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THE ROLE OF FEDERALISM IN HEALTH SURVEILLANCE: A CASE STUDY OF THE NATIONAL HEALTH-SURVEILLANCE INFRASTRUCTURE

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INTRODUCTION

Health surveillance is an often overlooked yet vital component of the Canadian health-care system. Health surveillance authorities are responsible for tracking and forecasting health events and examining the determinants of these conditions. These authorities may, for example, identify the development of an infectious disease outbreak or draw attention to gradually increasing rates

BACKGROUND ON HEALTH SURVEILLANCE

The Canadian health-care system consists of three components: health care, health promotion, and health protection. Health surveillance falls under the category of health protection. Public health surveillance refers to the process of collecting, analyzing, and disseminating health data. Surveillance authorities collect data to monitor and investigate health events or determinants of health, analyze and interpret this data, and disseminate this information to those who require it. The objective of surveillance is to provide timely, accurate, and strategic information and analysis to assist the health system in areas of policy, planning, and evaluation.² Health surveillance can deal with both communicable disease such as infections and non-communicable diseases such as diabetes, heart disease, and cancer. Communicable disease surveillance is particularly important since its implications transcend all geographic and jurisdictional boundaries.

Under the *Constitution Act, 1867* the majority of health care falls under provincial jurisdiction. Provinces are responsible for “the establishment, maintenance and management of hospitals, asylums, charities and (charitable) institutions in and for the province, other than marine hospitals.” Responsibility for health protection is less clear with federal and provincial governments sharing responsibilities. Public health is considered primarily a provincial concern under section 92(13) of the *Constitution Act, 1867* which gives the provinces responsibility for property and civil rights. Further provincial authority in this field is derived from the power they are given in section 92(16) over matters of a local or private nature in the province. Health surveillance falls into both of these categories and is therefore considered a provincial responsibility.

The federal authority in the field of health protection derives from a number of sources. Under section 91(27) of the *Constitution Act, 1867* the federal Parliament is assigned power over criminal law allowing it to pass legislation to prevent transmission of a “public evil.” This permits it to pass legislation to control transmission of health risks. The residual power given to Parliament under the national concern section of the “peace, order and good government” power of the *Constitution Act, 1867* also allows it to enact legislation to regulate matters of national health and welfare. These must be issues in which intra- and extra-provincial implications of the issues are linked, in which provinces are not able to regulate effectively on their own and in which failure of one province to regulate would affect the health of residents of other provinces. Health surveillance falls under this category. The federal government

also obtains authority over health protection by the power it is given to quarantine and to regulate trade and commerce of an interprovincial or international nature.³

Therefore, under the constitution, the provinces and the federal government share responsibility over issues of health surveillance. Both orders of government have used their authority in the area to pass legislation. The federal government, through the *Statistics Act* and the *Department of Health Act* has a mandate to collect information on public health risks of a Canada-wide nature.⁴ Provincial governments have also passed similar, but not complementary legislation to address intra-provincial health risks. Despite the existence of this legislation, there remains a lack of jurisdictional clarity in the area. Importantly, Ottawa lacks the constitutional authority to enforce legislation that compels provinces to transfer surveillance information to federal officials. Therefore, such transfers must occur voluntarily.

Federal public health functions are carried out by Health Canada and in particular its Health Protection Branch (HPB) (see Appendix B). Health-surveillance activities of the HPB are primarily the responsibility of the Laboratory Centre for Disease Control (LCDC). The LCDC collects information from the provinces and territories on these diseases, assists provinces in the diagnosis of communicable diseases and helps provinces, upon request, to react to health threats from these diseases. It monitors public health and emerging diseases nationally and internationally and provides an overall health surveillance function for the country. At the provincial level there is considerable variability in the organization, financing, and administration of public health activities.⁵

Federal health surveillance has traditionally focused on communicable diseases. Ottawa has collected information on these since 1924. It interacts with the provinces in this area via the LCDC, which in 1988 assumed full responsibility for collecting information on notifiable diseases from Statistics Canada. The LCDC assists the provincial health ministries in the diagnosis of communicable diseases and helps them identify and react to health threats. Provinces and territories supply information on notifiable diseases to the Bureau of Infectious Disease at the LCDC via the Canadian Communicable Disease Surveillance System.⁶ However, there is dissatisfaction at the national, provincial/territorial and local levels about existing relationships in this area.

An example of previous federal-provincial interaction in non-communicable disease surveillance is the now discontinued Sentinel Health Unit Surveillance System. In 1993 the LCDC launched this system in an attempt to improve the

scope of its surveillance activities beyond communicable diseases. Provincial epidemiologists identified key health units within their jurisdiction that would participate in this program. The LCDC dealt directly with these units and collected information that could be used for developing public health policy (demographic, incidence, risk factor data, etc.).⁷ Provincial ministries of health could be bypassed in this process. A current example of non-communicable disease surveillance is cancer surveillance. Provincial cancer registries send cancer incidence and mortality data to a national cancer registry at Statistics Canada. This process is, for the most part, voluntary. Voluntary agreements also exist for sharing data on hospital discharges. These are then sent to the Canadian Institute of Health Information (CIHI).⁸

Several problems currently exist in health surveillance. Experts in the field see many “islands of activity” in health surveillance with a lack of coordination and standardization and provincial, interprovincial, and national links. They believe this results in an inefficient, fragmented system with duplication and, especially, important gaps. Their major concerns include a lack of integration of existing health-related databases, inadequate linkage between laboratory-based diagnostic data and public health data, and lack of information on determinants of health. There is also confusion over federal-provincial roles and responsibilities in health surveillance, which is largely a result of ambiguity in the constitutional division of powers.⁹

At the federal level there are major difficulties with the considerable variation in the format of the information provinces send to the LCDC as well as the variety of computer programs used. The LCDC also recognizes it has significant resource and organizational limitations in carrying out effective surveillance.¹⁰ At the local level, public health officials support Health Canada’s assistance of provincial public health laboratories. There is satisfaction with communicable disease surveillance activities of Health Canada but non-communicable disease health surveillance is felt to be inadequate. There have been concerns with the fragmented approach to surveillance taken by the LCDC and its tendency to bypass provincial ministries when dealing directly with local health units. Some public health officials have found the organization of the LCDC difficult to understand and have had trouble communicating with this directorate. There is also a belief that communication between the various bureaus of LCDC is not optimal. However, more importantly, public health officials are looking for a greater federal role in coordinating surveillance activities across the country.¹¹

The Auditor General's 1999 report highlighted many of the current deficiencies of the present state of health surveillance. It identified the need to coordinate current health-surveillance activities, address important gaps, clarify roles and responsibilities, have clear rules and procedures to deal with emerging health threats, improve levels of communication and have a mechanism to evaluate quality of surveillance. This report drew particular attention to the nationwide outbreak of a food-borne salmonella infection in spring of 1998 as

undertaken by different stakeholders. The respective functions, authority and accountability of each party are not well defined. This lack of definition may affect accountability within the system, and ultimately its safety.

The issues of fragmentation, unclear roles and responsibilities, and lack of accountability have been identified as some of the major deficiencies to be overcome as the health-surveillance system is being reformed.

The Krever Commission had a profound impact on decision-making at all levels of government, particularly in public health circles. It sent a strong message that inadequate information was not a justification for inappropriate decision-making. Officials in Health Canada recognized the risk of a repeat of the blood crisis in other public health sectors. The potential risk provided a strong motivation for the development of the new surveillance initiatives.

DEVELOPMENT OF THE NETWORK FOR HEALTH SURVEILLANCE IN CANADA AND THE NATIONAL HEALTH SURVEILLANCE INFRASTRUCTURE

The Network for Health Surveillance in Canada is an attempt by federal, provincial, and territorial partners to address the deficiencies in the field of health surveillance. The objective of this project is to build capacity at all levels (local, regional, provincial/territorial, and national) to acquire and share health-surveillance information so as to improve evidence-based decision-making in the public health sector. It is believed that the Network will deliver better quality surveillance information, easier access to this information, timely sharing of the information, and tools for the integration and analysis of this information. It will also provide standards for the collection of surveillance data and provide an adaptable system which can accommodate changing health-surveillance needs. However, it is not intended to be a comprehensive plan for health surveillance. Individual partners can choose to operate outside the Network if they so desire and will still remain accountable for many surveillance functions.

The NHSI operationalizes many of the concepts put forth by the Network project. The NHSI is a federal-provincial collaborative effort to develop Internet-based tools that will allow for national and international surveillance of disease and other potential risks to health. Its objective is to develop an electronic infrastructure that will improve coordination of the presently fragmented health surveillance activities occurring throughout the country. Some of its key elements include

Integrated national public health architecture. The NHSI will link key public health nodes such as public health laboratories, hospitals, and physicians' offices.

Global surveillance and early-warning networks. The NHSI will coordinate with international health-surveillance systems to provide early information on emerging global health risks.

Policy and program decision support systems. The NHSI will assist in the analysis and interpretation of surveillance data. This will facilitate the tracking of risk factors and diseases as well as health expenditures, the economic burden of disease, and the effectiveness of health programs and policies.

process was the presence of new information technology that made a national surveillance system possible.

Over the 1990s Ottawa reduced cash transfers to the provinces for health care. The provinces also constrained or reduced funding to regional and local health organizations. The reduction in funding to the regional level was accompanied by a devolution of power, the objective of which was to contain costs and improve health outcomes.¹⁶ Local public health units, as a result, came under increasing pressure to improve the efficiency of their activities. However, achieving these efficiencies required improved methods of data collection at local levels and the facilitation of information-sharing between provinces. Traditional health-surveillance activities could not adequately carry this out. This explains the grass-roots pressure from local epidemiologists and public health officials to improve health-surveillance systems.

At the same time, at the federal and provincial levels, there was a growing recognition that a more coordinated approach to surveillance was necessary. In March 1995, the deputy ministers of health, in an effort to improve communication between levels of government, established an F/P/T working group to examine the health roles and responsibilities of each level of government. The main focus of this F/P/T collaborative effort was to search for overlap and duplication. The task force noted that there were few areas of overlap and duplication in health protection. Instead, large gaps were found, especially in health surveillance.¹⁷

Pressure also began to emerge from other sources for improved health surveillance. In September 1995, the Information Highway Advisory Council (IHAC) called for a federal leadership role in developing a unifying health information infrastructure. This was followed by a report in September 1996 by the Canadian Network for the Advancement of Research, Industry and Education (CANARIE) which called for Health Canada to work with the provinces and territories to develop a national strategy for the institution of an integrated health information network. In February 1997, the federally commissioned National Forum on Health recommended the development of an evidence-based health system based on a nationwide information system.

In response to these reports, particularly the National Forum on Health, the February 1997 federal budget committed \$50 million over three years to develop a Canadian Health Information System (CHIS — now referred to as the Canadian Health Infostructure), an electronic “network of networks,” to support evidence-based decision-making. In April 1997, the Advisory Council on Health Infostructure was created to advise the minister of health on

developing a long-term strategy to establish a Canadian Health Information System. This strategy included a call for the development of several pilot projects as well as the launch of a three-pronged Health Canada initiative to accelerate the development of an information system. The initiatives called for were a Population Health Clearing House, a First Nations Health Information System and a National Health Surveillance System. The health-surveillance

national surveillance priorities. The Integration Design Team presented a draft report to the deputy ministers of health in June 1998 which led to the publication of a discussion paper on an Integrated National Health Surveillance Network for Canada in September 1998. These reports initiated a broad series

recognition that, in general, a more evidence-based and program-rational approach to decision-making in health was necessary. Health surveillance, as one of the least contentious federal/provincial areas, was believed to be the area in which progress could be made relatively quickly.

Some concerns have been expressed regarding the development of the NHSI. The initial development excluded the provinces to a large extent. Partly as a result of this, the scope of the project may have been too large with too many pilots. The intent of the project subsequently changed from emphasizing the creation of an overall system to emphasizing the development of infrastructure on a project-to-project basis. This satisfied some provinces (Ontario and Quebec) which felt that the previous attempt to create a national system was too much of an infringement on their jurisdiction and too ambitious. Other provinces (Saskatchewan and Manitoba), however, had been more supportive of the development of an overall national system with national goals and objectives.

While F/P/T relationships in the development of the NHSI have to this point been generally positive, concerns have been expressed that the relationship among federal agencies may itself threaten the project. Specifically, concerns have been expressed that the directorates, particularly the LCDC, had been left out of the initial NHSI decision-making processes resulting in duplication of surveillance efforts in the HPB. Changes in the approach to the NHSI have, for the moment, addressed these concerns. The NHSI, however, currently remains separate and independent from the other HPB directorates.

Problems which may develop between the federal government and the provinces relate to the following issues: funding of surveillance activities, standards related to data collection, and ownership of information. With respect to the issue of funding, currently the federal government has been responsible for financing the coordination of the process while information-collection costs are being borne by the provinces. The continued development of the NHSI will require further investments in infrastructure at the local level, such as the expansion of current surveillance activities and training of personnel. Financing for this has not been finalized, although it will likely be obtained from a combination of federal, provincial, and private sources. However, it is expected that overall costs will be modest as the NHSI makes use of existing surveillance systems.

The issues of data quality and data ownership are also currently being worked out. Data quality is important to ensure a minimum standard of data collecting and processing. This will likely require strategic investments by national agencies such

as the Canadian Institute for Health Information. Data ownership is a more contentious issue. Provinces have expressed resistance to surrendering their data to federal officials due to concerns about how the data may be analyzed and for what purposes. The use of legislation to mandate transfer of provincial surveillance information to the federal level is considered unconstitutional. Conditional

improve public safety. Of the areas of jurisdictional dispute in health, health surveillance was viewed by both Ottawa and the provinces as the one in which progress was most likely to be made. The impact of federal reductions in transfer payments on provincial attitudes also contributed to the development of a collaborative relationship. After the federal reduction in transfer payments in the mid-1990s, the provinces were hesitant to enter into further shared-cost programs with Ottawa, particularly if there were conditions attached to funding. The collaborative approach adopted toward health surveillance is likely the only relationship the provinces would have agreed to because, after the initial roles and responsibilities were established, each level of government then funds what it sees as a responsibility of its own jurisdiction.

Several issues, such as developing a national standard of data collection and sharing, remain unresolved. There is a potential for Ottawa to take unilateral action in order to resolve this issue. In this approach, Ottawa would apply conditions to any federal funding for local surveillance activities. This might allow the federal government to set the standard of data quality and help to ensure that provinces supply data to federal agencies. This approach, however, would also represent a more hierarchical relationship between Ottawa and the

to this approach. Instead, with respect to the NHSI in particular, issues surrounding standards and sharing of data will take place on a project by project basis. Overall, in the area of policy goals and outcomes, collaboration has been an improvement over the previous disentangled regime by allowing for a Canada-wide system with improved economies of scale and identification of

improved health outcomes by reducing morbidity and mortality and, consequently, prevent loss of human capital. The coordinated approach will also allow for the development of an overall vision and long-term surveillance strategy for the country. Eventually, investments will be made in the area of the determinants of health which should further contribute to human development. The new system will address the emerging public demand for monitoring changes in health status, although it will be difficult to determine if better measurement is a result of the new health-surveillance system or of other changes being made in the health system at the same time.

The collaborative approach, by allowing for the existence of a voluntarily coordinated national program, is expected to yield improved health outcomes for Canadians and thus result in less loss of human capital than the current state of surveillance under disentangled federalism. The degree of benefit in this area cannot be determined at this time and is dependent on the success of the implemented program.

Social Equity. Under disentangled federalism, there exists considerable variability from province to province in levels of health surveillance and consequently the potential for variability in health. The Network and the NHSI will attempt to reduce the regional discrepancies by promoting sharing of surveillance infrastructure. Establishing national standards could further reduce

Consequently, the major impetus for the development of improved health surveillance has not been public pressure but rather pressure from experts within the field. It is widely accepted by experts that the current situation is inadequate and could possibly lead to adverse health consequences. Political fear of another Krever inquiry has also acted as a motivator for change. The majority of the consultation that led to the development of the NHSI has occurred between non-elected officials and content experts in the field. There has, to now, been little public involvement in the process.

Collaborative federalism, in theory, may further contribute to the lack of public involvement by forcing each level of government to focus first on satisfying the other levels of government, with the Canadian public interest coming second in priority attention. However, there was little public involvement in health surveillance under the previous disentangled model, suggesting that it is the low-profile, technical nature of this issue that is the major factor. Ultimately collaborative federalism may actually increase public involvement by allowing the development of a national plan and thereby raising the profile of the field. In addition, by developing a coordinated approach to health surveillance, health information should be more readily available to the public. An argument could be made that the current low-profile nature of the field may actually benefit a collaborative regime to advance a common policy settlement by allowing for a consultative

was not clear. This was due to a combination of ambiguous constitutional division of powers and disentangled federalism which has not forced the issue to be addressed. The collaborative approach has resulted in an assignment of roles and responsibilities for health surveillance and therefore should make accountability more clear.

Under both disentangled federalism and collaborative federalism there has been a problem with transparency. There, in particular, appears to be a transparency issue with the process that led to the NHSI. This is partly a consequence of the numerous levels of government, government agencies, and stakeholders involved in the development process as well as its relatively complicated nature. Individuals in the HPB have expressed uncertainty over who is responsible for decision-making and how some of the decisions were arrived at. These concerns have contributed to a change in the focus of the project from initially providing a comprehensive information system to developing infrastructure for the ongoing collection of information on a project-by-project basis. The development of the Network initiative has been more transparent with a clear definition of individuals, organizations, and levels of government involved at each point of the development process.

The move to collaborative federalism has improved accountability by clarifying roles and responsibilities. The complexity of the discussions associated with the collaborative model may have contributed to poor transparency.

Protection of Public Interest. In theory, provincial and federal elected officials involved in the NHSI should be representing the interests of their respective electoral majorities. However, the technical nature of the NHSI has required reliance upon non-elected content experts who are not as accountable to the public. This combined with the lack of public awareness of the project and problems with transparency of the process increases the possibility of ignoring specific stakeholder concerns.

The parallels between the regulation and management of the blood industry and health surveillance demonstrate the potential negative implications for society of not addressing known concerns about the Canadian governments' oversight of health surveillance. The regulation of blood products is a federal matter, while the management of the blood system was an interprovincial arrangement. Like health surveillance it had been a low-profile, technical field with a lack of public involvement in the process. The management board of the blood agency, composed extensively of provincial representatives, did not have

the authority of provincial/territorial treasuries to commit unbudgeted provincial money to repair emergency problems. This created a structural environment where the best interest of neither the F/P/T governments nor the Canadian public could be met on a timely basis and resulted in the failure to introduce appropriate HIV and hepatitis C tests when essential. Like the current state of surveillance, the blood industry had fragmentation of responsibility with a lack of clear accountability and poor transparency, as well as an ineffective inter-governmental management structure. The reformed blood system involves the public, is more transparent, and has made accountability clearer.

Health surveillance in its present state could be considered to be at risk

to possible federal involvement in these technical matters. Rather, the greater concern was with the lack of a federal presence in providing leadership to develop Canada-wide coordinated surveillance activities.

The lack of jurisdictional clarity necessitated a collaborative approach to surveillance reform. The F/P/T Working Group on Roles and Responsibilities was an example of federal-provincial cooperation and the Network and NHSI have continued this collaborative style. In order for the NHSI and other

PARALLELS WITH ENVIRONMENTAL HARMONIZATION LEGISLATION

A further understanding of the collaborative process, its strengths and its weaknesses, can be gained by reviewing the experience in the field of environmental harmonization. Two major F/P/T initiatives have occurred in recent years in environmental harmonization; the ambitious but failed Environmental Management Framework Agreement (EMFA) and the less ambitious Canada-Wide Accord on Environmental Harmonization (EHA). Both of these were attempts to address issues surrounding lack of coordination of governmental efforts in this area and concerns about overlap and duplication.²²

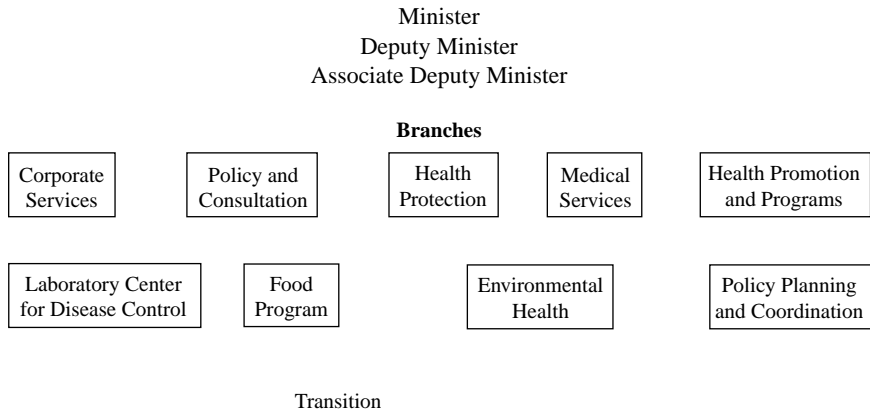
As with health surveillance, the roles of federal and provincial governments in relation to environmental harmonization are not laid out neatly in the constitution. The initiative to harmonize environmental policy between F/P/T governments was partially borne out of concerns regarding this constitutional ambiguity. At both levels of government a spirit of cooperation marked the

CONCLUSION

The development of the Network for Health Surveillance in Canada and the National Health Surveillance Infostructure provide valuable insights into the nature of collaborative federalism. Based on this case study, collaborative feder-

APPENDIX A

APPENDIX B STRUCTURE OF HEALTH CANADA (1995-1999)



Important Individuals in the Development of the NHSI

- Alan Nymark – Associate Deputy Minister (responsible for CHI Initiatives)
- Dr. Joe Losos – Assistant Deputy Minister HPB
- Alexa Brewer and – Project Managers for NHSI, Directors of Surveillance
- Dr. David Mowatt Transition
- Dr. Rick Mathias – Co-designer of NHSI
- Dr. Greg Sherman – Co-designer of NHSI
- Ian Shugart – Visiting Assistant Deputy Minister in charge of HPB
Transition

APPENDIX C DESCRIPTION OF THE NHSI

At present the core components to the NHSI are the Canadian Integrated Public Health System (CIPHS), the Local Public Health Infrastructure Development (LoPHID), and the Spatial Public Health Information Exchange (SPHINX). These are supported by the NHSI infrastructure which is composed of the Public Health Intelligence Database (PHIDB) and the Geomatic Information System Infrastructure (GIS). These are described in more detail below.

Core Components

Canadian Integrated Public Health System (CIPHS): A computer-based system designed to capture, integrate, and report surveillance data. This will link, in a standardized manner, data from a variety of health units across Canada.

Local Public Health Infrastructure Development (LoPHID): This component is designed to strengthen the local public health capacity to conduct surveillance, with attention to information on determinants of health. It will also generate and use local information for decision-making.

Spatial Public Health Information Exchange (SPHINX): This component is designed to access information already residing in health-related databases.

NHSI infrastructure

Public Health Intelligence Database (PHIDB): A repository of information from NHSI and Health Protection Bureau (HPB) surveillance activities.

Geomatic Information System Infrastructure (GIS): This infrastructure will allow for the development of the spatial information needs of the NHSI project.

Global Public Health Intelligence (GPHIN): A global early warning system designed to monitor international sources of information to allow for early detection and validation of health risks.

APPENDIX D SOME KEY ORGANIZATIONS INVOLVED IN THE DEVELOPMENT OF THE NHSI AND NETWORK

Federal Organizations

Information Highway Advisory Council: Created by the federal government to provide advice on how to develop the Canadian Information Highway. It also required a federal leadership role in developing a unifying health information infrastructure.

National Forum on Health: An initiative launched by the federal government in 1994 whose objective was to consult with the public and advise the government on ways to improve the health of Canadians. It proposed the development of an evidence-based approach to health decision-making which led to the introduction of the Canadian Health Infostructure.

Advisory Council on Health Infostructure: A group of key individuals in health care who advise the federal minister of health on the development of a national strategy for a Canadian health information system.

Canadian Health Infostructure: Created following recommendations from IHAC and CANARIE and in direct response to the National Forum on Health report. The NHSI is one component of the CHI.

Surveillance Transition Team: Individuals assigned with the responsibility of strengthening and expanding the HPB

in health between levels of government and clarify roles and responsibilities. This group reported to the Council of Deputy Ministers and identified that large gaps existed in health surveillance.

Integration Design Team: Evolved from the Working Group on Overlap and Duplication. Comprised of health-surveillance experts from across the country, this Design Team was established to create an integrated national health-surveillance network. It reported to the Surveillance Transition Team and the Council of Deputy Ministers.

NOTES

¹See Duane Adams, "Introduction and Overview," in this volume.

²Government of Canada, *A Network for Health Surveillance in Canada: Summary* (Ottawa: Minister of Public Works and Government Services, 1999).

³United Kingdom, *Constitution Act, 1867*, 30 and 31 Victoria, C.3; P.W. Hogg, *Constitutional Law of Canada* (Toronto: Thomson Canada Ltd., 1998); M. Jackman, "The Constitutional Basis for Federal Regulation of Health," *Health Law Review* 5, 2 (1996):3-10.

⁴Canada, *Department of Health Act*, 1996, c. 8; *Statistics Act*, 1970-71-72, c.15, s. 1.

⁵C.P. Shah, *An Introduction to Canadian Health and Health Care System*, 2d ed. (Toronto: Department of Preventative Medicine and Biostatistics, University of Toronto, 1987).

⁶P.N. Sockett, M. Garnett and C. Scott, "Communicable Disease Surveillance: Notification of Infectious Diseases in Canada," *Canadian Journal of Infectious Diseases* 7(1996):293-95.

⁷"Welcome to 'The Sentinel,'" *The Sentinel* (1997):1.

⁸*Partnership for Quality, Timely Surveillance Leading to Action for Better Health*, proposal to Develop a Network for Health Surveillance in Canada (Ottawa: Minister of Public Works and Government Services, 1999).

⁹Consulting and Audit Canada, *Canadian Health Information System: Business Requirements*, 8 May 1997; Advisory Committee on Epidemiology Working Group on National Surveillance, "Results of an Inventory of Provincial/Territorial Surveillance Activities," Draft results, 6 October 1997.

¹⁰Socket, Garnett and Scott, "Communicable Disease Surveillance"; Report of the Task Force on Surveillance <[Http://.hc-sc.gc.ca/main/lcdc/web/survlnce/tfrep_e.html](http://.hc-sc.gc.ca/main/lcdc/web/survlnce/tfrep_e.html)>.

¹¹R. Schabas, *Health Surveillance National Survey*, prepared by Schabas Associates Inc., 15 November 1997.

¹²Auditor General of Canada, *Report* (Ottawa: Office of the Auditor General of Canada and the Commissioner of the Environment and Sustainable Development, 1999), Chapter 14, "National Health Surveillance: Diseases and Injuries."

¹³Commission of Inquiry on the Blood System in Canada (Krever Commission), *Final Report* (Ottawa: Canadian Government Publishing, 1997).

¹⁴*Ibid.*

¹⁵Government of Canada, *A Network for Health Surveillance in Canada*; Health Canada, *Building Partnerships to Improve Health Surveillance Across Canada: The National Health Surveillance Infrastructure* (Ottawa: Supply and Services, 1999); EXOCOM Consulting Corp., *National Health Surveillance System, Program Charter*, Version 1, May 1998.