Discussion paper for Board of Directors,
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Michael M. Rachlis MD MSc FRCPC
Policy Analysis, Epidemiology, Program Evaluation
Telephone (416) 466-0093
Website: www.michaelrachlis.com E-mail michaelrachlis@rogers.com
13 Langley Avenue
Toronto, Ontario
Canada M4K 1B4

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The Federal Government Can and Should Lead the Renewal of Canada's Public Health System

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Executive Summary

This year, several calamities reminded Canadians that public health is the invisible infrastructure, which supports our health and our health care system. Canada's politicians have finally been spurred into action. But will the impending reforms to public health be sufficient to prevent the next outbreak? Will the reforms consider broader public health issues such as chronic illness and the continuing disparities in health between Canadians?

Both the federal government and the provinces have responsibility for public health. The Naylor Report concluded that the federal government has failed to fulfill its constitutional responsibilities because of ongoing conflict with the provinces about health care funding. The federal government must lead the reform of public health if it is to occur.

In the current Canadian policy environment, the federal government must spend new money to gain the cooperation of the provinces for public health reform. The 2000 and 2003 health accords provided tens of billions of dollars for health care but none to public health. Adequately funding public health won't break the federal government. The federal government spends less of our country's national income than it has for over fifty years $1 Billion per year for public health would cost less than 0.1% of Canada's GDP.

There are a variety of legislative and funding policy instruments for public health reform. Increasing the federal Canada Health Transfer to the provinces and mandating the provinces to provide certain public health services is unlikely to lever reform. The Canada Health Act is too blunt an instrument to guide the development of a coordinated public health system and the provinces are not following the rules for Canada's present transfers for Medicare. In a similar fashion, the health accords are proving to be a relatively inefficient method of leveraging health care reform.

Enhancing Health Canada's Population and Public Health Branch as a special operating authority is unlikely to be effective. This option would maintain the current problems of labour rigidity and limited budget horizons. It would also leave the negotiations for a pan-Canadian public health system to the vagaries of FPT intergovernmental affairs.

Establishing the new Canadian public health agency as a special statutory agency is a more promising option. Special statutory authorities can sign contracts with other governments and organizations. They have enhanced labour flexibility and can have multi-year budgets. They still derive their policy direction from the minister. The Naylor Report recommended establishing the new agency as a special statutory authority.

Establishing the new Canadian public health agency as a crown corporation would maximize public health's independence. The crown corporation model offers similar advantages to the special statutory agency option -- greater labour flexibility and ability to contract with other public health agencies. But, it gives greater independence for policy development and strategic planning. This paper recommends that the public health agency be established as a crown corporation to maximize public health's independence. However, if it is not established as a crown corporation, then it should be created as a

special statutory authority. This would ensure the minimum autonomy necessary to accomplish its work.

Quebec is generally considered to have the most effective public health services in Canada. The National Institute of Public Health is the lead agency for public health. The Governor in Council appoints its board and the director general/president. Many of its staff are shared with the regional health authorities in Montreal and Quebec City and the province's universities. The Quebec Institute is mandated with developing a broad program of public health beyond communicable disease. Quebec's public health institute is closest to the statutory authority model.

A new Canadian public health agency would be in a better position to contract with and provide funds to provincial, regional, and local public health services. The Naylor Report suggested a broader role than establishing and maintaining systems for communicable disease control. Each public health function needs and plan for reform.

The new Canadian public health agency should coordinate and fund the country's population health assessment. The agency should coordinate and fund the surveillance system, which should include data on chronic illnesses and the determinants of health. Responsibility for health protection legislation and regulation should be consolidated in Health Canada. The public health agency should provide scientific back up for regulatory activities. The agency should coordinate and fund the country's disease and injury control services and purchase all needed vaccines. The agency should coordinate and fund health promotion programs, which should include engagement with citizens and their organizations.

The SARS outbreak revealed that Canada does not have an emergency plan for communicable disease control. As recommended by the Naylor Report, the federal government should set a time limit for negotiations with the provinces for an outbreak management system. If an agreement could not be reached during this period, the federal government should draft default legislation, which would establish rules for FPT relations on public health issues, particularly the management of communicable disease outbreaks.

Canada's chief public health officer should be the CEO of the new Canadian public health agency. Canada does not have public health goals or a strategic plan for public health. The new Canadian public health agency should develop a strategic plan for public health as one of its first priorities.

In the end, whether a society can effectively address its health problems depends on its ability to mobilize collective action. This year, Canada had a close brush with disaster. The SARS outbreak dramatically demonstrated the dire health and economic consequences that can accrue from an inadequate public health system. Societies, which place a low value on public health, become sick societies. Hopefully, it will not take another disastrous disease outbreak, tens of thousands deaths from lung cancer, or the complications of the obesity epidemic for Canada to implement an effective, properly resourced strategy for public health.

Introduction

This year, several calamities reminded Canadians about the importance of public health. The Severe Acute Respiratory Syndrome (SARS) outbreak and the identification of an Alberta cow infected with BSE* were two key causes of Canada's sluggish economic growth in the first half of 2003. Three years ago, waterborne outbreaks of infectious diseases occurred in Walkerton Ontario and North Battleford, Saskatchewan. Canadians were shocked that even a developed country with a large supply of fresh-water could have problems with its drinking water. In August, revelations about inadequate inspection processes in a meat processing plant in Aylmer Ontario again raised concerns about the safety of Canada's food supply.

The federal SARS report chaired by Dr. David Naylor noted that experts have advised governments for years of public health's problems but their warnings were disregarded. As a result Dr. Naylor wrote, "there is much to learn from the outbreak of SARS in Canada -- in large part because too many earlier lessons were ignored."[1]

Canada has generally high standards of health. Life expectancy at birth hit a new high in 2001 of 82.2 years for women and 77.1 years for men.[2] These figures place us seventh in the world for women and fifth for men.[3] In contrast, the US which spends much more on health care is 18th for women and tied for 17th for men.

However, the recent shocks remind Canadians that public health is the invisible infrastructure, which supports our health and our health care system. Many erroneously assume that our relatively good health is due to our health care system. Health care certainly has something to do with health status and almost all of us have had or will have cause to feel grateful to Canada's health care services. But, the greatest increases in life expectancy took place before the development of modern health care. These gains were due to clean water, safe food, and improvements in nutrition, housing, and working conditions.

Even in an unparalleled era of high technology medicine, public health and prevention are still the most important factors to improve our health. With what we know now, we could prevent over 80% of the cases of coronary heart disease cases,[4] diabetes,[5] and chronic obstructive lung disease and lung cancer.[6]

But, public health's victories are silent. When a patient survives a new open-heart operation, it's big news. When people don't get heart disease because of public health's activities, there is no coverage.

It's illness and treatment that get public attention. It's human nature. Denial is cheap and prevention costs in the short-term, even if the expenses are recouped over time. But, any society that neglects the prevention of disease and the promotion of health does so at great risk. Benjamin Disraeli's words are as relevant now as ever:

* Bovine spongiform encephalopathy, variant Creutzfeld Jacob Disease, or mad cow disease.

> "The health of the public is the foundation upon which rests the happiness of the people and the welfare of the state."

With the events of 2003, Canada's politicians have finally been spurred into action. There will be reforms to public health. But will they be enough to prevent the next devastating outbreak? Will they also consider broader public health issues such as the continuing disparities in health between different regions and socioeconomic groups?

This discussion paper briefly delineates public health's problems, discusses the jurisdictional issues at stake, and then outlines the policy options for the federal government to rejuvenate Canada's beleaguered public health services. It is intended as a complement to the Naylor Report focussing on the specific model that would best serve public health in Canada and globally.

Canada's public health services have a lot of problems

Public health is commonly defined as:[7]

> "The science and art of promoting health, preventing disease, prolonging life and improving quality of life through the organized efforts of society."

The key functions through which public health services fulfill their mandate are:

1. Population health assessment
2. Health Surveillance
3. Health protection
4. Disease and injury prevention
5. Health promotion

In the last few years, many others besides Dr. Naylor have concluded that Canada's public health services are inadequate for the task at hand:

- Justice Horace Kreever noted in his report[8] that, "Public health departments in many parts of Canada do not have the resources to carry out their duties."
- A report on public health infrastructure was presented to Federal Provincial Territorial Deputy Ministers of Health in June 2000 but the Deputies refused to have the report tabled. The report noted that, "There seems to be agreement that only one crisis can be handled at a time."[9]
- The Canadian Medical Association Journal referred to public health as "being on the ropes."[10]

Dr. John Frank, one of Canada's senior public health physicians and director of the Canadian Institute of Population and Public Health, has identified five categories of issues affecting public health:[11]

1. One world, no boundaries
2. New epidemics of chronic disease
3. Environmental degradation and change
4. The perils of untested new technologies
5. Public health: an evaluative conscience for the clinical care system

Each of these is described briefly in turn.

1. One world, no boundaries

While Canadians are smug about the elimination of epidemics of infectious diseases, there are daily reminders that an innocuous outbreak thousands of kilometers beyond our borders can quickly wreak devastation here. HIV/AIDS did not exist in North America prior to 1980 but it is now one of the leading causes of death for young men. The West Nile virus did not exist in North America prior to 1999 and that year caused only 62 known human infections and 7 deaths in the New York City area. However, it caused over 4500 confirmed cases and 300 deaths in 2002 and has now become established in most parts of North America.[12] As of October 7, 2003 there were already over 7000 North American cases.

Canadians generally consider tuberculosis a disease of only historical importance but worldwide it is more common than ever. An increasing percentage of cases are resistant to multiple antibiotics and can only be treated with long, expensive courses of medications. Canada's public health system appears unable to mount the most basic control programs. A recent study documented that only 20 percent of immigrants to Ontario adhered to TB follow up.[13] Only 6 percent were given therapy to prevent future episodes of TB. In 2001, the Department of Public Health received 3,300 referrals from Federal Immigration officials for inactive TB. They should be monitored regularly for 3-5 years but a spokesperson for Toronto public health admitted, "…we have had to cut back on our follow up. In fact, we do quite minimal follow-up at this point."[14]

One of public health's greatest triumphs is vaccination. Smallpox summarizes the evolution of public health. Less than two hundred years after Jenner gave the first vaccination in England in 1797, the World Health Organization managed to eliminate the last wild disease in Ethiopia in 1977. At this time it is only found in research facilities, and biological weapons labs. Now, public health has to cope with the possibility of terrorist use of smallpox, as well as other communicable diseases, and noxious agents.

SARS may have been generated by a mutation of a previously existing coronavirus passing through a wild animal in China (a civet cat) and thence to humans.[15] Within a few months of the disease's first appearance modern air travel had spread it to the other side of the Globe. Migration and advances in travel technology have always been important to disease spread. Measles was unknown to first nations peoples and devastated their communities after European contact. With the development of intercontinental shipping trade, Cholera regularly spread from its origin in the Indian subcontinent and lay

waste to communities all around the world. However, there is a qualitative difference between infections that can only spread at the rate of 15 km/h and those that can go 915!

It also appears that Canada's public health system is incapable of dealing with these risks. In 1999, the Auditor General reviewed the management of a disease outbreak linked to contaminated cheese.[16] At the time, the Auditor concluded that the lead agency, the Canadian Food Inspection Agency (CFIA) did not share information with public health services in a timely manner. This delay caused more illnesses.

Some food inspection services are under provincial control. In August 2003 it was revealed that a meat plant in Aylmer Ontario was processing meat from animals that died before slaughter.[17] The provincial government had evidently been warned of possible problems eighteen months earlier but cut the number of full-time meat plant inspectors from 103 to 10.

Canada is the only developed country without an immunization schedule. The provinces currently decide upon their own immunization schedules. Some provinces cover new vaccines for diseases like chickenpox while others do not. In August 2003, an Ontario health unit, held a lottery to determine who would 'win' a dose of a new expensive vaccine against meningitis.[18] The province does not fund the vaccine and the health unit did not have enough funding to pay for full coverage.

To make things worse, governments have not organized themselves to bulk purchase vaccines. As a result, government and individuals spend millions extra than if governments cooperated.

2. New epidemics of chronic disease

The main health problems currently facing Canadians are chronic illnesses. Some chronic illnesses such as coronary heart disease have waned. Canadians are now less than one-third as likely to die of a heart attack or stroke than they were 50 years ago. However, cardiovascular disease remains the major cause of death. Some cancers such as stomach and cervix have substantially decreased their death rates.[19] Lung cancer death rates in men have fallen by over 15% since they peaked in the late 1980s. Unfortunately, female lung cancer death rates have increased by nearly 400% in the past 30 years. And, while non-Hodgkins lymphoma is a rare disease it is also increasing.

The prevalence of childhood obesity is also increasing rapidly. This is fueling epidemics of diabetes and end stage kidney disease and may portend a future resurgence in coronary heart disease.[20] Like other chronic illnesses, the burden of the childhood obesity epidemic falls more heavily on Canadians of lower socio-economic status.[21]

Mental health concerns are as common or more common than physical problems.[22] Many Canadians, particularly children, are not able to get treatment for their problems.

3. Environmental degradation and change

While the political debate rages about whether human activity is responsible for environmental, there is little question that there is major environmental change and that it has grave implications for human health.[23] Global warming may change the distribution of a number of insect borne diseases including West Nile and malaria

There is widespread contamination of ground water from which many Canadians, especially in rural areas draw their drinking water.[24] And yet, there appears to be less public health capacity to protect us from outbreaks of water borne illness like those in Walkerton Ontario and North Battleford Saskatchewan.[25] The estimates of the costs to renovate Canada's water systems are in the tens of billions of dollars.[26]

There are also concerns about air quality especially in the Greater Toronto area and BC's lower mainland.[27] It has been estimated that in the city of Toronto alone there are approximately 1,000 premature deaths, 5,500 hospital admissions, and over 60,000 cases of bronchitis in children every year due to polluted air.

Other aspects of the built environment also pose health risks. Millions of Canadians, including many children, suffer from inadequate housing and limited access to recreation and nutritious food. These environmental risks are some of the reasons for the continuing health disparities between wealthier and poorer Canadians.

4. The perils of untested new technologies

Canadians rely upon public health agencies to protect us from dangerous drugs, foods, and other products. Recently, there are concerns that the fine balance of ensuring accessible drugs vs. protection from dangerous products has tipped in favour of the drug industry.[28] Seven drugs approved since 1993 and later withdrawn from the market have contributed to at least 1000 deaths across North America. New drugs are typically tested in several thousands of patients prior to licensing. But, less common side effects might only declare themselves after hundreds of thousands of treatments. There is no systematic post-market surveillance to identify these adverse effects.

There is also concern about dangers from untested new technologies from agricultural practices to medical devices. When an Alberta cow was discovered with BSE, much of the rest of the world wanted to know why Canada still allows ruminant animals to eat feed containing other ruminants. Canada still permits routine administration of antibiotics to animals as growth promoters despite Denmark demonstrating that this practice is unnecessary and causes increased antibiotic resistance.[29]

There are also concerns about the explosion of genetic tests and procedures, which are touted to a worried public. However, closer evaluation often reveals that the benefits may have been overblown, especially for low-risk persons.[30]

Societies have always had to balance risks with benefits. But our 21st century high technology, mass marketing, and international air travel magnify risk and sometimes the

consequences are irremediable.

5. Public health: an evaluative conscience for the clinical care system

Health care systems have been historically based on treating those who 'come through the door' and not on who actually needs care. As a result, family doctors spend approximately 1 in 8 visits treating people for upper respiratory infections[31] while most chronic illnesses are under-diagnosed and under-treated.[32,33] Thousands of Canadians die every year and tens of thousands are hospitalized from heart attacks, strokes, kidney failure and other complications from their chronic illnesses.[34]

While public health has responsibility for a geographical area, family doctors typically only take responsibility for one episode of care for their patients. Very few family doctors have lists or rosters of patients and fewer still have lists of patients with certain conditions, which require detailed follow-up; e.g., diabetes.

Manitoba has developed a registry and follow-up program for childhood immunizations but across the country there is little public health involvement in these clinical preventive services or with those for cervical cancer or breast cancer.[35]

All provinces except Ontario have moved to some form of regional authority model for health services. For example, in the western provinces, typically hospital, long-term care, home care, mental health, and public health services are now under one budget and one management team. The regional authorities are just now starting to plan services around their populations. The old system of waiting for patients to come through the door still dominates planning and resource allocation.

Public health: pay a little now or a lot in the future

Public health is a victim of its success. The elimination of the epidemics of infectious disease, which plagued Canadians up until the mid-twentieth century, blinded Canadians to the threats of new infectious diseases. Public health also has great potential to help contain chronic illnesses, environmental threats, and dangerous new technologies, as well as improve the functioning of the health care system.

In fact, the sustainability of Canada's health care system is intimately intertwined with the future of public health. If the potential for prevention could be translated into reality just for coronary heart disease, diabetes, lung cancer and chronic lung disease, this would free up over 6000 hospital beds.[36] This is more beds than the entire complement of beds in Atlantic Canada.

Derek Wanless, a London statistician and banker recently reviewed the sustainability of the UK's National Health Service for the Treasury Department.[37] He developed three future scenarios and then tested each for its impact on resource requirements. Wanless concluded that the scenario, which included a focus on public health, would never be more expensive and would improve health the most. It eventually would be 5% less

expensive than only focussing on illness treatment and 15% cheaper than simply moving incrementally from the status quo.

We seem to have forgotten the public health maxim that one cannot ever build a big enough hospital at the bottom of the cliff without first building a fence around the top. Public health is the fence around the top of the cliff.

The next section begins the discussion of the federal role in public health.

Which jurisdiction has responsibility for public health?

Both the federal government and the provinces have responsibility for certain aspects of public health. In theory the provinces have responsibility for local matters while the federal government has the responsibility for interprovincial and international threats. In practice, the federal government has failed to fulfill its constitutional responsibilities because of ongoing conflict with the provinces about funding.

The original Canadian constitution, the British North America (BNA) Act, was proclaimed in 1867. At that time there was little organized public health or health care. There was little in the way of regulation of doctors or hospitals. In fact, hospitals were largely places for poor people to die. Health was considered primarily a private, local matter. The exception was the importation of infectious diseases like cholera. Quarantine originated in the 1300s in Italy to protect ports from plague. In fact, Quarantine, is derived from the Latin word *quaresma*, referring to the forty days ships had to wait before they could land.[38]

Given the contemporary political environment, not surprisingly, there is very little mention of health in the British North America Act. The provinces were granted the constitutional authority for:

> "The establishment, maintenance, and management of hospitals, asylums, charities, and eleemosynary[*] institutions in and for the province, other than marine hospitals."

The federal government was given the responsibility for:

> "Quarantine and the establishment and maintenance of marine hospitals."

The archaic language highlights how out of touch the Canadian constitution is with the realities of 21st century Canadian health policy. As, health has become a more important policy area, the division of responsibilities between the federal government and the provinces has developed according to custom, consensus, and, not infrequently, court decision.

Court decisions subsequent to 1867 gave the provinces primary responsibility for local public health services as well as the regulation of hospitals and health professionals. These powers have been considered to be of a local or private nature according to BNA Act section 92(16).

However, other court decisions have also reaffirmed the federal government's ability to provide conditional grants to the provinces even in areas of clear provincial responsibility such as health care, education, training, and social services.

Notwithstanding the debate about health care services, it does appear that the federal government has a major role in many public health issues. Justice Willard Estey

[*] Defined by the Oxford English dictionary as, "Of or pertaining to alms or almsgiving; charitable."

commented:[39]

> "Health is not a subject specifically dealt with in the Constitution Act either in 1867 or by way of subsequent amendment. It is by the Constitution not assigned either to the federal or provincial legislative authority. Legislation dealing with health matters has been found within the provincial power where the approach in the legislation is to an aspect of health, local in nature. On the other hand, federal legislation in relation to 'health' can be supported where the dimension of the problem is national rather than local in nature…or where the health concern arises in the context of a public wrong and the response is criminal prohibition…In sum, "health" is not a matter which is subject to a specific constitutional assignment but instead is an amorphous topic which can be addressed by valid federal or provincial legislation, depending in the circumstances of each case upon the nature of scope of the health problem in question."

The Canadian Medical Association[40] and the Naylor Report have recently reviewed the arguments for the federal government's role in public health. Their analysis concludes that the federal government can use its claim to criminal law power for regulation and stewardship of public health. The residual powers of the federal government (POGG or "peace, order, and good government") also allow the federal government to deal with matters that are of a pan-Canadian concern as well as those which are deemed to be of an emergency nature.

The federal government has the constitutional responsibility for health care for aboriginals on reserves, including public health. The federal government is also directly responsible for public health services relating to the military, the RCMP, and federal correctional institutions.

The British North America Act also gives the federal government responsibility for the census and statistics. This should permit the federal government to establish surveillance systems for disease particularly when linked with their residual powers

There are also political reasons for the federal government to consider taking a strong role in public health. The six smaller provinces have little hope of maintaining adequate resources for public health. As demonstrated in Toronto, even Canada's largest public health units are stretched to breaking when confronted with a disease outbreak like SARS. Smaller jurisdictions also lack the critical mass for experts in program planning and evaluation.

Further political reasons for federal involvement include the claim by municipalities as well as health care and social service agencies that the federal government should be more financially responsible for the health of non-reserve aboriginals, refugees, new immigrants, and official language minorities.

Over the last twenty years, the conflict between the federal government and the provinces

and territories has intensified. In 1983, the federal government made the first cuts to its payments under the Established Programs Financing Act (EPF). Further cuts were made in 1986, 1989, 1991, and 1995. Now the provinces complain that the federal government is only paying 16% of the costs of Canada's health services.[41] The federal government claims the true figures are between 32% and 40%.[42] Whatever the true value, the provinces believe that the federal government should be paying a lot more and many will feel aggrieved at whatever amounts they receive.

In February 2003, the Prime Minister announced a new FPT health accord, but this seems to have heightened, not reduced the conflict. The provinces didn't receive as much money as the Romanow Commission had recommended and several now face tight budgets. The SARS outbreak and the BSE case have especially adversely affected Ontario and Alberta respectively. The federal government claims its revenues have also suffered. Finance Minister John Manley, has said that the federal government may have to renege on a $2 Billion payment next year which was conditional on a large federal surplus.

Because of ongoing conflict over funding the true authority over public health matters is somewhat unclear. The federal government could exercise more authority, especially in areas like communicable disease control. But, because of the already existing intergovernmental tension, neither the federal minister of health nor Health Canada wish to tread on a province, or even to be seen as trespassing on provincial jurisdiction. As a result of the ongoing conflict, communication between health professionals is often strained.

The public's misunderstanding about language mirrors the jurisdictional confusion about public health. The frequent use of the phrase "public health care" (meaning publicly funded *illness treatment care*) in lay discussion, suggests that public health really means "Medicare". Within the Canadian public health community and governments, the phrase public health was largely supplanted by "population health" over the 1990s, although average Canadians remain generally unfamiliar with the term.

This paper is mainly concerned with the legislative and funding instruments that the federal government might use to promote public health. This section first outlines the Canadian policy context which affects the choice of instruments, then delineates the general approach suggested for the federal government, and finally describes the details of instrument choice according to the specifics for each public health function.

The Canadian policy context is unique

Canadians typically look to countries such as the US, the UK, and Australia for policy inspiration, but the Canadian policy environment is unique. The formulation of Canadian health policy has more of the characteristics of foreign policy than domestic affairs.

Canadians look for policy inspiration to other countries, such as the United States, the United Kingdom, and Australia, which have similar histories, democratic institutions, cultures, and constitutional makeup. However, the choice of policy instruments often depends upon idiosyncratic factors which are characteristic of a particular country or a

particular policy area. Canadian policy analysts Howlett and Ramesh[43] note that:

> "…A nation's policy style and political culture, and the depth of its social cleavages, have a critical bearing on the choice of an instrument. Each nation has a peculiar national style, culture, and pattern of social conflicts which predispose its decision-makers to choose a particular instrument."

The UK is a unitary state, although elected councils in Scotland, Wales, and Northern Ireland give it the appearance of a federation. Australia and the US are federations but lack the French/English linguistic and cultural divide, which plays a major role in Canada's political culture. In fact, Canadian policy discourse generally avoids the word 'nation' specifically because Quebecois see *themselves* as a nation. This leaves us with awkward expressions such as 'pan-Canadian' to articulate our aspirations as a country.

Canada's provinces may not have more powers *de jure* for public health compared with US and Australian states. But, *de facto*, the federal government has too often abdicated its role to avoid conflict.

Could Canada solve its public health problems without the federal government taking the lead?

The reform of public health in Canada requires either federal government leadership or an integrated approach amongst the provinces. It is unlikely that the provinces would cooperate sufficiently and this would still not satisfy the World Health Organization, which only deals with federal governments. Therefore, the federal government must take the lead.

The federal government must take the primary role to improve Canada's public health services. The Auditor General concluded in 1999 that weaknesses in Canada's surveillance system compromised the public's health. In 2002, the Auditor updated her report[44] and concluded that Health Canada had made limited progress but that surveillance was still weak and compromised it's ability to, "design, deliver, and evaluate public health activities."

The federal government, the provinces and territories have been deliberating about a new surveillance system for over five years with little to show for their time. Fallout from this year's SARS epidemic has revealed poor communication between local and provincial public health agencies and the federal government.

The Auditor also noted that Health Canada's surveillance systems were inadequate to mount action against chronic illnesses like cardiovascular disease and diabetes which are the major causes of death in Canada and other developed countries.

If the federal government does not take the lead and ensure results, it appears that the provinces will not voluntarily collaborate to create a Canadian system. Furthermore, the World Health Organization has made it clear that they deal with countries and federal governments and not states or provinces. The Naylor Report notes that a WHO discussion

document requires member countries to operate national surveillance systems:

> "Rapid identification of urgent national risks that may be public health emergencies of international concern would require that each country have a national surveillance system that feeds data from the periphery to the central governments in a very short time."

Canada cannot fulfill its international obligations without federal involvement. If federal leadership is absent there will be no Canadian public health strategy and the country will remain vulnerable to outbreaks like SARS.

Could the federal government lead reform without new money?

In the current dysfunctional Canadian policy environment, the federal government must put up new money to gain the cooperation of the provinces for public health reform.

The federal government claims that they are transferring adequate resources to the provinces to fulfill their responsibilities for health. But, the provinces claim that the federal government has shortchanged them in the past two decades, despite the substantial new federal resources in the FPT health accords of 2000 and 2003. In fact, while the Federal government triumphed in the signing of the 2003 accord, Alberta's premier Klein denied having signed anything.[45] Federal government officials express exasperation that provinces are ungrateful for the new money.

But perception is reality. What might seem a reward to one party may, in fact, look like a penalty to the other. Deborah Stone describes a situation where a person who is expecting a $2000 raise will be disappointed by an offer of $1000 while someone who is expecting to pay a $2000 fine will feel better if the forfeit only amounts to $1000. Stone highlights that the expectations of the receiver determines whether the transaction is viewed positively or negatively.

The Naylor report notes that theoretically, the federal government might have the right to mandate provincial and local public health officials to follow federal rules and regulation on public health. However, in the current policy environment, it is very unlikely that the federal government would take such an approach and perhaps even unlikelier that the provinces would follow it.

Would adequately funding public health fiscally squeeze the federal government?

The 2003 health care accord will provide at least $28 Billion in new money over the next five years. None of the money was targetted to public health. Federal finance officials are expressing concern about the diminishing surplus but, the federal government could provide $1 Billion for public health and still spend less money than any federal government since 1948.

The federal government does need to come up with new resources, but the amounts required are relatively small. The 2000 FPT health accord increased funding by $23 Billion over five years. The 2003 accord will increase health care funding by at $28 - $35

Billion over the next five years.* Funds were targetted to primary health care, home care catastrophic drug coverage, diagnostic and medical equipment, health information technology, programs for the First Nations and Inuit, and the creation of a six-week compassionate family care leave benefit under employment insurance. Neither the 2000 nor the 2003 accord specifically targetted resources for public health.

While it is difficult to ascertain accurately the true spending on public health in Canada, the Naylor Report estimates it is no more than three billion dollars, amounting to less than 3% of what is spent on treatment services. The Report recommended $200 million per year for core funding for a new public health agency, $300 million for the agency to distribute to provincial and local public health agencies, $100 million for infectious disease control, and $100 million for a national immunization strategy. It recommended that the federal government start with less funding and eventually grow the new money to $700 million per annum.

However, many claim that at least $1 Billion in new annual spending is required to adequately reform public health services in Canada. While the federal government claims that its surpluses are decreasing, it spends less of our country's national income than it has for over fifty years. As figure one demonstrates, last year the federal government budget consumed only 15% of Canada's gross domestic product (GDP), the lowest figure since 1948/49. An extra $1 Billion per year for public health would cost less than one-tenth of one percent of Canada's GDP.

What legislative and financial policy instruments could the federal government use to promote public health?

There are a variety of techniques or policy instruments that governments can use to attain their goals. While there are theoretically different ways of categorizing instruments, in practice most are hybrids. Adding complexity, different policies, even in the same area, often require different instruments. There are various models for public health reform that run the gamut from a new program of transfers administered by Health Canada to a new crown corporation for public health. The Naylor Report recommended that the agency be established as a special statutory authority but, establishing the new agency as a crown corporation would maximize its independence.

American policy analyst Deborah Stone[46] refers to policy instruments as, "the means of tackling policy problems." Other definitions include Vedung's,[47] "the set of techniques by which governmental authorities wield their power in attempting to ensure support or prevent social change." Different authorities have different categories for the instruments available to government. McMaster University policy analyst Professor Mita Giacomini has categorized them as:

1 Funding reforms

* The federal government claims $35 Billion but $2 Billion is contingent on the size of the federal surplus and another $5 Billion had previously been announced in the September 2000 agreement. This led to the rhetorical conflict over 'old' vs. 'new', 'new' money. See the accord at: http://www.hc-sc.gc.ca/english/hca2003/accord.html.

2 Rules and regulation (legislation)
3 Institutional structures
4 Information

Most policy instruments are not pure. They typically combine features of more than one. Prior to the 1970s, there was little interest in policy implementation and the specification of choice of instruments. It was assumed that the major determinants of policy occurred before implementation. However, the choice of instruments and the implementation process are now appreciated as frequently being the determining factors in a policy's effectiveness. This paper primarily addresses funding and legislation reforms. There are four options that will be discussed further:

1. Increasing the federal Canada Health Transfer to the provinces and mandating the provinces to provide certain public health services either through amendments to the Canada Health Act or through targetted funding under a revised health accord.
2. An enhanced Health Canada Population and Public Health Branch which would administer a new series of public health grants and transfers
3. Establish a new Canadian public health agency as a special statutory agency
4. Establish a new Canadian public health agency as a crown corporation

Increasing the federal Canada Health Transfer to the provinces and mandating the provinces to provide certain public health services either through amendments to the Canada Health Act or through targetted funding under a revised health accord.
The Canada Health Act is too blunt an instrument to guide the development of a coordinated public health system. Furthermore, the provinces are not following the rules for Canada's present transfers for Medicare and yet the federal government has taken little action in response. In a similar fashion, the health accords are proving to be a relatively inefficient method of leveraging health care reform. In other countries, the federal government provides much of the funding for local and state or provincial public health. However, the provinces ongoing resentment with the federal government means that they are likely to take new federal money but not necessarily comply with the terms for it use.

Over time, some people have suggested opening up the Canada Health Act and making public health services one of the criteria for federal funding. This would be unlikely to work for two reasons. First, the provinces are not presently complying with the Canada Health Act (CHA) criteria and yet the federal government has taken little action.[48] Second, the CHA is an inappropriate vehicle for delineating the public health services that the country requires. The CHA merely outlines the conditions that provincial health insurance plans must follow. It is silent about the organization of health care services. The provinces are free to pay doctors and hospitals how they wish. They can develop home care programs, or not. They can actively manage wait lists, or not. The only rules pertain to coverage of insured persons. It would be very difficult to assure the development of an integrated Canadian public health policy through such a blunt policy instrument as the Canada Health Act.

Simply adding to the present federal health transfer would also be unlikely to lever any meaningful reform. In 2000, the federal government sent a signal to the provinces that it wanted new cash to lever change in their systems. The federal government initially claimed that it wanted the money to be used for primary health care, home care, and medical equipment. But by the time the federal government and the provinces signed the September 2000 agreement, only 7% of the new money was tied to specific reform purposes. The rest ended up in the province' general revenues' accounts where it could be used for any purpose.

Even the funds for high technology and primary health care weren't really targeted. Some provinces used the high-tech funds to buy lawn mowers, ice makers, and woodworking tools.[49,50] Initially the federal government wanted five criteria for primary health-care pilot projects, but after a series of negotiations, the provinces won the funding even if projects only met one criterion.

An enhanced Health Canada Population and Public Health Branch which would administer a new series of public health grants and transfers

In other countries central governments provide grants to provincial and local public health agencies. The Naylor Report concluded that conditional grants administered in a traditional fashion would not lever the needed reforms. This option would also maintain the current problems of labour rigidity and limited budget horizons. Naylor recommended the creation of an arm's length federal public health organization to administer a new series of grants.

In other federations, central governments fund provincial and local public health programs through grants and contributions programs. This option could be fulfilled by enlarging the scope and resources of the Department's Population and Public Health Branch (PPHB) or by establishing the PPHB as a special operating agency or a departmental service organization. The latter two organizational entities allow somewhat more independence but they would still operate within Health Canada. They are not independent organizations. Treasury Board can approve their creation without special legislation.

Margaret Thatcher's government originally developed special operating agencies in the mid-1980s. By 1993, two-thirds of British civil servants were working in special agencies. The intention of this government reform was to separate policy from operational units. Late in its second term, the Mulroney Conservative government implemented some SOAs but this model has not become the in Canada. Federal SOAs include the passport office, Indian Oil and Gas Canada, and the Canadian Heritage Information Office.

Theoretically this model offers increased flexibility to achieve specific policy goals within the overall ministerial plan. In general, SOAs achieve policy goals best when there are stable policy objectives, when the objectives can be specified, measured, and reported, and when there is stable, predictable funding.

This model has the advantage of requiring little change in existing institutional arrangements and therefore generating less political conflict. However, the other side of this advantage is that it does not move far enough away from the status quo to effectively change policies and practices.

Special operating agencies would not be able to sign contracts with local public health organizations still leaving negotiations to intergovernmental diplomacy. As an SOA, public health would not have the requisite independence from Health Canada to be seen as a distinct entity by the provinces. This option would likely continue the present stalemate where the federal government cannot guarantee its provincial transfers would actually be used for its priorities. This option would also hamper the agency from establishing direct relations with provincial, regional, and local public health agencies.

SOAs still have to follow departmental human resource policies under the Public Service Employment Act. This would inhibit a public health agency from developing the flexibility or funding it would require to maintain a highly trained professional staff. Governments have difficulty competing with the private sector for skilled workers like public health scientists. Operating within the department would also confine the agency to one-year budget horizons, which are seen as impediments to long-term planning.

In the current policy environment, it is unlikely that the federal government could reform public health services through an enhanced Health Canada Population and Public Health Branch and a new series of public health grants and transfers. The Naylor Report also concluded that conditional grants administered in a traditional fashion would not be effective. Naylor recommended that a new grants and contributions program be administered by a new federal arm's length public health organization.

Establish a new Canadian public health agency as a special statutory agency

The Naylor Report recommended a more independent organization for federal public health, the special statutory authority. The report recommended flowing federal funds for public health through this new agency. Special statutory authorities can sign contracts with other governments and organizations. They have enhanced labour flexibility and can have multi-year budgets. They still derive their policy direction from the minister.

Special statutory agencies (also called Legislated Service Agencies) manage the delivery of specific government services. Statutory agencies are headed by a CEO who reports to the Minister. The CEO and board members are appointed by the Governor in Council. Statutory agencies operate as separate employers under the Public Staff Relations Act, which allows them greater flexibility in human resources than the department. With appropriate legislation they may get funding beyond the usual 12-month budget cycle. They also have the autonomy to enter into agreements and retain operating surpluses. Special statutory agencies can only be established through legislation. Theoretically this model offers increased flexibility to achieve specific policy goals within the overall ministerial plan. The Naylor report recommended this model for the Canadian public health agency.

Examples of Special Statutory agencies include the Canadian Food Inspection Agency (CFIA), the Canadian Institutes of Health Research, the Canadian Institute for Health Information, and Statistics Canada. While some statutory agencies, such as Statistics Canada have strong track record, others do not.

The CFIA was created in 1997 to monitor and inspect the safety of food in Canada. In 1999, the Auditor General criticized the CFIA for not providing performance information which she believed is "anticipated by the Canadian Food Inspection Agency Act". Two years later, the Auditor reported: [51]

> "This is the agency's fifth year of reporting performance information in its annual report. In all key respects, the extent and significance of the weaknesses of the performance information on the Agency's programs and operations I have identified in my previous four annual assessments continue to exist."

This option has the advantage of establishing a degree of independence for the agency while permitting the minister to set overall policy direction. This option would separate public health somewhat from Health Canada but it would permit better connections with other departments important to its mission, e.g. Human Resources Development Canada, Environment Canada.

This option allows more independence than a special operating authority. As a statutory authority, a Canadian public health agency could contract directly with other public health agencies. This should allow the new federal public health agency to bypass the intergovernmental tension that otherwise clouds these grants and contributions. It would also allow the contracts to be written in sufficient detail to ensure a coordinated approach to public health problems.

This option would still leave overall policy direction to the ministry of health. This could be viewed as a disadvantage if it is seen as desirable to permit public health to operate as independently as say, the judiciary or the Bank of Canada.

Establish a new Canadian public health agency as a crown corporation

The crown corporation model has been typically used as an instrument of public policy when the private sector has failed to provide comprehensive solutions, e.g. transportation, broadcasting, mail delivery. However, the crown corporation option has also been used for organizations with exclusive public missions , e.g. the Bank of Canada, the Canada Council. The crown corporation model offers similar advantages to the special statutory agency one -- greater labour flexibility and ability to contract with other public health agencies. But, it gives more autonomy for policy making.

Canada has historically used crown corporations as a tool to deal with the national problem of "too much geography, not enough people".[52] The Canadian National Railway, when it was a crown corporation, helped open up Canada's near north. Still a crown

corporation, the CBC established a Canadian presence on the airwaves.

The federal government establishes crown corporations through legislation and appoints a crown corporation's CEO and board of directors. They are responsible to parliament through a designated minister who is also responsible for approving budgets and corporate plans. In 2002, the Prime Minister released new guidelines, which reinforce Crown corporations' autonomy and restrict contact between Crown corporations and their respective ministries. The federal government influences corporations through regulations and directives. But, in contrast with special statutory agencies, crown corporations are mainly responsible for their own policy development.

As of 2002, there were forty-three crown corporations which collectively had over 71,000 employees and assets of over $73 Billion. Total appropriations were $4.5 Billion. Some crown corporations like the National Research Council, the Canada Council, the Canadian Race Relations Foundation receive the bulk of their budgets from the government, and have public service missions. Most crown corporations, like Via Rail, Canada Post, the Canadian Mortgage and Housing Corporation, and Atomic Energy Canada have certain public missions but operate in a commercial environment and are expected to strive to make a profit. The Bank of Canada has an exclusive public mission and is one of the most autonomous crown corporations. Its board of directors appoints its CEO, subject to cabinet approval. The auditor general does not audit the Bank of Canada. The minister of finance specially appoints its auditors.

While some crown corporations function well, the Auditor General recently noted that two-thirds had deficiencies in corporate and strategic planning with one-third having significant problems.[53] She claimed that the government's process for approving corporate plans does not challenge Crown corporations to achieve optimal performance.

Crown corporations do not have as much ministerial direction as a statutory agency. While it would be an advantage for a public health agency to have some independence from Health Canada, a public health crown corporation might be too distant from governmental and political direction.

If one assumes that many of public health's problems at the federal level are related to its location within Health Canada, then maximizing its independence would also best enhance Canada's health. This line of argument asserts that the crown corporation model would be best for international health.

Are there Canadian models to which we could look to for inspiration?

The Quebec National Institute of Public Health is the best Canadian example of a modern public health agency. It is closest to the special statutory agency model.

Quebec is generally considered to have the most effective public health services in Canada. It is one of the few provinces which has modern legislation. Most provinces have systems that were established before the Second World War. Although it is difficult to accurately count the expenditures for public health, it appears that Quebec's system is

well resourced, especially for public health physicians. Quebec is the only province, which allows specialist public health physicians to bill Medicare for their work.

Quebec's passed two public health acts in 1998.[54] The Public Health Act prescribes the mandates and responsibilities of the minister, the ministry and the other components of the public health system, including the National Institute of Public Health, the regional health and social services authorities, and local community health centres.

The National Institute of Public Health Act established the Institute and details its specific mandates and responsibilities as the lead agency for public health. The Governor in Council appoints the board of directors and the director general/president. The minister can issue directives to the Institute with which it must comply.

The Institute was allocated the provincial public health laboratories and a number of personnel. Many are shared with the regional health authorities in Montreal and Quebec City and the province's universities. The Institute provides resources and expertise to all of the province's regions but particularly to the smaller ones which cannot maintain an adequate range of public health personnel on their own.

The Institute can develop its own human resource policies according to conditions laid down by the government. This allows the Institute the flexibility it requires to be a competitive employer.

Quebec has had public health goals since the 1980s and the activities of the Institute are synchronized with these priorities and the province's public health program and framework. The province's regional health and social service authorities are responsible for developing their own plans. The regional plans are supposed to follow the provincial plan. They are also supposed to be tailored to the specific concerns of their populations. The Regions are supposed to develop their plans with the input of the local community health centres in their territory.

In parallel, community health centres are charged to develop their own local public health plans, congruent with the provincial and regional plans, with the input of citizens' organizations in their communities.

The legislation outlines a broad program of public health well beyond simply controlling communicable disease. The public health system is charged with "exerting a positive influence on major health determinants, in particular through trans-sectoral coordination."

The act deals with each key public health function including health assessment, surveillance, health promotion, health protection, disease and injury prevention. There is also a substantial portion of the act devoted to outlining the ethical practices which must be followed.

Quebec's public health Institute is closer to the statutory authority model than a crown corporation because most of its policy direction comes from the minister.

How do we Decide amongst the options for a Canadian Public Health Agency?

The crown corporation model maximizes public health's independence. As a crown corporation, the agency would share advantages with the special statutory agency model including flexible labour relations and the ability to contract with other public health agencies. However, the crown corporation model would allow greater independence for policy development and strategic planning. This paper recommends that a Canadian public health agency be established as a crown corporation to maximize public health's independence. However, if it is not established as a crown corporation, then it should be established as a special statutory authority. This would ensure the minimum autonomy necessary to accomplish its work.

After all the analysis, it finally comes down to trust. Do Canadians trust the existing public health system to protect them from preventable illnesses? Do they trust Canadian governments to maintain the integrity of Canada's public health system? If they do, then more resources could be added to existing institutional arrangements. If they don't, then the institutional arrangements should be changed to maximize the independence of public health.

The federal Auditor General and the Naylor report express concern abut the ability or willingness of Canadian governments to cooperate on public health issues. Dr. Naylor's report notes:

> "Our first theme is that the single largest impediment to dealing with future public health is the lack of a collaborative framework and ethos among different levels of government. If the experience of SARS in Ontario were repeated in a jurisdiction with fewer resources and smaller base of highly skilled and dedicated personnel, or in the face of a more virulent infectious disease, the consequences could be disastrous. Canadians expect to see their governments collaborate responsible in the face of serious threat to the health of the population."

The decision about which organizational model is best for a public health in Canada depends upon the degree of independence which is desirable. Canadian society has seen fit to carefully preserve the independence of the courts, the RCMP, and the Bank of Canada. Canadian society has seen fit to make these institutions as independent as possible from the political and the bureaucratic process. Given the problems revealed by the SARS outbreak and repeated commissions and auditor general reports, a case can certainly be made that public health professionals deserve maximum independence and an adequate budget to perform their tasks.

Creating the new Canadian Public Health Agency as a crown corporation would maximize public health's independence. As a crown corporation, the agency would share the advantages of the special statutory agency including flexible labour relations and ability to contract with other public health agencies. However, the crown corporation model would also allow greater independence for policy development and strategic planning. This paper recommends that a Canadian public health agency be established as

a crown corporation to maximize public health's independence. However, if it is not established as a crown corporation, then it should be established as a special statutory authority to ensure the minimum of the independence public health requires.

If the federal government established an independent agency for public health, how would it facilitate the reform and funding of provincial, regional, and local public health services? Would this new agency only deal with communicable disease control?

Because it would be relatively independent of Health Canada, a new Canadian public health agency as a crown corporation or special statutory authority would be in a better position than Health Canada to contract with and provide funds to provincial, regional, and local public health services. The Naylor Report suggested a broad role for the new agency besides establishing and maintaining systems for communicable disease control. The US Centers for Disease Control and Prevention has mandates beyond communicable disease control which includes environmental health and health promotion. Each public health function needs its own analysis and plan for reform.

Deborah Stone has highlighted that the specific qualities of a policy problem are crucial in determining the correct institutional response. There are major qualitative differences between quelling a tuberculosis outbreak in a homeless shelter and protecting the public from potentially dangerous prescription medications. There are different approaches and mixes of personnel required for each task. It would be a mistake to think that only one "policy" will fix all of public health.

While the preceding section has made the case for an independent public health agency for Canada, this office would do most of its work in partnership with and through provincial, regional, and local public health agencies. The US Centers for Disease Control and Prevention (CDC) was originally founded in 1946 as the Communicable Disease Center but gradually its mandate was broadened to include other public health functions. Prevention was added to its name in 1992. Now the Center's mission is described very broadly: "to promote health and quality of life by preventing and controlling disease, injury, and disability."

The CDC has two major roles and several minor ones. It is the main US federal agency, which provides support for local and state public health programs. Nearly a quarter of its 8600 employees are based outside the head office of Atlanta, Georgia. Most work in state and local public health offices. The Epidemic Intelligence Service provides training for field epidemiology and gives the US an expert "flying squad" of disease control specialists.

The CDC also assists with the development and evaluation of public health programs in the US and other countries, performs and funds research, and provides resources for training of public health personnel.

The Canadian agency would contract with provincial and local public health and other organizations to accomplish much of its work. For example, resolving a tuberculosis

problem in an inner city shelter might require cooperation from:

- public health services, health care services, ministries of health
- municipal departments and provincial ministries of social services
- municipal housing agencies and ministries of housing
- the Department of Indian and Northern Affairs
- First nations
- Federal (and where applicable Provincial) department(s) of immigration, immigrant communities and their organizations
- various non-governmental organizations.

This section reviews each key public health function and outlines how it would be affected by a new federal public health agency. The Naylor Report recommended $200 million per year for core funding for a new public health agency, $300 million for the agency to distribute to provincial and local public health agencies, $100 million for infectious disease control, and $100 million for a national immunization strategy. Naylor recommends that the new money be added gradually over five years as the capacity of the system increases.

The Naylor Report suggested the $300 million per year for provincial and local public health be channelled through a "public health partnerships program" under the auspices of the new agency. The public health system could acquire significant surge capacity through the strengthening of provincial and local services. As the Naylor Report observes, "the same personnel help find an outbreak one day and inspect restaurants or deliver a health promotion seminar the next." In Toronto during the SARS outbreaks, public health inspectors and nurses spent all their time on communicable disease control and other tasks with longer prevention horizons, were left undone

It is recommended that most of the federal funding for provincial and local public health be funded through the agency. The main exception is health protection. The Naylor Report suggested that some of these services could require provincial cost sharing. However, requiring cost sharing might result in diminished provincial participation.

Population health assessment

The new Canadian public health agency should coordinate and fund the country's population health assessment. As in Quebec there should be Canadian strategies developed with provincial, regional and local plans. Health assessment includes advocacy as well as analysis.

Health assessment should be based upon accurate data and rigorous scientific analysis. In most definitions, the assessment function includes taking action on the assessment, i.e. management. Public health assessment also involves advocacy.

In 1854, London epidemiologist Dr. John Snow not only traced a cholera epidemic to a water pump on Broad Street. He recommended its closure. Twentieth century public health reports on tobacco have advocated for stronger tobacco control laws. In 1987, after

he reviewed the scientific evidence on the use of condoms to prevent HIV infection, US Surgeon General Everett strongly recommended their use to the public.

Data collection and analysis require an infrastructure of equipment and trained personnel. Advocacy also requires a degree of political independence which allows public health officials to directly communicate their concerns to the public.

The core of the technical experts for public health assessment would be located within the new public health agency. These personnel would be dispersed across the country and not located in only one geographical location. The agency would contract with provincial, regional, and local public health departments to provide many of the human and other resources required for population health assessment. In a similar fashion to Quebec, standardized annual reports would be produced for all areas of the country. This would allow Canadians to monitor progress towards the attainment of the goals within the overall public health strategy. As in Quebec, this process should include an iterative loop with communities and their organizations developing local versions of national plans and feeding information, analysis, and advocacy up the line to refine regional, provincial, and federal public health plans.

Surveillance

The new Canadian public health agency should coordinate and fund the country's surveillance system. Surveillance should include data on chronic illnesses and the determinants of health as well as communicable diseases. There also should be enhanced local public health surveillance to provide real time epidemic control.

Health Canada defines health surveillance[55] as, "the ongoing, systematic use of routinely collected health data to guide public health action in a timely fashion. Health surveillance tracks and forecasts the occurrence of health events or determinants through the ongoing collection of data, the collation, analysis and interpretation of that data into a product that is disseminated to those who need to know."

As mentioned previously, Canadian governments have been struggling with the establishment of a countrywide surveillance network for several years. The Auditor General is concerned that she has not seen much progress on this file. One of the first tasks of the new Canadian public health agency should be the establishment of an effective surveillance network.

This task should involve the linkage of data from diverse sources to not only track communicable disease but also chronic illnesses such as cardiovascular disease, and the determinants of health such as the natural and built environment. Surveillance should be carried out in cooperation with many different departments and agencies.

It is important that local surveillance also be supported. For example, often pharmacists are the first to be aware of an outbreak of gastroenteritis when there is a surge of demand for over the counter gastrointestinal medications.

Health protection

The federal government is reviewing its outdated health protection legislation. Commercial interests are taking advantage of this opportunity to attempt to reduce regulatory oversight. Over time, some public health services and regulatory activities have been moved to other ministries with potentially conflicting mandates. Responsibility for health protection should be consolidated in Health Canada. The new public health agency could provide scientific back up for regulatory activities.

Health protection relates to the regulation of human activities for the protection of the public's health. In Canada, health protection includes food and agriculture, the environment, as well as pharmaceutical products and medical devices.

A number of reports, through several years have highlighted that Canada's health protection legislation is out of date and does not provide adequate public protection.[56] In June 2003, Health Canada released a discussion paper and consultation schedule with the intention of developing new legislation. The proposed Canada Health Protection Act would replace four legislative acts -- the Food and Drugs Act, the Hazardous Products Act, the Quarantine Act, and the Radiation Emitting Devices Act.

The discussion paper claims that the purpose of the new act is protect Canadians' health.[57] The first of three key values underlying the new act is proposed as, "the health and safety of the people of Canada shall be the primary consideration in actions taken under this proposed act." One of the six principles which are proposed to guide decisions is that, "the concept of precaution will be applied". The so-called 'precautionary principle' is usually interpreted as meaning that, "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."[58]

However, another proposed principle is that, "potential negative effects shall be weighed against potential advantages for the people of Canada". This appears to contradict the sprit of health primacy and the precautionary principle. Cost benefit analysis can deal with issues where the science is clear-cut. But, for many emerging technologies the science is at least somewhat ambiguous. That is exactly why the precautionary principle is so important.

Some other issues in the health protection file are being pushed hard by commercial not public health interests. For example, a coalition of media and drug companies are lobbying hard for direct to consumer advertising of prescription drugs,[59] even though this policy is seen as a threat to the public's health by most health organizations and analysts.[60,61]

As public health developed in the nineteenth century, it operated as a 'vanguard agency', involving governments in services like sanitation and regulatory activities like pharmaceutical assessments. As these public health activities matured, governments sometimes created new agencies to manage them or moved them under the jurisdiction of other departments. Sanitation was spun off from public health into municipal garbage

departments. In the 1990s, the Canadian Food Inspection Agency (CFIA) was created as a special statutory agency reporting to the Minister of Agriculture. In some provinces, public health inspectors have been moved under the jurisdiction of other government departments.

Public health personnel are concerned that these spin offs no longer maintain the primacy of public health. For example, the CFIA moved quickly to reassure consumers about the safety of Canada's beef after one Alberta cow was diagnosed with BSE. But, many in public health also wanted the agency to be more critical about Canada's regulatory system which allows ruminants to ingest feed containing parts from other ruminants. Ensuring safe drinking water is a foundational mandate for public health but watershed protection is usually left to ministries of the environment, forestry, natural resources, or agriculture, which have other mandates than safe water.

Health protection is built upon the science of health assessment and surveillance but it is sustained by the precautionary principle. In every era, commercial interests have conflicted with the public's health. Sometimes we are seduced into believing that economic growth is compromised by high standards for public health and environmental protection. But, without health and environmental standards there is no economic progress.

Effective health protection is built upon the criminal law and therefore requires federal legislation. It would be awkward for an arm's length organization like the federal public health agency to take on the regulatory authority of government. This task is best left within government but it should reside in the department of health not other departments which have their own interests which might be in conflict with the precautionary principle or public health.

The public health agency would still have a major role in promoting the science behind health protection regulation. The Institute should have funding to establish centres of excellence across the country to facilitate research and scientific exchange and link practitioners to scientists.

Disease and Injury prevention

The new Canadian public health agency should coordinate and fund the country's disease and injury control services. The agency should also coordinate responses to disease outbreaks for which Canada has international obligations, or when the outbreak threatens to spill beyond local control. The new funding that the agency would provide for local public health would provide enhanced surge capacity to deal with communicable disease outbreaks. The new agency should bulk purchase and distribute all needed vaccines. The Naylor Report recommended that the federal government set a time limit for negotiations with the provinces for an outbreak management system. If an agreement could not be reached during this period, Naylor recommended that the federal government draft default legislation, which would establish rules for FPT relations on public health issues, particularly the management of communicable disease outbreaks.

Disease and injury prevention builds upon health assessment and surveillance to craft evidence-based policies and programs to reduce the toll from preventable diseases and injuries. This should include both communicable and non-communicable diseases.

At present, public health services lack surge capacity. The SARS outbreak demonstrated that Canada can barely deal with outbreaks of infectious disease. The Toronto public health department, one of the largest on the continent, had to call in resources from other parts of North America. It's computer system for managing outbreaks had not been improved since 1989. It was not compatible with other systems in place at the province and Health Canada.

The federal public health agency would have the lead responsibility for drafting and implementing a Canadian prevention plan as part of the overall public health strategy. The Institute's responsibilities would include research and evaluation as well as employing a 'flying squad' of outbreak management specialists, similar to the US CDC's Epidemic Intelligence Service. This group would assist local and provincial officials with their work, acting as surge capacity for the entire country.

A key part of disease prevention response is the laboratory system. It is neither necessary nor desirable to locate all the laboratories in one city. The Institute should be charged with ensuring that there is a countrywide system of public health laboratories, which can provide support for all needed disease prevention activities.

Canada is the only developed country with sub-national immunization schedules. The provinces currently decide upon their own immunization schedules. Some provinces cover new vaccines while others do not. Vaccines are not purchased at the national level, despite the opportunities for bulk purchasing to decrease overall costs. The current immunization situation in Canada is dangerous and inequitable. The Canadian public health agency should be charged with developing an immunization schedule, purchasing vaccines in bulk, and distributing them to the provinces. The costs for present vaccines would be approximately $7-8 per capita or $220 to $250 million. However, newer vaccines (e.g. chickenpox) are more expensive than their predecessors.

As in Quebec, the agency should be given the mandate to take charge of public health emergency situations when appropriate. The World Health Organization only deals with national governments not state or provincial governments. The Naylor Report recommended that the federal government set a time limit for negotiations with the provinces for a Canadian surveillance system. If an agreement could not be reached during this period, Naylor recommended that the federal government draft default legislation, which would establish rules for FPT relations on public health issues, particularly the management of communicable disease outbreaks. Another approach might be to establish the new public agency expeditiously and then mandate it to develop such rules. Then if it failed, the federal government could draft its own legislation. The new agency might be politically better positioned than the federal government to conclude successful negotiations with the provinces on this issue.

Health Promotion

The new Canadian public health agency would coordinate and fund the country's health promotion programs. Health promotion requires local public health to engage its citizens and work with their organizations.

Health promotion is sometimes misinterpreted as the exhortation of the public to engage in healthy behaviours. However, health promotion is much broader than simply broadcasting the benefits of health living. It is not enough to promote exercise when there are no playgrounds and the streets are unsafe. It is not enough to promote handwashing and hygiene when there is no safe water. Health promotion has been defined as:[62]

"The process of enabling people to increase control over, and to improve their health."

Rudolf Virchow, the great nineteenth century physician and a key founder of public health, claimed that diseases were caused by defects in society." If disease is an expression of individual life under unfavourable circumstances, then epidemics must be indicative of mass disturbances".

Our pattern of health and illness reflects what we eat, the air we breathe, the water we drink, the work we do, and the quality of our personal relationships. Our natural and built-environments are very important but so are our values, our culture, and our institutions. In other words, health is politics. North Americans have very high rates of coronary heart disease and lung cancer because we eat too much of the wrong food and too many of us smoke cigarettes. We have low rates of water and food borne illness because of a safe supply of food and drinking water. On the other hand, African peasants have low rates of coronary heart disease and lung cancer and high rates of water and food borne illnesses. A particular population's health status is as unique to that society as fingerprints are to an individual. If health is a political construct then there are several important rules that follow:

1. Major change in a society's pattern of health and illness requires change in that society's values, customs, and institutions.
2. Some powerful interests and communities will be threatened by this change and will oppose reform.
3. These threats to interests and values will inevitably cause political backlash. This backlash will modify policies so that they will be less offensive and as a result, less effective.

Tobacco and lung cancer

We can use the epidemic of lung cancer as an example of how health is affected by social change. Tobacco causes 85-90% of the more than 17,000 annual deaths from lung cancer. This is more than all deaths from injuries, accidents, suicide, and AIDS combined.

Smoking was popularized for men during the First World War and for women during the second. Tobacco was a key part of the culture, linked with rites of passage into adulthood and sexual maturity.

By the early 1960s half of Canada's adults were smokers and lung cancer became a major cause of death. There was strong evidence that cigarettes caused lung cancer but, it wasn't until the 1970s that public attitudes towards smoking tangibly changed. First airplanes went smoke free and then public buildings like hospitals. Gradually the public's change in values made its way into public policy, e.g. smoke-free spaces. Then these public policies further changed values and promoted more tobacco control policies.

However, the tobacco companies have predictably used their economic power to protect their interests. They overturned the tobacco excise tax in the early 1990s, which reduced the incentive for smuggling.[63] Then at least some companies assisted smugglers to import cheap cigarettes.[64] Eventually, the federal government and several provinces reduced their taxes and smoking rates increased for the first time in thirty years.[65]

The tobacco story illustrates that if powerful groups are threatened by healthy public policies, there will be a political backlash. But gradually public health has reduced tobacco use and its toll. Smoking rates are now down to nearly 20% of adults. Male lung cancer death rates have declined by 15% since their peak in 1988.* That means 1600 fewer lung cancer deaths every year.

Public health services need to facilitate change in society's values and institutions if they are to tackle our greatest health problems. This requires engagement with the democratic process. Public health agencies have worked closely with advocates inside and outside of government to craft tobacco control responses and these are now bearing fruit.

Some Canadians see public health as limited to control of contagious diseases. But this has never been its only mandate. The roots of public health in Canada and elsewhere are inextricably linked with social and governmental reforms. If we are to deal with the growing epidemics of female lung cancer, childhood obesity, and diabetes we need to ensure that public health can work effectively with citizens and communities.

How to promote health promotion

The Population Health and Public Health Branch of Health Canada distributes more than $225 million for health promotion through its grants and contributions program. The Auditor General recently reviewed two of these programs finding serious management problems with the AIDS/HIV program while noting the general effective management of the Canadian Prenatal Nutrition Program (CPRN).[66]

These programs, with appropriate reforms, could be a model for the public health agency's grants and contributions program. They provide funding directly to local

* Female smoking rates are also declining. But, female smoking prevalence peaked twenty years ago and there is an approximate twenty year lag-time for cancers to develop.

programs, which deliver what are, essentially, public health services. The CPRN funds prenatal nutrition projects. Aboriginal Head Start is based on the successful well-evaluated US program by the same name. The Canadian Action Program for Children (CAPC) funds 464 projects which deliver 1,790 programs in more than 3,035 communities.

It would be a shame if these projects, many of which provide ongoing services for vulnerable groups were destabilized by their move to a new Canadian public health agency. If there is not enough money involved in the transition, then these programs could get poached by the desperately needed communicable disease control infrastructure. Acute care tends to poach resources from public health and communicable disease control tends to poach resources from the rest of public health.

The agency for public health should act as the lead agency at the federal level in developing and implementing health promotion strategies. These would follow from the overall public health plan and priorities. The Agency should also provide human and other resources to provincial, regional, and local public health agencies. Now public health units throughout Canada are re-inventing wheels as they design programs to counter childhood obesity. Central support for these activities would free up more local personnel to deliver programs.

How could the federal government's primary health care policy support public health?

The World Health Organization has long suggested integrating local public health with primary health care. In Quebec, many European countries, and the developing world, local public health services are integrated into primary health care centres. The federal government should offer further support for public health by ensuring that their significant new resources for primary health care are targetted to models which integrate and support public health.

As in Quebec, where local community health centres are mandated to work with communities in developing their health plans, the new federal public health agency should incorporate citizen participation in developing health promotion programs. Quebec has a unique network of local community health centres which integrate treatment services, social services, and public health -- the CLSCs (centres locaux services communautaire). The CLSCs are based upon the world health organization definition of primary health care[67] which includes health services working with their communities to prevent common illnesses. The CLSCs provide a vehicle for delivering traditional public health services such as communicable disease control and ensuring the safety of vulnerable people during natural disasters.[68] Theoretically local public health units in the rest of Canada could perform similar functions. However, the lack of resources and community engagement means that local public health services too often do not fulfill this roles.

The federal government could further assist the development of local public health and health promotion services if it targetted better its primary health care redevelopment

funds. The two health transition funds (1997 and 2000) provided over $800 million to primary health care projects. The 2003 health accord will provide even more. The accord notes that primary health care organizations should, "address the needs of the communities they serve, as well as providing care and services to individual patients". However, almost all of the funding is going towards re-organizing private family physicians' services. This may be a laudable cause, but virtually none of the new federal funding in the past six years has been used to further broader notions of primary health care.

Theoretically, the federal government could target most of funding to models which are consistent with its long-standing primary health care policies. The implementation of a Canadian network of local community health centres would facilitate the attainment of many public health goals. Even a small amount of its primary health care funding devoted in such a way would be a major proportionate boost in public health funding.

What should be the role of the chief public health officer?

Ideally, Canada's chief public health officer should be the CEO of the new Canadian public health agency. It is important that the officer have enough independence from government to advocate for public health policies.

The president of the Quebec Public Health Institute is also the province's chief public health officer (CPHO). Whether the head of a Canadian public health agency should also be the CPHO depends on the autonomy granted to such a agency. If the Population and Public Helath Branch (PPHB) simply takes on the mandate of the agency without being granted at least the autonomy of a special statutory authority, then the CPHO would not have the autonomy to speak her mind freely.

It is crucial that the CPHO have the independence to speak out on public health issues and advocate as she sees fit. However, advocacy engenders political opposition from those interests, which would be adversely affected by proposed legislation or regulation. In Snow's time, pressure from London's private water companies disestablished the Board of Health. In October 2002, the board of Alberta's Palliser Regional Health Authority fired Dr. David Swann, the medical officer of health, for speaking out in favour of the Kyoto Protocol on Climate Change.[69] That same month, Ottawa medical officer of health, Dr. Robert Cushman was criticized for his advocacy of public transportation.[70]

If the public health agency is not granted more independence then the office of the CPHO should be created at arm's length. One option would be to make the CPHO an officer of parliament leaving an administrator in charge of the PPHB. In this arrangement, the office of the CPHO should be made responsible for population health assessment and reporting.

However, it would be most desirable for the CPHO to be the CEO of an independent, federal public health agency. This would allow the integration of reporting with operations and advocacy with action.

The federal government needs a strategic plan for public health to guide funding and program development

Canada does not have public health goals or a strategic plan for public health. This makes it impossible to develop indicators and an accountability framework. The new Canadian public health agency should develop a strategic plan for public health as one of its first priorities.

As mentioned above, Canada is one of the few developed countries which does not have public health goals to guide its program development. Quebec has had such goals for over fifteen years and they are the focus for planning and evaluation. Some other provinces have had health goals but they have not been used as assiduously as in Quebec.

The Auditor General in her 2002 report noted that Health Canada doesn't even have priorities for public health surveillance and that a process to develop them had run off the rails. Without goals there can be no meaningful indictors or accountability framework. Without Canadian priorities, how can the provinces have meaningful direction for their activities?

How should we deal with public health emergencies?

The SARS outbreak and subsequent reports have revealed considerable lack of coordination between governments. The federal government has the jurisdiction to take control during emergencies. But it should first attempt to clarify roles and responsibilities cooperatively through an initiative led by the new public health agency.

The Naylor report and the auditor general have catalogued the lack of cooperation between Canadian governments on public health issues. The Canadian government has the ability to take control of outbreaks through the Emergencies Act but, the powers under the act are so broad and sweeping that it has never been used since it was passed into law.

The Canadian Medical Association has recommended a graded system of response to public health crises.[71] Unfortunately, as observed by Naylor, this would require a series of complicated deliberations between federal and provincial officials. This might hamper a timely response. Naylor recommended that the federal government initiate time-limited negotiations to resolve this matter. However, these negotiations might be more fruitful if they were carried out by a new, independent federal public health agency. If such an agency is not created or if the negotiations stall then the federal government should pass draft its own default legislation to clarify decision-making and coordination before the next public health crisis.

Conclusion

In the end, whether a society can effectively address its health problems depends on its ability to mobilize collective action. In the 1800s, there were frequent cholera epidemics, which swept out of Asia and regularly devastated the rest of the world. Even though by the 1850s, it was clear that they were due to improper sewage disposal and lack of safe

drinking water, there was tremendous resistance to developing the needed public works.[72] When the great Victorian reformer, Edwin Chadwick proposed such projects, his upper class friends typically asked, "Who will pay for all this sewering and watering?". When London established the first Board of Health in the 1850s, it was disbanded after a few years because of political opposition from private water companies who opposed regulation of their businesses.

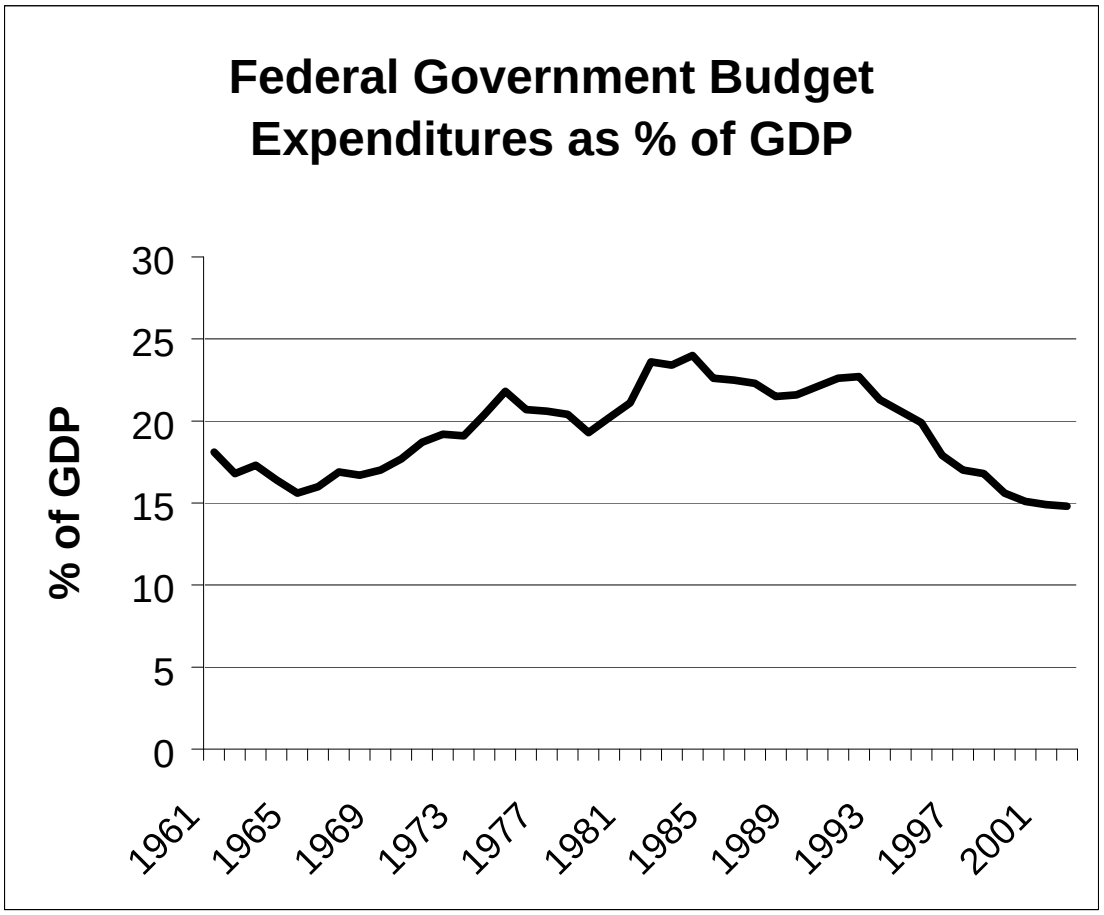
We see a replay of these debates today. Public health advocates like Harvard's Nancy Krieger argue for a larger role for collective action, claiming that the foundation of public health is social justice.[73] Professor Krieger asserts that public health, "…has a compelling desire to make the world a better place, free of misery, inequality, and preventable suffering, a world in which we all can live, love, work, play, ail, and die with our dignity intact and our humanity cherished."

Those who focus on individual rights and low taxes typically oppose a larger role for public health. For example, in April 2003, the National Post sharply criticized Toronto medical officer of health Sheila Basrur for championing a by-law to restrict lawn pesticides.[74] The Post asserted that she should 'stick to her knitting' and deal with the Severe Acute Respiratory Syndrome outbreak. While others evinced concern that the SARS epidemic would drain needed resources from an already hobbled public health department, the Post opposed more funding. It claimed that Basrur's pursuit of the pesticide by-law was proof that the department already had too much.

This year, Canada had a close brush with disaster. The SARS outbreak dramatically demonstrated the dire health and economic consequences that can accrue from an inadequate public health system. Societies which place a low value on public health become sick societies.

This paper has discussed the policy instruments the federal might use to re-vitalize public health. Hopefully, it will not take another disastrous disease outbreak or the complications of the obesity epidemic for Canada to implement an effective, properly resourced strategy for public health.

Figure 1: Federal Government budget expenditures as Percent of Gross Domestic Product (GDP) (Updated figures available November 3, 2003.)
http://www.fin.gc.ca/frt/2003/frt03_e.pdf



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