions. This process involves increased reliance on subject matter experts and the engagement of Provincial and Territorial representatives. It includes the establishment of advisory bodies that will provide subject matter expertise in support of pharmacy product, medical and supplies acquisitions.

140. While this effort represents an improvement for NESS operations, continued emphasis is required to ensure that "evidence-based" acquisition practices are fully and consistently employed for all significant purchases of NESS assets.

141. **The rationale and approach towards pre-positioned supply sites needs to be revisited to reflect current needs.**

142. In addition to the ten warehouses located across Canada, NESS, in collaboration with the P/Ts, maintains 1,300 pre-positioned sites that were established long before the creation of the Agency. There are a number of management issues related to these sites including:

- difficulty in rationalizing the need for 1,300 sites across the country;

- complexity in maintaining accurate inventory records and Provincial/Territorial key contact information for each of these sites; and
- complexity in identifying and appropriately managing obsolete and/or non-deployable assets currently maintained in these sites.

143. The number and location of pre-positioned sites is not based on current risk and/or needs assessments, although several Provinces are currently reviewing their approach towards pre-positioned sites. One element of revisiting this approach towards pre-positioned sites involves the clarification of specific PHAC and Provincial/Territorial roles in connection with decision making on the re-alignment and management of pre-positioned sites. This consideration would presumably be within the scope of revised MOU's with the P/Ts.

144. **NESS program management has not yet developed a comprehensive asset maintenance plan.**

145. NESS inventory consists of three primary categories of assets: pharmaceuticals, supplies (e.g. masks, blankets, etc.) and equipment (e.g. medical/diagnostic equipment, generators, etc.).

146. Each of these categories has unique maintenance challenges, requiring PHAC to have appropriate policy guidance, Standard Operating Procedures and trained resources in order to ensure that assets are maintained in a state of readiness for deployment on a timely basis.

147. **Pharmaceuticals:** PHAC has progressed in addressing maintenance challenges related to these assets by leveraging pharmaceutical supply vendors to ensure that pharmaceutical products are rotated in a timely manner to maintain their readiness for deployment. PHAC currently has agreements with six suppliers for 18 products that are located in three Provinces.

148. The Agency faces a resource challenge with respect to pharmaceuticals maintenance in that NESS has had difficulty staffing a pharmacist to support the management of this significant sized pharmacy. NESS was without pharmacist support from the inception of the Agency in 2004 through 2009 and is currently relying on a seconded pharmacist to ensure appropriate subject matter expertise.

149. **Supplies:** NESS does not have reliable useful life information for the majority of its supplies stored at the main warehouse, the regional warehouses, or at the pre-positioned sites. Useful life information is currently maintained and managed on an ad hoc basis.

150. **Equipment:** NESS currently has both an information management challenge and a resource challenge with respect to medical and social services equipment. NESS does not have a comprehensive asset maintenance plan and reliable maintenance schedule for a large portion of its medical and social services equipment. As a result,

there is an increased risk that equipment is not maintained in a deployable state. Assets such as ventilators have been added to NESS without the necessary expertise to manage them throughout their life cycle.

151. **NESS has implemented appropriate Good Manufacturing Practice (GMP) compliance processes**

152. An annual compliance audit was recently conducted by a pharmaceutical company to verify compliance to the company's procedures and good manufacturing practices with respect to the storage and distribution of Small Pox Vaccine, and to ensure the NESS facility meets standards and GMP guidance for the storage of vaccine products.  Based on the results of this audit, the NESS central depot continues to be approved for temperature controlled storage of vaccine and distribution services provided for the company.

153. In addition, periodic inspections by Health Canada also demonstrated that the Agency complies with GMP with respect to the operations of its central warehouse.

154. **Current NESS inventory control and accounting processes and systems are not adequate to support effective inventory management.**

155. The current method of NESS asset record keeping leverages a combination of manual inventory ledger sheets, spreadsheets and word processing documents. This inventory management system has significant deficiencies and does not adequately satisfy program management asset control or information management needs.

156. NESS program management has identified the implementation of a computerized inventory system as a 2010-11 priority.  This initiative which will initially focus on pharmaceutical products, is expected to be fully implemented across all product areas within three years.

157. Examples of current inventory management process and system weaknesses that we have identified are:

158. **Inaccurate inventory valuation** – The value of NESS inventory is estimated by Program Management to be $300 million. However, this amount is not based on historical inventory records maintained on any recognized basis of accounting (i.e. Generally Accepted Accounting Principles). Specific examples of issues identified include:

- the inventory is not recorded as assets in the Agency's financial statements as required under Treasury Board Accounting Standards;
- inventory valued at the most recent purchase prices compared to an accepted practice of valuing inventory at the lower of historical cost or market value;

- failure to employ recognized accounting principles in relation to inventory transactions; (e.g. the concept of "first in, first out" in determining inventory values)
- lack of recognition and accounting of obsolete inventory items; and
- lack of dollar value information available for inventory quantities maintained at pre-positioned sites.

159. **Inaccurate inventory records for all NESS locations** – A complete physical inventory count is performed over a three year period for all ten warehouses. There are currently no formal plans and processes for periodic inventory counts of pre-positioned and vendor's consignment sites; accordingly, program management has only a limited basis upon which to rely on the accuracy of current inventory records relating to these sites.  In addition, through our audit testing of inventory records and observance of inventory locations, a number of arithmetic errors and inventory quantity/value discrepancies were identified in comparing inventory records to physical inventory counts.

160. **Inaccurate asset maintenance information** – As described in the previous section, the NESS program does not currently maintain robust or accurate asset maintenance or scheduling records in support of the full scope of NESS assets.

161. **Absence of timely and relevant management information**– The current NESS inventory management system does not sufficiently support program management information needs.  As noted above, there are basic management information issues related to the availability and reliability of inventory quantity and valuation information.

162. In addition, from a broader management perspective, the inventory management system does not sufficiently support program management. Examples of the types of information that are typically available from an inventory management system include:

- inventory turnover/utilization information;
- inventory aging information;
- inventory obsolescence information;
- asset maintenance information;
- inventory space utilization; and
- inventory cost trends.

163. The availability of this type of information would better allow program management to effectively manage NESS operations. Insufficient asset management and controls may lead to obsolescence, loss, fraud, inefficient use of assets, and reduced PHAC capacity to meet NESS objectives.

164. **NESS lacks a clear policy and supporting processes to ensure that inventory obsolescence is actively managed.**

165. One of the recognized challenges in managing emergency stockpiles is the reality that the timing, frequency and extent of asset deployments are highly difficult to forecast given the inherent uncertainties associated with emergency preparedness. Equally challenging are the management of inventory storage and disposal decisions related to those products that are at, or beyond their useful lives/expiry dates.

166. In response to this challenge, program management has initiated several improvement activities including:

- initiating the development of a draft asset disposition policy; and
- conducting a review of the current state of inventory at its main storage facility in order to support decisions about which assets to keep and to dispose of (i.e. based on an assessment of whether the asset meets minimum standards of care or whether the asset is judged to be harmful to patients).

167. While these activities are viewed as a positive step towards improving NESS operations and deployment readiness, continuous focus is required to ensure that the full scope of required improvement initiatives are established and documented via a comprehensive operational plan. This plan should include the investigation of innovative opportunities and legal authorization to acquire, store, rotate and deploy assets. Examples include:

- the deployment/loading/donation of health care assets to health care delivery organizations prior to assets expiry dates;
- the sharing /rotation/deployment of assets to/from federal partners, international partners and also to/from potentially Nongovernment Organizations; and
- outsourcing warehousing services.

168. **No formal evaluation of the NESS program has been done to assess the effectiveness and timeliness of assets deployment.**

169. The NESS program has provided emergency responses through the provision of emergency medical and social services supplies. Numerous factors contribute towards ensuring that assets are deployed in an effective and timely manner such as: NESS having a clear mandate and strategic objectives; there being sufficient capacity (e.g. qualified personnel and resources); there being sufficient size and content of inventory; the number and location of supply centers; proper maintenance of assets; etc. PHAC's challenges related to these issues have been included throughout this audit report.

170. With respect to the distribution and transportation strategy, the only signed MOU is with the Royal Canadian Mounted Police (RCMP) for the provision of air transportation services in the event of a national emergency. NESS management indicated it had a list of transportation sources and contact information that could

provide transportation during emergencies. However, the Agency has not yet developed a formal comprehensive transportation plan with the engagement of the P/Ts.

171. As a result of the above issues facing the Agency, there are increased risks that assets may not be deployed in a timely and effective manner. Moreover, the Agency has not yet developed a formal Results-Based Management Framework, and no formal evaluation of the NESS program has been performed since the creation of the Agency in 2004.

172. We conclude that there is no assurance that the NESS inventory could be deployed in a timely, efficient and effective manner.

### Recommendations

173. The Assistant Deputy Minister, Emergency Preparedness and Response and Corporate Affairs, in collaboration with the Director Evaluation Services Division should initiate a formal evaluation to assess the relevance of the National Emergency Stockpile System program. If after conducting the evaluation, the Agency chooses to maintain part or all of the program, the Director General, Centre for Emergency Preparedness and Response, in cooperation with key partners and stakeholders should articulate a clear National Emergency Stockpile System mandate and obtain Agency senior management approval. This would be followed by the development of updated Memoranda of Understanding formalizing National Emergency Stockpile System and Provincial and Territorial roles and responsibilities.

174. Furthermore, the Director General Centre for Emergency Preparedness and Response should initiate the development and ongoing maintenance of a National Emergency Stockpile System strategic plan and operational business plan, based on a comprehensive risk and needs assessment, to guide program activities. Key components of this plan should include:

- a stated vision for the program;
- strategic objectives;
- operational objectives; and
- an operational plan that includes:
    - performance goals;
    - the development of a comprehensive asset maintenance plan;
    - the implementation of a modernized inventory tracking system;
    - the development of an asset disposition policy and supporting processes;
    - a strategy and business plan for addressing asset obsolescence;
    - change initiatives including an assessment of each initiative's priority and expected deliverables/ milestones and timing;
    - innovative opportunities to acquire, store, rotate and deploy assets;

- core resource requirements; and
- change initiatives resource requirements

175. The Chief Financial Officer, in cooperation with the Director General, Centre for Emergency and Preparedness and Response should develop a policy and related procedures in order to properly record and report on National Emergency Stockpile System assets in accordance with the Treasury Board Accounting Policy.

**National Office of Health Emergency Response Teams (NOHERT)**

176. The National Office of Health Emergency Response Teams (NOHERT) is part of OERS. Its mandate is to establish national criteria to ensure the development and delivery of HERT. Its goal is to train and certify Health Emergency Response Teams across the country, and to ensure they are ready to be deployed on a 24-hour basis to assist provincial, territorial or other local authorities in providing emergency medical care during a major disaster.

177. NOHERT's all hazards approach provides an emergency medical response for many situations including natural disasters, explosions, as well as to major chemical, biological or radiological-active nuclear incidents. Each NOHERT team is expected to have expertise in emergency medical care (including triage, stabilization, evacuation, and patient management), as well as mental health care and public health disaster risk identification, assessment and management skills. An all hazards approach implies that plans are keyed to the adverse effects common to most emergencies, rather than isolated type cases.

178. The NOHERT program was created to address the gap identified in the response to SARS, as well as the need for an additional emergency  national medical response capacity in the event of a terrorist attack such as the 9/11 attack on the United States.

179. The Health Emergency Response Team is located within the Office of Emergency Response Services (OERS) which falls under the Centre for Emergency Preparedness and Response (CEPR).

180. As of February 2010, HERT expenditures  were $2.9 million for the fiscal year 2008-09. They are estimated at $1.8 million for 2009-10.

181. **A transformation of the HERT program has been initiated without a clear and formal mandate based on a risk and threat assessment and is not well coordinated with the development of the single window PHAC Public Health Reserve (PHR) as described below.**

182. NOHERT has a Health Emergency Response Team established in 2007 which consists of approximately 200 medical and support members. These medical professionals have been equipped, recruited, trained and tested.

183. No requests have been received from P/Ts for HERT deployment other than a request in support of the 2010 Vancouver Olympic Games. Twenty one members (nurses and medical doctors) of HERT were selected and pre-positioned during the Olympic Games. A lessons learned report from this experience is expected to be published in August 2010.

184. The original HERT concept idea was to create four HERT. A major exercise entitled "Caduceus Major" was held in 2007. This exercise involved the first deployment of a HERT and was built on lessons learned from smaller exercises held in 2006, as well as consultations with the P/Ts. The exercise report concluded that the original premise of the HERT program needed to be re-evaluated and even though the original concept was laudable and ambitious, it was time to reconsider a new model and approach that would provide Canadians a more flexible modular and credible national public health emergency response capability.

185. A transformation of the HERT program has subsequently been initiated, based on feedback from Provincial and Territorial stakeholders, recommendations from the "Caduceus Major" after action report (AAR) and an extensive review through the 2008 Health Portfolio Strategic Review process. Further HERT development must ensure that clear and formal mandates are followed to address risk and needs assessment issues in the context of a well coordinated single window Public Health Reserve (PHR).

186. This recently developed new HERT approach focused on the creation of a national roster of medical responders and emergency management personnel with specialized training in disaster response. This approach is referred to as the National Medical Reserve (NMR). The NMR is intended to respond to jurisdictional requests for surge medical capacity.

187. This new concept proposes the addition of approximately 200 NMR members per year for the next four to five years to reach a total NMR resource capacity of 1,000. Modeling for the purpose of determining estimated needs was done by assessing other relevant surge capacity models and their staffing approaches. The use of complementary risk assessments along with continued consultations with P/Ts stakeholders will help provide more definitive reserve requirements. The absence of a proactive Agency risk management and measurement approach makes it difficult to assess whether the new approach taken by HERT is addressing program objectives (i.e. to improve surge capacity and the ability to respond in a coordinated and efficient manner to support Provincial, Territorial and local government management of health emergencies).

188. While the primary responsibility to provide a wide range of preparedness activities lies with CEPR, we noted a number of organizational efforts within PHAC related to emergency preparedness and response that do not appear to be well aligned with the efforts of CEPR as described below.

189. The Agency is in the process of developing a single window Public Health Reserve (PHR) which would integrate the proposed National Medical Reserve (NMR) . This PHR will include the reserve capabilities of epidemiologists, laboratories, and public health surge support, in addition to the clinical surge support contained within the proposed NMR. The competency base contained within this PHR would range from public health specialists to clinical professionals, for example; paramedics, emergency nurses and physicians.

190. However, no clear and formal mandate from senior management has yet been granted for NMR. HERT managers are using a bottom-up approach. Discussions and consultations within the Agency and with key partners on the new approach for the HERT (NMR) have not yet been finalized and have not been formally approved by senior management.  Although both initiatives serve different purposes within the health care continuum, it is essential that both of these initiatives be developed in close collaboration to ensure that efforts are not duplicated and that common challenges and opportunities are addressed in a coordinated manner. Once approved the mandate and concept of operations could lead to  various activities, including:

   • formalized revised Memoranda of Understanding with key services delivery partners and stakeholders;
   • detailed concept of operations planning; (including a Memorandum to Cabinet)
   • an implementation plan for the newly developed NMR; and
   • NESS restructuring.

191. Furthermore, some Provincial officials have highlighted a lack of understanding or agreement about the general orientation and operational concept of this new initiative and have also indicated concerns about potential duplication of efforts. Some Provincial officials indicated that plans and mechanisms were in place to address medical requirements in case of emergencies. The need for the National Medical Reserve must be confirmed through dialogue and partnership with all stakeholders to ensure that requirements and expectations are met.

192. Further consultations and discussions are required with P/Ts to determine their current capacities, gaps and to assess the necessary supplementary assistance required during significant events or health emergencies.

**Recommendation**

193. The Director General Centre for Emergency Preparedness and Response in cooperation with key partners and stakeholders, should :

   • confirm or revisit the Health Emergency Response Teams  mandate and its operational concept; and

- ensure good coordination and integration of National Emergency Stockpile System  and human resources  deployments in operational settings.

## National Microbiological Laboratory (NML)

194. NML supports PHAC emergency preparedness and outbreak response efforts. NML activities include reference and diagnostic services, surveillance, applied and discovery research, as well as development and training. These activities contribute to the PHAC's role in preparing for, monitoring, identifying and responding to outbreaks of disease, as well as other threats involving infectious agents. The NML's specific emergency preparedness and outbreak response activities include:

- providing first-response laboratory capacity and mobile response field units, targeting acute infectious disease outbreaks as well as bio-terrorism threats or other deliberate acts involving infectious agents; and
- mobilizing the NML Operations Centre in times of national health emergencies to help manage the crisis.

195. **NML roles and responsibilities need to be clarified to ensure coordinated responses during emergencies.**

196. It was noted that past experiences in dealing with the H1N1 virus and preparation for the 2010 Olympic Winter Games were positive, and that these contributed toward improving the manner by which NML supports PHAC's emergency preparedness and response efforts.  Noted improvement areas included the management structure, logistics, procedure definition and the critical role played by the EOC's Liaison Officer during response events or emergencies.

197. Opportunities for improvement were identified in relation to how laboratory service requests are received, prioritized and approved as well as how diagnostic laboratory results are communicated during emergency situations to partners and stakeholders including the international community. (Up to 50,000 samples in a/year may be provided for testing and/or analysis).

## Incident Command System/Incident Management System (ICS/IMS)

198. PHAC has introduced an ICS/IMS in support of emergency response efforts. The purpose of this effort is to establish a structured, disciplined approach towards organizing and integrating personnel, policies, procedures, facilities, and equipment into a common approach designed to improve emergency response operations.

199. PHAC's introduction of an IMS has consisted of the delivery of ICS training to approximately 600 PHAC personnel, including 300 employees within the NML.

200. While PHAC representatives interviewed indicated a general level of satisfaction with the level and extent of ICS training they received, a number of observations were raised as to the effectiveness of PHAC's adoption of ICS, as stated below.

201. **ICS is more suited to a "first responder" organization and PHAC is not a "first responder".**

202. ICS is based upon a flexible, scalable response organization providing a common framework within which people can work together effectively. These people may be drawn from multiple organizations that do not routinely work together. ICS is designed to give standard response and operational procedures to reduce problems and the potential for miscommunication on such incidents. ICS is typically viewed as a "first-responder" structure, where the first responder to an emergency is in charge of that emergency until the incident has been declared resolved; a "superior-ranking" responder arrives on scene and seizes command; or the Incident Commander appoints another Incident Commander. This approach is considered by those we interviewed as being incongruent to PHAC's typical role of supporting "first responders".  Accordingly, a number of interviewees questioned the organizational "buy-in" to the ICS structure, and indicated a need to revisit this operational model.

### Conclusion

203. There is a lack of human resources surge capacity to work with an expanded HP EOC during an emergency or event. The mandate of the NESS requires renewal in order to more appropriately reflect its current health emergency response role. Program management attention is also required regarding the transformation of the HERT program and coordination with the single window PHAC Public Health Reserve. Finally, there is a need to clarify NML's roles and responsibilities in relation to PHAC's emergency response activities.

## Recovery

204. We expected that systematic and continuous recovery approaches were developed and that they take into consideration lessons learned from experiences in order to increase effectiveness and improve emergency management practices and processes.

205. As identified in the Emergency Management Framework for Canada, continuous improvement should be a core focus in any emergency preparedness and response regime. The lessons learned and knowledge generated from evidence-based and qualitative information should be used to develop improved practices that are widely shared. After emergencies or disasters occur, a systematic approach should be taken to document and lessons learned from that experience as well as to increase effectiveness and improve emergency management practices and processes. Continuous improvement should be systematically undertaken as an integral part of

emergency management functions and practices at all levels, as appropriate, to minimize the recurrence of problems.

206. In reviewing PHAC's emergency preparedness and response continuous improvement focus, we observed the following:

207. **PHAC has not yet developed a robust methodology for systematically identifying and acting upon lessons learned from emergency preparedness and response efforts.**

208. As part of this audit, we reviewed available documents produced to capture lessons learned (e.g. H1N1 hot wash reports, Exercise Gold for the Vancouver Olympics After Action report), and a related follow-up action report (e.g. Exercise Gold Final Improvement Plan).  While these efforts are commendable and represent a step towards continuous improvement, they also highlight a broader set of gaps to be addressed within PHAC, including :

- PHAC has not yet developed a standard process or methodology for systematically identifying and documenting lessons learned either in relation to the conduct of exercises or emergency response efforts;

- a focus on developing a standard process would include the development of:
  - a standard set of activities (methodology) for conducting a review;
  - common documentation tools (e.g. templates);
  - training of personnel using  lessons learned exercises;
  - a review function to ensure the quality of report output; and
  - an accessible repository/library of lessons learned documents available to emergency preparedness response personnel.;

- similarly, PHAC has not yet developed a standard process or methodology for systematically identifying, documenting, and prioritizing the actions required to address issues that have surfaced via the lessons learned exercises; and.

- in addition, PHAC has not established responsibilities or developed standard processes to ensure that improvement actions are undertaken in a complete and timely manner, and that such actions as implemented are actually effective.

209. Furthermore, based on interviews conducted with PHAC representatives, we could not establish whether there was alignment between the improvement actions identified and PHAC's emergency preparedness and response training focus.

210. Currently, responsibility for these processes resides with the JEPC. However, audit interviewees indicated that there was a lack of clarity in the governance related to the review and sign-off of lessons learned related deliverables.

## Conclusion

211. Management attention is required to develop a methodology for systematically identifying and acting upon lessons learned from emergency preparedness and response efforts.

### Recommendations

212. The Director General, Centre for Emergency Preparedness and Response, through the Joint Emergency Planning Committee, should initiate the development and roll-out of a standard methodology encompassing the :

   - conduct of lessons learned exercises;
   - development of related action plans;
   - evaluation of the effectiveness of actions taken; and
   - establishment of a repository/library of lessons learned.

213. The Director General, Centre for Emergency Preparedness and Response through the Joint Emergency Planning Committee, should also consider the establishment of a supporting forum (e.g. sub-committee) to oversee the approval and compliance of "lessons learned" deliverables (e.g. After Action reports, improvement plans, and evaluation results).

# Support Functions

214. We expected the Agency would have appropriate systems in place to ensure that the human and financial resources and Information Management and Information Technology (IM/IT) support required for emergency preparedness and response activities were properly planned, managed and supported.

### Human Resources

215. Human Resources planning and coordination is critical to ensure that resources are managed effectively in order to support program objectives and to be able to respond to emergency preparedness and response related activities. Actions such as identifying required staffing, providing surge capacity, training, security clearances and, succession planning must be performed in a manner to ensure that trained and qualified personnel are available to effectively monitor and respond to emergency events.

216. Many emergency preparedness and response key positions have been staffed on a temporary basis by acting appointments or have only recently been staffed.

217. **There is no documented succession plan for key positions.**

218. PHAC has not yet documented a plan to address retention or succession planning for key positions in CEPR.

## Financial Resources

219. We noted that the CEPR has only notional budgets approved for 2010-11. The Integrated Operational Planning exercise currently underway will allow a potential re-allocation of resources. However, based on past experiences, revised notional budgets are only available in July. This practice is not conducive to sound financial management and planning.

## Information Management and Information Technology (IM/IT)

220. **There are concerns about the capacity to obtain a timely and cost effective resolution in case of significant service interruptions and Information Technology shut downs.**

221. As a result of changes in the security systems at two NESS warehouses, administrative arrangements had to be made to physically monitor the warehouses temperature. This step was required for licensing purposes. However, installing a proper backup security system would have been more cost effective and also would have reduced risks. At the time of this audit, the Agency was already in the process of reviewing its contingency plan to reduce risks related to service interruptions.

## Conclusion

222. Program management attention is required to develop and implement staffing and succession plans for key positions, to secure program funding and obtain required technical support.

## Recommendations

223. The Director General Centre for Emergency Preparedness and Response in cooperation with the Human Resources Directorate should develop, implement and monitor staffing and succession plans for key positions.

224. Once the mandates of the emergency preparedness and response activities including those of Health Emergency Response Teams and the National Emergency Stockpile System have been clarified, the Director General, Centre for Emergency Preparedness and Response should secure the required funding.

225. The Director General Information Management and Information Technology should continue to develop the Agency contingency plan to deal with significant service interruptions.

## Audit Conclusion

226. While the Agency was able to respond to emergencies, we are concerned that many issues identified in this report need to be addressed to ensure the Agency fully meets its mandate of protecting and promoting the health of Canadians. PHAC needs to maintain its focus on building emergency preparedness and response capacity and to deliver its response activities in the most effective, efficient and timely manner.

# Acknowledgments

227. We wish to express our appreciation for the cooperation and assistance afforded to the audit team by management and staff during the course of this audit.

# Appendix A: Audit Criteria

## 1.0 Governance and strategic directions are in place and adequately communicated.

| # | Sub-Criteria | Link to audit objective # | Link to MAF |
|---|---|---|---|
| 1.1 | An appropriate governance structure is established, communicated and monitored (PHAC Governance/MOU/Monitoring of MOU activities and responsibilities). | Objective # 1 | Governance and Strategic Direction |
| 1.2 | Program objectives are aligned with PHAC strategic directions and mandate. | Objective # 1 | Governance and Strategic Direction |

## 2.0 The management framework in place ensures the efficient and effective use of resources.

| # | Sub-Criteria | Link to audit objective # | Link to MAF |
|---|---|---|---|
| 2.1 | Authority and accountability are clearly defined so that decisions and actions are taken. | Objective # 1 | Accountability |
| 2.2 | Roles and responsibilities and mandate are clearly defined, understood  and communicated within PHAC and with respect to Other Government Departments and partners. | Objective # 1 | Governance and Strategic Direction / Accountability |
| 2.3 | The organizational structure is conducive to the achievement of program objectives and operational requirements. | Objectives # 1 & 2 | Governance and Strategic Direction / Accountability |
| 2.4 | Policies, plans, guidelines and other relevant tools have been developed to support the delivery of emergency preparedness and response activities and are disseminated to staff. | Objectives # 1 & 2 | People |
| 2.5 | Awareness training and exercise programs are in place to ensure sufficient trained | Objectives # 1 & 2 | People / Risk Management |

| | | | |
|---|---|---|---|
| | resources are available to provide service. | | |
| **2.6** | Resources (human, financial and information) are properly planned, managed and supported. | Objectives # 1 & 2 | People / Stewardship |
| **2.7** | Management has reliable information that supports decision-making and accountability including measurement systems. | Objectives # 1 & 2 | Stewardship |
| **2.8** | Risk management mechanisms exist to identify, assess, monitor, mitigate and report on risks. | Objective # 2 | Risk Management |
| **2.9** | The organization has in place formal plans and approaches to knowledge management and lessons learned methods and practices. | Objective # 1 | Learning , Innovation and Change management |
| **2.10** | Management has identified appropriate performance and other evaluation measures linked to planned results. | Objective # 1 | Results and Performance |

**3.0 Emergency preparedness and response resources (human and assets) are managed in a manner that allows the Agency to meet its commitments and obligations.**

| # | Sub-Criteria | Link to audit objective # | Link to MAF |
|---|---|---|---|
| **3.1** | Appropriate plans and strategy for the management of assets have been documented and implemented and include a short and long term timeframe for managing assets. | Objective # 3 | Stewardship |
| **3.2** | Assets are deployed in a timely and effective manner. | Objective # 3 | Stewardship |
| **3.3** | Proper asset management processes and controls exist to ensure assets are managed with due regard to responsiveness to emergency situations, stakeholder needs, effectiveness and efficiency. This includes proper safeguarding of assets. | Objective # 3 | Stewardship |

| # | | Link to audit objective # | Link to MAF |
|---|---|---|---|
| | Methods and practices include planning, acquisition, record keeping (including accrual accounting), management and disposition processes. | | |
| **3.4** | Proper processes exist to ensure that response resources are managed with due regard to responsiveness to stakeholder needs, effectiveness and efficiency. | Objective #3 | Stewardship |
| **3.5** | Reporting on assets and response resources is reviewed for completeness, accuracy, relevance, timeliness, appropriateness and reasonableness. | Objective # 3 | Stewardship |

**4.0    Emergency preparedness and response services are responsive to stakeholder needs.**

| # | Sub-Criteria | Link to audit objective # | Link to MAF |
|---|---|---|---|
| **4.1** | Lines of communication exist between the organization and key government delivery partners, P/Ts and other relevant stakeholders, exclusive of the general public. | Objective # 1 | Client-Focused Service |
| **4.2** | The organization leverages, where appropriate, collaborative opportunities to enhance public health services. | Objective # 1 | Client-Focused Service |

## Appendix B:  Management Action Plan

| Recommendation | Management Action Plan | Officer of Prime Interest | Target Date |
|---|---|---|---|
| **Mandate, Governance and Strategic Directions**<br><br>63. The Assistant Deputy Minister, Emergency Preparedness and Response and Corporate Affairs in cooperation with key partners and stakeholders should re-examine the emergency preparedness and response mandate and supporting roles and responsibilities in order to appropriately address the Agency's:<br><br>• role in relation to international emergencies;<br>• role in support of Federal health partners;<br>• role in support of Canada's Territories; and<br>• expectations of regional offices vs. available resources. | Agree.<br><br>a) The Assistant Deputy Minister, Emergency Preparedness and Response and Corporate Affairs (ADM, EPRCA) will put in place a Project Team to respond to Agency wide issues related to emergency preparedness and response, including the mandate and roles and responsibilities.<br><br>b) The ADM, EPRCA will clarify the emergency preparedness and response mandate, and roles and responsibilities. The ADM, EPRCA will work with the Project Team and horizontally with internal and external partners and stakeholders and seek Executive Committee (EC) approval. | ADM, EPRCA<br><br><br><br>ADM, EPRCA | Project Team in Place: September 2010<br><br><br>April 2011 |
| **Planning and Preparedness**<br><br>88. The Director General Centre for Emergency Preparedness and Response should develop a long term comprehensive threat and risk | Agree. The Director General Centre for Emergency  Preparedness and Response (DG, CEPR) will develop a | DG, CEPR | April 2011 |

| Recommendation | Management Action Plan | Officer of Prime Interest | Target Date |
|---|---|---|---|
| assessment process, and an "All Hazards" Risk Management Plan to support emergency preparedness and response efforts. | formal PHAC Public Health Threat and Risk Assessment process.<br>The DG, CEPR will engage the intelligence community and the health portfolio. This assessment will inform the development of CEPR's All-Hazards Risk Management Plan and will be integrated into the Agency's overall risk management framework. | | |
| 97. In cooperation with Health Canada, the Director General Centre for Emergency Preparedness and Response should revise the current version (2007) of the Health Portfolio Emergency Preparedness Policy, particularly in view of the PHAC experience in responding to major incidents/events in the 2008-10 time frames such as H1N1. | Agree. In cooperation with Health Canada, the DG, CEPR will revise the Health Portfolio Emergency Preparedness Policy (HPEPP) as part of the Joint Emergency Preparedness Committee (JEPC) work plan for 2010-12. | DG, CEPR | December 2011 |
| 111. In cooperation with key partners and stakeholders, The Director General, Centre for Emergency Preparedness and Response should:<br><br>• develop and implement public health exercises to test newly developed plans and arrangements such as the Federal Emergency Response Plan, the PHAC emergency support function, the Health Portfolio Emergency Response Plan and the Health Portfolio Emergency Preparedness Policy ; | Agree. The DG, CEPR is in the process of developing a comprehensive multi-year work plan for training and exercises which will inform funding requirements to support program priorities. This will be based on an assessment of client/stakeholder needs both within the Health Portfolio and externally (e.g., Provinces and Territories (P/Ts)). | DG, CEPR | June 2011 |

| Recommendation | Management Action Plan | Officer of Prime Interest | Target Date |
|---|---|---|---|
| • develop and implement comprehensive multi-year training and exercise plans; and <br> • secure training and exercises funding requirements. | | | |
| 123. The Director General, Centre for Emergency Preparedness and Response should continue the development of Agency surge capacity models; make a decision on the usage of a common software; and provide mandatory emergency management training to Emergency Operations Centre employees and to surge personnel to ensure that they are fully trained and qualified to respond to emergencies or significant events. | Agree. <br><br> a) PHAC Human Resources Directorate (HRD) is leading the development of an Agency wide surge capacity model and will also prepare a Human Resources emergency/events framework to deal with the various human resources issues identified in this report. | DG, HRD | June 2011 |
| | b) The DG, CEPR will complete a needs analysis, develop an action plan and seek EC approval on the implementation of a standardized Emergency Operations Centre (EOC) software and provide adequate training on its use. | DG CEPR | Needs analysis February 2011 |
| | c) The DG, CEPR is currently working to identify emergency preparedness and response capacity gaps and to develop a long-term plan to build a response capacity that is appropriately trained and qualified. To this end, staff will be trained to pre-determined levels in the following sequence: | DG, CEPR | Training Plans: March 2011 <br><br> Sessions will be repeated bi-annually |

| Recommendation | Management Action Plan | Officer of Prime Interest | Target Date |
|---|---|---|---|
| | 1. Dedicated Health Portfolio Emergency Operations Centre Staff (HPEOC) <br> 2. Wider CEPR Staff <br> 3. Health Portfolio Surge Capacity <br><br> A training plan will be presented to JEPC for review and approval annually. | | |
| **Response Activities** <br><br> 173. The Assistant Deputy Minister, Emergency Preparedness and Response and Corporate Affairs, in collaboration with the Director Evaluation Services Division should initiate a formal evaluation to assess the relevance of the National Emergency Stockpile System program. If after conducting the evaluation, the Agency chooses to maintain part or all of the program, the Director General, Centre for Emergency Preparedness and Response in cooperation with key partners and stakeholders should articulate a clear National Emergency Stockpile System mandate and obtain Agency senior management approval. This would be followed by the development of updated Memoranda of Understanding formalizing the National Emergency Stockpile System and Provincial and Territorial roles and responsibilities. | Agree. <br><br> a) The Director, Evaluation Services Division (ESD), in collaboration with the DG, CEPR will conduct an evaluation of the National Emergency Stockpile System (NESS) program to assess its relevance. <br><br> b) The DG, CEPR will articulate a clear National Emergency Stockpile System (NESS) mandate in cooperation with key partners and stakeholders and present to EC for approval. <br><br> c) In cooperation with key partners and stakeholders, the DG, CEPR will develop updated Memoranda of Understanding formalizing NESS and P/Ts roles and responsibilities | Dir, ESD and DG, CEPR <br><br><br><br><br> DG, CEPR <br><br><br><br><br> DG, CEPR | December 2010 <br><br><br><br><br> April 2011 <br><br><br><br><br> March 2012 |
| 174. Furthermore, the Director General, Centre for | Agree. | | |

| Recommendation | Management Action Plan | Officer of Prime Interest | Target Date |
|---|---|---|---|
| Emergency Preparedness and Response should initiate the development and ongoing maintenance of a National Emergency Stockpile System strategic plan and operational business plan, based on a comprehensive risk and needs assessment, to guide program activities. Key components of this plan should include:<br><br>• a stated vision for the program;<br>• strategic objectives;<br>• operational objectives;<br>• an operational plan that includes:<br> • performance goals;<br> • the development of a comprehensive asset maintenance plan;<br> • the implementation of a modernized inventory tracking system;<br> • the development of an asset disposition policy and supporting processes;<br> • a strategy and business plan for addressing asset obsolescence;<br> • change initiatives including an assessment of each initiative's priority and expected deliverables/ milestones and timing;<br> • innovative opportunities to acquire, store, rotate and deploy assets;<br> • core resource requirements; and<br> • change initiatives resource requirements | a) The DG, CEPR will develop a vision statement and strategic objectives for NESS aligned with the Agency's priorities and mandate and will seek EC approval.<br><br>b) The DG, CEPR will develop a five year strategic plan for NESS in consultation with key federal and P/Ts partners, and will seek endorsement from EC.<br><br>c) The DG, CEPR will develop and seek EC endorsement of a comprehensive operational plan to support the NESS Strategic Plan. This comprehensive operational plan will detail various initiatives and outline necessary resource investments required to address issues relating to NESS such as those that are outlined in this recommendation. | DG, CEPR<br><br><br><br>DG, CEPR<br><br><br><br><br><br>DG CEPR | May 2011<br><br><br><br>August 2011<br><br><br><br><br>November 2011 |

| Recommendation | Management Action Plan | Officer of Prime Interest | Target Date |
|---|---|---|---|
| 175. The Chief Financial Officer, in cooperation with the Director General, Centre for Emergency and Preparedness and Response should develop a policy and related procedures in order to properly record and report on National Emergency Stockpile System assets in accordance with the Treasury Board Accounting Policy. | Agree. The Chief Financial Officer (CFO), in cooperation with the DG, CEPR will develop a policy and related procedures in order to properly record and report on NESS in accordance with the Treasury Board Accounting Policy and will be linked to the proposed NESS inventory system. | CFO | December 2011 |
| 193. The Director General, Centre for Emergency Preparedness and Response in cooperation with key partners and stakeholders, should :<br><br>• confirm or revisit the Health Emergency Response Teams mandate and its operational concept; and<br>• ensure good coordination and integration of National Emergency Stockpile System and human resources deployments in operational settings. | Agree.<br><br>a) The DG, CEPR will obtain a clear and formal mandate from EC to transform the Health Emergency Response Teams (HERT) program.<br><br>b) If supported by EC, the DG, CEPR will seek senior management approval to develop a National Medical Reserve (NMR) focused on deployable, surge medical professionals to replace the original HERT model. This should be more cost effective and consistent with P/Ts interests.<br><br>c) The DG, CEPR will work horizontally to examine the logistical coordination across the Agency and develop a Standard Operating Procedure (SOP) for NESS and human resource deployments. This | DG, CEPR<br><br>DG, CEPR<br><br>DG, CEPR | October 2010<br><br>March 2011<br><br>March 2012 |

| Recommendation | Management Action Plan | Officer of Prime Interest | Target Date |
|---|---|---|---|
| | SOP will be brought to the Branch Executive Team and then EC. | | |
| **Recovery** | | | |
| 212. The Director General, Centre for Emergency Preparedness and Response through the Joint Emergency Planning Committee should initiate the development and roll-out of a standard methodology encompassing the : <br><br> • conduct of lessons learned exercises; <br> • development of related action plans; <br> • evaluation of the effectiveness of actions taken; and <br> • establishment of a repository/library of lessons learned. | Agree. The DG, CEPR will develop a formalized methodology and governance structure to facilitate the implementation of lessons learned and subsequent evaluation. This methodology will incorporate available Public Safety Canada (PSC) guidance as required. | DG, CEPR | June 2011 |
| 213. The Director General, Centre for Emergency Preparedness and Response through the Joint Emergency Planning Committee should also consider the establishment of a supporting forum (e.g. sub-committee) to oversee the approval and compliance of lessons learned deliverables (e.g. After Action reports, improvement plans, and evaluation results). | Agree. The DG, CEPR will work with JEPC to develop a sub-committee to oversee the implementation of findings of post-event reviews. | DG, CEPR | December 2010 |
| **Support Functions** | | | |
| 223. The Director General, Centre for Emergency Preparedness and Response in cooperation with the Human Resources Directorate should develop, | Agree. The DG, CEPR will develop, in consultation with the HRD, staffing and succession plans. | DG, CEPR | March 2011 |

| Recommendation | Management Action Plan | Officer of Prime Interest | Target Date |
|---|---|---|---|
| implement and monitor staffing and succession plans for key positions. | | | |
| 224. Once the mandates of the emergency preparedness and response activities including those of Health Emergency Response Teams and the National Emergency Stockpile System have been clarified, the Director General, Centre for Emergency Preparedness and Response should secure the required funding. | Agree. In cooperation with the Project Team, the DG, CEPR will examine funding issues and propose solutions for EC consideration. | DG, CEPR | October 2011 |
| 225. The Director General, Information Management and Information Technology should continue to develop the Agency contingency plan to deal with significant service interruptions. | Agree. The DG, Information Management/Information Technology (IM/IT) has developed a proposal for addressing contingency issues which will be brought forward for funding. | DG, IM/IT | June 2012 |

| Opportunities for Improvement | Management Action Plan | Officer of Prime Interest | Target Date |
|---|---|---|---|
| 64. The Assistant Deputy Minister, Emergency Preparedness and Response and Corporate Affairs should consider aligning the emergency preparedness and response management structure in accordance with the Incident Command System model in order to provide a clear accountability on emergency preparedness and response activities for:<br><br>• prevention (emergency preparedness and response policy, surveillance, risk assessment, legislative initiatives and other mitigation programs);<br>• preparedness (development of plans, training, exercises, management of the Emergency Operations Centre, preparing for surge capacity, the National Emergency Stockpile System, the new Health Emergency response teams, Public Health Reserve, etc.); and<br>• response and recovery (activation of the Emergency Operations Centre, Incident Command System/Incident Management System, response management for emergencies, events, recovery, etc.) | Agree. The ADM, EPRCA will examine governance of emergency preparedness and response activities and make recommendations to EC. | ADM, EPRCA | April 2011 |
| 65. At a minimum, the Assistant Deputy Minister, Emergency Preparedness and Response and Corporate Affairs should review the Job descriptions of the Director Generals and Assistant Deputy Ministers to ensure that a clear line of | Agree. The ADM, EPRCA will provide recommendations to EC regarding reporting relationships and job descriptions of senior officials. | ADM, EPRCA | March 2011 |

| Opportunities for Improvement | Management Action Plan | Officer of Prime Interest | Target Date |
|---|---|---|---|
| responsibility exists for prevention, preparedness, response, and recovery activities.<br><br>115. The Director General, Centre for Emergency Preparedness and Response should continue the current development efforts on the Operations Manual and the Standard Operating Procedures | Agree. An Operations Manual for the Emergency Operations Centre (EOC) is under development. Over 100 Standard Operating Procedures (SOPs) have been written within the last four months. The DG, CEPR will continue to monitor the need for the development of new SOPs and create them as required. CEPR will also put in place a mechanism and schedule to review all the SOPs for relevance and updating. | DG, CEPR | Semi-Annual Review Starting December 2010 |

# Appendix C:  List of Acronyms

| | |
|---|---|
| CBSA | Canadian Border Services Agency |
| CBRNE | Chemical, Biological, Radiological and Nuclear Emergency |
| CEPR | Centre for Emergency Preparedness and Response |
| CPHN | Canadian Public Health Network |
| CPHO | Chief Public Health Officer |
| CSC | Correctional Services Canada |
| DND | Department of National Defense |
| EOC | Emergency Operations Centre |
| ESF5 | Emergency Support Functions |
| FERP | Federal Emergency Response Plan |
| FIORP | Food-borne Illness Response Protocol |
| FNERP | Federal Nuclear Emergency Response Plan |
| GHSAG | Global Health Security Action Group |
| GMP | Good Manufacturing Practice |
| GOC | Government Operations Centre |
| HC | Health Canada |
| HERT | Health Emergency Response Teams |
| HP | Health Portfolio |
| HPEOC | Health Portfolio Emergency Operations Centre |
| HPERP | Health Portfolio Emergency Response Plan |
| HPEPP | Health Portfolio Emergency Preparedness Policy |
| ICS | Incident Command System |
| IM/IT | Information Management/Information Technology |
| IMS | Incident Management System |
| INAC | Indian and Northern Affairs Canada |
| JEPC | Joint Emergency Preparedness Committee |
| MOU | Memoranda of Understanding |
| NERS | National Emergency Response System |
| NESS | National Emergency Stockpile System |
| NOHERT | National Office of Health Emergency Response Teams |
| NGO | Nongovernmental Organizations |
| NML | National Microbiological Laboratory |
| NMR | National Medical Reserve |
| OERS | Office of Emergency Response Services |
| PCO | Privy Council Office |
| PHR | Public Health Reserve |
| PSC | Public Safety Canada |
| P/Ts | Provinces and Territories |
| PHAC | Public Health Agency of Canada |
| SARS | Severe Acute Respiratory Syndrome |
| SOP | Standard Operating Procedures |
| TB | Treasury Board |
| WHO | World Health Organization |