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Honourable Charlie Parker
Speaker
House of Assembly
Province of Nova Scotia

Dear Sir:

I have the honour to submit herewith my Special Report to the House of Assembly on Pandemic Preparedness to be laid before the House in accordance with Section 15 of the Auditor General Act.

Respectfully submitted

JACQUES R. LAPOINTE, BA, CA
Auditor General

Halifax, Nova Scotia
July 28, 2009

Pandemic Preparedness

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Pandemic Preparedness

Summary

Considerable time and effort has been expended in preparing Nova Scotia's Health System Pandemic Plan to address a possible serious pandemic. Nevertheless, the Plan contains a number of areas which still require work to ensure an effective response to the ongoing H1N1 pandemic.

There is no entity in place that can exercise joint executive leadership to provide overall command and coordination of government's pandemic response efforts in a severe pandemic situation. While the Emergency Management Office may possess the legal authority to assume such a role, it is not clear who would be involved in making executive decisions while numerous separate entities manage their responses. We have recommended that Executive Council decide who will assume this leadership role and establish the needed command and coordination structures to oversee a provincial pandemic response.

Although pandemic planning may be considered primarily a health system issue, there are aspects of planning for pandemics which must be addressed in non-health entities. The Emergency Management Office coordinates emergency planning across government departments and agencies; however not all government entities have submitted their plans, nor have these been reviewed for adequacy. Although the Emergency Management Office has engaged key non-government stakeholders in emergency planning, there is no central agency responsible for emergency planning, including for a pandemic, in critical non-government entities. We believe the Emergency Management Office, with its expertise in emergency planning, is the logical agency to ensure both government and non-government entities have plans to deal with a pandemic emergency. Adequate emergency plans are necessary to ensure critical services such as power, water, snow clearing, policing and fire response continue during a time when absenteeism may be high.

The Departments of Health and Health Promotion and Protection have not assessed District Health Authority pandemic plans. This is important because District Health Authorities deliver hospital-based health care services. This key step should have been undertaken as part of the province's pandemic planning process. We have recommended the Departments of Health and Health Promotion and Protection immediately review all District Health Authority pandemic plans and ensure plans are adequate, consistent and complete as soon as possible.

Nova Scotia does not have an adequate stockpile of supplies to access during a pandemic. Funding requests to address this shortfall have been significantly less than required. An inadequate supplies stockpile poses a risk that Nova Scotia will not have sufficient supplies to adequately protect health care workers and effectively respond to the existing H1N1 pandemic. We have recommended steps be taken to rapidly acquire medical supplies to enable an adequate response to a potential medical crisis.

A number of issues in pandemic response capability should be addressed including: assessment of surveillance, epidemiology and lab capacity; dealing with staffing shortfalls; union agreements; staff and volunteer liability; and other issues. DOH and HPP have also identified these limitations in their response capability and have begun planning and establishing work groups to address these issues.

We examined certain aspects of Capital Health and Pictou County Health Authority pandemic plans and included our findings in this Report.

The current pandemic began before we completed our audit. We carried out limited work on the response to the initial stages of the pandemic. We surveyed family and emergency room physicians and found 82% were either satisfied or somewhat satisfied with the initial response, although 55% were not happy with their ability to obtain adequate supplies.

Throughout this Report, we have made recommendations intended to assist the Province to take measures to: ensure an effective chain of command during a crisis period; avoid significant gaps in preparedness; avoid administrative disorganization; ensure clear accountability and transparency; and allow the free flow of information. Given that we are currently experiencing an H1N1 pandemic, we feel most of our recommendations should be addressed immediately to ensure Nova Scotia responds effectively to the current situation and is ready for any worsening conditions.

NOVA SCOTIA

Pandemic Preparedness

Background

PANDEMIC PREPAREDNESS

1. Pandemic preparedness planning for the Nova Scotia health system is coordinated through Health Services Emergency Management (HSEM) – a joint group of the Department of Health (DOH) and the Department of Health Promotion and Protection (HPP). HSEM reports to both Departments. Its main focus is increasing the capacity and capability of the health system to cope with emergencies or disasters of all types. The HSEM Advisory Committee provides oversight of emergency planning. It is comprised of representatives from the Departments of Health and Health Promotion and Protection as well as District Health Authorities.

2. The Nova Scotia Health System Pandemic Influenza Plan (Health System Pandemic Plan) is intended to provide a framework for the provincial health system to respond to a pandemic. Health system operational plans dealing with delivery of patient care services in hospitals, primary and secondary assessment care sites, and other areas, are not covered by the Health System Pandemic Plan. Rather these areas are the responsibility of District Health Authorities. The Health System Pandemic Plan does not address overall pandemic planning for non-health government departments and agencies or significant external organizations such as utilities.

3. Outside the health system, the Emergency Management Office (EMO) is responsible for coordination of all-hazards emergency planning for the Province. All-hazards planning is designed to allow responses to any type of emergency. Each government department and agency is responsible for preparing its own emergency or business continuity plan outlining how the department will ensure its critical operations continue during and following an emergency or disaster. EMO coordinates business continuity planning across government.

4. A Pandemic Leads Committee assisted with the development of the Health System Pandemic Plan. The Committee reported to Health Services Emergency Management and was comprised of provincial employees from DOH, HPP and the Department of Community Services. Each individual was identified as a subject matter expert for a specific area of the Health System Pandemic Plan. Since the H1N1 outbreak, additional people became involved. The Committee now reports directly to the Chief Public Health Officer, and the Chief of Program Delivery at the Department of Health.

5. Nova Scotia's first Health System Pandemic Plan was released in June 2007. The current Health System Pandemic Plan, version two, was released in January 2008.

6. The Health System Pandemic Plan includes the following assumptions regarding the nature and extent of the pandemic.

   - *"The first peak of illness in Canada may occur within two to four months after the virus arrives in Canada.*
   - *A pandemic usually spreads in two or more waves, either in the same year or in successive influenza seasons.*
   - *A second wave may occur within three to nine months of the initial outbreak wave and may cause more serious illnesses and deaths than the first.*
   - *In any locality, the length of each wave of illness is likely to be six to eight weeks.*
   - *A substantial portion of the workforce may not be able to work for some period of time due to illness in themselves or their family members.*
   - *Effective preventive and therapeutic resources will likely be in short supply.*
   - *Essential community services are likely to be disrupted."*

7. The Health System Pandemic Plan estimates that between 140,000 and 328,000 Nova Scotians could become ill during a pandemic.

8. The World Health Organization (WHO) addresses significant health issues throughout many countries, including the need to plan for possible pandemics. The WHO tracks diseases which have the potential to reach pandemic status based on six pandemic alert levels.

9. On June 11, 2009 the WHO raised their pandemic alert to level six, indicating a pandemic is now underway.

10. We wish to acknowledge the work of staff at the Department of Health and the Department of Health Promotion and Protection and thank them for their cooperation over the course of our audit. Pandemic planning is a significant undertaking and staff at DOH and HPP have been engaged in this for a number of years. Their efforts produced the first two versions of Nova Scotia's Health System Pandemic Plan. Although this Report identifies areas for improvement, it is important to understand that significant work has been accomplished. Similarly, staff at Capital Health and Pictou County Health Authority, the two District Health Authorities (DHAs) where we completed some of our audit work, have invested considerable time in producing their respective pandemic plans. We would also like to thank EMO for their cooperation during our audit.

11. As part of our audit, we surveyed emergency and family physicians in Nova Scotia. We would like to thank Doctors Nova Scotia for sending an email regarding the survey on our behalf. We would also like to thank all the physicians who took part in the survey and shared their perspectives with us.

Audit Objectives and Scope

12. In Spring 2009 we completed a performance audit on pandemic preparedness. We wanted to determine whether the Province has an adequate plan ready for immediate use in the event of a pandemic. We carried out audit work at the Department of Health, Department of Health Promotion and Protection, Emergency Management Office, and two District Health Authorities – Capital Health and Pictou County Health Authority. We concentrated our audit work at Capital Health and Pictou County Health Authority on the maintenance of essential services. We did not audit their detailed pandemic plans.

13. We audited version two of the Health System Pandemic Plan released in January 2008, as well as work completed after that date up to July 2009. At the two DHAs we audited aspects of their pandemic plans as of February 2009. Both DHAs indicated they have continued to work on their pandemic plans since we completed fieldwork. We did not audit updates to the plans or response efforts in the DHAs. Our work at the Emergency Management Office involved gathering information on its role in emergency planning and response.

14. This audit was conducted in accordance with Section 8 of the Auditor General Act and auditing standards established by the Canadian Institute of Chartered Accountants.

15. We originally intended to report our audit results in the Fall 2009 Report of the Auditor General. Given the outbreak of H1N1 in April 2009, and the subsequent declaration of a pandemic by the WHO, we decided to report our results earlier. Following completion of fieldwork on pandemic planning, we examined the Province's preliminary response to H1N1. We also surveyed family and emergency room physicians in the Province, asking for their perspective on the outbreak response. The results of our additional work and physician survey are included in this Report.

16. The objectives of our audit were to:

- assess whether Nova Scotia has an adequate pandemic plan in place for immediate use; and
- assess the adequacy of the response to the H1N1 outbreak.

17. In order to address these objectives, our work included an examination of the following:

    - stakeholder involvement in plan development;
    - whether risk assessments were completed;
    - pandemic communication plans;
    - whether essential services were identified with plans to ensure these services are maintained;
    - roles and responsibilities in the chain of command during a pandemic;
    - legislative authorities to make and implement decisions;
    - ability to identify and track the spread of a pandemic, adequacy of epidemiological investigation capabilities, plans to address any identified deficiencies in these areas; and
    - updates to the Health System Pandemic Plan.

18. Audit criteria were developed for this engagement based on the *World Health Organization checklist for influenza pandemic preparedness planning*. These criteria were discussed with, and accepted as appropriate by, senior management of the Department of Health, Department of Health Promotion and Protection, and the two District Health Authorities.

19. Our audit approach included an examination of the Health System Pandemic Plan, legislation and other documents, as well as interviews with management and staff. Our audit work at the DHAs was limited to specific aspects of their pandemic plans. Our audit scope did not include an assessment of all-hazards plans for all government departments and we did not audit non-governmental entities that may play a significant role in a response to a pandemic, such as utility companies.

20. Fieldwork for this audit started in December 2008, with the intention of reporting the results in our Fall 2009 Report. Following the H1N1 outbreak in April 2009 and the declaration of a pandemic in June 2009, we decided to provide this Special Report. Where applicable, we included comments on any changes to the Health System Pandemic Plan as a result of the H1N1 outbreak and pandemic. We also added a short section discussing the province's response to date. However since the response to the pandemic is ongoing, we have not expressed an audit opinion on the entire response. Rather we audited certain aspects of the H1N1 response and included what we found in this Report. Throughout this Report, we have made recommendations for improvements to Nova Scotia's pandemic preparedness. These recommendations are intended to assist the Province to take measures to: ensure an effective chain of command during a crisis period; avoid significant gaps in preparedness; avoid administrative disorganization; ensure clear accountability and transparency; and allow the free flow of information. Given that we are currently experiencing an H1N1 pandemic, we feel our recommendations should be addressed

immediately to ensure Nova Scotia responds effectively to the current situation and is ready for any worsening conditions.

Significant Audit Observations

Overall Conclusions and Summary of Observations

PANDEMIC PREPAREDNESS

21. Considerable time and effort have gone into the preparation of versions one and two of the Health System Pandemic Plan. Nevertheless it contains a number of areas which still require work to ensure an effective response to the ongoing H1N1 pandemic. This Report presents our findings and recommendations in a number of areas including: concerns with the Province's overall leadership structure for pandemic response; the need for a central government agency to be responsible for ensuring key stakeholders, including non-government entities, have emergency plans capable of dealing with pandemic-specific risks; and inadequate stockpiled supplies. DOH and HPP reviewed their preliminary response to H1N1, established workgroups and have begun planning to address deficiencies and areas for improvement. These groups were still in the process of developing detailed work plans when this Report was written. We acknowledge that the response to the pandemic is evolving and changing as the world learns more about the H1N1 virus.

Leadership and Accountability Structure During a Pandemic Response

Conclusions and summary of observations

The Province has not established a leadership structure to provide overall command and coordination of pandemic response efforts in a severe pandemic situation. A number of sectors and organizations have a role to play in addition to the government health sector, including the Emergency Management Office, government departments and agencies, municipalities and key private sector organizations such as utility companies. There is no entity in place that can exercise joint executive leadership. While EMO may possess the legal authority to assume such a role, it is not clear who would be involved in making executive decisions while numerous separate entities manage their responses. We have recommended that government decide who will assume this leadership role and take action to establish the needed command and coordination structures to oversee a provincial pandemic response. We have also recommended that every effort be made to fill critical vacancies at the Department of Health Promotion and Protection.

22. *Overall leadership of pandemic response* – While the Department of Health, the Department of Health Promotion and Protection, and District Health Authorities are responsible for the health system's response to a pandemic, the Emergency Management Office also plays a critical role. Currently, no formalized structure addresses the overall joint leadership of response efforts by DOH, HPP and EMO. It is not clear who will be involved in decisions once the response is being managed by multiple entities.

23. Should the current pandemic become more severe, the lack of a formal structure that addresses joint executive leadership could become a more significant issue. A lack of clearly defined leadership authority was noted as a significant contributing factor to the problems experienced during the 2003 SARS outbreak in Toronto. There is a need to manage the comprehensive provincial effort by all health organizations, government departments and agencies, municipalities, and key private sector service providers such as utilities. In order to effectively respond to the pandemic there needs to be strong coordination between DOH, HPP and EMO. A joint executive group is needed for oversight and decisions regarding the response. This group should include the Chief Medical Officer of Health to ensure members are adequately informed regarding the medical aspects of the pandemic and decisions made. Similar executive groups with different members may be needed in responding to other types of emergencies.

Recommendation 1
To ensure that government's pandemic response management is coordinated at a high level, a joint executive group should be established that oversees the entire response. Executive Council should decide which organization will assume this responsibility and leadership role. At present, the Emergency Management Office has the legislative authority to do so. In order to ensure appropriate medical expertise, this group should include the Chief Medical Officer of Health.

24. *Vacant positions* – Four of seven Medical Officer of Health positions, a senior epidemiologist, and a surveillance manager position are currently vacant. Medical Officers of Health have significant authorities and responsibilities for the investigation of communicable diseases under the Health Protection Act. Epidemiology and surveillance staff are also key to analyzing the spread of disease. This is particularly significant during a pandemic. With six vacant positions, existing staff may not be able to adequately fulfill these responsibilities.

25. HPP management informed us the vacant positions require a very specific skill set and HPP has had difficulties attracting people to these roles.

26. In order to effectively carry out the Department's daily responsibilities, including planning for and responding to a pandemic, sufficient staff are

needed to fill senior positions and provide their expertise and guidance to the Department. When there are continued vacancies in senior roles over a significant time, there is a risk that certain tasks will not be completed. There is also a risk of burnout of existing senior staff. This risk is increased during high activity periods such as the current pandemic. Given that a pandemic is already under way, this staff shortage has become an immediate problem that needs timely action.

Recommendation 2
The Department of Health Promotion and Protection should take steps to quickly fill all the vacant senior positions, or develop a plan to deal with the work load if positions are not filled.

Lack of Central Agency Responsibility for Pandemic Planning

Conclusions and summary of observations

No central provincial government agency has clear responsibility to engage both government and non-government entities in emergency planning, including preparing for a pandemic. Although pandemic planning may be considered primarily a health system issue, there are aspects of planning for pandemics which must be addressed in non-health entities. The Emergency Management Office coordinates emergency planning across government departments and agencies through its business continuity plan program. However, not all departments and agencies have submitted their plans and these have not been reviewed by EMO. Plans may be inadequate, or may not exist. Health Services Emergency Management is responsible for providing a framework for the health system's response to a pandemic. However, HSEM does not formally review and assess District Health Authority pandemic plans. Without this review and guidance there is no assurance that all DHAs have adequate plans to respond to a pandemic. Although EMO has engaged key non-government stakeholders in emergency planning, no central agency is responsible for emergency planning, including for a pandemic, in critical non-government entities. We believe EMO, with its expertise in emergency planning, is the logical agency to ensure both government and non-government entities have plans to deal with an emergency, including a pandemic. Adequate emergency plans are necessary to ensure critical services such as power, water, snow clearing, policing and fire response continue during a time when absenteeism could be high.

27. *Health Services Emergency Management* – Health Services Emergency Management, a joint group of DOH and HPP, is responsible for enhancing the health system's ability to respond to all emergencies or disasters, including a pandemic. HPP management informed us HSEM does not

have the mandate to develop pandemic plans for areas outside health such as transportation.

28. *Emergency Management Office* – The Emergency Management Office (EMO) is responsible for emergency planning in the Province. EMO management informed us they deal with emergency mitigation, preparedness, response and recovery. EMO is mandated to coordinate government's response to any emergency and relies on DOH and HPP to provide the expertise and leadership on pandemic issues.

29. *Dealing with emergencies* – Many different organizations are responsible for aspects of a pandemic response. DOH and HPP informed us that health emergencies are initially managed at the local level. Once the resources or ability of the local level to respond to the emergency have been exhausted, the next higher level becomes involved. During an outbreak, a District Health Authority would continue to manage its services. If the DHA could no longer adequately respond to the situation, the province, through DOH and HPP, would get involved. Responding to a pandemic involves the coordination of multiple organizations from the local municipal level, DHAs, and provincial and federal governments, with possible involvement of international organizations such as the WHO.

30. *Legislation* – The Health Protection Act has a provision to declare a public health emergency, while the Emergency Management Act includes a provision to declare a state of emergency. Section 64 of the Health Protection Act states *"The Minister may make recommendations to the member of the Executive Council to whom is assigned the administration of the Emergency Measures Act respecting matters relating to public health emergencies that should be included in emergency measures plans made or required to be made under that Act."* DOH and HPP management informed us they see the Emergency Management Act as having greater authority than, and precedence over, the Health Protection Act. While the health sector can declare a public health emergency, only the Emergency Management Office can declare a state of emergency. EMO management informed us that in the event of a pandemic these decisions would be made with input from DOH and HPP.

31. *Lack of central review of District Health Authority pandemic plans* – Although Health Services Emergency Management is involved in pandemic planning for the Department of Health and the Department of Health Promotion and Protection, there is no central review of District Health Authority pandemic plans and HSEM does not know whether DHAs have adequate plans. DOH and HPP, through HSEM, need to take greater leadership of pandemic planning for the health sector. Without a coordinated approach for Nova Scotia's health sector, there is no guarantee that pandemic planning is comprehensive. DHAs may not have adequate pandemic plans. Although

hospital accreditation standards include some requirements related to emergency planning, these are not extensive and do not address all detailed areas necessary for a thorough review of pandemic plans. Front-line health care services are delivered through Nova Scotia's hospitals. Without adequate, consistent and comprehensive pandemic plans, districts may not be able to handle the potential impacts of a pandemic such as increased emergency room visits, greater hospitalization of influenza patients, and significant employee absenteeism. Given the current situation with H1N1, it is important that Health Services Emergency Management ensure all DHAs have adequate pandemic plans in place and are dealing with any areas which were still incomplete at the start of the outbreak.

Recommendation 3
DOH and HPP should immediately review all District Health Authority pandemic plans to identify missing components and follow up to ensure all DHAs have complete plans as soon as possible.

32. *Planning for essential services* – HSEM defines essential service workers as those required to maintain key community services. The definition of essential services was determined through the Public Health Agency of Canada. The Health System Pandemic Plan has a list of potential essential services, including the following.
    - police officers
    - firefighters
    - emergency response decision makers
    - public works and utility workers
    - electricity
    - water
    - essential communications systems
    - funeral service or mortuary personnel
    - health care workers

33. Although pandemic planning may be considered as primarily a health system issue, there are aspects of planning for pandemics which must be addressed in non-health entities. A pandemic can have wide reaching and long lasting impacts on an organization's ability to continue day-to-day operations. Entities providing key services such as snow clearing, fire, water and power should plan for how they will maintain these services if, in an emergency, significant numbers of workers may be absent. This planning does not require health system expertise.

34. *Non-government entities* – EMO management informed us they have engaged external stakeholders such as the RCMP, Stanfield International Airport, Halifax Port Authority, Aliant, Nova Scotia Power and others in emergency planning. Emergency plans should consider pandemic-specific risks.

35. Although EMO may have discussed emergency planning with non-government entities, there is no central government agency responsible for emergency planning, including for a pandemic, in critical non-government entities in Nova Scotia. The Province has a responsibility to the public to deal with province-wide issues in pandemic planning. EMO has expertise in emergency management and the mandate to coordinate government's response to an emergency. EMO also has contacts throughout key external entities. We believe EMO should review non-government entity emergency plans to ensure they are adequate, including being able to deal with a pandemic situation.

Recommendation 4
Executive Council should require EMO to coordinate overall emergency planning, including planning for a pandemic emergency, between the province and non-government entities.

Recommendation 5
EMO should review non-government entity emergency plans to ensure they can adequately deal with a pandemic crisis.

36. *Government entities* – As noted earlier, the Health System Pandemic Plan does not address continuity of services throughout government during a pandemic. The Emergency Management Office is responsible for coordinating emergency, or business continuity, planning across government departments and agencies. EMO provided guidelines to these entities as part of a broader business continuity planning program which departments and agencies are required to follow. This program includes an emergency plan, referred to as a business continuity plan, but also covers other aspects of business continuity such as threat risk assessments and crisis management.

37. Government entities are required to submit their business continuity plans to EMO. Although some departments have submitted plans, none have completed all aspects of EMO's program, including testing the plans. EMO management believe, and we concur, that it is critical that all government departments and agencies complete their emergency planning processes. Nevertheless, EMO has not reviewed the submitted plans for compliance with the program and therefore cannot determine whether they are adequate to deal with a pandemic emergency.

Recommendation 6
EMO should require all government departments and agencies to immediately complete and submit their business continuity plans. EMO should review the plans to ensure they are adequate to deal with a severe pandemic.

38. Since Nova Scotia's Health System Pandemic Plan provides a framework for the health system only, it does not evaluate the impact of essential service worker absences on the pandemic response. The Health System Pandemic Plan assumes each entity will make an assessment for its employees, including District Health Authorities which are responsible for operational plans for delivery of health care services. However Health Services Emergency Management has not formally assessed DHA pandemic plans and therefore does not know the status of DHA essential services plans.

39. We examined certain aspects of pandemic plans at two DHAs, including an assessment of whether those entities' plans addressed maintaining essential services.

40. *Capital Health* – Capital Health defines essential services as high priority where the services cannot be deferred. In its pandemic plan, each Capital Health department identified its highest priority essential services and four of six departments evaluated the impact of employee absenteeism on the pandemic response.

41. *Pictou County Health Authority* – Although the Pictou County Health Authority pandemic plan includes criteria to categorize services as high or medium priority, it has not completed a final determination of essential services or evaluated the impact of employee absences.

Recommendation 7
DOH and HPP should follow up with DHAs to ensure adequate plans for essential services have been developed.

Recommendation 8
Pictou County Health Authority should finalize the identification of essential services.

Development of the Health System Pandemic Plan

Conclusions and summary of observations

Comprehensive pandemic risk assessments were not conducted in developing the Health System Pandemic Plan. Additionally, HSEM has not reviewed and evaluated DHA pandemic plans to ensure key provincial concerns are addressed. Appropriate Ministers or Deputy Ministers did not formally approve the Health System Pandemic Plan. Without formal risk assessments using established risk assessment methodology, evaluation of DHA operational plans for health services

delivery, and executive approval of plans, there is a risk the DHA pandemic plans and the Health System Pandemic Plan may not identify key concerns and may not promote a consistent approach to issues. We did note adequate stakeholder involvement in developing the Health System Pandemic Plan.

42. *History* – The Nova Scotia Health System Pandemic Influenza Plan was first released in June 2007, with an updated version in January 2008. Health Services Emergency Management is responsible for the Health System Pandemic Plan, and a number of subject matter experts, known as pandemic leads, have been identified for various subsections. We found stakeholders were involved in developing the Health System Pandemic Plan.

43. *Risk assessments* – No formally documented, comprehensive pandemic risk assessments utilizing commonly used risk assessment methodology were completed for either version of the Health System Pandemic Plan. Although DOH and HPP each complete annual risk assessments at an overall departmental level, neither identified specific pandemic risks. HSEM staff indicated that risks are informally assessed throughout the pandemic planning process. If a new risk area is identified, it is added to the pandemic work plan and assigned to a pandemic lead with the appropriate expertise.

44. Earlier in this Report, we noted our concerns with considering overall emergency planning without taking into account issues which may be unique to a pandemic. Similarly, we believe it is important to ensure that specific pandemic risks are identified, and their impact on the Health System Pandemic Plan considered. Without a formal risk assessment process, there is a possibility the plan may fail to identify key areas in pandemic planning. This could lead to failure to respond satisfactorily to a pandemic in some areas.

Recommendation 9
In developing the next version of the Health System Pandemic Plan, DOH and HPP should conduct a formal pandemic risk assessment, including formally documenting how risks are addressed within the Health System Pandemic Plan.

45. *District Health Authorities' plans* – HSEM management informed us DHAs are responsible for operational aspects of health system pandemic planning, such as selection of primary and secondary assessment sites and equipment requirements. Each DHA is also responsible for coordinating planning with its municipalities. DOH and HPP do not directly engage municipalities regarding pandemic planning.

46. HSEM obtained DHA pandemic plans but has not assessed these plans to determine whether DHAs adequately addressed pandemic planning for operational areas, or whether all DHAs have engaged their respective municipalities in pandemic planning. HSEM management informed us they have no role to play in assessing DHA pandemic plans. This lack of central review of DHA pandemic plans poses a number of risks including failure of DHAs to address critical areas in the provincial Health System Pandemic Plan, failure to adequately engage municipalities, or an inconsistent approach to pandemic issues across the Province.

Recommendation 10
DOH and HPP should identify key DHA pandemic planning issues and formally review all DHA pandemic plans to ensure those issues are addressed.

47. *Health System Pandemic Plan approval* – There was no formal, written approval of the Health System Pandemic Influenza Plan by either the Ministers or Deputy Ministers of Health, and Health Promotion and Protection. HSEM management indicated the Plan is an operational document, not requiring formal ministerial approval. We were informed the Health System Pandemic Plan was informally approved by the Deputy Ministers of both Departments. Additionally, the first two versions of the Health System Pandemic Plan were not signed off by subject matter experts for their areas of responsibility, although HSEM management informed us subject matter expert sign-off is planned for future versions of the Plan.

Recommendation 11
Formal approval of the Health System Pandemic Plan should be documented, including sign-off by subject matter experts, to ensure all parties understand their roles and responsibilities.

48. *Incomplete sections of Health System Pandemic Plan* – When we carried out our fieldwork, several sections of the Health System Pandemic Plan were still either draft or incomplete.

- The Command and Control section had not been completed. The Health System Pandemic Plan states that *"A command and control process for emergency operations is in the process of being revised and will be included in a future version of the Nova Scotia Health System Pandemic Plan."*
- The Good Neighbour Protocol with unions was still unsigned as of July 23, 2009.
- Ethical considerations and decision making framework were marked as draft.

- Security for strategic reserve drugs was noted as under development.
- Resourcing, remuneration, and liability for primary and secondary assessment sites were noted as under development.
- Although Health Services Emergency Management has an education strategy to develop and implement a number of courses and web-based programs related to emergency preparedness, only two courses are currently available. There is no timeline indicating when additional courses will be offered.

49. DOH and HPP have been working on the Health System Pandemic Plan for a number of years. These areas are serious deficiencies which we believe should have been given higher priority and been addressed by this point. A strong well-documented command and control structure is key in the response to a pandemic to ensure all parties understand their role and who to go to when they no longer have the authority for certain decisions. The lack of central decision making and control was noted as a significant contributing factor to many of the problems experienced in the response to the 2003 SARS outbreak in Toronto. Primary and secondary assessment sites could be required during a severe pandemic but issues around these sites have not been fully dealt with. Having draft and incomplete areas in the Health System Pandemic Plan will compromise the province's ability to respond to a pandemic.

Recommendation 12
Draft and incomplete sections of the Health System Pandemic Plan should be completed. The revised Plan should be communicated to potential users and stakeholders. Critical incomplete areas should be identified and addressed immediately.

50. *Lack of legislative review of Health System Pandemic Plan* – In addition to having a Health System Pandemic Plan, it is important that the Departments of Health and Health Promotion and Protection ensure this Plan can be fully implemented during a pandemic. We noted there was no review of existing legislation and the Health System Pandemic Plan to ensure all aspects of the Plan are covered by legislation and able to be implemented quickly during a pandemic. Without a review, problems may be encountered in implementing the Health System Pandemic Plan if proposed approaches conflict with legislation.

Recommendation 13
The Health System Pandemic Plan, including new sections as they are finalized, should be reviewed in concert with existing legislation to ensure all aspects of the Plan can be fully implemented and do not conflict with legislation. If necessary, legislation should be revised.

Strategic Reserves of Supplies

Conclusions and summary of observations

Nova Scotia does not have adequate stockpiles of supplies to access during a pandemic. The existing stockpiles are valued at $1.7 million – a shortfall of $5.8 million from total required reserves. Funding requests for supplies have been significantly less than required. We also found the Departments of Health and Health Promotion and Protection have had difficulties obtaining supply information from District Health Authorities despite requirements in the Health Authorities Act that DHAs provide requested information to the Minister of Health. Finally, we identified the need for better communication with DHAs regarding the status of supplies stockpiles. Since Nova Scotia's stockpiles are insufficient to meet estimated requirements, the health system may not have adequate protective equipment to safeguard health care workers or adequate supplies and medication to treat the sick.

51. *Supplies stockpiles* – During a pandemic, there will be an increase in the demand for healthcare services at a time when the availability of medical supplies such as gloves, masks, medical first responder kits and other items may be reduced due to worldwide demand and potential supply disruptions. Strategic reserves are intended to provide a buffer of supplies that can be utilized as needed during an emergency. Nova Scotia's Health System Pandemic Plan identifies strategic reserves, or supplies stockpiles, as important in responding to a pandemic or other emergency.

52. In September 2006, an internal evaluation of health system supply requirements was completed. It estimated approximately $7.5 million in supplies stockpiles were required to meet increased demands associated with a pandemic. Adequate supplies stockpiles are key to ensuring Nova Scotia can adequately respond to a pandemic. The current stockpile is insufficient to meet estimated supply needs. The shortfall between current stockpiles and recommended levels is approximately $5.8 million.

53. HSEM management indicated this deficiency has been due to insufficient funding. In our examination of DOH and HPP budget documents, we found $250,000 in requests to fund strategic reserves of supplies in documents sent to Treasury and Policy Board, the central government agency responsible for the annual budget. Approximately half of those amounts were approved. There were limited requests for funding in the departments' internal budget documents. These totalled less than $500,000 since 2006-07 when the stockpile report was completed, and were removed from the official budget request through the departments' internal budget process. Finally we noted a recent joint request by DOH and HPP to Executive Council for $2.4 million to obtain warehouse space to hold the reserve of supplies.

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PANDEMIC PREPAREDNESS

54. We are concerned that requests for stockpile funding were so low in comparison to estimated requirements. Furthermore, departmental management decided to largely exclude stockpile funding from the official budget requests to Treasury and Policy Board. This led to a significant shortfall in the supplies necessary to respond to the current H1N1 pandemic. DOH and HPP management informed us they have recently been given Executive Council approval to purchase whatever supplies are needed to deal with the current pandemic. As expected, supplies are not as readily available as they were prior to the pandemic. For example, Nova Scotia recently ordered 1 million protective masks for use by health care workers. The supplier informed the province that it will take 12 to 18 months before this order can be completely filled. Without adequate supply reserves, the Nova Scotia health system may not have adequate protective equipment to safeguard health care workers or adequate supplies and medication to treat the sick.

Recommendation 14
DOH and HPP should request immediate approval of funding required to purchase all identified supplies stockpile requirements.

Recommendation 15
Steps should be taken to rapidly acquire all medical supplies needed to enable an adequate response to a potential medical crisis.

55. In 2008, DOH and HPP hired an external consultant to assess estimated supply requirements to maintain essential services, equipment and pharmaceuticals from an all-hazards planning perspective for the health system. The project objective is to *"evaluate an independent, secure, province-wide, comprehensive, healthcare strategic reserve to address both general operating requirements and, in addition, appropriate surge capacity to respond to all hazard threats, including pandemic events."* This project is intended to build on the 2006 internal report and to provide a more extensive listing of supplies and equipment required in the provincial strategic reserve.

56. The final report was expected in June 2009, but was still outstanding at the time this Report was written. We understand the issue delaying completion of the consultant's report relates to DHAs. DOH and HPP are not certain whether either department can legally require the DHAs to provide details of their supplies on hand and costs for those supplies. Under the Health Authorities Act, however, DHAs report to the Minister of Health and are required to provide the Minister with any information requested. This issue underscores the need for clear legislative authority throughout pandemic planning and response.

Recommendation 16
The Minister of Health should require all District Health Authorities to provide requested supply information to DOH and HPP immediately.

Recommendation 17
DOH and HPP should ensure the consultant's report on strategic supply reserves for the health system is completed as quickly as possible following the receipt of remaining information from District Health Authorities.

57. The 2006 internal report and the planned external consultant report evaluated strategic supply reserves for the health system only. There are no plans to provide supplies, such as masks and gloves, to other essential service workers. We did not audit non-health system entities to determine whether they have their own supplies stockpiles.

58. *Capital Health* – Capital Health has taken steps to ensure it continues to have access to supplies in the event of a pandemic. Capital Health supply needs for essential services were assessed in the 2006 report discussed earlier in this section. Although Capital Health does not have sufficient supplies on hand to address identified needs, there are plans to obtain additional supplies. Capital Health management indicated they plan to increase their supply purchases as the pandemic stages increase. The provincial stockpile is seen as a last resort.

59. Capital Health management informed us that suppliers are setting limits on quantities designated areas can receive, increasing the risk that, if Capital Health increases its purchases before DOH and HPP or other DHAs, the supply limit set for Nova Scotia could be fully used. Capital Health does have agreements with four of its suppliers to ensure continued delivery of supplies during a pandemic. Additionally, Capital Health has copies of the pandemic plans for three of those suppliers. Management also indicated they are working on agreements with additional suppliers.

60. Capital Health's Materials Management Disaster Contingency Plan includes listings of essential supplies and equipment, instructions for procurement and purchasing, and staffing plans. This level of detail will help ensure all processes are followed during the response to a pandemic.

61. *Pictou County Health Authority* – Pictou County Health Authority (PCHA) essential services supply needs were also assessed as part of the 2006 report. PCHA management informed us the Authority is reliant on the Nova Scotia stockpile for supplies during a pandemic. At the time of our fieldwork, PCHA had no contingency plans to address shortfalls should they encounter difficulties obtaining supplies from the stockpile. Management informed us they have begun to consider this issue since the H1N1 outbreak.

Recommendation 18
DOH and HPP should communicate with District Health Authorities to ensure all DHAs are aware of the status of the provincial supplies stockpile. DOH and HPP should engage all DHAs in determining a province-wide approach to supply procurement during a pandemic public health emergency.

Surveillance, Epidemiology and Lab Capacity

Conclusions and summary of observations

No formal, documented assessments have been completed of surveillance, lab or epidemiological capacity in Nova Scotia to determine whether these systems are capable of handling the increases associated with a pandemic. Results of the mumps outbreak in 2007-08 indicated the lab and public health systems were overwhelmed. Management at the Provincial Public Health Laboratory Network acknowledge they can only deal with a three or four fold increase in demand, while a federal committee looking at lab involvement in a pandemic response has suggested as much as a ten fold increase is possible. Epidemiological capacity in the province is still limited and could have a negative impact on the ability to track a pandemic once it has arrived in Nova Scotia. There is a significant risk that Nova Scotia does not have adequate capacity in surveillance, epidemiology, or labs to deal with the increased demands on the system from a pandemic. The lack of assessment of system capacity is concerning and must be addressed.

Surveillance and Epidemiological Investigation

62. *Surveillance system overview* – The Health System Pandemic Plan defines surveillance as the ongoing collection and interpretation of health data necessary for public health, and the provision of this information on a timely basis to the appropriate individuals. The current H1N1 pandemic is a form of influenza. Instances of influenza in Nova Scotia can be identified through notifiable disease reporting or through monitoring of influenza like illness.

63. *Influenza like illness* – One area of surveillance for potential pandemic influenza is the national FluWatch program. FluWatch is administered by the Public Health Agency of Canada and collects key data regarding influenza like illness (ILI) in the general population, the number of lab confirmed cases, outbreaks, and the number of schools and workplaces with greater than 10% absenteeism. ILI is captured by sentinel physicians, family doctors in Nova Scotia selected by the College of Family Physicians of Canada, who report possible influenza activity in their patients to the FluWatch program on a weekly basis. The remaining data is collected

provincially and sent to FluWatch for compilation. From this information, the rate of influenza activity in the population is calculated and published on a weekly basis during the influenza season (October to April) and biweekly in the off season (May to September).

64. *Notifiable diseases* – Influenza of pandemic potential is included on the list of notifiable diseases under the Health Protection Act Reporting of Notifiable Diseases and Conditions Regulations. The Act requires physicians, registered nurses, and medical laboratory technologists to report suspected or laboratory confirmed cases of notifiable diseases to a Medical Officer of Health. Once reported to a Medical Officer, a Public Health Nurse may be assigned to the case to gather more information. The information gathered is entered into a case management system which is used by the Department of Health Promotion and Protection's Population Health Assessment and Surveillance division to monitor trends in data over time. We did not examine the case management system during this audit.

65. HPP has not completed a formal assessment of the surveillance system. Two aspects related to immunization surveillance have been evaluated. HPP management indicated Nova Scotia has limited surge capacity in surveillance. This means there is a limited ability to deal with significant increases over normal system demands. The number of surveillance staff, particularly public health nurses and epidemiologists is limited.

66. *Mumps outbreak* – The 2007-08 mumps outbreak had a significant impact on the public health system. The case follow-up process put a strain on public health resources and impacted other public health programming. As the outbreak progressed, the level of investigation of individual cases was reduced due to the impact on public health resources. (See Chapter Four – Communicable Disease Prevention and Control in the February 2008 Report of the Auditor General in which we examined the response to the then ongoing mumps outbreak for further information.)

67. HPP management informed us that in the early stages of a pandemic, the identification and arrival of the pandemic strain in Nova Scotia, and the ability to track the movements of the strain through the population, will be important. This would be accomplished by confirming the presence of the virus through positive lab tests and the work of public health nurses and epidemiologists. Once the pandemic virus has become widespread, the actual number of cases will become less important, while measures of morbidity, mortality, societal disruptions, and capacity of health resources will require monitoring. When we completed our fieldwork on the Health System Pandemic Plan, we found the surveillance system did not have the ability to track and monitor information such as morbidity and mortality. Since the pandemic was declared, changes to the existing system now permit tracking of this information.

Recommendation 19
All aspects of the provincial surveillance system should be assessed and identified gaps addressed. The resulting surveillance system should be capable of monitoring key indicators, including those which are tracked during a pandemic.

68. *Epidemiology overview* – Epidemiology is a branch of medical science that deals with the incidence, distribution and control of disease in a population. Epidemiologists and public health nurses play a key role in tracking and investigating the spread of disease. Public health nurses are involved on the ground during an outbreak interviewing individuals who have been infected with the disease and providing information to those infected. The information collected by the public health nurses is provided to epidemiologists for further investigation.

69. HPP management informed us there is limited surge capacity related to surveillance, particularly for epidemiologists and public health nurses. Surveillance staff indicated the ability to bring in additional staff to help with epidemiological investigations during a pandemic is limited. Few individuals have the training and skills required for epidemiological investigations.

70. Estimates from the Health System Pandemic Plan suggest a moderate pandemic could result in up to 35% of the workforce being unavailable to attend work. Given the limited surge capacity in these key positions, any absenteeism could create significant backlogs and delays. One of the issues identified from the 2007-08 mumps outbreak was that sustained outbreaks of an infectious disease can quickly exhaust public health resources, leading to the interruption and delay of other public health programs.

71. HPP management recognize the need for additional surveillance staff and the constraints shortages could cause during a pandemic. They informed us they take advantage of opportunities to obtain additional surveillance staff, including federal programs which place federal surveillance employees within the Province to support the work of provincial employees. There are currently three federal employees within the provincial surveillance team. Although these individuals can provide assistance to Nova Scotia while they are here, the Public Health Agency of Canada could reassign these individuals if an outbreak was to occur in another location in the country.

Recommendation 20
The Province's capacity to conduct epidemiological investigations should be formally assessed, including an analysis of the impacts of various attack rates on Nova Scotia's ability to respond to a pandemic and a plan developed to address the identified gaps.

Lab Capacity

72. Provincial labs are a key mechanism used in detecting and confirming the presence of a notifiable disease in Nova Scotia. There are several labs located throughout Nova Scotia, each of which is capable of performing a number of tests; although currently only the lab at the QE II Health Sciences Centre in Halifax is able to test for influenza. Provincial Public Health Laboratory Network staff informed us there are no plans to have other labs in the province perform influenza sample testing.

73. There has been no official assessment of lab capacity in Nova Scotia to determine whether it is sufficient to identify and monitor a pandemic, or to determine the surge capacity of the system. An internal report prepared following the 2007-08 mumps outbreak indicated labs used for testing mumps samples were strained by the volume of samples, resulting in a two to seven day backlog for testing. Steps have been taken to mitigate the strains placed on the labs during a pandemic, including determining what tests can be delayed or deferred. Management at the Provincial Public Health Laboratory Network indicated the lab has the supplies available to handle a three or four fold increase. However, a federal committee considering lab involvement in a pandemic response has suggested the possibility of a ten fold increase.

74. During a pandemic, some level of regular testing will still be required. When combined with pandemic-related testing, limited supplies and human resources, this could cause significant delays.

Recommendation 21
The provincial lab capacity should be formally assessed, including impacts of significant increases in sample testing and a plan developed to address the identified gaps.

75. The Provincial Public Health Laboratory Network was created as part of the renewal of public health to assist regional labs with microbiology expertise, primarily in the area of public health related testing. It also acts as a liaison with public health services and labs to coordinate the response during an outbreak. The Provincial Public Health Laboratory Network is working on preparing guidelines to help labs respond to the additional workloads required during a pandemic.

Human Resource Issues

Conclusions and summary of observations

A number of key areas related to health care staffing during a pandemic must

be addressed to ensure the continued availability of workers in an emergency. A draft protocol between the Province and health care unions addresses issues around a pandemic. However the protocol remains unsigned so there is no guarantee it will be followed during the H1N1 pandemic. Additionally, it is not clear whether volunteers, including those from outside Nova Scotia, would be covered for liability purposes or workers' compensation. This leads to the risk that volunteers will refuse to participate because they are concerned with putting themselves at risk. As well, providing temporary licenses to staff to assist with either health care for the sick or processing lab samples could help alleviate pressures on the health system in the event of a pandemic. When these issues are not dealt with before a pandemic becomes acute, there could be delays in worker availability, which could negatively impact the care provided.

Unions and Extra Hours

76. *Departments of Health and Health Promotion and Protection* – During a pandemic, the health system will likely be faced with employee absenteeism and increased demand for services that may require extra hours from remaining staff. These issues have been addressed in a draft Good Neighbour Protocol, intended as a framework for dealing with all health care unions in Nova Scotia. This protocol has not been signed, although DOH and HPP management indicated most of the larger unions are supportive of it. The draft protocol addresses many areas including work at primary and secondary assessment sites, quarantine, volunteers, assistance from out of province, and workers' compensation. We were initially informed the protocol would be signed in May 2009, shortly after the onset of the H1N1 outbreak. However the protocol was still draft on July 23, 2009. Resolving issues which could arise during a pandemic is a key planning consideration. When these issues are not dealt with before a pandemic becomes acute, there can be delays in worker availability, which could negatively impact the care provided.

Recommendation 22
The Good Neighbour Protocol should be signed immediately to ensure there is an agreed upon framework in place to deal with human resource issues during the pandemic.

77. *Capital Health* – Capital Health management have a draft plan which addresses extra hours worked by staff and compensation during a pandemic. The plan also notes that in the event of a pandemic, it may be necessary to suspend certain provisions of collective bargaining agreements. Management indicated the suspension of certain provisions is consistent with the language in the draft Good Neighbour Protocol. Capital Health management informed us they believe other potential union issues during a pandemic are a joint responsibility between all DHAs, DOH and HPP.

78. *Pictou County Health Authority* – Pictou County Health Authority (PCHA) has not addressed extra hours, compensation or union issues as they see this as a provincial responsibility. When we completed our fieldwork, PCHA was aware the Good Neighbour Protocol existed but were not aware of the status of provincial work on this protocol.

Recommendation 23
DOH and HPP should inform District Health Authorities of the status of union issues in pandemic planning to prevent duplication of efforts.

Workers' Compensation, Insurance and Legal Liability

79. *Departments of Health and Health Promotion and Protection* – During a pandemic, increased demand for health services and reduced staffing due to illness are likely to create a need for volunteers, including non-health care workers, to assist in the health system. There is no formal legal liability program in place and there is confusion surrounding workers' compensation coverage for volunteers. There is a draft volunteer management plan, which is planned for inclusion in version three of the Health System Pandemic Plan. The draft notes that volunteers would be covered by the Province of Nova Scotia for workers' compensation. However, we determined volunteers would not be covered under workers' compensation as they do not meet the definition of workers. Without clear guidelines, there is a risk volunteers will not take part in a pandemic response out of fear they will not receive assistance if injured. This highlights the need for a joint review of legislation and components of the Health System Pandemic Plan as discussed earlier. This would help identify areas where proposed actions are not possible from a legal standpoint.

80. DOH and HPP management indicated that the Department of Transportation and Infrastructure Renewal (TIR) is responsible for legal liability of workers. Government is generally self-insured. TIR management informed us they recommended a clearly defined fund and policy be created to clarify the details of insurance available in this situation. However, they have not received any direction to proceed. Accordingly, there is no formal definition around the legal liability program in place for volunteers during a pandemic event. This leads to risk that volunteers will refuse to participate because they are concerned with putting themselves at risk of being sued.

81. If a state of emergency is declared under the Emergency Management Act anyone working pursuant to the Act *"...is not liable for any damage arising out of any action taken pursuant to this Act or the regulations."* The Health Protection Act provides immunity to the Chief Medical Officer, the Deputy Chief Medical Officer, a medical officer, a public health inspector or a public health nurse, but does not address volunteers and other health professionals.

82. DOH and HPP are aware of these concerns. Since the H1N1 pandemic began, the Departments have developed a plan to examine this issue.

83. *Capital Health* – Capital Health management initially identified insurance and legal liability as a provincial responsibility. Capital Health legal counsel later clarified that volunteers are covered under Capital Health's general liability insurance provided by the Nova Scotia Health Organizations Protective Association. We examined the insurance policy and determined that volunteers are covered, regardless of the circumstances. Additionally, anyone brought in as an employee would be covered for workers' compensation provided Capital Health notified the Workers' Compensation Board.

84. *Pictou County Health Authority* – Pictou County Health Authority management indicated insurance and legal liability will be addressed through the Nova Scotia Health Organizations Protective Association.

Recommendation 24
DOH and HPP should take immediate steps to clarify legal liability for volunteers and determine how volunteers and workers from outside Nova Scotia will be covered for workers' compensation during a pandemic. This information should be communicated to District Health Authorities.

Temporary/Emergency Licensing

85. *Departments of Health and Health Promotion and Protection* – Given the expected increased demand for services during a pandemic and potential staff absenteeism, it may be necessary to bring in retired workers or those with the skills to perform tasks, but who are not currently licensed by regulatory boards. Health Services Emergency Management indicated they have contacted various licensing bodies and determined that physicians, registered nurses, licensed practical nurses and dieticians have temporary license provisions. Various other professions including dentists, ophthalmologists and pharmacists indicated they have no plans for temporary licensing. HSEM management are aware of these issues. They informed us the question of who would pay the cost of temporary licensing fees remains outstanding.

86. *Capital Health* – Capital Health management indicated temporary licenses are a province-wide issue for which DHAs, DOH and HPP share joint responsibility. They also indicated registered nurses, licensed practical nurses and physicians already have a system to issue temporary licenses.

87. *Pictou County Health Authority* – Pictou County Health Authority management indicated they view temporary licensing as a provincial responsibility, not an issue for each DHA to deal with.

88. *Provincial Public Health Laboratory Network* – Provincial Public Health Laboratory Network staff indicated that human resources will be a limiting factor in the lab testing capacity during a pandemic, specifically the capacity to conduct molecular testing. There is a relatively small group of technologists who have the competencies required for molecular testing. In a pandemic situation where molecular testing is required, Network staff noted it would be beneficial if they could access technologists trained in molecular techniques who may not be licensed to work in a medical laboratory, for example those in research labs, provided those technologists then worked under the supervision of licensed medical laboratory technicians.

89. We reviewed the results of a 2008 mass casualty exercise and noted issues were identified related to temporary licenses. Specific concerns included the need for rapid licensing of health care professionals, legislation to enable regulatory bodies to rapidly issue temporary licenses, and better coordination between public and private health care providers. We also noted a problem with timely lab testing as the volume of samples increased significantly during the 2007 mumps outbreak. Providing temporary licenses to staff who can assist with either health care for the sick or processing lab samples could help alleviate pressures on the health system in the event of a pandemic.

Recommendation 25
DOH and HPP should finalize plans for temporary licensing with professional groups. This information should be communicated to District Health Authorities.

Other Issues

90. *Bed Availability Tracking* – Each DHA submits a Daily Review Template to DOH and HPP to identify intensive care unit (ICU) beds available and the number of emergency department patients waiting for beds. This information is not available in real time as it is only updated daily, and is not submitted on weekends. Additionally, this tracking does not include the human resources required to use a vacant bed. Although DOH and HPP may have information on whether an ICU bed is available, under the current system, they would not know whether there are sufficient physicians and nurses to staff those beds.

Recommendation 26
DOH and HPP should develop and implement a system that allows bed tracking on a timely basis throughout the week and which includes consideration of staff availability for open beds.

91. *Primary and secondary assessment sites* – In the event of a pandemic, primary and secondary assessment sites may be needed to serve as immunization clinics or to assess and treat the sick. These locations can be key to relieving the stress on hospitals during a pandemic as there may be too many sick people requiring care for existing hospital beds to accommodate. Although the Health System Pandemic Plan identifies primary and secondary assessment sites as part of the pandemic response, DOH and HPP view the assessment of these locations as a District Health Authority responsibility. Neither DOH nor HPP have taken any steps to ensure that DHAs have adequate plans for primary and secondary assessment sites.

92. *Capital Health* – Capital Health has not selected primary and secondary assessment sites. The Authority has developed detailed site selection requirements to evaluate potential sites, but does not intend to identify sites until they are required. Capital Health management informed us equipment needs for sites will not be addressed until locations are selected.

93. We also noted Capital Health has detailed plans for the use of primary and secondary assessment sites once they have been selected. This information should assist Capital Health in their pandemic response.

94. *Pictou County Health Authority* – Only one primary and secondary assessment location has been selected and PCHA management acknowledge this location will not be sufficient to respond to a significant pandemic. Additionally, PCHA management has not officially approved this site. PCHA is in the process of completing its business continuity plan which will include the final approval of both resource requirements and the primary and secondary assessment sites.

95. PCHA has a detailed, documented process on how and when to activate its primary and secondary assessment locations. This ensures the process can be followed by replacement staff if key staff are absent. Planning for this site includes detailed equipment and supply needs, along with a draft floor plan showing how the site will be used during a pandemic.

96. PCHA selected a primary and secondary assessment location which it controls to ensure availability during a pandemic. This is notable as a pandemic could last several months. Availability of the facilities used for primary and secondary assessment could be an issue if using a facility controlled by another organization. PCHA has a list of more than 50 other sites including fire departments, community halls, legions and churches which could be considered for alternative care locations. This listing includes details on each location's amenities such as heat, water, sewer and auxiliary power along with the address and contact information for the site. PCHA management indicated they would require direction from

the province before going forward with plans for other provincially-owned sites such as schools.

Recommendation 27
DOH and HPP should ensure all District Health Authorities have adequate appropriate primary and secondary assessment locations and plans for their use.

Communications

Conclusions and summary of observations

Although the pandemic communication plan includes many important elements, it is missing a consolidated list of contact information for stakeholders. Without such a list, time will be wasted developing a contact list during a pandemic. There is a risk that key stakeholders could be overlooked in providing information or arranging meetings. We also noted the operational plan prepared for internal use requires revision to reflect the most current information. The roles and responsibilities of staff responsible for the pandemic communications portfolio have been clearly defined and communicated. However not all groups and organizations identified as responsible for the distribution of information in a pandemic have been made aware of their responsibilities.

97. *Importance of communication during a pandemic* – During a pandemic the need for accurate and timely communication is critical to ensure the public has the information they require and are aware of the situation as it develops. It is also important to have good lines of communication between those in charge of the response, and those on the ground treating the sick, such as health care workers and doctors. Appropriate and timely communication can help minimize the public's concerns regarding a pandemic. It can also help health care workers to feel informed at a time when their workload is likely significantly increased.

98. *Communication guidelines* – In 2007, DOH and HPP developed guidelines to provide an aid for communication during a pandemic. The document includes guidelines, policies, communications tools and checklists, as well as protocols for communication between various levels of government and across jurisdictional boundaries. There are areas in which the guidelines have not been updated with the names of individuals in certain positions, although the position is still reflected in the information provided. Sections of the guidelines also note certain information is to be added later; however, this was not done. Communications staff informed us these guidelines will be updated but were unable to provide timelines. Complete and current information is critical to a successful and timely response in a pandemic.

99. Although these guidelines have not been tested, staff indicated they are responsible for communications every day. The approach used in a pandemic would not be new; the only change would be the increased speed required to get the messages out.

Recommendation 28
DOH and HPP should review and update pandemic communication guidelines to reflect the most recent information available.

100. *Contact information of stakeholders* – There is no consolidated list of contact information for stakeholders. We are concerned there is no single contact list for use during emergencies such as a pandemic. This could lead to delays in distributing information to the health system as well as the public.

101. During our work on the response to H1N1, we requested a listing of public health contacts in each district from Health Services Emergency Management. It took several days for this information to be provided. HSEM exists to manage planning for a response to a health system emergency. In order to do this efficiently, HSEM should have current contact lists for all relevant stakeholders or organizations that may need to be contacted during an emergency such as a pandemic. We understand HSEM now has a plan to identify gaps and update contact lists.

Recommendation 29
A consolidated contact list for all stakeholders who may need to be contacted during a pandemic should be developed and distributed to appropriate staff within DOH and HPP.

102. *Responsibilities for communication* – The Health System Pandemic Plan includes information on the roles and responsibilities for various groups and organizations to distribute information during a pandemic. Not all groups identified as responsible for distributing information have been made aware of their responsibility. The lack of prior arrangements, and discussions with all groups who may be requested to assist, could delay the distribution of critical information during a pandemic.

Recommendation 30
DOH and HPP should communicate their expectations for assistance to all organizations and groups identified as responsible for distributing information during a pandemic.

103. We found roles and responsibilities for the pandemic communication portfolios at DOH and HPP were clearly defined. Alternatives for the

pandemic portfolios have been identified, which is important to ensure continuity of the response if key individuals become ill with the pandemic strain themselves.

Health System Pandemic Plan Revisions

Conclusions and summary of observations

Events such as outbreaks and exercises have occurred that could help strengthen the pandemic response by identifying deficiencies and building knowledge of how to respond. However, there is no process in place to ensure the Health System Pandemic Plan is updated for lessons learned from these events. Some revisions have been made to the Plan, presumably as additional information was learned and gaps were identified.

104. *Need to identify lessons learned* – Pandemic planning is an ongoing process that not only relies on tests of the plans but also draws upon lessons learned from various emergencies or outbreaks and through the results of exercises to test the plan. A process for lessons learned from outbreaks can help identify information regarding whether the planned responses are appropriate, areas requiring additional guidance, and help build the skills and knowledge of those who will be involved in a pandemic response.

105. There have been no official tests of the Health System Pandemic Plan to date, although HSEM management have identified a number of exercises, outbreaks and events that have taken place which they feel have provided valuable information in certain areas. These events help build response capabilities and assist in identifying weaknesses or areas of concern that could arise during a pandemic.

106. *Health System Pandemic Plan revisions* – Our audit work focussed primarily on version two of the Health System Pandemic Plan. We also looked at revisions to the Plan arising from exercises or events such as outbreaks which occurred. We reviewed the reports prepared following any events, outbreaks or exercises identified to us by management. These reports included a number of issues, observations and recommendations, many of which would be relevant to planning for a pandemic. HSEM staff were unable to demonstrate how specific observations or lessons learned were incorporated into the Health System Pandemic Plan or the revision documents which describe changes for future versions of the Plan. There is no formal process to ensure all the recommendations and experiences from outbreaks and exercises are reflected in the Health System Pandemic Plan. It is important to use lessons learned from outbreaks and exercises to

improve future responses. Failure to do so poses a risk that past problems could be repeated. Staff could spend time dealing with issues which were addressed during a previous outbreak or exercise that they are unaware of.

107. Since the H1N1 outbreak began, DOH and HPP have identified areas where there are gaps and created work groups to examine outstanding issues.

Recommendation 31
Health Services Emergency Management should develop a process to ensure each issue identified as a result of an outbreak or emergency is recorded, along with an explanation of how the lessons learned have been reflected in the Health System Pandemic Plan.

Recommendation 32
Previous outbreaks should be reviewed to ensure that lessons learned are incorporated into the Health System Pandemic Plan.

Other Issues Related to District Health Authorities

Conclusions and summary of observations

There were difficulties identifying employees' health professions for the province's Health Human Resources pilot survey at Pictou County Health Authority. These issues should be addressed before the province uses this survey in all District Health Authorities to provide information for human resource planning during a pandemic. In the course of our audit, we also noted certain good practices at Capital Health and Pictou County Health Authority. Both Authorities appear to have good communication with Regional Emergency Management Coordinators and other regional partners.

108. *Capital Health* – During our audit, we noted extensive communications between Capital Health and Halifax Regional Municipality (HRM). The two organizations have a signed Memorandum of Understanding, one of the objectives of which is to ensure coordination and alignment of initiatives in areas of shared interest, including emergency planning. The Regional Emergency Management Coordinator noted the HRM Emergency Operations Centre and Capital Health Emergency Operations Centre coordinate with each other, including the exchange of liaison officers during Emergency Operations Centre activation. Finally we noted Capital Health has a copy of HRM's draft all-hazards plan, which includes a chapter on infectious diseases such as a pandemic. This demonstrates communication between the Authority and municipality on pandemic-related issues.

109. *Pictou County Health Authority* – During our work at Pictou County Health Authority, we noted PCHA has detailed project charters for pandemic planning projects. This allows groups to focus on tasks they are responsible for and provides direction on how objectives are to be achieved. We reviewed the business continuity plan, human resources, and flu activation center project charters and found they provided detailed guidance on how to achieve objectives, reducing the risk of omitting steps during an emergency.

110. PCHA management informed us they have seen the pandemic plans of Emergency Health Services and the Funeral Director Association. This helps ensure that PCHA is aware of what to expect from these agencies during a pandemic, and reduces the risk that there are unidentified gaps between plans.

111. PCHA has communicated with the local Regional Emergency Management Coordinator, outlining its requirements related to essential services from external agencies. The Coordinator informed PCHA management that those responsible for providing essential services are aware of the expectations but that the Coordinator cannot comment on whether the services are well-prepared for a pandemic.

112. Communications between DHAs and regional partners such as municipalities and emergency management coordinators, as well as the exchange of emergency plans and other information, are good practices. Similar exchanges could benefit many groups within government and throughout the Province. Additionally, PCHA's practice of using project plans for each Health System Pandemic Plan component helps ensure all identified issues are addressed and could be beneficial for any group engaged in pandemic planning.

113. *Health Human Resources pilot survey* – The Health Human Resources (HHR) project is one of the health system pandemic planning projects. It is intended to assist with the development of a framework to help human resource planners consider the skills, knowledge and competencies required by health care providers to respond to a pandemic. The project is not intended to provide the number of health care providers needed from a specific profession.

114. As part of the health system's pandemic planning, a survey was developed to assess worker competencies in areas required for a pandemic response. PCHA was selected as the test site for this survey. 278 surveys were sent to various health care professionals including registered nurses, licensed practical nurses, and laboratory technologists.

115. The survey did not include a mechanism for feedback from participants and therefore any difficulties or interpretation issues with the survey may not be captured. As this survey will be used to help develop the HHR planning strategy and future versions of the Health System Pandemic Plan, having accurate results is critical.

116. When this report was written the results of the pilot survey were not available.

117. One issue PCHA noted with the HHR survey related to difficulties determining the professional designations of staff due to the lack of a consistent human resource system. Information was recorded in a number of different systems and staff spent considerable time extracting required data. During an emergency such as a pandemic where staffing shortages exist, this could result in significant delays in identifying professionals with the skills to assist in the response, potentially compromising patient care and the overall response to the emergency.

Examination Of Certain Aspects Of Response To H1N1

Conclusions and summary of observations

The current pandemic began before we completed our audit. We conducted limited work on the response to the initial stages of the pandemic. We conducted a survey of family and emergency room physicians and found 82% were either satisfied or somewhat satisfied with the initial response, although 55% were not happy with the ability to access adequate supplies. DOH and HPP have identified deficiencies in their response capability and have begun planning and establishing work groups to address these issues.

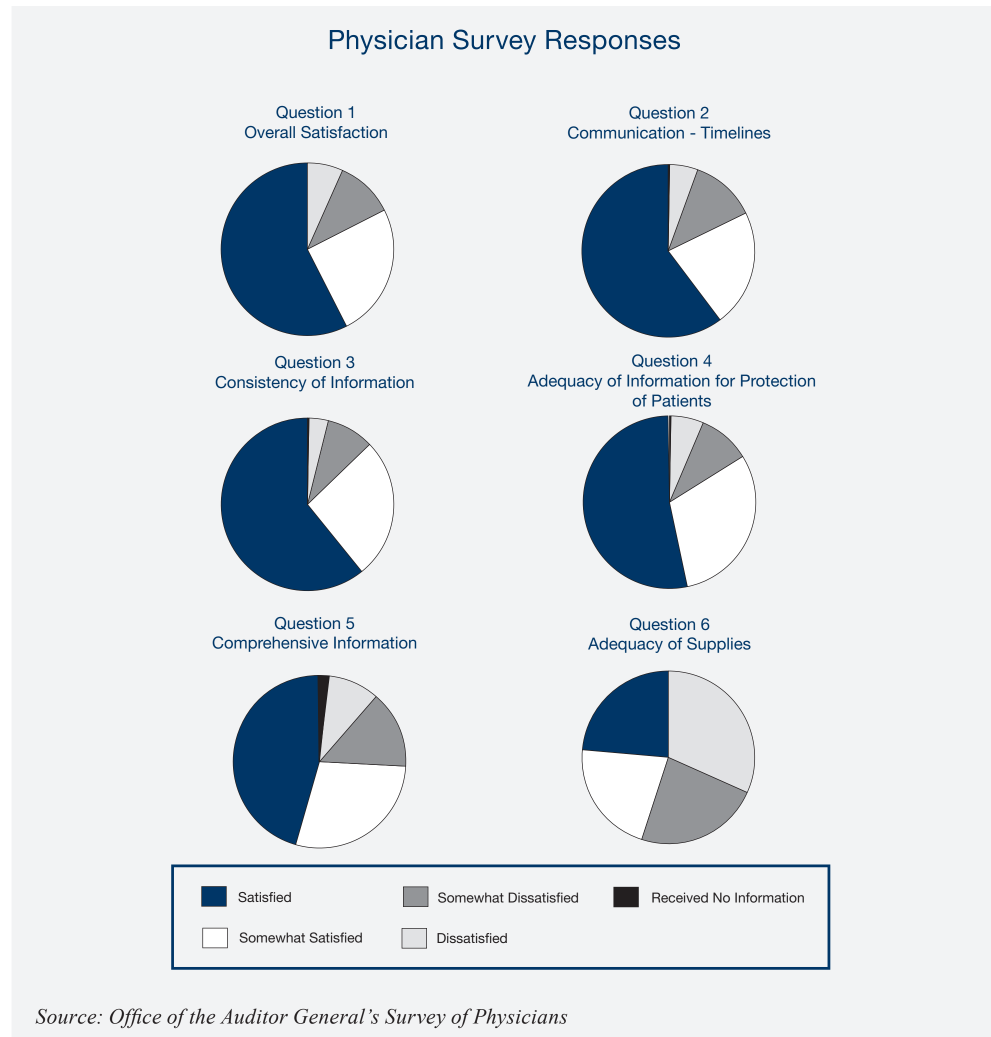
118. *What we did* – We were finishing our audit fieldwork on pandemic preparedness when H1N1 was first identified in Nova Scotia in late April 2009. We felt the House of Assembly and the public would want information on the early days of Nova Scotia's response to H1N1. We began to examine this by surveying family and emergency room physicians in the province and reviewing information from DOH and HPP. Shortly after we started this work, the WHO declared the worldwide outbreak of H1N1 a pandemic on June 11, 2009. A few weeks later Nova Scotia began seeing an increase in the number of new cases each week. As a result, we held only limited meetings with DOH and HPP staff. We relied largely on documentation of meetings and communication information released to health care workers and the public during H1N1. We did not want any continued work by our Office to impede the province's ability to respond to the H1N1 pandemic. Accordingly we decided to report the results of our work on pandemic

preparedness and our work to that point on the early days of Nova Scotia's response to H1N1. We did not audit all aspects of DOH's and HPP's response to the pandemic as this is still ongoing. Additionally, readers must keep in mind that although we have been dealing with a pandemic since early June, Nova Scotia has had 456 lab-confirmed cases of H1N1 as of July 24, 2009. We cannot say how the province would have responded if the number of cases had been much higher, with significant numbers of the population requiring hospitalization and large numbers of health care workers becoming sick.

119. *Physician survey* – On June 22 Doctors Nova Scotia sent 937 surveys to family and emergency room physicians on our behalf, requesting a response by July 3, 2009. We received 229 responses to our survey, a 24% response rate.

120. As of July 3, 2009, the date the survey responses were due, Nova Scotia had 151 confirmed cases of H1N1, including four requiring hospitalization.

121. Survey responses show that physicians were generally either satisfied or somewhat satisfied in most areas surveyed, including the response to the H1N1 outbreak and timeliness and consistency of communication. One area in which physicians were less satisfied was that of the ability to obtain sufficient supplies to respond to the outbreak. 23% of respondents were satisfied and 22% somewhat satisfied while 55% were either dissatisfied or somewhat dissatisfied. As noted earlier in this Report, Nova Scotia has significantly less stockpiles of supplies than recommended in preparation for a pandemic. We are concerned that roughly half of physicians were not satisfied with access to supplies during a time when the number of people ill in Nova Scotia was quite low. The following charts provide detailed results for each survey question.



Source: Office of the Auditor General's Survey of Physicians

122. *King's-Edgehill School* – We spoke to officials at King's-Edgehill School in Windsor, where Nova Scotia's first cases of H1N1 were identified. They informed us they had excellent support from DOH and HPP, including public health staff. King's-Edgehill School officials also noted that public health staff were on site at the school in the early days of the outbreak, providing information to staff, students and parents.

123. *Lab testing* – We reviewed the documentation for ten positive H1N1 tests. We found test results were generally available within a day of the sample being sent to the lab. While these results are timely, we remain concerned with the lack of assessment of the lab system's capacity. It is not clear whether test results would continue to be available in such a timely fashion if the number of tests increased significantly.

124. *Review of documents* – We reviewed documentation of meetings held from April 24 to June 11, 2009 as well as various documents created for

communication to stakeholders in the health care system and the public. We found DOH and HPP conducted numerous meetings and sent regular communication updates to stakeholders during their early response to H1N1. We found DOH and HPP did a good job of documenting their response efforts. This should be helpful when the pandemic is over and the departments review what happened. Since the outbreak began, a number of issues were identified for further assessment, and work groups were established to examine these areas.

PANDEMIC PREPAREDNESS

125. Health Services Emergency Management provided us with a comprehensive lessons learned document which was developed in early June 2009 based on input from various health system stakeholders. The document is intended to identify areas which still require further work. Many of the areas for improvement confirm deficiencies identified during our audit fieldwork, including the following.

- The lack of adequate supplies stockpiles
- The need for improved, more comprehensive contact lists
- The need to review District Health Authority pandemic plans to ensure these are adequate
- The lack of a bed management plan to help identify available beds quickly

126. DOH and HPP have since begun planning, and establishing working groups, to deal with issues identified in the lessons learned document. Although this is an important step, the number of H1N1 cases in Nova Scotia and worldwide is increasing. There are a number of areas which still require work as of July 24, 2009. DOH and HPP management and staff will need to allocate their time between response to the ongoing pandemic and working to get better prepared if H1N1 becomes more serious. Many of the issues noted above could be exacerbated if the number of H1N1 cases increased significantly. These areas pose a considerable risk that the Nova Scotia health system may have difficulties responding effectively to the current pandemic if the situation worsens.

Recommendation 33
DOH and HPP should prioritize the issues identified in the early days of the H1N1 outbreak. These issues should be fully addressed immediately, with the highest priority issues being dealt with first, to enable Nova Scotia to effectively respond to a potential medical crisis.

List of Recommendations

Recommendations 9, 11, 12, 31 and 32 may be given a lower priority. With these exceptions, these recommendations should be considered high to medium priority and quick action taken to address them.

Recommendation 1
To ensure that government's pandemic response management is coordinated at a high level, a joint executive group should be established that oversees the entire response. Executive Council should decide which organization will assume this responsibility and leadership role. At present, the Emergency Management Office has the legislative authority to do so. In order to ensure appropriate medical expertise, this group should include the Chief Medical Officer of Health.

Recommendation 2
The Department of Health Promotion and Protection should take steps to quickly fill all the vacant senior positions, or develop a plan to deal with the work load if positions are not filled.

Recommendation 3
DOH and HPP should immediately review all District Health Authority pandemic plans to identify missing components and follow up to ensure all DHAs have complete plans as soon as possible.

Recommendation 4
Executive Council should require EMO to coordinate overall emergency planning, including planning for a pandemic emergency, between the province and non-government entities.

Recommendation 5
EMO should review non-government entity emergency plans to ensure they can adequately deal with a pandemic crisis.

Recommendation 6
EMO should require all government departments and agencies to immediately complete and submit their business continuity plans. EMO should review the plans to ensure they are adequate to deal with a severe pandemic.

Recommendation 7
DOH and HPP should follow up with DHAs to ensure adequate plans for essential services have been developed.

Recommendation 8
Pictou County Health Authority should finalize the identification of essential services.

Recommendation 9
In developing the next version of the Health System Pandemic Plan, DOH and HPP should conduct a formal pandemic risk assessment, including formally documenting how risks are addressed within the Health System Pandemic Plan.

Recommendation 10
DOH and HPP should identify key DHA pandemic planning issues and formally review all DHA pandemic plans to ensure those issues are addressed.

Recommendation 11
Formal approval of the Health System Pandemic Plan should be documented, including sign-off by subject matter experts, to ensure all parties understand their roles and responsibilities.

Recommendation 12
Draft and incomplete sections of the Health System Pandemic Plan should be completed. The revised Plan should be communicated to potential users and stakeholders. Critical incomplete areas should be identified and addressed immediately.

Recommendation 13
The Health System Pandemic Plan, including new sections as they are finalized, should be reviewed in concert with existing legislation to ensure all aspects of the Plan can be fully implemented and do not conflict with legislation. If necessary, legislation should be revised.

Recommendation 14
DOH and HPP should request immediate approval of funding required to purchase all identified supplies stockpile requirements.

Recommendation 15
Steps should be taken to rapidly acquire all medical supplies needed to enable an adequate response to a potential medical crisis.

Recommendation 16
The Minister of Health should require all District Health Authorities to provide requested supply information to DOH and HPP immediately.

Recommendation 17
DOH and HPP should ensure the consultant's report on strategic supply reserves for the health system is completed as quickly as possible following the receipt of remaining information from District Health Authorities.

Recommendation 18
DOH and HPP should communicate with District Health Authorities to ensure all DHAs are aware of the status of the provincial supplies stockpile. DOH and HPP should engage all DHAs in determining a province-wide approach to supply procurement during a pandemic public health emergency.

Recommendation 19
All aspects of the provincial surveillance system should be assessed and identified gaps addressed. The resulting surveillance system should be capable of monitoring key indicators, including those which are tracked during a pandemic.

Recommendation 20
The Province's capacity to conduct epidemiological investigations should be formally assessed, including an analysis of the impacts of various attack rates on Nova Scotia's ability to respond to a pandemic and a plan developed to address the identified gaps.

Recommendation 21
The provincial lab capacity should be formally assessed, including impacts of significant increases in sample testing and a plan developed to address the identified gaps.

Recommendation 22
The Good Neighbour Protocol should be signed immediately to ensure there is an agreed upon framework in place to deal with human resource issues during the pandemic.

Recommendation 23
DOH and HPP should inform District Health Authorities of the status of union issues in pandemic planning to prevent duplication of efforts.

Recommendation 24
DOH and HPP should take immediate steps to clarify legal liability for volunteers and determine how volunteers and workers from outside Nova Scotia will be covered for workers' compensation during a pandemic. This information should be communicated to District Health Authorities.

Recommendation 25
DOH and HPP should finalize plans for temporary licensing with professional groups. This information should be communicated to District Health Authorities.

Recommendation 26
DOH and HPP should develop and implement a system that allows bed tracking on a timely basis throughout the week and which includes consideration of staff availability for open beds.

Recommendation 27
DOH and HPP should ensure all District Health Authorities have adequate appropriate primary and secondary assessment locations and plans for their use.

Recommendation 28
DOH and HPP should review and update pandemic communication guidelines to reflect the most recent information available.

Recommendation 29
A consolidated contact list for all stakeholders who may need to be contacted during a pandemic should be developed and distributed to appropriate staff within DOH and HPP.

Recommendation 30
DOH and HPP should communicate their expectations for assistance to all organizations and groups identified as responsible for distributing information during a pandemic.

Recommendation 31
Health Services Emergency Management should develop a process to ensure each issue identified as a result of an outbreak or emergency is recorded, along with an explanation of how the lessons learned have been reflected in the Health System Pandemic Plan.

Recommendation 32
Previous outbreaks should be reviewed to ensure that lessons learned are incorporated into the Health System Pandemic Plan.

Recommendation 33

DOH and HPP should prioritize the issues identified in the early days of the H1N1 outbreak. These issues should be fully addressed immediately, with the highest priority issues being dealt with first, to enable Nova Scotia to effectively respond to a potential medical crisis.

Response: Department of Health and Department of Health Promotion and Protection

The Departments of Health and Health Promotion and Protection are in overall agreement with the recommendations of the Auditor General Report. In many instances, the report validates what both departments had already identified as areas for improvement. The two departments were in the midst of working together to revise and update the existing Health System Pandemic Plan when the current pandemic was declared.

We appreciate the Auditor Generals comments, acknowledging the considerable time and effort staff from both departments and from within the districts have invested in pandemic planning to date. Nova Scotia is very fortunate to have a strong team working together at both departments to ensure a solid pandemic plan for Nova Scotians. We are also very fortunate to have a team of talented and skilled public health and health care professionals in our districts. They work hard every day to protect the health and safety of Nova Scotians, and to respond to their health care needs.

It is important to remember that Nova Scotia is now in a pandemic. Nova Scotia was the first province in Canada to have lab confirmed cases of HINI (Human Swine Influenza). As a result, we were the first province to implement our pandemic plan. We recognize the work that needs to be done to strengthen the existing health system pandemic plan, still our ability to respond as quickly as we did to the first lab-confirmed cases in Canada is a testament to the work done so far, and the strong working relationships we have with our District Health Authorities and our provincial and federal counterparts. As of July 24, the health care and public health system have responded to 456 lab-confirmed cases, 10 hospitalizations and one death since the outbreak started in April.

At this stage, our priority is to manage the response to the pandemic while we further refine the pandemic plan. Similarly to other provinces and territories, Nova Scotia's health system pandemic plan was based on the best information we had about a potential pandemic. Now that we are in the midst of a pandemic, we know more about the strain of the virus, who is at greater risk and the specific care needs as well as needed supplies. We are now in a better position to plan, prepare and respond.

Senior staff from key government departments meet every two weeks to share updates on detailed work plans and address joint issues and challenges resulting from the pandemic. It is a rigorous process supported by tight timelines. Deputy Ministers and Ministers are updated regularly.

We agree with the recommendation to address strategic reserves. The Departments of Health and Health Promotion and Protection have received

RESPONSE: DEPARTMENT OF HEALTH AND DEPARTMENT OF HEALTH PROMOTION AND PROTECTION

RESPONSE: DEPARTMENT OF HEALTH AND DEPARTMENT OF HEALTH PROMOTION AND PROTECTION

approval to purchase the required amount of supplies for this pandemic. A report is expected shortly confirming the type and amount of supplies and equipment needed for the entire health system.

We will develop a process to review the DHA and IWK pandemic plans in a timely manner. The departments of Health and Health Promotion and Protection have been working very closely with the DHAs and the IWK during the pandemic. We have every confidence reviewing their plans together will strengthen the province's pandemic preparedness overall.

A single entity to lead government's overall response to a pandemic, beyond the health system is supported.

In summary, the Departments of Health and Health Promotion and Protection welcome the audit recommendations, as they will help to strengthen an already effective pandemic plan and planning process.

Response: Emergency Management Office

The role of the Emergency Management Office (EMO) is to ensure the safety and security of Nova Scotians, their property and environment by providing for a prompt and coordinated response to an emergency. This small team of highly skilled personnel takes its responsibility seriously. Our organization is committed to continual improvement and welcomes the opportunity to receive and comment on the Auditor General's report.

This report highlights the importance of proper planning and collaboration with key partners to ensure the best possible outcomes when faced with an emergency situation.

The Nova Scotia Government takes an "all-hazards approach" to emergency management. This allows us to be better prepared for events ranging from significant weather, a large-scale industrial accident, or a global public health issue like a pandemic. This approach is core to maintaining public safety and to ensuring that critically important government programs and services are available to Nova Scotians.

Since the Auditor General completed its audit, EMO Nova Scotia has lead two initiatives that directly relate to recommendations in this report:

- EMO has worked with senior government leaders to establish an Incident Management Team that will provide corporate executive leadership on the H1N1 Flu Virus and other emergencies.

- EMO has requested data from all government departments about their critical services, programs and functions. Once collated by EMO's business continuity management team, this information will help inform government decisions during a pandemic event.

Emergency management professionals acknowledge that no emergency plan is perfect. Only by testing and incorporating learnings from real events, exercised emergency scenarios and reviewing global best practices can an organization (or group of organizations) truly be prepared for the next emergency event.

RESPONSE:
CAPITAL HEALTH

Response: Capital Health

We acknowledge and accept the recommendations made by the Office of the Auditor General of Nova Scotia identifying five areas that could improve Capital Health's pandemic preparedness.

It is important to note that these observations were made during the visit to Capital Health by the audit team in February 2009. Subsequent to this time, Nova Scotia has been dealing with an outbreak of H1N1 virus and Capital Health has had the requirement to enact the pandemic plan. We have been improving the plan as we have identified opportunities through this outbreak. The five recommendations by the Auditor General are consistent with these opportunities.

Recommendation #7 identifies the need for the Departments of Health and Health Protection and Promotion to follow-up with the District Health Authorities regarding their essential services plans. We are revisiting these departmental plans within Capital Health with a target date of late August for completion.

Recommendation #23 identifies the need for DOH and HPP to inform District Health Authorities of the status of union issues in pandemic planning to prevent duplication of effort. While the Department of Health is pursuing the signing of the Good Neighbour Protocol with the seven provincial healthcare unions on behalf of the District Health Authorities and IWK, Capital Health will ensure that NSGEU and NSNU are aware of the updated departmental essential services plan in early September. The CDHA acknowledges it role in facilitating and cooperating with the various stakeholders in this aspect of our Pandemic preparedness.

Recommendation #24 deals with the need for DOH and HPP to clarify legal liability for volunteers and determine how volunteers and workers from outside the province will be covered for worker's compensation during a pandemic. At Capital Health, volunteers are covered by the organization's liability insurance coverage and we have clarified with WCB how we can activate coverage for out of province persons who work as our employees. We are aware of the legal liability coverage for these groups while they are working at Capital Health.

Recommendation #25 discusses the need to finalize plans for temporary licensing with professional groups and communicate this to District Health Authorities. We continue to work with the professional colleges and registrars to expedite licensing of the professionals needed to help manage in the case of a pandemic.

Recommendation #27 states that DOH and HPP should ensure that all District Health Authorities have adequate appropriate primary and secondary assessment locations and plans for their use. During the initial outbreak in Windsor, Capital Health activated a primary assessment center in accordance with our Pandemic Plan. A similar plan to establish and activate centers in Halifax, Dartmouth and

Sackville was also in place. We continue to work with the Emergency Management office of Halifax Regional Municipality and the Municipality of West Hants, Town of Windsor and Hantsport and others to adjust our primary center location in accordance with selection criteria.

This review has been an excellent opportunity for Capital Health to receive feedback on the preparedness of the pandemic plan through the Auditor General's review. We are confident that the implementation of these recommendations will further our readiness and ensure we can continue to respond to the healthcare needs of our community.

RESPONSE: CAPITAL HEALTH

RESPONSE:
PICTOU COUNTY
HEALTH AUTHORITY

Response: Pictou County Health Authority

Recommendation #8
PCHA should finalize the identification of essential services.

PCHA Response to Recommendation #8

UPDATE: PCHA has developed a document defining the essential services that will be provided during a Pandemic and it has been included in all departments Business Continuity Plans. PCHA still feels there should be direction from the Province with regards to medium and low priority services that may be discontinued during a Pandemic. We feel continuity is needed across the province for the low priority services. Thus insuring Public confidence that we are working together to provide consistent essential healthcare services.

Paragraph 61

PCHA - PCHA essential services supply needs were also assessed as part of the 2006 report. PCHA management informed us the authority is reliant on the Nova Scotia stockpile for supplies during a pandemic. At the time our fieldwork, PCHA had no contingency plans to address shortfalls in supplies should they encounter difficulties obtaining supplies from the stockpile. Management informed us they have begun to consider this issue since the H1N1 outbreak.

PCHA Response to Paragraph 61

UPDATE: PCHA essential supplies needs have been addressed through local and provincial initiatives with contingency plans are in place.

Paragraph 94

PCHA- Only one primary and secondary assessment location has been selected and PCHA management acknowledges this location will not be sufficient to respond to a significant pandemic. Additionally, PCHA management has not officially approved this site. PCHA is in the process of completing their business continuity plan which will include the final approval of both resource requirements and the primary and secondary assessment sites.

PCHA Response to Paragraph 94

UPDATE: PCHA has approved their primary and secondary assessment locations.