

Chapter

2

Health Canada

National Health Surveillance

The audit work reported in this chapter was conducted in accordance with the legislative mandate, policies, and practices of the Office of the Auditor General of Canada. These policies and practices embrace the standards recommended by the Canadian Institute of Chartered Accountants.

Table of Contents

Key Message	1
Introduction	3
Health surveillance: Essential for public health activities	3
Concerns we raised in 1999	4
Focus of the follow-up	4
Observations and Recommendations	5
Improving collaboration on national health surveillance	5
Progress in developing a national framework	5
An established approach to national health surveillance is still many years away	6
Lack of agreement on roles and responsibilities	7
Priority setting and business planning	9
Weaknesses in existing disease surveillance systems	9
Communicable disease surveillance: Improvement has been inconsistent	10
Steps to improve communicable disease information: The Canadian Integrated Public Health Surveillance Project	12
Chronic disease surveillance: Limited progress	14
Gaps in national health surveillance activities	15
Surveillance issues that need to be resolved	20
Lack of financial capacity to establish chronic disease surveillance systems	21
Lack of financial capacity to maintain chronic disease surveillance systems	21
Erosion of financial capacity	21
Priorities need to be established and supported with funding	23
Keeping Canadians safe: Food-borne disease and blood-borne pathogens	24
National surveillance of enteric diseases	24
National surveillance of blood-borne pathogens	24
Measuring and reporting performance	25
Standing Committee on Public Accounts	26
Conclusion	26
About the Follow-Up	28



Health Canada

National Health Surveillance

Assistant Auditor General: Maria Barrados
Principal: Patricia MacDonald

Key Message

2.1 Health Canada has made limited progress toward resolving some of the weaknesses identified in our 1999 audit. However, national surveillance is still weak; many systems still lack timely, accurate, and complete disease information; and gaps in surveillance continue. These weaknesses, taken together, compromise Health Canada’s ability to anticipate, prevent, identify, respond to, monitor, and control diseases and injuries. Further, they compromise its ability to design, deliver, and evaluate public health activities.

ORIGINAL ISSUES	PROGRESS	RATING*
<p>2.2 Health Canada should provide strong leadership and address factors that are compromising its ability to engage in national health surveillance:</p> <ul style="list-style-type: none"> Lack of federal public health legislation or a national framework to link the separate public health activities in the provinces and territories. No agreement among the various partners on clearly defined roles and responsibilities in the areas of data collection and dissemination and responding to public health threats. 	<p>Health Canada is taking a greater leadership role in national health surveillance:</p> <ul style="list-style-type: none"> It has made progress in establishing a national framework for health surveillance. This framework allows for greater collaboration among the partners responsible for health surveillance. We are concerned that there are still only a few agreements on data sharing between Health Canada and the provinces and territories, and no agreement on common standards and nationally reportable diseases. 	<p>LIMITED PROGRESS</p>
<p>2.3 Health Canada, in collaboration with the provinces and territories, should improve the timeliness, accuracy, and completeness of disease information.</p>	<p>Health Canada’s progress in this area has been inconsistent:</p> <ul style="list-style-type: none"> Many of its surveillance systems still lack timely, accurate, and complete disease information. Exceptions include surveillance systems for enteric diseases, influenza, and AIDS. 	<p>LIMITED PROGRESS</p>
	<ul style="list-style-type: none"> Progress has been made on The Canadian Integrated Public Health Surveillance Project, which is intended to address these concerns. However, it still faces some challenges and will not likely be fully operational for some time. 	<p>SATISFACTORY PROGRESS</p>
<p>2.4 Health Canada, in collaboration with other organizations, should take steps to fill gaps in surveillance of chronic disease, such as diabetes and cardiovascular disease.</p>	<p>Health Canada has made significant progress in developing a national diabetes surveillance system. However, the gaps in other chronic disease surveillance continue.</p>	<p>LIMITED PROGRESS</p>

*Possible ratings are completed, satisfactory progress, limited progress, no progress, rejected, unknown. (See About the Follow-Up for an explanation of the ratings.)

NEW ISSUES

2.5 For the most part, diabetes and breast cancer are the only chronic diseases with a national surveillance system. Despite the recognized importance of surveillance for chronic diseases, limited resources have been allocated to this area and health surveillance information is lacking for cardiovascular disease, musculoskeletal disease, cancer (except breast cancer), chronic respiratory disease, mental illness, and injuries. Further, surveillance is also lacking for risk determinants and for impacts of interventions, screening, and treatment on health outcomes.

2.6 Health Canada should identify its health surveillance priorities and ensure that adequate and stable funding is available to develop and maintain the surveillance systems that it identifies as priorities.

Health Canada has responded. Health Canada has agreed to continue working on the recommendations and taking corrective actions as described in its responses, included in the chapter.

Introduction

Health surveillance: Essential for public health activities

2.7 Health surveillance is a core function of public health activities. It begins with the ongoing collection of information on disease, which is then integrated, analyzed, and interpreted. The data these activities produce are disseminated in a variety of formats to those who need the information so they can take appropriate action.

2.8 Information informs decision makers and is crucial to their making the right decisions at the right times. Information obtained through health surveillance is important for understanding the health status of a population. Authorities can use health surveillance information to identify a disease outbreak and respond to it and to prevent disease by educating the public about factors that may put health at risk (that is, risk determinants, such as lack of exercise). Further, the information can be used to monitor the incidence of disease and to help control disease by determining the most effective treatment. Health surveillance information is also needed to develop government health policies and programs, to measure the performance of government activities and evaluate their effectiveness, and finally, to assess the quality and accessibility of health care.

2.9 Provincial, territorial, and municipal governments as well as public health professionals and laboratories are closely involved in health surveillance. As primary providers of public health services, they supply Health Canada with disease information for national health surveillance. Health Canada's role is to provide leadership and support for health surveillance across the country. It is responsible for gaining the collaboration of the various partners in health surveillance, integrating the disease information it receives from them, developing the surveillance systems to analyze and interpret the information, and then disseminating the results. Other partners in health surveillance include Statistics Canada, the Canadian Institute for Health Information, the Canadian Food Inspection Agency, and several organizations outside government.

2.10 Collaboration is critical to national health surveillance, given the many partners it involves. Working together allows for timely information sharing, co-ordinated responses, and effective action.

2.11 The risks that poor health surveillance creates are very real: preventable illnesses may not be prevented, approaches to treating disease may not be as effective as they could be, and government funding may be directed at the wrong health issues. For example, in 1999 we reported on a salmonella outbreak during which the exchange of information was not as timely and collaboration not as effective as they could have been, while the illness spread.

2.12 Health Canada's Population and Public Health Branch is responsible for national health surveillance. The Branch was created in a reorganization of Health Canada in 2000. In addition to health surveillance and disease

control, the Branch is responsible for policies, programs, and systems for disease and injury prevention, health promotion, community action, and the Department's emergency preparedness and response capacity. Its responsibilities include most elements of the former Laboratory Centre for Disease Control and the former Health Promotion and Programs Branch, as well as some responsibilities of the former Health Protection Branch. Our Office reported on the Branch's population health activities (disease and injury prevention, health promotion, and community action) in December 2001.

2.13 The Branch is divided into several centres. Those mainly responsible for surveillance include the Centre for Surveillance Coordination, the Centre for Infectious Disease Prevention and Control, the Centre for Chronic Disease Prevention and Control, the Centre for Healthy Human Development, the Centre for Emergency Preparedness and Response, the National Microbiology Laboratory, and the Laboratory for Food-borne Zoonoses (diseases that animals can transmit to humans through food).

2.14 In 2001–02, the Population and Public Health Branch had a budget of \$365 million. That included \$66 million for salaries and \$13 million for benefits of 1,146 full-time staff equivalents, and \$78 million for operating expenses. It also included \$208 million for grants and contributions, most of it destined for population health activities rather than health surveillance activities.

Concerns we raised in 1999

2.15 In 1999 we examined the way Health Canada carried out national health surveillance activities and how those activities supported the other components of public health—health assessment, health promotion, disease and injury prevention, and health protection.

2.16 Our report raised a number of concerns about the Department's national health surveillance activities. We concluded that our concerns were significant and called for corrective action in several areas.

2.17 Specifically, we were concerned that there was no mechanism for assigning roles and responsibilities between Health Canada and its provincial and territorial partners. We also identified weaknesses in both the disease information forwarded to Health Canada and the Department's dissemination of surveillance information in its various forms. We noted gaps in surveillance activities in areas where surveillance systems were inadequate. Finally, we were concerned about the way Health Canada had evaluated, measured, and reported the performance of its national health surveillance activities.

Focus of the follow-up

2.18 The objective of this follow-up was to determine the progress made in addressing the observations and recommendations contained in our 1999 Report—Chapter 14, National Health Surveillance: Diseases and Injuries; and Chapter 15, Management of a Food-borne Disease Outbreak. We also

followed up on recommendations made by the Standing Committee on Public Accounts. We looked at the Department's actions and the commitments it had made in response to our audit; and we reviewed the progress it had reported to the Public Accounts Committee. In the last three years, Health Canada has undertaken a number of new initiatives related to national health surveillance, which we also reviewed. Our report presents the results of the areas that were re-audited. Further details about the follow-up's objective, scope, and criteria can be found in About the Follow-Up at the end of the chapter.

Observations and Recommendations

Improving collaboration on national health surveillance

2.19 In 1999 we noted that a survey of public health professionals at the provincial, territorial, and regional levels revealed that participants wanted Health Canada to take a more proactive role in health surveillance. They agreed that strong leadership was needed from Health Canada.

2.20 At that time, we also noted two factors that were compromising Health Canada's ability to conduct national health surveillance:

- There was neither federal public health legislation nor a national framework to link the separate public health activities of the provinces and territories.
- There was no agreement among the various partners on clearly defined roles and responsibilities for collecting and disseminating data and for responding to public health threats.

Progress in developing a national framework

2.21 Each province and territory has its own public health legislation and public health priorities, resulting in 13 separate public health systems. Making progress in this complex environment can be a challenge. Therefore, strong national leadership is needed.

2.22 In 1996, Health Canada recognized that because each province and territory has its own public health legislation, a national framework would be needed if national health surveillance were to succeed. In its response to our 1999 audit report, Health Canada noted that it was reviewing its legislation with a view to updating it so it would better support national health surveillance.

2.23 Our follow-up found that there is still no public health legislation and that the legislative review is still under way. However, Health Canada has made progress in establishing a framework for national health surveillance to ensure collaboration among the partners. It has established a number of federal/provincial/territorial committees to advise and act on issues of national health surveillance (Exhibit 2.1). These committees are a useful way to ensure that all the partners participate. The committees have set goals for themselves and are working toward them.

Exhibit 2.1 Federal/provincial/territorial committees on national health surveillance

Health Surveillance Working Group—provides a pan-Canadian forum that links the federal, provincial, and territorial governments to build a national health surveillance infostructure system. The Working Group reports to the Advisory Committee on Health Infostructure and the Conference of Deputy Ministers of Health. It has three sub-groups:

- **Communicable Disease Surveillance Sub-Group**—to provide leadership and develop a strategy for the co-ordination and integration of communicable disease surveillance systems in Canada.
- **Chronic Non-Communicable Disease Infostructure Sub-Group**—to provide leadership and develop a strategy for the co-ordination and integration of chronic disease surveillance systems in Canada.
- **Injury Surveillance Sub-Group**—to provide advice and recommendations to Health Canada, federal/provincial/territorial stakeholder groups, and other organizations that maintain injury information systems and to support the effort to build and maintain a national injury surveillance infostructure for Canada.

Canadian Public Health Laboratory Forum—to provide leadership in the public health laboratory functions and provide advice on issues related to delivery of services by public health laboratories.

National Health Surveillance Infostructure Project—to develop infostructure systems to address issues and gaps related to national health surveillance.

Canadian Integrated Public Health Surveillance Project Collaborative—to lead in defining, developing, and promoting the Canadian Integrated Public Health Surveillance Project.

2.24 As part of its reorganization in 2000, Health Canada created the Centre for Surveillance Coordination. Its function is to provide leadership on co-ordination issues related to national health surveillance and to support the federal/provincial/territorial committees by carrying out specific tasks for them.

An established approach to national health surveillance is still many years away

2.25 To advance a national framework, the Health Surveillance Working Group has agreed on an approach for improving national health surveillance. For example, it has agreed that developing a national health surveillance “infostructure” system should be a goal of the partners. Subgroups are working to develop specific approaches to improving surveillance systems for communicable disease, chronic disease, and injury. They are identifying gaps in surveillance systems, such as the lack of standards for data, and are developing plans to address these gaps.

2.26 These are comprehensive approaches that the committees believe will address many of the weaknesses in national health surveillance. We are concerned, however, that Health Canada has set no specific timelines for implementing them and so we do not know when the Department expects to have the approaches in place. We were informed that given their comprehensiveness, it will likely take several to many years.

2.27 Also of concern is that these approaches are being developed largely independent of current surveillance activities. Rather than incremental improvements to current surveillance activities, they involve comprehensive change. In the meantime, many of the same weaknesses and gaps continue in national health surveillance as we observed in 1999.

Lack of agreement on roles and responsibilities

2.28 Clearly defined and agreed-on roles and responsibilities are a key element of successful national health surveillance. They are particularly important in the areas of collecting and disseminating data and responding to public health threats.

2.29 Lack of agreement on data sharing between Health Canada and the provinces and territories. Disease information is the property of the provinces and territories. To ensure that this information is shared appropriately and that the *Privacy Act* is not violated, the details of data sharing need to be outlined clearly in written agreements. Agreements on data collection need to cover such details as how the data will be used, who owns the data, what standards will be followed, and how privacy and confidentiality will be protected. Agreements on data dissemination need to cover such details as what information can be published and who can receive it. Finally, each agreement should outline the consequences of not respecting it.

2.30 At present, only a few agreements on data sharing exist (for example, on HIV/AIDS), and no generic agreement has been developed to ensure that all important details are covered. Since much of Health Canada's disease information comes from other partners, any agreements would need to clearly outline the responsibilities of all partners in the sharing of that information.

2.31 Health Canada slow to develop common standards for data to be shared. We recommended in 1999 that Health Canada establish common standards and protocols for classifying, collecting, and reporting data on communicable diseases.

2.32 Common or uniform standards and protocols are critical to ensuring that disease information is consistent. Consistency is important because national health surveillance involves integrating information so it can be analyzed on a national basis. Our follow-up found only limited progress on the development of common standards. The Communicable Disease Surveillance Sub-Group has begun developing standards for nationally reportable diseases, immunization information, and vaccine-associated adverse events (bad reactions to a vaccine). Progress has been made on the development of standards for data elements and the core data set (the set of data elements that are common to all diseases—for example, gender, and date of onset of illness). However, only very limited progress has been made on elaborating disease-specific data sets (for example, defining the symptoms of a specific disease) and laboratory standards (such as which lab test to use).

2.33 Once standards have been developed, agreement on them must be reached. We found that there is no national agreement on a mechanism for

maintaining or approving standards on behalf of all the partners. Without this mechanism, Health Canada has no way of ensuring that common standards are respected.

2.34 Still no formal agreement on which diseases should be reported nationally. In 1999 we noted that there was no formal agreement on which communicable diseases would be reportable (notifiable) to Health Canada (those of particular concern, such as tuberculosis and rabies). Nor was there agreement on which of several emerging diseases should be added to the list.

2.35 Our follow-up found that there is still no formal agreement requiring provinces and territories to accept or respect the list of nationally reportable diseases. However, informal agreement exists on a list of reportable diseases. The list was updated in 2000, and work is under way to update it again to include several bioterrorist agents, such as smallpox and anthrax.

2.36 Progress made in agreeing on a co-ordinated response to public health threats. Our 1999 report observed that Health Canada had not defined clearly who was responsible for doing what in the event of an emergency public health threat—for example, controlling diseases at ports of entry, managing outbreaks of food-borne disease, or dealing with an influenza pandemic.

2.37 We found that a number of important improvements in this area have been made over the last three years or are nearing completion. At this writing, a memorandum of understanding (MOU) on controlling diseases at ports of entry was soon to be signed by Health Canada and the Canada Customs and Revenue Agency. This MOU would provide for training front-line customs officers to handle situations that potentially involve the importation of illness. Health Canada and the Canadian Food Inspection Agency have signed a Food-borne Illness Outbreak Response Protocol and an MOU; at this writing, the provincial and territorial governments were being consulted in the hope that they would sign the agreements, too. To prepare for the possibility of an influenza pandemic, Health Canada has contracted privately with a company to ensure that there is an infrastructure to provide enough vaccine to make Canada self-sufficient within the next few years. The Department is negotiating a new MOU with provincial and territorial governments that outlines clearly their roles and responsibilities in the event of an influenza pandemic. The MOU will replace an outdated working agreement.

2.38 In summary, Health Canada has made progress on developing a framework for national health surveillance. However, it has made only limited progress on resolving weaknesses and gaps in national health surveillance activities. For the most part, there is still no agreement on important matters such as data sharing, common standards, and nationally reportable diseases. Strong leadership is needed to ensure that all partners work together to advance these initiatives without delay.

2.39 Recommendation. Health Canada should work with the provinces and territories to set specific timelines for implementing a national approach to health surveillance that will ensure that weaknesses and gaps in health surveillance are remedied.

Health Canada's response. A national approach to health surveillance is set out in the Canadian Health Infrastructure Health Surveillance Tactical Plan. Health Canada and the provinces and territories are supportive of the directions set out in this Plan. At the first opportunity, Health Canada will discuss with the provinces and territories the setting of time lines under the Plan.

2.40 Recommendation. Health Canada should work with provinces and territories to obtain agreement on the sharing of disease information, including agreement on data collection, data dissemination, data standards, and the list of diseases that should be reported nationally. Further, it should work with the provinces and territories to create a mechanism for maintaining and accepting data standards.

Health Canada's response. Health Canada will continue its work with the provinces and territories to obtain further agreements on the sharing of disease information, including agreement on data collection, data dissemination, data standards, and the list of diseases that should be reported nationally. Health Canada will also continue its work with the provinces and territories to create a mechanism for maintaining and accepting data standards.

Priority setting and business planning

2.41 In 1999–2000, Health Canada prepared a draft business plan for its health surveillance activities (at that time delivered by the Laboratory Centre for Disease Control). The development of this plan was a comprehensive process and included consultation with leading medical and technical public health professionals. Out of this process, Health Canada set its priorities. Although this plan was never finalized, it was presented to the Deputy Minister of Health Canada, the federal/provincial/territorial Public Health Working Group, and the Prime Minister's Office.

2.42 Shortly thereafter, in 2000, Health Canada reorganized. The Population and Public Health Branch (which then became responsible for health surveillance) began a new priority-setting process. Our Office reported on this process in our December 2001 Report, Chapter 9. In that report, we noted that first steps had been taken to set priorities, including a program review exercise. During our follow-up, we determined that Health Canada had never completed that exercise.

2.43 This means that the Department has still not formally established priorities among its health surveillance activities.

Weaknesses in existing disease surveillance systems

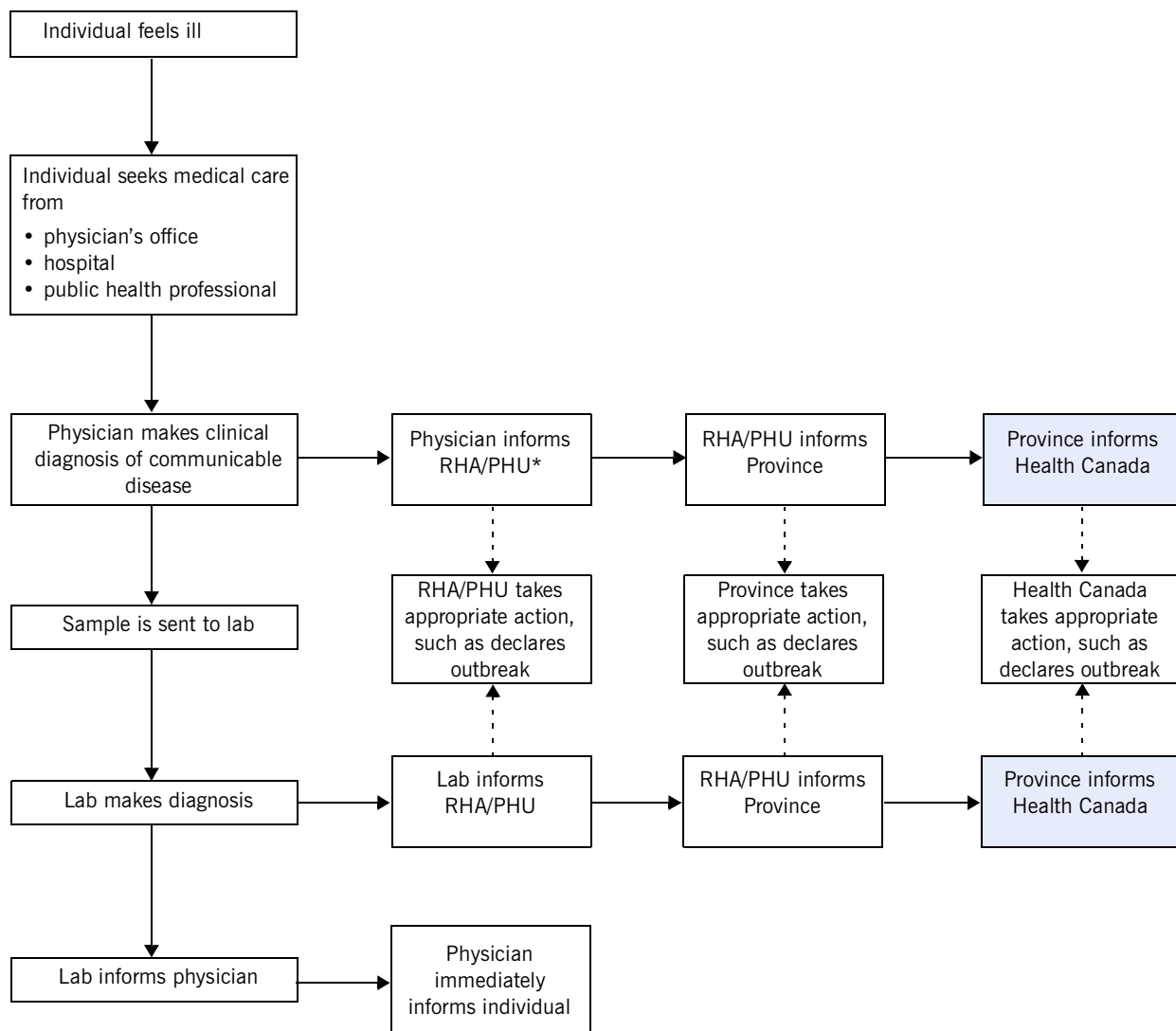
2.44 Disease surveillance systems are tools that enable Health Canada to track and forecast diseases and injuries, risk determinants, and health outcomes. Such systems entail the ongoing collection of disease information; the integration, analysis, and interpretation of that information to create

surveillance products; and the dissemination of those products to governments and public health professionals. Surveillance products can range from data such as the national incidence of a disease in a given week to a comprehensive annual report that includes incidence, mortality, risk determinants, and health care costs for a particular disease.

Communicable disease surveillance: Improvement has been inconsistent

2.45 Information on communicable (infectious) diseases comes from a number of sources, including physicians, hospitals, public health workers in regional health authorities (RHA) or public health units (PHU), and public and private laboratories. Exhibit 2.2 illustrates how information should flow to Health Canada.

Exhibit 2.2 How information on communicable disease should reach Health Canada



*RHA—Regional health authorities
PHU—Public health units

2.46 Because of the number of sources of disease information (which are all outside Health Canada) and the number of transfers of that information before it reaches Health Canada, it is a challenge for the Department to determine that the information is timely, accurate, and complete. Any breakdown in the flow of information affects the information Health Canada receives, which in turn affects its ability to take action.

2.47 Health Canada also needs to ensure that the surveillance products it disseminates are timely and contain accurate and complete information if they are to be of value. Any deficiencies in the information it receives will severely impair the effectiveness of its surveillance products.

2.48 In 1999 we reviewed a number of surveillance systems for specific communicable diseases. We raised several concerns about the timeliness and quality of communicable disease information collected by Health Canada and disseminated as surveillance products. The concerns we had about four of these systems—the Notifiable Diseases Reporting System and the AIDS, influenza, and enteric diseases systems—are summarized in Exhibit 2.3.

2.49 Since 1999, the AIDS, influenza, and enteric diseases systems have received additional funding, directed by the Treasury Board. Our 2002 follow-up of these systems found that Health Canada has improved them. The Notifiable Diseases Reporting System did not receive additional funding. We found that improvements to this system were limited. In all four systems we found more timely dissemination of surveillance products, although the

Exhibit 2.3 Progress in surveillance of communicable diseases

Surveillance system	Our observations in 1999	Follow-up observations in 2002
Notifiable Diseases Reporting System	<ul style="list-style-type: none"> • Underreporting by physicians • Delays in receiving data • Data received from provinces with different frequency, in different formats 	<ul style="list-style-type: none"> • Limited improvement since 1999 • Monthly reporting about four months behind (some provinces missing); quarterly reporting of preliminary data; annual report for 1999 the most recent
AIDS	<ul style="list-style-type: none"> • Underreporting by physicians • Delays in receiving data • Data incomplete • Data not sent by all provinces • Timely dissemination 	<ul style="list-style-type: none"> • Improvement: field surveillance officers in provinces and some formal data-sharing agreements • Annual report for 2001 the most recent
Influenza	<ul style="list-style-type: none"> • Sentinel physician reporting incomplete • Dissemination problematic 	<ul style="list-style-type: none"> • Improvement in four reporting systems—sentinel physician; laboratory; provincial activity; and international • Weekly reporting, available the following week
Enteric (gastro-intestinal) diseases	<ul style="list-style-type: none"> • Delays in receiving data 	<ul style="list-style-type: none"> • Improvement in three reporting systems—laboratory; outbreak; genetic fingerprint • Weekly laboratory reporting, available the following week; real-time reporting available for outbreak and genetic fingerprint

quality of the products is still limited by the quality of the disease information on which they are based. The progress we found in these four systems is also summarized in Exhibit 2.3.

2.50 Exhibit 2.4 describes two other surveillance systems we reviewed—the disease-specific surveillance systems for the incidence and outbreak of meningococcal infection and for the incidence of vaccine-associated adverse events. The exhibit also discusses our concerns about the timeliness and quality of the disease information collected.

2.51 Health Canada's challenges in collecting communicable disease information continue. They include

- **Timeliness.** Data sources submit disease information according to their own schedules—for example, immediately, daily, weekly, or monthly.
- **Accuracy.** Data sources submit disease information in their own ways—for example, some give the date of onset as the date of diagnosis and others give the date of first symptom.
- **Completeness.** Data sources may submit no information or only partial information.

Steps to improve communicable disease information: The Canadian Integrated Public Health Surveillance Project

2.52 Health Canada recognizes the weaknesses in the disease information it collects, and it has developed the Canadian Integrated Public Health Surveillance Project to address some of them. This project comprises a group of integrated computer and database applications that will allow public health professionals in the provinces to collect and forward information on communicable diseases to Health Canada. By standardizing reporting, it will make disease information more

- timely, with case-by-case electronic and real-time data;
- accurate, with common modules and standards; and
- complete, with the potential to be used at all public health offices and laboratories.

2.53 The project is managed by a collaborative group of federal and provincial representatives. It is really two information management systems. The first, the Public Health Information System, manages epidemiological/clinical data. The second, the Laboratory Data Management System, manages laboratory data. Health Canada has made satisfactory progress on this project. The Public Health Information System is operational in British Columbia and is soon to be piloted in several regional health authorities or public health units in seven provinces and territories. The Laboratory Data Management System is being used in two federal laboratories.

2.54 This project has the potential to improve the quality of surveillance information. Our concerns remain, however, because full implementation is still some time away, the disease information in current systems is still inadequate, and limited effort has been made to find an interim solution. We have identified several matters that need to be resolved before these systems

can succeed. First, compatibility of provincial systems with the national system must be assured. Second, data standards have yet to be agreed on. Third, obtaining agreement on data sharing, data ownership, and privacy protection remains a challenge. Finally, the project will not fully address concerns about the completeness of the data. The impact of the two systems on the timeliness and quality of communicable disease information may not be evident for some time.

Exhibit 2.4 Meningococcal disease and vaccine-associated adverse events

Meningococcal disease is serious and sometimes fatal. About one in ten persons who develop the disease may die and one in ten who recover will suffer some long-term effects, such as deafness. The number of cases of meningococcal disease goes up and down in regular cycles, with local and regional outbreaks occurring about once every 10 to 15 years. Although the disease can occur at any age, the highest risk is among children under a year old, with the next-highest risk among teenagers aged 15 to 19 years.

There are effective antibiotics for the treatment of meningococcal disease. Vaccines against several meningococci types are available and may be used in an outbreak situation to provide protection.

Meningococcal disease is a reportable disease and is therefore reported through the Notifiable Disease Reporting System. Health Canada also has an enhanced (disease-specific) surveillance system for meningococcal disease. Because the disease is preventable with a vaccine, any adverse events (bad reactions) following vaccination should be reported through the surveillance system for vaccine-associated adverse events.

The enhanced system is intended to receive case-by-case disease information (confirmed cases, with case information linked to lab data) and outbreak information electronically from the provinces on a real-time basis. However, reporting by the provinces is not always timely and complete. Standards for the required information have not been developed. Case information for meningococcal disease is sometimes submitted independent of the lab data. Matching at the federal level can be difficult, and unmatched data have less value. During an outbreak, the quality of data generally improves as provinces focus more on meningococcal disease. However, during an outbreak the data often arrive through informal channels, such as emergency phone calls or e-mails, rather than the formal surveillance system. As a result, the communication of timely, accurate, and complete information on meningococcal disease is a concern. The most recent report on meningococcal disease was published in 2000 and relied on data from 1997 and 1998.

One means of dealing with a meningococcal outbreak is to vaccinate vulnerable population groups. With every vaccination there is a risk of an adverse event. Health Canada has two surveillance systems that provide some information on vaccine-associated adverse events. The systems are of limited value in collecting timely, accurate, and complete information on vaccine-associated adverse events from meningococcal vaccination. The first is a network of 12 pediatric hospitals that provide information on patients who may be suffering from a serious reaction to the vaccine. The system's value is limited because it would not capture an adverse event unless the individual went to a pediatric hospital, and people in one of the most vulnerable age groups—15 to 19—are not likely to be patients in a pediatric hospital. The second system collects information from public health professionals on a standard form; it is a voluntary system. Health Canada recognizes the limitations: a voluntary system is unlikely to provide complete information. However, it believes that the more serious the adverse event, the more likely it is to be reported. The last annual report on adverse events was published in 1997.

2.55 In summary, Health Canada has made progress in enhancing the surveillance systems for which it received directed funding from the Treasury Board. It has made only limited progress on the others. The Canadian Integrated Public Health Surveillance Project has the potential to address some weaknesses, but it still faces some challenges. In the meantime, current disease information remains inadequate.

2.56 Recommendation. Health Canada should enhance its current surveillance of communicable diseases while it continues to advance the Canadian Integrated Public Health Surveillance Project.

Health Canada's response. Health Canada will continue to enhance current surveillance of communicable diseases, with particular emphasis on specific diseases such as HIV, enteric diseases, sexually transmitted infections, blood-borne pathogens, and vaccine-preventable diseases. The Department will continue to advance the Canadian Integrated Public Health Surveillance Project.

Chronic disease surveillance: Limited progress

2.57 Chronic disease information is collected from a number of sources, including disease registries, such as those for cancer; administrative data such as hospital records and provincial billing records for health services; morbidity and mortality data maintained by Statistics Canada; and health surveys such as the National Population Health Survey. This information is not sent automatically to Health Canada, although it is available to the Department for its surveillance activities.

2.58 Once the information is collected, Health Canada has a number of surveillance systems that integrate, analyze, and interpret disease information and create and disseminate surveillance products based on that information.

2.59 In 1999 we noted problems in the disease information collected for two of several cancer surveillance systems, the Childhood Cancer Treatment and Outcome Surveillance System and the National Enhanced Cancer Surveillance System. The first system is part of a broader surveillance system, the Canadian Childhood Cancer Surveillance and Control Program. We found that the Treatment and Outcome system had incomplete data on youths between 15 and 19 years of age and that no results of any analysis had been reported. Our follow-up determined that no progress had been made toward filling the information gaps, but a report on the results of its analysis of the data collected from the Childhood Cancer Treatment and Outcome Surveillance System is scheduled to be published. Also of concern is the very limited activity in surveillance for the late effects, etiology investigation, and tissue bank systems—the other systems in the Childhood Cancer Program.

2.60 In 1999, it was determined that there were gaps in the environmental data collected by National Enhanced Cancer Surveillance System. Our 2002 follow-up found that the information gaps had not yet been filled and that more current information has not been collected. Health Canada has published a number of reports on the results of its analysis.

Gaps in national health surveillance activities

2.61 Recommendation. Health Canada should collect the disease information needed to provide a complete and timely picture of cancer in Canada.

Health Canada's response. Health Canada's current picture of cancer in Canada includes cancer incidence and mortality data. Health Canada needs more concrete information on risk factors, severity at the time of diagnosis, and treatment data. The Department will continue its work with the provinces and territories to get such concrete information.

2.62 Most of Health Canada's existing disease surveillance systems focus on the incidence of disease. However, there are opportunities for collecting and analyzing information on disease beyond its incidence.

2.63 As an individual moves from health to disease to health outcome, that individual will interact with the health care system many times (Exhibit 2.5). Each time, disease information can be collected for surveillance activities (Exhibit 2.6).

2.64 Gaps in surveillance exist because there may be no surveillance system at all or because an existing surveillance system may focus largely on the incidence of disease and not on other important areas. Those areas can include risk determinants and the impacts of interventions, screening, and treatment on health outcomes.

2.65 In its 1999–2000 draft business plan, Health Canada recognized a number of gaps in surveillance, particularly surveillance of chronic diseases. It also demonstrated the significance of chronic diseases to the health of Canadians, as measured by the projected cost of these diseases for 1998 (Exhibit 2.7).

2.66 In 1999 we noted that national surveillance activity for cardiovascular disease was inadequate—specifically, surveillance of incidence, risk determinants, intervention, and treatment. Our report acknowledged that Health Canada was working to develop a national system that it expected would be operating fully in 2003. We also noted a gap in national surveillance of diabetes, but a national system was to be operating fully in 2000.

2.67 Our follow-up found that there are still some significant gaps in surveillance:

- Cardiovascular disease surveillance. Health Canada has done little work on developing a national system for surveillance of cardiovascular disease, a disease projected to cost Canadians \$21 billion in 1998. During our 1999 audit, work had begun on developing a Canadian Heart Disease and Stroke Surveillance System Network. The Network made some initial progress but after a business plan was developed, the funding for the Network ended. Health Canada's present activities in this area are directed largely at publishing a biannual report on heart disease and stroke that provides only very limited information on the disease. The Chronic Non-Communicable Disease Infostructure Sub-Group is currently contributing to a study on the feasibility of extending the diabetes surveillance system to include cardiovascular disease.

Exhibit 2.5 Public health services and disease continuum

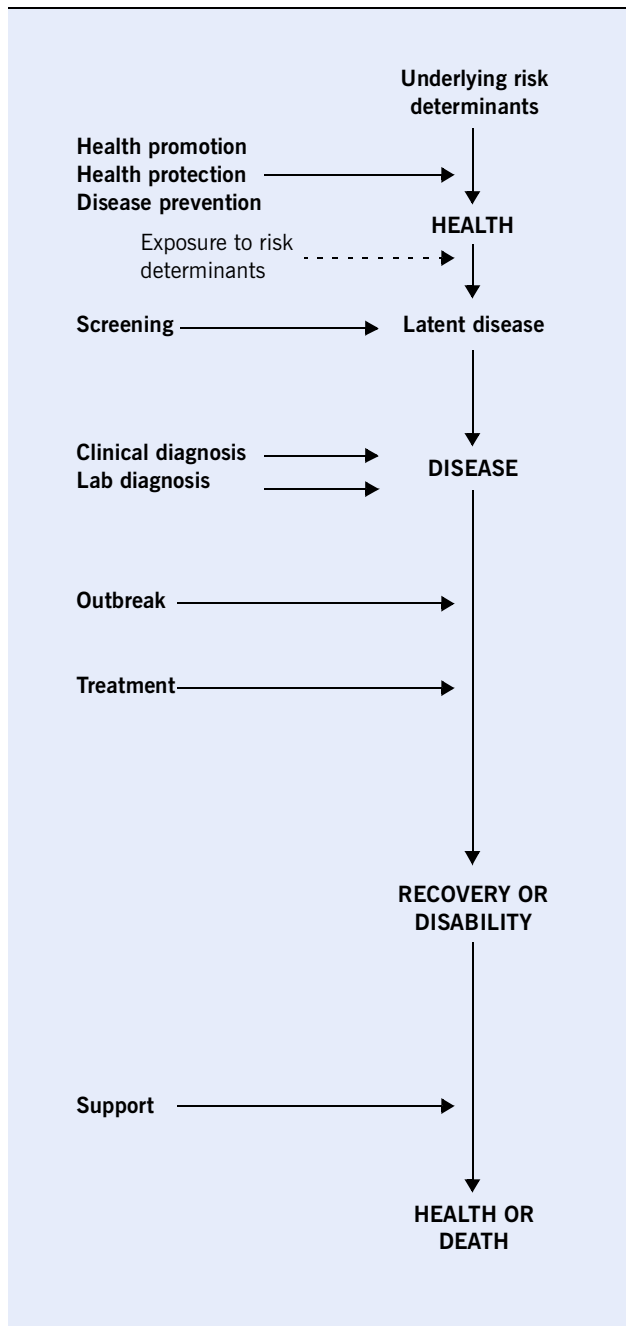


Exhibit 2.6 Opportunities in the delivery of public health services for surveillance

Opportunities exist in the delivery of health care for surveillance systems to monitor the following:

- Risk determinants (behaviour, environment, age, gender, social support, etc.)—to identify the factors that influence disease.
- Health promotion, health protection, disease prevention—to evaluate the effectiveness of these interventions.
- Screening—to evaluate the effectiveness and coverage of screening activities.
- Incidence—to quantify how many new cases of a particular disease have been identified in Canadians during a given period.
- Prevalence—to quantify the total number of cases of a particular disease in the Canadian population during a given period.
- Outbreak—to identify an outbreak of a communicable disease and to plan a response to the outbreak.
- Treatment—to evaluate the effectiveness of a treatment and the economic burden of the treatment, for example,
 - Drug—to evaluate the effectiveness of drugs and adverse reactions to drugs, and to identify drug resistance
 - Surgical—to evaluate the effectiveness of surgical practices and to develop best practices
 - Vaccination—to evaluate the effectiveness of vaccination strategies, longevity of protection, and adverse reactions to vaccines.
 - Rehabilitation—to evaluate the effectiveness of rehabilitation options and to develop best practices.
- Support (hospital, home care, and palliative care)—to evaluate the effectiveness of support and its economic burden and to measure accessibility to health care.
- Health—to measure the health of Canadians.

Exhibit 2.7 Projected costs of selected diseases for 1998

Diagnostic category	(\$ billions)		
	Direct cost	Indirect cost	Total cost
Cardiovascular (i.e., heart disease and stroke)	7.3	13.7	21
Musculoskeletal (i.e., arthritis)	2.5	15.5	18
Injuries	3.1	10.9	14
Cancer	3.2	9.8	13
Chronic Respiratory (i.e., asthma)	3.7	8.3	12
Mental Illness	5.1	2.9	8

Source: Health Canada Business Plan, 1999–2000

- **Diabetes surveillance.** Health Canada has made significant progress on developing a national diabetes surveillance system (Exhibit 2.8).
- **Other important chronic diseases.** There are still a number of key health issues for which surveillance is inadequate. These include chronic diseases such as musculoskeletal disease (for example, arthritis), cancer (except breast cancer), chronic respiratory disease (for example, asthma), and mental illness (for example, depression). These four diseases had projected costs of about \$50 billion in 1998.
- **Risk determinant and health outcome surveillance.** There are many gaps in the surveillance of risk determinants and the impacts of interventions, screening, and treatment on health outcomes. For example, while the development of a surveillance system for breast cancer screening is progressing, no surveillance system currently collects information on patient outcomes after various breast cancer treatments. As a result, physicians and breast cancer patients have only limited information on treatment options (Exhibit 2.9). Similarly, the diabetes surveillance system will be able to provide information on the incidence, prevalence, and associated health problems of diabetes but not on risk determinants, intervention, treatment, or incidence in children under 19 years of age. An inventory of opportunities for surveillance systems for notifiable diseases, AIDS, cardiovascular disease, and cancer (excluding breast cancer) is included in Exhibit 2.10.

Exhibit 2.8 National surveillance system for diabetes

Diabetes is the seventh leading cause of death in Canada. It is estimated that 33 percent of persons with diabetes do not know they have it. If left untreated or managed improperly, diabetes can slowly damage the body. This creates complications such as heart disease, blindness, and kidney disease. It is also estimated that 90 percent of all persons with diabetes suffer from type II diabetes, which can be prevented or delayed by modifying two known risk determinants—obesity and physical inactivity.

In 1999, the federal government developed the Canadian Diabetes Strategy, with four main components. One component was the development of a national diabetes surveillance system, and it has seen significant progress since then. All 13 provinces and territories are signatories to a memorandum of understanding that outlines the participation and responsibilities of all partners.

The data for the system are administrative data, such as physicians' billings and hospital discharges. Each year, Health Canada receives these data from the provinces, separated between cases that might indicate diabetes and cases that do not. The data are used to determine the prevalence of diabetes.

Health Canada intends to develop mathematical models that can be applied to the data to correct for false positives. This would allow it to estimate the incidence of the disease.

In the future, the Department will be able to analyze administrative data to identify other health problems (complications) associated with diabetes.

So far, data on prevalence, incidence, and complications from 1995 to 2000 have been collected from nine provinces and territories. The information on prevalence is being analyzed and the Department plans to issue its first annual report in 2002.

Exhibit 2.9 Surveillance system for breast cancer treatment

Breast cancer is the most common cancer among women in Canada. It is diagnosed in more than 19,000 Canadians every year. A study by the National Cancer Institute of Canada suggested that the direct costs of breast cancer totalled \$7 billion in 1990. That is just one third of the estimated indirect costs.

In 1993 the Canadian Breast Cancer Initiative was launched, with a financial commitment of \$25 million for five years. In 1998 the program was renewed to 2003, with total funding of \$35 million or \$7 million annually. The goal of the initiative is to encourage and support research related to the prevention, treatment, and control of breast cancer. The initiative has five components, one of which is surveillance and monitoring of breast cancer. This component is divided into three sub-components: screening surveillance; risk factor surveillance; and treatment and palliative care surveillance.

It appears that most effort has been directed at surveillance of breast cancer screening. A system for collecting data from organized screening programs already exists and is soon to be extended to include non-organized screening programs. Health Canada has undertaken only limited activities to develop a breast cancer treatment surveillance system; at present there is no such system.

Surveillance information on breast cancer treatment would be of great value to physicians and breast cancer patients. For example, long-term effects of treatment could be monitored and used to assist physicians and patients in decision making. This represents a missed opportunity.

- **Injury surveillance.** The national system for surveillance of injuries to Canadians, which had an estimated annual cost of \$14 billion in 1998, is incomplete. At present, injury surveillance is largely limited to children. The Injury Surveillance Sub-Group has prepared an inventory of data sources and surveillance activities on injuries. It has also begun an injury surveillance pilot project with the British Columbia Injury Research and Prevention Unit, which captures injury data for all ages directly from 10 hospital emergency departments in British Columbia.

2.68 In summary, a significant number of gaps remain in the surveillance of chronic diseases and injuries. Health Canada's efforts are limited largely to surveillance of diabetes and breast cancer. Consequently, it has only limited surveillance information on many of the leading causes of death in Canada.

2.69 Recommendation. Health Canada, in collaboration with other organizations, should take steps to fill identified gaps in surveillance by ensuring the timely development of national surveillance systems for chronic diseases.

Health Canada's response. Health Canada has surveillance systems for chronic disease at various levels of maturity and, in collaboration with provinces and territories and others, will continue its work toward addressing specific gaps such as cardiovascular disease, chronic respiratory disease, and musculoskeletal disease.

Exhibit 2.10 Opportunities for surveillance systems—Four diseases

Surveillance opportunity	Notifiable diseases	AIDS	Cardio-vascular	Cancer (system excludes breast cancer)
Risk determinants	N/A	●	●	●
Health promotion, health protection, disease prevention	○	○	○	○
Screening	N/A	N/A	○	○
Incidence	●	●	○	●
Prevalence	○	●	○	●
Outbreak	●	N/A	N/A	N/A
Treatment	○	○	○	○
Support	○	○	○	○
Health	○	○	○	○

● Surveillance system exists but has weaknesses, as discussed in the chapter.

○ There is no surveillance system, or surveillance is limited.

N/A Not applicable.

Surveillance issues that need to be resolved

2.70 As we have noted, Health Canada has made limited progress on improving national health surveillance. During our follow-up we identified several factors that have impeded or prevented improvement.

2.71 Many of the factors within Health Canada's control are financial. The centres that conduct surveillance activities receive funding for salaries, operations and maintenance, and grants and contributions. This funding, which represents the centres' financial capacity to deliver programs, comes from three streams. The first stream is referred to as targeted money, funds that the Treasury Board has approved for specific initiatives, mainly within the last five years. As part of obtaining the approval, the Department agrees to achieve certain goals. The Centre for Infectious Disease Prevention and Control has received targeted funds for blood-borne pathogens, enteric diseases (gastro-intestinal illness), influenza pandemic, HIV/AIDS, and hepatitis C. The Centre for Chronic Disease Prevention and Control has received targeted funds for diabetes and breast cancer.

2.72 The second stream of funding is referred to as A-base money. It is the funding that Health Canada allocates to the centres for programs that do not have specifically targeted funding. This stream represents the only discretionary funding available to the centres.

2.73 The third stream is the annual reallocation of resources within Health Canada to offset funding pressures on the Department. This exercise, carried out by the Department's Resource Allocation Committee, is discussed in more detail in paragraph 2.81.

2.74 Funding in 2001–02 to three key centres for operations and maintenance of all their activities is outlined in Exhibit 2.11 (The funding shown includes surveillance activities as well as the other activities of the centres.)

Exhibit 2.11 Operations and maintenance funding in 2001–02 (at 1 April 2001)

Program	(\$ '000)		
	Centre for Infectious Diseases Prevention and Control	Centre for Chronic Diseases Prevention and Control	Centre for Surveillance Coordination
Targeted funds	23,500	7,900	900
A-base	3,850	1,050	300
Departmental reallocation	0	0	0
Total funding before levies	27,350	8,950	1,200
Levied amounts (deducted)	(4,200)	(1,500)	(200)
Total after levies	23,150	7,450	1,000

Lack of financial capacity to establish chronic disease surveillance systems

2.75 Health Canada's 1999–2000 draft business plan also recognized that the Department lacked the financial capacity to fill the gaps in disease surveillance. It recommended that resources be directed to

- maintain and extend infectious disease activities, where required; and
- extend the scope of activities for chronic diseases.

2.76 However, our follow-up found that the recommendations in the draft business plan had not been implemented. We were informed that financial capacity remains a concern in 2002. In 2001–02 the Centre for Chronic Disease Prevention and Control received \$5 million for diabetes (\$1 million of it for surveillance activities); \$2.6 million for breast cancer (\$0.6 million for surveillance activities); \$300,000 for biotechnology (none of it for surveillance activities); and \$1.05 million in A-base funding (\$0.6 million for surveillance activities).

2.77 The \$600,000 in A-base funding is all that is available for all chronic diseases except diabetes and breast cancer—that is, cardiovascular disease, other forms of cancer, musculoskeletal disease, chronic respiratory disease, and mental illness.

Lack of financial capacity to maintain chronic disease surveillance systems

2.78 The Childhood Cancer Treatment and Outcome Surveillance System and the National Enhanced Cancer Surveillance System both received targeted funding for their development. Once they were established, targeted funding ended and an amount to maintain the systems was included in the A-base. Over time, however, the amount in the A-base has eroded.

2.79 The Brighter Futures–Child Development Initiative, for example, targeted funds to the development of the Childhood Cancer Treatment and Outcome Surveillance System for five years. When the Child Development Initiative ended, funding of \$1 million to keep the surveillance system operating was added to the A-base. However, the A-base funding has declined consistently (Exhibit 2.12).

2.80 The Population and Public Health Branch has reported that this funding is inadequate. In 2001–02, the Branch identified this surveillance system as one of several surveillance systems that were an unfunded, high-priority project of the Centre for Chronic Disease Prevention and Control. The Branch asked the Department's Resource Allocation Committee for additional funding of \$420,000 to operate this system. However, the Centre received no additional funding and had to manage the system within its A-base resources, which we have noted totalled \$600,000 for all chronic diseases except diabetes and breast cancer.

Erosion of financial capacity

2.81 Health Canada engages each year in an internal exercise of resource reallocation, managed by its Resource Allocation Committee. The Committee collects money by charging levies to the funds allocated to each

branch of the Department. Inadequately funded activities of all the branches are identified, and those with highest priority are allocated additional funds from the money collected through the levies. The levies charged to the Population and Public Health Branch are collected from the operations and maintenance funding for each of the Branch's centres.

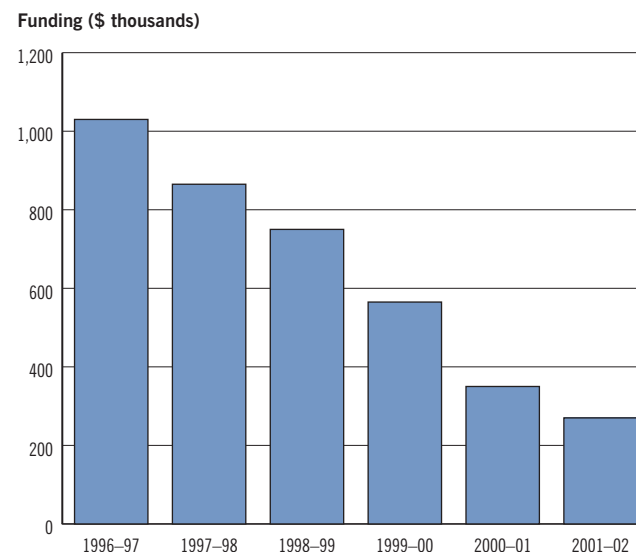
2.82 Other levies to fund various initiatives of the Department are also collected from the centres. Our analysis of resources allocated to each centre determined that the levies charged to the Branch for 2001–02, and then collected from each centre as a percentage of its operations and maintenance funding, were roughly equivalent to

- 15 percent from the Centre for Infectious Disease Prevention and Control,
- 17 percent from the Centre for Chronic Disease Prevention and Control, and
- 17 percent from the Centre for Surveillance Coordination.

The three centres paid a total of almost \$5.9 million in levies (Exhibit 2.11), taken from both the targeted funds intended for specific activities and the A-base funds, which are discretionary. The funds were reallocated to other activities within Health Canada, which means they are supporting activities that are not the ones to which the Treasury Board directed the support.

2.83 In 2001–02, the three centres also identified unfunded activities of about \$7 million. The Branch requested additional funding for these activities from the Resource Allocation Committee. However, the Committee denied the requests and provided no additional funds. The collection of levies, combined with the denial of requests for funding, has eroded the centres' ability to carry out their surveillance activities.

Exhibit 2.12 A-base funding for Childhood Cancer Treatment and Outcome Surveillance, 1996–2002



Priorities need to be established and supported with funding

2.84 A great many diseases affect Canadians; there are many opportunities for health surveillance. It is clear that not all of the information on diseases can be collected and analyzed.

2.85 It is essential that Health Canada determine its priorities for national health surveillance activities relative to the other activities in the Department. As well, priorities among the various health surveillance activities must be clearly established. This means choosing which key health issues will be surveyed—for example, outbreaks of reportable (notifiable) diseases or interventions for cardiovascular disease. Finally, it is important that Health Canada direct enough resources to those priorities to develop surveillance systems and maintain them.

2.86 As already noted, Health Canada did set priorities for health surveillance activities in 1999–2000. However, those priorities were not supported by funding. And we have already noted that more recent attempts to set priorities have not been completed.

2.87 Health Canada has made only a limited commitment of funding to the centres that conduct national health surveillance. We determined that around 86 percent of the operations and maintenance funding received by the Centre for Infectious Disease Prevention and Control is targeted funding. And 89 percent received by the Centre for Chronic Disease Prevention and Control is targeted. This means that most of the centres' activities are supported by funding directed to the centres by the Treasury Board. Of the funds the two centres receive for their activities, only 14 percent and 11 percent, respectively, come from Health Canada.

2.88 These financial capacity issues create a number of problems for program officials. Funding is variable, the A-base is eroded, and targeted funds are redirected, although the centres remain responsible for delivering adequate national health surveillance.

2.89 Recommendation. Health Canada should identify its health surveillance priorities and ensure that adequate and stable funding is available to develop and maintain the surveillance systems that it identifies as priorities.

Health Canada's response. For Health Canada, health surveillance activity is of significant importance. It is a constant and important item for analysis and evaluation at the time of the annual setting of departmental priorities, and it will remain so in the future.

Keeping Canadians safe: Food-borne disease and blood-borne pathogens

2.90 In response to blood and food crises, the Treasury Board directed specific funds to these program areas so that surveillance systems could be improved. We assessed Health Canada's progress in improving the surveillance systems for food-borne disease and blood-borne pathogens.

National surveillance of enteric diseases

2.91 Since 1999, the Department has made progress on developing systems for national surveillance of enteric diseases. Enteric diseases cause gastrointestinal illness and are usually transmitted in food and water. Health Canada has undertaken five major initiatives to improve its surveillance systems:

- **National Enteric Surveillance Program.** A system that collects and analyzes all positive laboratory samples from 10 provincial laboratories. The results are compared against a historical baseline to detect any unusual increase in the incidence of pathogens.
- **Canadian Enteric Outbreak Surveillance Centre.** Two linked Web-based applications that allow information on outbreaks to be shared in confidence among regional, provincial/territorial, and federal public health professionals on a real-time basis once they are posted on the Web.
- **PulseNet North.** A laboratory outbreak identification system that allows information on pathogens to be exchanged in real time. It is linked with the provincial labs in all provinces in Canada and with a similar system in the United States (PulseNet), allowing information sharing across North America.
- **National Studies on Acute Gastrointestinal Illness.** A collection of studies to supplement existing surveillance activities, for example, studies to determine the underreporting of gastrointestinal illness and identify the risk determinants associated with gastrointestinal illness in Canada.
- **National Enteric Surveillance Program Stakeholder Committee.** A federal/provincial/territorial committee to advise on and discuss issues related to national surveillance of enteric diseases.

2.92 The National Enteric Surveillance Program and PulseNet North have been implemented. The Canadian Enteric Outbreak Surveillance Centre finished its pilot phase and is being rolled out in Ontario in 2002. The other initiatives are still quite new but appear promising. Health Canada has also identified areas that need more work, and it plans to make the necessary improvements.

National surveillance of blood-borne pathogens

2.93 In 1996, while the Krever Commission was still finalizing its report on blood safety, the Treasury Board approved funding to strengthen Health Canada's Blood Safety Program. In 1998, after the Commission issued its report, the Treasury Board approved additional funding for the Program. A portion of the funding was to be used to develop the capacity to create a

blood surveillance system. The Department committed to have such a system in place by 2003.

2.94 Health Canada has made progress on developing a national system for the surveillance of blood-borne pathogens. It initiated the Transfusion-Transmitted Injury pilot surveillance system in 1998, modelled on the Quebec system that was already being developed. The Quebec system is based on a network of transfusion safety officers who collect data from hospitals that have a significant level of transfusion activity. The pilot started with Quebec and British Columbia; Nova Scotia and Prince Edward Island were added in 2000 and they submitted data in 2002. Ontario and Manitoba joined in 2002.

2.95 During our follow-up, however, we became aware of issues yet to be resolved that could delay the implementation of the National Transfusion-Transmitted Injury surveillance system. Specifically, we are concerned that Health Canada has not made adequate progress toward assuring that timely, accurate, and complete information from all provinces will be available in 2003. Nor can it be sure that provincial capacity is adequate and can be maintained to provide the information needed for a sustainable national system.

2.96 We will continue to monitor the progress of this surveillance system.

Measuring and reporting performance

2.97 In 1999 we noted that Health Canada had completed few evaluations and had no formal plan to evaluate surveillance systems. We also noted that the framework for measuring performance and the development of performance indicators were incomplete. Finally, we noted that the Department was reporting only limited information to Parliament.

2.98 During our 2002 follow-up, we noted that the Departmental Program Evaluation Division was working on evaluations of the Canadian Strategy on HIV/AIDS and Health Canada's Blood Safety Program. The Population and Public Health Branch has also evaluated a few surveillance systems. This is progress; but given that three years have passed, it is too slow.

2.99 The Department is still developing its performance measures. They have not been approved by senior management, nor have they been distributed widely in the Department.

2.100 Finally, reporting to Parliament remains inadequate. It is limited largely to information on activities and outputs. It does not include information on issues such as the value of surveillance information to support evidence-based decisions.

2.101 Recommendation. Health Canada should strengthen its evaluation, performance measurement, and reporting of results of its health surveillance activities.

Health Canada's response. The Department has strengthened its evaluation and performance measurement of health surveillance. Examples include the public release of the health indicators of First Nations health status and the enhanced use of performance information in the departmental performance report. In the performance report, performance expectations are made clear

and concrete, and in the vast majority of cases, key results are reported against expectations. The reliability of performance information is supported by facts, and the use of performance information is demonstrated. Progress will continue to be made in the future.

Standing Committee on Public Accounts

2.102 On 2 March 2000, the Standing Committee on Public Accounts invited our Office and Health Canada to a hearing on Chapter 14 of our September 1999 Report. In May 2000, the Committee released a report that included five recommendations.

2.103 The recommendations focussed on two themes. Four recommended improvements in reporting to Parliament on specific activities (implementation of the Network for Health Surveillance, results and outcomes of the Network, performance measurement and risk assessment, and implementation of the recommendations in our Report). The fifth recommended the development of tools to assist in evaluation, performance measurement, and risk assessment.

2.104 We found that Health Canada has reported some information about the activities of the Network for Health Surveillance. It provided information on important issues such as strategic plans, timelines, and budgets, but the progress it discussed was not measured against those plans, timelines, and budgets. As already noted, reporting on performance measurement and risk assessment remains limited, and only a few evaluations have been completed. The Department provided a status report in 2000 on its implementation of our recommendations, but not in 2001. Finally, we found in 2002 that Health Canada is still developing the tools it needs to assist in evaluation, performance measurement, and risk assessment.

Conclusion

2.105 Since our audit in 1999, Health Canada has made progress in establishing a national framework that allows for greater collaboration among the partners involved in health surveillance. It has also made progress in defining roles and responsibilities for responding to public health threats. However, for the most part, it still has no agreement with the other partners on important matters such as data sharing, common standards, and nationally reportable diseases.

2.106 Many of Health Canada's existing disease surveillance systems still lack timely, accurate, and complete disease information, although some surveillance systems have improved. To address some of the weaknesses in the surveillance of communicable diseases, Health Canada and the provinces have undertaken to co-operate on developing the Canadian Integrated Public Health Information Surveillance Project. They have made progress, but full implementation is not likely for some time.

2.107 For the most part, diabetes and breast cancer are the only chronic diseases with a national surveillance system. The Department has allocated

only limited resources to the surveillance of other chronic diseases, despite the recognized importance of this activity, and it lacks health surveillance information on cardiovascular disease, cancer (except breast cancer), musculoskeletal disease, chronic respiratory disease, mental illness, and injuries. Further, it is lacking in surveillance of risk determinants and the impact of interventions, screening, and treatment on health outcomes.

2.108 We identified several issues that Health Canada needs to resolve. At present, these issues are impeding or preventing progress. Many of them are financial issues. The Department lacks the financial capacity to fill gaps in the surveillance of chronic disease. It also lacks the financial capacity to maintain chronic disease surveillance systems. Further, the internal exercise of resource reallocation results in an erosion of financial capacity. Finally, Health Canada needs to set priorities for health surveillance activities and provide adequate funding to support those priorities.

2.109 Health Canada's evaluation, performance measurement, and reporting of results of its health surveillance activities remain weak.

2.110 We recognize that Health Canada is not solely responsible for a number of these weaknesses. We encourage it to continue to show strong leadership for collaboration and co-operation among all the partners in health surveillance to address these problems.

About the Follow-Up

Objective

The objective of this audit was to determine the progress made by Health Canada in developing the following:

- common standards and protocols to facilitate collaboration and sharing of information among all the players in the health surveillance process;
- means to ensure that required surveillance systems provide timely and relevant information to anticipate, prevent, and respond to health threats and emerging health risks;
- adequate procedures to measure performance and report results;
- solutions to identified problems.

Scope

The follow-up audit focussed on the recommendations made in our 1999 Report—Chapter 14, National Health Surveillance: Diseases and Injuries; and Chapter 15, Management of a Food-borne Disease Outbreak. We also followed up on recommendations made by the Standing Committee on Public Accounts. Health Canada has undertaken a number of new initiatives in the last three years, which we also reviewed.

We reviewed a departmental status report on the action taken in response to the recommendations. We carried out extensive interviews with Health Canada staff involved in surveillance activities. We also met with provincial health officials in several provinces and with local medical officers of health in several regions. Finally, we reviewed documentation supporting Health Canada's activities in health surveillance.

Our report presents the results of the areas that were re-audited.

Criteria

We expected that Health Canada would have made satisfactory progress in implementing our recommendations and those of the Public Accounts Committee.

The criteria from the 1999 audits remain relevant. Therefore, we expected that

- all players in health surveillance would clearly understand Health Canada's role and responsibilities in the national health surveillance process;
- a full range of documented protocols and procedures would exist that indicate clearly what each player should do when a disease outbreak or health threat occurs;
- all players in the health surveillance process would use common standards and protocols for classifying, collecting, and reporting data on diseases and injuries to ensure that all information is comparable across the country;
- Health Canada's surveillance systems for monitoring diseases and injuries would enable it to collect, analyze, and disseminate all the information needed to help anticipate, prevent, and respond to existing and emerging health risk;
- there would be procedures to measure the effectiveness of health surveillance activities and report results;
- Health Canada's health surveillance activities would be based on a sound risk-benefit approach and a rational priority-setting framework; and
- Health Canada would take appropriate action to resolve identified problems.

Ratings

We assessed the action of departments/agencies against our original audit recommendations (see Key Message at the beginning of the Chapter). We used the following ratings:

- **Completed.** Corrective action has been fully implemented
- **Satisfactory progress.** Progress is being made at a satisfactory pace
- **Limited progress.** Some progress is being made, but the pace or scope is not satisfactory
- **No progress.** No evidence of progress although the department or agency accepted the recommendation from the original audit
- **Rejected.** The department or agency did not accept the recommendation from the original audit
- **Unknown.** Status of progress is unknown or information is not available

Audit team

Assistant Auditor General: Maria Barrados

Principal: Patricia MacDonald

Director: Linda Anglin

Jo Ann Little

Marie-Eve Viau

For information, please contact Communications at (613) 995-3708 or 1-888-761-5953 (toll-free).

