QUÉBEC PUBLIC HEALTH PROGRAM

2003-2012

Québec

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Santé et Services sociaux
Québec

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Québec's Commitment to Prevention

Our society continues to develop and is becoming more prosperous, which should make it possible for each of its members to achieve their full potential. Thus, the goal is simple but ambitious—that every Quebecer should be healthy, both physically and psychologically. Of course, everyone must do their part to maintain their own health and their own balance. But more than that, society must provide the conditions that are conducive to the achievement of this goal. In brief, individual responsibility goes hand in hand with a collective responsibility.

In Québec, this shift towards prevention must occur and the Government has therefore asked all its partners, both public and private, to get involved in this more vigorous program for preventing health and social problems. Together, we will intensify our efforts to promote healthy lifestyles, such as exercise, healthy eating and not smoking. Together, we will support the most harmonious development possible of all children in Québec. Together, we will establish networks of mutual aid and social participation. Together, we will take action on social settings in order to ensure the health and well-being of each member of our society.

The Government has made a large contribution in preventing social and health problems in a number of ways: whether through its new strategy to combat poverty, which puts it at the forefront of social action in favour of the most disadvantaged; through its family policy, which provides preschool children with stimulating and safe child care environments; through its Tobacco Act, which is already affecting individual behaviours and the quality of the air in public places; or through the new Regulation respecting the quality of drinking water, which can prevent many diseases by ensuring that Quebecers have high-quality drinking water.

Over the next decade, we must do more to try to enhance the health and well-being of our citizens, whether this action comes from the public sector or private partners. This should be done in a consistent fashion and within a clear framework. This is precisely the direction taken in the *Québec Public Health Program 2003-2012*, which has been adopted recently by the Québec government. This program sets out the contribution that the health and social services network will make to the collective commitment to prevention. I view the program as an indispensable tool for harmonizing and strengthening public health services in all regions of Québec, in a spirit of partnership with the various sectors of our society.

Over the last twenty years, we have taken important steps in the field of health and well-being. This has been reflected in a significant increase in the life expectancy of Quebecers. We now face new challenges that require renewed action to decrease the incidence of preventable diseases, such as cardiovascular diseases and cancers, as well as to reduce social problems. Moreover, reducing the inequalities in health and well-being will bring us closer to the goals that are dear to Quebecers: solidarity, social justice and equity.

Roger Bertrand

Minister for Health, Social Services,
Youth Protection and Prevention

Foreword

With the publication of the first Québec Public Health Program, I am inviting the actors in the health and social services network and all our partners to implement an ambitious collective project to enhance the health of the Québec population. This program will chart the course of public health action for the next ten years.

In implementing the *Québec Public Health Program 2003-2012*, a number of major challenges will have to be overcome in order to meet the needs of the population. These challenges include establishing a set of services that are common to all Québec regions and local territories, thus ensuring greater coherence of public health actions; adapting these services to the needs and specific characteristics of local and regional communities; and ensuring the quality of activities through a creative and innovative combination of rigour and use of the most recent knowledge. A public health practice that is part of an overarching and concerted perspective poses other major challenges. Thus, rather than taking fragmentary and isolated actions, diverse methods and strategies must be combined. Our links with partners in other sectors should also be strengthened so as to increase intersectoral actions to promote population's health and well-being. This is a demanding project but I believe that our network has the necessary expertise and know-how to meet these challenges.

I would like to sincerely thank all the people —and I know that there are many of them—who helped to develop the *Québec Public Health Program 2003-2012*. I am counting on the commitment of the actors in the health and social services network and the participation of actors in the other sectors, to ensure that the program is implemented, adapted to local and regional realities and renewed over the next ten years.

Richard Massé, MD,

National Public Health Director

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List of abbreviations and acronyms

CAIQ	Commission d'accès à l'information du Québec
CLSC	Centre local de services communautaires (local community service centre)
CSST	Commission de la santé et de la sécurité du travail
DGSP	Direction générale de la santé publique
DSP	Direction de santé publique (public health department)
HIV/AIDS	Human immunodeficiency virus/acquired immunodeficiency syndrome
INSPQ	Institut national de santé publique du Québec
IRSST	Institut de recherche en santé et sécurité du travail
ISQ	Institut de la statistique du Québec
MADO	Maladie à déclaration obligatoire (reportable disease)
MEQ	Ministère de l'Éducation du Québec
MSSS	Ministère de la Santé et des Services sociaux
OECD	Organization for Economic Co-operation and Development
PAHO	Pan-American Health Organization
PHA	Public Health Act
RRSSS	Régie régionale de la santé et des services sociaux (regional health and social services board)
WHO	World Health Organization

Introduction

The importance of taking action before health and psychosocial problems occur in the population has been recognized for many years and in different sectors. This acknowledgement, which is one of the foundations upon which the action of the ministère de la Santé et des Services sociaux (MSSS) is based, is reflected concretely in the initiatives contained in the *QuébecPublic Health Program 2003-2012*. The program defines the activities to be implemented over the coming years in order to act on the determinants that have an impact on the physical and psychosocial aspects of health. In this way, it strives to promote health and prevent the onset and development of health and psychosocial problems in the Québec population. The program also specifies the public health services that are accessible to all Québec citizens.

Both the structure and content of the national program are influenced and enriched by a number of contextual elements. First, the program is the main measure provided for under the Public Health Act (PHA), adopted in December 2001, to chart the course of public health action organized at the national, regional and local levels. Second, the program, which adheres to the objectives established in the *Policy on Health and Well-being*, introduces the activities needed to enhance the population's health and well-being status as well as to reduce inequalities in health and well-being. In addition, it links the planning of public health activities to the national and regional processes of strategic planning of the Ministère and the regional boards. Finally, the program ensures the continuity of *Québec Priorities in Public Health 1997-2002* and even broadens the organization of activities to cover all the issues that come within the field of public health action.

This document describes the content of the *Québec Public Health Program 2003-2012*. Chapter 1 provides an overall vision of the program by briefly presenting the program's components, which are then described in detail in the other chapters of the document. Chapter 2 provides an overall portrait of the health and well-being of the Québec population and of the main health determinants, which helps us to understand the relative importance of the problems and to identify which problems can be prevented through public health actions. The public health functions, the values and ethical principles as well as the strategies on which the program's activities are based are described in Chapter 3. This is followed by a chapter dealing with the surveillance activities used to monitor the population's health. Public health interventions and services to the population are dealt with in Chapter 5. The overall evaluation framework for the program is presented in Chapter 6 while the last chapter describes the procedures related to implementing and updating the *Québec Public Health Program 2003-2012*. Finally, additional documents will examine certain aspects of the program in greater depth, including surveillance, the strategy related to the development of communities, the battle against human immunodeficiency virus and acquired immunodeficiency syndrome (HIV/AIDS), sexually transmitted infections and the hepatitis C virus, research and innovation as well as program evaluation.

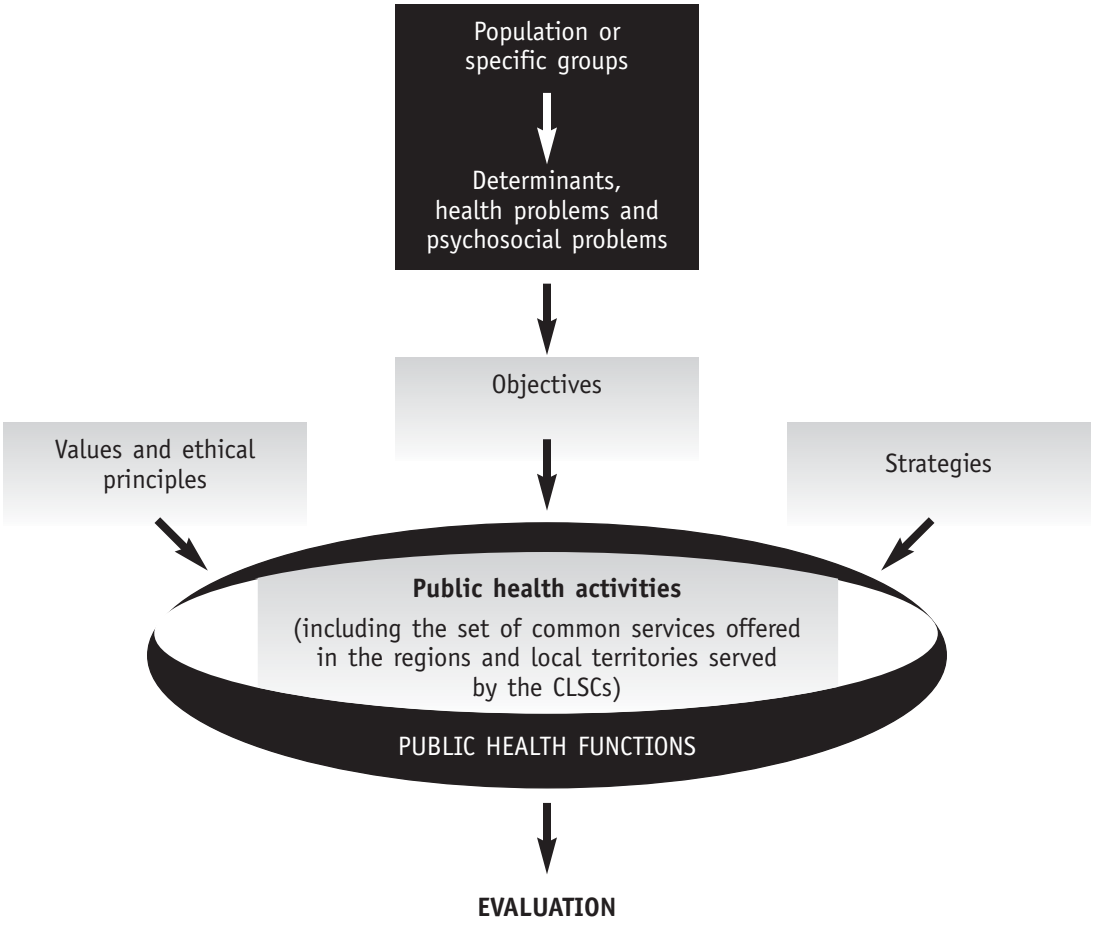
CHAPTER 1

OVERVIEW OF THE PROGRAM

The Québec Public Health Program defines the public health activities that are necessary to enhance the health and well-being of the population. The public health approach is to act on the factors that influence health for the benefit of the entire population or specific groups of people. This action is not based on a diagnosis of individuals, but rather of the population as a whole or of groups with certain common characteristics. This approach is characterized by early intervention, that is, action taken mainly before problems related to health and well-being occur.

The components of the program are first presented in Diagram 1 and then described below.

Diagram 1 Components of the Québec Public Health Program



Through its **objectives**, the program strives to change the determinants of health and well-being, enhance health and well-being, and reduce health or psychosocial problems and injuries.

These objectives are expressed in **activities** that relate to one of the public health **functions**—that is, the roles or tasks that are the responsibility of public health—as described in the Public Health Act.

Public health functions

Core functions

- Ongoing surveillance of the population's health status
- Promotion of health and well-being
- Prevention of diseases, psychosocial problems and injuries
- Health protection

Support functions

- Regulation, legislation and public policies that have an impact on health
- Research and innovation
- Skills development and maintenance

The functions, which are especially important because they delimit the field of public health action and thus determine the type of activities that come within it, are divided into two categories. The core functions give public health activities their distinctive character and are as follows: ongoing surveillance of the population's health status; promotion of health and well-being; prevention of diseases, psychosocial problems and injuries; and health protection. The support functions, which as their name suggests, support the exercise of the core functions, are: regulation, legislation and public policies that have an impact on health; research and innovation; and the development and maintenance of the skills of the people who work in public health. It is through the combination of activities that come under each function that action can be taken to enhance the health and well-being of the population.

The population's health status can be monitored through **surveillance activities**. Some of these activities, just like the activities that relate to the other functions, fall within the six **program areas**, under which issues that have common characteristics are grouped together. The activities that are part of each program area are often interlinked since certain determinants of one problem may relate to more than one program area (for example, lifestyles and the environment which are linked with respiratory diseases). Moreover, certain determinants are common to problems considered in different program areas (including sexual behaviours that are involved in teen pregnancies and sexually transmitted infections). All the activities included in the Québec Public Health Program meet the two following criteria: they must seek to decrease major (i.e. in terms of their magnitude or seriousness) health or psychosocial problems, and they must be linked to an effective **intervention** or **service**. Some of the program's activities were already part of the *Québec Priorities in Public Health 1997-2002*; the health problems that were used in the section titles of that document are included in the content of the six program areas in the present program. Other activities are derived from the government action plans or policy documents produced by the ministère de la Santé et des Services sociaux. The activities are intended for the whole **population**, specific age **groups** (children, adolescents, adults, or people aged 65 or over) or vulnerable groups, that is, groups which, because of their characteristics, are at a greater risk of having a psychosocial or health problem.

Program areas

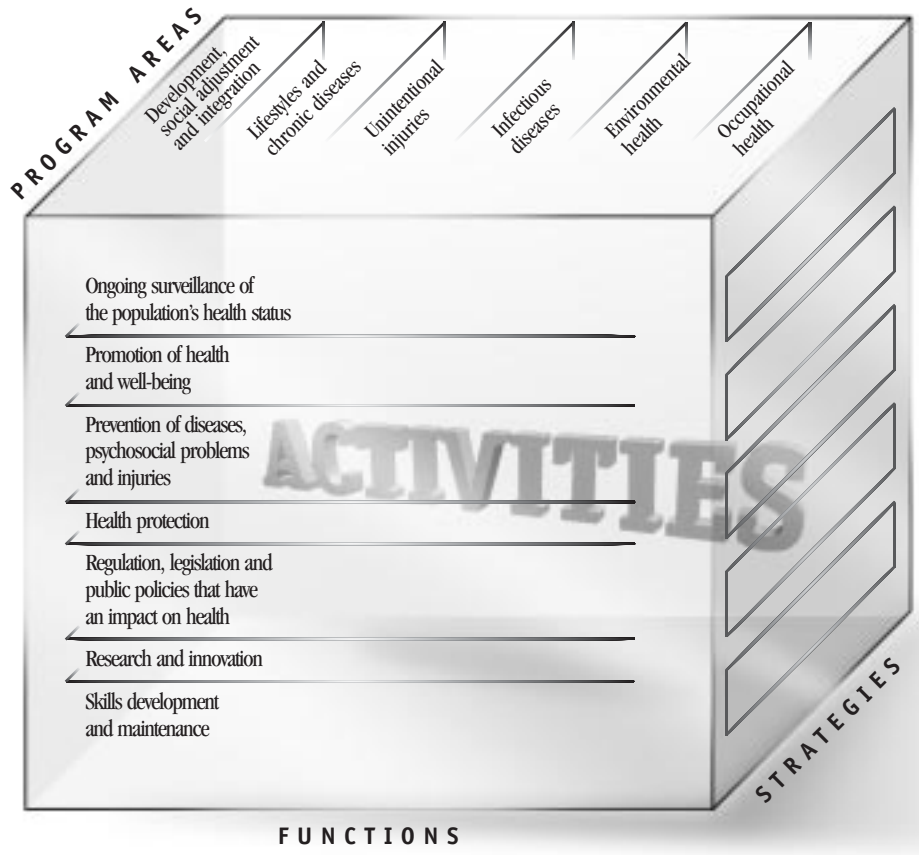
- Development, social adjustment and integration
- Lifestyles and chronic diseases
- Unintentional injuries
- Infectious diseases
- Environmental health
- Occupational health

Some of the program's activities deal with problems that can be found throughout Québec. They constitute the set of services that are common to all regions and all the territories served by local community service centres (CLSCs). This set of services, which includes all the functions and all the program areas, is a first in public health in Québec. Other activities are also included in the program, both to meet needs resulting from health and psychosocial problems that are specific to regional or local populations and to broaden, where practicable, the range of services offered and their impact on population's health.

The activities are organized by **strategies** to achieve the objectives set by guiding the choice of activities and groups of people for whom they are intended. In addition, the program puts forward **values** and **ethical principles**—an ethical framework called for by the Public Health Act—which should enrich the thinking and discussion about the values involved in the exercise of the public health functions and in the planning and implementation of activities.

To sum up, the program includes the objectives and activities that make it possible to enhance the health and well-being of the population or specific groups. These activities, combined according to diverse strategies, are the concrete expression of each function, in each of the program areas. The program has a matrix structure (functions X strategies X program areas), as illustrated in Diagram 2.[1]

DIAGRAM 2 STRUCTURE OF THE QUÉBEC PUBLIC HEALTH PROGRAM



Finally, the program includes an **evaluation framework** to follow up the exercise of the functions and the implementation of the activities and to monitor social and health indicators.

The structure on which the program is built has both strengths and weaknesses. It has the advantage of delimiting, through the functions, the field of public health action and of specifying, through the program areas, the context in which these functions are exercised on a daily basis. The problems or groups of people targeted by the activities cannot be found directly in the chapter titles; however, the objectives and activities listed in each of the program areas clearly mention the health or psychosocial problems concerned as well as the targeted population.

CHAPTER 2

THE POPULATION'S HEALTH STATUS AND ITS PRINCIPAL DETERMINANTS: HIGHLIGHTS

The purpose of the following health portrait is to highlight the main challenges that must be met in order to enhance the health and well-being of the Québec population. It reports on what are observed to be Québec's major health problems, either because of their seriousness or magnitude.

The data sources most often used are death records and short-term hospitalization records as well as population surveys conducted in Québec since 1987 by Santé Québec and the Institut de la statistique du Québec (ISQ). Although based on the most recent Québec data, this health portrait has limitations that often stem from the data themselves. The data on deaths and hospitalizations, for example, tell us little about the problems that are not reflected in mortality rates or the use of hospital care. The data on the use of services are influenced by the very nature and availability of the services offered. Moreover, we lack the data needed to determine the magnitude of certain problems, in particular, those of a psychosocial nature. Finally, this health portrait, which is intended to highlight the importance of the problems, provides only a partial view of the health problems that are already under control due to sustained action. This is true, for example, of many infectious diseases that are under control thanks to vaccination. This portrait is, however, supplemented by a more detailed description of the major problems and their related factors, which is included in the presentation of each program area.

During the last twenty years, the overall mortality rate (all causes combined) for the entire population has decreased by nearly 30% and it has also dropped in each age group.[2] On the whole, this decline is explained principally by an appreciable decrease in deaths due to cardiovascular diseases and injuries, particularly those due to road traffic injuries.[3] Consequently, in this same period, life expectancy increased by 5.2 years for men and 3.3 years for women, reaching 75.4 years for men and 81.5 years for women in 1999.[4] The values for life expectancy observed in recent years place Québec slightly below the Canadian average, but ahead of the majority of the countries of the Organization for Economic Co-operation and Development (OECD).[5]

The enhancement of the population's health status in recent decades can be explained by a variety of factors. The general improvement in living conditions of Quebecers—including a higher educational level, better nutrition, improved sanitation and safer living environments—have contributed to an overall decrease in mortality. The better health status of mothers and children can be attributed to the evolution of demographic factors during the last fifty years, such as birth spacing and the decrease in family size. Important gains can also be explained by the efforts made in prevention which have been constant in several sectors, including the health and social services sector. Finally, improved care and treatment offered to people who have a health problem have also contributed to these encouraging results.

MAJOR HEALTH PROBLEMS

Certain problems nevertheless remain a cause for concern because of their high incidence, their seriousness in terms of mortality or the disabilities that they cause, or because there has been an increase in or resurgence of them.

Although they have decreased considerably during the last twenty years, circulatory disorders —most often ischemic heart disease—are still responsible for slightly more than a third of deaths among men and women. Following closely are cancers, which cause slightly less than a third of deaths among both sexes. Diseases of the respiratory system, which include chronic respiratory diseases and pneumonias, rank third among causes of mortality, followed by unintentional injuries[6] and diseases of the digestive system.[7] When health status is assessed in terms of morbidity, which is reflected partially in hospitalization rates for short-term physical care,[8] the main conditions affecting the population rank as follows: cardiovascular diseases, diseases of the digestive system, diseases of the respiratory system and cancers. It should be mentioned that pregnancy, childbirth and their complications rank second among the reasons for hospitalization for the population as a whole.[9] Moreover, the health problems most often reported are allergies, headaches, diseases of the joints and muscular-skeletal system, including pain in the back and spine, hypertension, injuries, functional digestive disorders, asthma and cardiac diseases. These are common problems, each affecting approximately 10% of the population,[10] which generate considerable use of ambulatory services and restrict activities to varying degrees. Apart from consultations for preventive purposes or for routine check-ups, the reasons for the most recent consultation of a professional are most often diseases of the joints and muscular-skeletal system, diseases of the respiratory system and injuries as well as disorders of the nervous system and sensory organs.[11]

Problems of a psychosocial nature, including mental health problems which affect a large proportion of the population, should also be mentioned. Many children have adjustment problems[12] or are victims of physical or psychological abuse, sexual abuse or neglect.[13] There is a high number of cases of sexual abuse and intimate partner violence which jeopardize the health and well-being of women.[14] Not only has drug and alcohol use increased, but it is starting earlier in life.[15] Finally, one out of five persons presents a high level of psychological distress[16] and the suicide rates are high, particularly among men.[17]

When the health indicators for the population as a whole are further examined by specific age groups, a number of psychosocial and health realities are revealed, which are highlighted below.

Children and adolescents from birth to age 14

Congenital defects and perinatal conditions, including intrauterine growth retardation and prematurity, are still the principal causes of mortality among children under 1 year old while poisonings and injuries, mainly due to road traffic accidents, are the leading cause of mortality among children aged 1 to 14.[18] The main reasons for hospital admissions among children under 14 are diseases of the respiratory system, diseases of the digestive system, poisonings and injuries, as well as infectious and parasitic diseases.[19] Research studies have heightened our understanding of the magnitude and consequences of childhood social adjustment problems which are receiving increasing attention. This is also true of developmental delays, learning disabilities, behavioural disorders, and problems of physical and psychological abuse, sexual abuse and neglect. Manifestations of psychological distress are observed among very young children, as witnessed by the incidence of anxiety disorders and depression as well as suicidal thoughts and gestures reported in the scientific literature.[20]

Adolescents and young adults aged 15 to 24

Cases of violent death, most of which are attributable to suicide and road traffic injuries, are a very significant cause of mortality among adolescents and young adults, especially males. Cancers represent the third most important cause of death among young people aged 15 to 24.[21] Unintentional injuries are a major cause of admission to hospital among boys and young men.[22] Sexually transmitted and blood borne infections occur more frequently from late adolescence onwards.[23] The teenage pregnancy rate is relatively high and while the elective abortion rate has increased among women of all age groups since 1985, it is still the highest among women aged 18 to 24.[24] The magnitude and consequences of drug and alcohol use, smoking and other forms of dependency among adolescents and young adults are increasingly known. The data show that there are more regular smokers among young adults aged 20 to 24 than among adolescents aged 15 to 17. The same trend is observed for drug use among boys only.[25] The proportion of the population with a high level of psychological distress or suicidal thoughts is highest in this age group.[26]

Adults aged 25 to 44

Injuries and suicides result in the greatest number of deaths among 25 to 40 year-old men and women combined, but particularly among men. It should also be noted that compared to the previous age groups, for this age group there is a significant increase in deaths due to chronic diseases, including cancers and cardiovascular diseases. Indeed, cancers are the leading cause of death among women in this age group. At about 40 years old, cancers overtake injuries and suicide as the leading cause of death.[27] Digestive, genito-urinary, circulatory, and mental disorders, as well as injuries are major causes of admission to hospital among people aged 25 to 44. Reproductive health is the leading cause of hospital admissions among women in this age group.[28] The number of cases of diabetes, though less prevalent than the disorders mentioned above, increases considerably from this age onwards.[29] Mental disorders, suicide, all forms of violence as well as problems associated with drug and alcohol use continue to have serious consequences for individuals, families and communities.[30]

Adults aged 45 to 64

People aged 45 to 64 are subject to a large increase in overall mortality, which can be attributed to a significant increase in chronic diseases. Thus, the mortality rate for all causes combined is nearly five times higher among people aged 45 to 64 than among those aged 25 to 44, while the mortality rates due to injuries and suicides remain similar for these two age groups. However, the mortality rate due to cancers is almost five times higher for people aged 60 to 64 than for those aged 45 to 50 and the mortality rate for cardiovascular diseases is almost six times higher. Cancers are the leading cause of death, followed by cardiovascular diseases, respiratory disorders and digestive disorders.[31]

These problems, along with genito-urinary and mental disorders, are the leading causes of hospitalization. A large increase in cardiovascular diseases as a cause of hospital admission among people aged 45 to 64[32] is also observed. Although most of the psychosocial problems affecting the population have already been mentioned, it should be added that some of their consequences are more evident during this period of life.

People aged 65 or over

The proportion of Quebecers aged 65 or over will increase during the next twenty years.[33] As a result, the number of people struggling with conditions that jeopardize their autonomy will increase. Indeed, a greater prevalence of chronic physical and mental illnesses has been observed, the most prevalent among the latter being dementia, particularly Alzheimer's disease. Certain sensory disorders are also more prevalent.[34] Among people aged 65 or over, diseases of the circulatory system, cancers and respiratory diseases are by far the three leading causes of death.[35] Digestive disorders, along with diseases of the circulatory and respiratory systems and cancers, are the leading causes of admission to hospital.[36] From the age of 75 onwards, there is a sudden increase in the number of injury-related hospital admissions and deaths.[37] The combination of morbid conditions among people in this age group results in a greater use of drugs, thereby increasing the risks of drug interactions and adverse effects.[38] The significant loss of autonomy among the oldest of this age group often leads to a withdrawal from daily life, resulting, for example, in isolation and depression. More than one out of four people aged 75 or over has a long-term activity limitation[39] and during this period of life, nearly 20% of people live in a health care institution.[40] Finally, abuse and neglect also figure among the problems faced by seniors.

Groups that are particularly vulnerable

Examination of the population's health status based on socio-economic characteristics reveals inequalities in the distribution of risk factors and health problems. These inequalities help to identify the groups that are more vulnerable. The preceding analysis by sex is highly instructive in this respect, as is the examination of health and psychosocial problems by age group. However, variables other than sex and age should also be considered to complete the analysis of the population's health status. Among these is poverty, which is characterized by a set of material and social deprivations and increases the risk of health problems. It is well known that there is a high correlation between the population's health status and a series of indicators of disadvantage, such as low educational level, economic inactivity, insufficient income or lack of social support. This correlation is also visible between the regions of Québec and from one CLSC territory to the next.[41]

People may be vulnerable during relatively long periods of their lives, which may correspond to life stages or transition periods. Certain combinations of factors that jeopardize health often lead to an exponential growth in the vulnerability of individuals or groups affected by these factors. Poor health status is sometimes the cause and sometimes the consequence of difficult living conditions. Furthermore, the combination of physical problems, mental health problems and other psychosocial problems in certain groups increases their vulnerability. This notion of comorbidity requires that the problems be considered as a group rather than in isolation.

Human and social costs

Dependency-free life expectancy is one of the indicators used to quantify the burden of disease within a population or population groups. This indicator reflects life expectancy without either severe, moderate or mild dependency. According to the 1998 survey data, dependency-free life expectancy was 69.4 years for men and 70.6 years for women. It increased by 14 months for men and decreased by 11 months for women between 1987 and 1998. This variation can be explained mainly by an increase in mild dependency. When the latter is excluded from the calculations, the healthy life expectancy of men increases by 26 months and that of women increases by 15 months.[42] Thus, men die at a younger age than women, but they live with a disability-related dependency for a shorter time than do women. Perception or self-evaluation of health status is a useful indicator for describing the population's health status as it provides the opportunity to compare objective and subjective aspects of health. The perception of health status is associated with physical health problems, functional capacity and activity limitation and, to a lesser degree, the status of mental and social health. It is also associated with individual behaviour related to health. Thus, the proportion of the population aged 15 or over who perceive themselves to be in excellent, very good or good health is nearly 90%, but decreases with age—from nearly 93% among people aged 15 to 24 to 77% among people aged 65 or over.[43]

The World Health Organization classifies health problems according to the global burden of disease, that is, the burden that they place on society measured in terms of the premature deaths and disabilities that result from these health problems. Based on this notion of global burden, cardiovascular diseases, mental disorders (including suicide), and cancers are the most serious problems in industrialized countries. According to WHO estimates, they alone account for 50% of the global burden of all diseases. These indicators allow us to more accurately measure the magnitude of certain problems, such as mental disorders, which until now have been underestimated because they have little direct effect on mortality. Consideration of these problems individually shows that ischemic heart disease, major depression, other cardiovascular diseases (e.g., stroke), problems associated with alcohol use and road traffic injuries create the greatest burden.[44]

Expenditures

The health and social services sector is a major economic sector. In 2002-2003, the share of the budget devoted to health and social services (17.5 billion dollars)[45] represented 40.4% of total government program expenditures.[46] Public sector expenditures on health and social services represented 7.4% of the gross domestic product (GDP),[47] while public and private sector expenditures on health represented 9.3% of GDP. This proportion increases to 10.1% when public social service expenditures are included.[48] The government's mission in the health and social services sector ranks first among government expenditures, followed by the mission of education and culture, two sectors which represent 27.3% of government program expenditures.[49] In 2002-2003, expenditures related to health and social services were estimated to be $2,349 per person.[50] Finally, expenditures on public health activities and services were estimated to be 2.3% of total health and social services program expenditures for 2000-2001.[51]

PRINCIPAL HEALTH DETERMINANTS

The health and well-being of the population as well as the observed disparities in health and well-being result from the interaction of biological, behavioural and environmental determinants that have an impact on both individuals and families as well as communities. The effects of a series of factors can be observed, such as people's biological predispositions, behaviour, family and social relations and, more broadly, their living conditions and physical environment as well as the quality and accessibility of health and social services.

Social and health changes occur in a context that is partly determined by general demographic, social and cultural trends. The latter greatly influence the evolution of the population's health status, as well as the social perceptions of what constitutes health, disease or disability and the acceptability of the solutions proposed. Among the changes that have taken place in recent years are: population aging, a decline in fertility, a changing family structure and the evolution of the social roles of men and women—both young and old—particularly with regard to work and family, the recognition and increased acceptance of different sexual orientations, the erosion of religious values, the growing proportion of immigrants and increasing number of cultural communities that make up the population of Québec.

The following highly interrelated health determinants all provide analytical vantage points or perspectives, either direct or indirect, to help guide public health action:

- biological and genetic predispositions;
- lifestyles and other health-related behaviours;
- living conditions and social settings;
- physical environment;
- organization of health and social services as well as access to resources.

The health determinants include people's biological and genetic predispositions, which in some cases can be identified in families and populations. In certain cases, these predispositions may work in favour of health and thus may act as protective factors; in other cases, it is possible to either prevent or lessen their negative effects, given that their evolution can be modified.

There is no longer any doubt that lifestyles and other health-related behaviours are linked to a series of problems, in particular those related to chronic diseases, infectious diseases and unintentional injuries. Despite the significant advances made in recent years with regard to certain behaviour, as witnessed by the overall decrease in cardiovascular diseases, other health gains that are just as important can still be achieved by taking action on smoking, nutrition, sexual behaviours, dental hygiene, drug and alcohol use, safety-related behaviours and the use of preventive services such as screening, vaccination and fluoride application to children's teeth.

It has been known for a long time that socio-economic status, educational level, housing quality and employment situation are linked to many physical health and psychosocial problems. The enormous influence of these factors on health and well-being must be mentioned, despite the fact that the most powerful levers to change these living conditions are in the hands, not of the health and social services sector, but of other sectors. They are also indissociable from the social settings in which people evolve and which constitute, in turn, important health determinants. The family, child care setting, school, workplace and community are all social settings that, according to the values and standards which they convey, influence people's health practices. Social stability, safety, recognition of diversity, harmonious interpersonal relations and social cohesion make up a set of conditions that have a protective effect on health. In particular, the protective effects of social support, based on characteristics such as the quality and diversity of available support, should be mentioned. Numerous studies conducted in recent years have revealed the important impact of these "social" determinants on many health and psychosocial problems.

The quality of the physical environment—the quality of drinking water, recreational water, outdoor air, indoor air and soil as well as the quality and safety of the built environment, equipment and consumer products—is related to the incidence of a series of diseases and injuries. The fluctuation of several environmental contaminants is correlated with the incidence of certain health problems. For example, the causal relationship between solar radiation and skin cancer, and between the presence of pollen and allergic rhinitis is well known. The influence of land-use management on people's health, safety and quality of life is also recognized. Another topic of growing concern among the public is food quality, not only in terms of sanitation, but also food safety, as reflected in the debate over genetically modified organisms and pesticide use.

Finally, the organization of and access to health and social services is another determinant of the health and well-being of the population. In fact, both the organizational aspects that favour accessibility, continuity, coordination and quality of care and services, as well as the application of clinical preventive practices, have an influence on health. The following elements contribute to the quality of health and social services: the early detection and rapid treatment of problems, the judicious use of diagnostic and therapeutic technology (such as drugs, including antibiotics), the supply of a wide range of services adapted to the health problems of the population, the greater integration of primary care (including preventive services), the strengthening of a territory-based approach, the complementarity of the different levels in the organization of services, interdisciplinarity, the competence of professionals and the participation by those who are sick as well as their family and friends in their care. Certain population groups depend more on care and services in order to maintain their health and quality of life. For example, this is true of the elderly with decreasing autonomy or even people suffering from serious mental disorders and their family and friends. Moreover, access to a range of services and support, mutual aid or advocacy resources helps individuals and communities to fully develop their potential.

This brief overview of the major health problems affecting the Québec population and of the most important determinants of these problems has highlighted a number of findings which constitute public health challenges for the coming years. A first challenge will be to reduce psychosocial problems; these problems are frequently interrelated and often appear very early in life, which has consequences that are sometimes serious for individuals, families and communities. The second challenge will be to decrease avoidable premature death and disabilities due to chronic diseases, unintentional injuries and mental disorders. A third challenge will be to attenuate the effects of population aging, particularly its consequences for people who have functional disabilities and for their natural support network. The fourth and final challenge will be to reduce inequalities in health and well-being.

CHAPTER 3

FOUNDATIONS OF THE PROGRAM

PUBLIC HEALTH FUNCTIONS

The *Québec Public Health Program 2003-2012* builds on the public health functions,[52] which define the nature of the activities to be offered to improve the population's health.

The first four functions, referred to as core functions, give public health action its distinctive character. Ongoing surveillance of the population's health status includes activities to evaluate the population's health status, to gather data on health determinants, and to provide this information to the population and the people who are in charge of planning health and social services. Promotion of health and well-being includes all actions intended to have an impact on health determinants so that individuals, groups and communities can gain more control over their health through the improvement of their living conditions and lifestyles. Prevention encompasses activities whose primary purpose is to reduce the risk factors associated with diseases, psychosocial problems and injuries and to detect early signs of health or psychosocial problems. Health protection includes activities that the authorities undertake with individuals, groups or the whole population in the event of a real or apprehended threat to health.

The exercise of these core functions is supported by three other functions. Thus, the function referred to as regulation, legislation and public policies that affect health includes all activities to influence the development of regulations, laws and policies so as to promote the population's health and well-being. The function designated by the terms research and innovation includes a set of activities that focus on the production, dissemination and application of the scientific knowledge necessary for the exercise of the other public health functions and for innovation and the development of public health expertise. Finally, the function referred to as skills development and maintenance, which is closely linked to the preceding function, includes all activities to ensure that knowledge and practices are transferred to public health actors to support the implementation of the program and to allow the latter to play a leading role in the projects to be carried out in social settings and communities.

GUIDEPOSTS FOR A PUBLIC HEALTH CODE OF ETHICS[53]

Key values and principles

The following values and principles are proposed in order to integrate an ethical dimension into the practice of public health.

THE PROGRAM'S KEY VALUES AND ETHICAL PRINCIPLES

- The public interest
- Beneficence
- Non-maleficence
- Autonomy
- Respect for confidentiality and privacy
- Responsibility
- Solidarity
- Protection of individuals, groups and communities that are vulnerable
- Justice

Promoting the public interest is a key value in public health. This refers to the interest of groups, communities, or any other type of community or social group or of the population in general. The public interests targeted are health and well-being—as indicated by healthy life expectancy and quality of life—as well as security and a healthy environment. Promotion of the public interest implies the defence of the long-term interests of a population, sometimes at the expense of individual or momentary preferences.

Beneficence and non-maleficence are two key ethical principles that help to clarify the notion of public interest. Beneficence, marked by empathy and solicitude in the face of disease or suffering, expresses the moral obligation to take action in the interest of the population. The concern for beneficence, within the limits of the responsibilities that are incumbent on public health actors, goes hand in hand with the objective of achieving a good status of health and well-being for the whole population. However, beneficence is not limited to the good will that underlies action, but requires that the benefits of an intervention be assessed in relation to its possible negative effects. The principle of non-maleficence underlies the moral obligation not to injure or cause harm to others; it evokes the importance of protecting the population against misdeeds, whether iatrogenic or not, resulting from certain actions or the failure to act. It also underlines the importance of justifying intervention in a manner that takes into account its negative effects,

whether they are direct or indirect. Finally, the ethical principles of beneficence and non-maleficence refer in particular to another order of principles, that is, to uncertainty and precaution. The principle of uncertainty requires that we periodically question the evidence, even solid evidence, when planning interventions. The principle of precaution warns against inaction when the risks to health are not well known or are poorly described, or when knowledge about the methods of intervention is lacking but the risks to health are serious and irreversible. Thus, while beneficence and precaution encourage action, non-maleficence and uncertainty encourage caution.

While the enhancement of health and well-being focuses on the public interest, it is based on the recognition of the capacity of human beings to make their own life choices as well as on the respect for individuals and their integrity. Public health activities must therefore also conform to the principle of respect for individual autonomy, that is, the ability of individuals to run their own lives and to decide what is good, desirable, tolerable or acceptable for themselves or for those for whom they are responsible. This principle is associated with values such as freedom and independence. Respect for confidentiality and privacy is a rule which goes together with respect for individual autonomy. It is especially important in any situation that involves the use of nominative data for the purposes of surveillance, research or intervention. All individuals have the right to decide for themselves what they are willing to divulge about their private lives regarding, for example, their hereditary or genetic baggage, health status or a previous exposure to health risks. Thus we can anticipate conflicts between the need to protect the health of the whole population, which may necessitate the collection and communication of personal information, and the requirement to respect individuals' autonomy and right to confidentiality.

Furthermore, the value associated with the notion of responsibility plays an important role in relation to the health and well-being of the population. Indeed, this may even be expressed in terms of the balance between social responsibility, embodied in the state and different social organizations, and the individual responsibility of citizens. Society's responsibility for the health of the population does not exempt citizens from exercising their individual responsibility. Indeed, all citizens are responsible for their choices and must be concerned with the consequences of these choices not only for their own health and well-being but also for the health and well-being of the community as a whole. However, calling on individual responsibility may serve no useful purpose if the conditions required for individuals to exercise this responsibility do not exist at the level of society. Thus, the state must ensure that it uses all the means necessary to promote and protect the public interest and to guarantee that all citizens enjoy equal opportunity with regard to health and well-being. The state must collaborate with social actors to help citizens to develop the capacity to make choices while ensuring that the conditions that will facilitate these choices are put in place. These conditions are often outside the individual's sphere of influence—including the social conditions or collective arrangements over which citizens have little or no influence.

Consequently, the co-responsibility of society and the citizen is expressed through the value of solidarity. While responsibility has two facets—the responsibility of society towards citizens and of the citizen towards the collective efforts to defend the public interest—, solidarity also has two facets—the empathy and assistance of the entire society in pursuing health and well-being and the agreement of citizens to tolerate certain infringements on their autonomy. Social solidarity ensures that, on the one hand, the community as a whole is concerned with meeting the needs of persons and groups and, on the other, the majority of citizens undertake actions that are likely to enhance the health of the population. Thus, these two movements are often the conditions necessary for public health action to be effective.

This social solidarity allows us to take into account the specific needs of groups of individuals who have more problems or risk factors. The health portrait of the population clearly shows that health is not equally shared by the population: socio-economically disadvantaged groups, certain ethnic minorities and other groups, due to their age, sex or various conditions, are more likely to have psychosocial or health problems. Thus, the protection of individuals, groups and communities that are vulnerable occupies a legitimate place among the values that should be respected in public health.

Concern for individuals, groups and communities that are vulnerable related to the broader principle of justice, which implies an impartial response to the needs associated with the health and well-being of the individuals and groups that make up the population. The principle of justice implies that a balance will be sought between universal measures

for everyone and selective measures for individuals and groups that are vulnerable. Similarly, intergenerational justice calls for a consideration of the sustainability of effects. Other considerations, in particular related to sex, gender or culture, are likely to be dealt with when the principle of justice is evoked. This principle includes the notion of non-discrimination, according to which a fair intervention will not expose target groups to discrimination, social labelling or stigmatization.

Drawing on values and ethical principles

Ethics play an important role in public health because most of the decisions to be made concern people, whether individuals, groups or communities and, more precisely, the way in which they live together. The proposed values and ethical principles indicate the orientations, concerns and attitudes that should be favoured or rules that should be observed. Turning to values and ethical principles in a planning or practice context encourages discussion and debates when there is a clash between different beliefs, options or justifications which are all equally defensible. Reference to these values and principles does not mean that they should be applied in a mechanistic and linear fashion but rather that they should be used to stimulate thinking and provide guideposts when solving moral issues related to health and well-being. These values and principles allow us to examine the different aspects of activities from different perspectives when decisions are being made. Furthermore, they may have special importance depending on the situations that are being examined.

There are different ways to promote the use of ethical guideposts. Thus, the *Comité d'éthique de santé publique* (public health ethics committee) established by the Public Health Act is a primary means to allow ethical concerns to play a role. It provides a formal mechanism to obtain opinions on proposed surveillance plans or any other public health issue that may be raised in the application of the Act and the implementation of the present program or action plans. Values and ethical principles are therefore likely to be integrated into the exercise of each of the public health functions. Moreover, the development of ethical expertise corresponds with the aims of the function that focuses on the development and maintenance of public health skills. The production of reference tools and the organization of continuing education activities should help to develop this expertise. Finally, the research ethics committees that already exist are paving the way for the consideration of the ethical issues that may be raised in the exercise of the research and innovation function.

STRATEGIES

The selected strategies

Our understanding of what determines the population's health status influences the choice of strategies. These strategies have an effect that cuts across all program areas in that the convergence of a set of activities impacts on factors that are likely to enhance the population's health and well-being. The strategies selected encourage the sharing of responsibilities in this regard. Thus, the maintenance and enhancement of the population's health status result from the commitment, on the part of individuals, families and communities as well as actors in the community, public and private sectors, to positively influence health determinants.

THE SELECTED STRATEGIES

- Strengthen the potential of individuals.
- Support community development
- Participate in intersectoral actions that promote health and well-being.
- Support groups that are vulnerable.
- Encourage use of effective clinical preventive practices.

Strengthening the potential of individuals

The health and well-being of the population largely depend on the potential of individuals—that is, on their physical, psychological, behavioural and social capacities—to make their own decisions and to exercise a degree of control over their lives. The role of public health is to recognize this potential and to support its development through actions centred not only on information, but also on the maintenance and acquisition of skills that allow individuals to make the most informed choices about their health and well-being. Thus, health and well-being are achieved through the empowerment of individuals.

Supporting community development[54]

The role of public health in the development of communities is to encourage and support the participation of individuals who are members of these communities in a

process to determine what they consider to be the most important health problems and the most appropriate solutions to these problems. This involves supporting the process of empowerment of communities. This strategy implies the involvement of local and regional actors, use of the community approach and partnership with other sectors so as to encourage the implementation of community-based projects focusing on health and well-being. Public health expertise can play a role in the coordination of such projects prior to their being carried out, as well as in implementing, leading and evaluating the projects.

Participating in intersectoral action that promotes health and well-being

Most of the levers of direct action on the physical, social and economic environments belong to sectors other than that of health and social services. It is therefore essential for public health actors to collaborate with the actors in other sectors to establish the conditions and create the environments that promote health from the point of view of sustainable development. The actions undertaken may consist of, for example, facilitating access to resources, services or adequate equipment and influencing decisions by the population to promote health and well-being. Public health can also contribute by evaluating the health risks associated with measures or projects that originate in the public or private sectors as well as by identifying the courses of action that are likely to attenuate their potentially negative effects on health.

Promoting the empowerment of individuals implies supporting the capacity of these individuals to make decisions and to exercise greater control over their lives.

The process of community empowerment involves the development of the capacities of a community to assume responsibility for itself and to improve the health and well-being of its members.

Public health actions inevitably lead to the interaction between several sectors of society, particularly the following: the family and childhood sector, education, recreation and sports, justice, public safety, employment, income, housing, food, agriculture, the environment and transportation.

Different population groups may be vulnerable of having various psychosocial and health problems; socio-economically disadvantaged groups and certain cultural communities, including Native people, are highly vulnerable to a set of these problems.

Supporting groups that are vulnerable

In order to reduce the disparities in health observed in the population, it is possible to act on the risk factors themselves and on the means that individuals and communities can use to reduce the negative effects of these factors. Public health action helps to characterize the different forms of risk and their consequences for health as well as to determine and implement action to attenuate these consequences. It is important to both ensure that services are accessible to groups that are vulnerable and that these services are adapted to the characteristics of these groups.

Encouraging the use of effective clinical preventive practices

Clinicians provide primary care to the population. They are encouraged to promote healthy behaviours, offer counselling and detect certain risk factors and problems that are as yet asymptomatic or the first signs of health problems and psychosocial problems. Public health teams can help support clinical preventive practices by determining which preventive actions are effective as well as by disseminating guidelines or guides for maintaining or integrating such actions into the services offered to the population.

The provision of effective clinical preventive practices must be advocated because of their significant effects on the improvement of the population's health status.

The deployment of strategies

The strategies selected have a high potential for integration because they affect all the public health functions. For example, support for groups that are vulnerable requires not only that the surveillance function be carried out to better understand the evolution of the health status of these groups, but also that preventive services adapted to their

needs be offered and that studies be conducted to improve the quality of these services and that public policies be influenced in favour of these groups.

In addition, the choice of strategies and particularly the combination of these strategies can be used to reduce inequalities in health and well-being, an objective that transcends the program areas as well as the health or psychosocial problems considered individually. In fact, it is through the empowerment of individuals and communities, through support for groups that are vulnerable and intersectoral actions, that we can claim to have achieved a degree of equality in health and well-being.

Moreover, this same combination of strategies requires flexible planning which can accommodate community-based projects concerned with taking charge of the health and well-being of their members. Such projects are based on the capacity of community members to undertake to change their physical or social environment so as to improve their health and well-being. It is therefore important to support the implementation of projects that correspond with the objectives of the program and around which groups or communities can mobilize.

The decision about which strategy to emphasize depends on the context in which the activity occurs, the determinants, health problems or psychosocial problems involved and the very nature of the activity implemented. In certain cases, research is needed to establish the optimal combination of strategies that will generate, in the Québec context, significant health gains for the whole population.

While the public health functions are the principal foundation of the Québec public health program, its implementation will be guided by the values and ethical principles as well as the strategies described above.

CHAPTER 4

SURVEILLANCE: ACQUIRING AND SHARING KNOWLEDGE ABOUT THE POPULATION'S HEALTH STATUS

PURPOSES OF SURVEILLANCE

Through the activities associated with surveillance, the population's health status can be described and analyzed in terms of problems, risk factors, determinants, disparities and trends for the following purposes:

- to inform the population about its health status, so that individuals, groups, communities or their representatives can compare their status with that of the whole population and act in the most informed way possible to promote their health and well-being;
- to support decision-making and the process of social and health planning both by identifying major problems and detecting emerging problems in the general population or certain groups in order to design appropriate policies and offer activities and adequate services;
- to review orientations and choices through the monitoring of outcome indicators;
- to support decision-making in the related sectors whose actions, services or policies may have an impact on the health and well-being of the population.

The function of surveillance is thus exercised closely with the other public health functions. It is also exercised through each of the program areas, without being limited to them. Indeed, when the population's health status is being assessed, surveillance may focus on monitoring health determinants, health problems and psychosocial problems that are not targeted by a program area.

Through surveillance it is possible to determine the major health problems and the determinants on which the activities offered must focus so as to improve the population's health status. It is also possible through surveillance to measure to what extent the social and health objectives targeted by these activities have been achieved. In this way, surveillance makes an essential contribution to the evaluation of the program.

SURVEILLANCE ACTIVITIES

Surveillance activities can be organized according to the following three principal themes: data provision, production and dissemination of information. The main orientations of these activities are defined in the surveillance plans provided for under section 35 of the Public Health Act. The national and regional surveillance plans serve in the planning of all activities related to data provision, the processing and analysis of these data as well as the dissemination of the information that can be drawn from them. These plans are submitted to the Comité d'éthique de santé publique and they must comply with the rules of the Commission d'accès à l'information du Québec (CAIQ), if applicable.

THE ACTIVITIES

Some of the activities included in the program already exist. Some of them are to be continued as they are—existing activities to be maintained—while others are to be consolidated—existing activities to be consolidated. The remaining activities are new and must be introduced — activities to be implemented.

Symbols used

- ■ Activity to be conducted during first stage of the program (2003-2005)
- ● Existing activity to be maintained
- ◐ Existing activity to be consolidated
- ○ Activity to be implemented

Activities related to data provision

Exercising the surveillance function requires first and foremost that data be available and accessible. Public health actors must, on the one hand, ensure that the data produced by the data banks for which they are responsible are of high quality and available to the entire health and social services network. As users, on the other hand, they must follow a series of steps in order to obtain the data that are essential to the surveillance of the population's health status. These steps are as follows: identify the necessary data and data sources as well as the surveys to be conducted; establish and conclude agreements with data holders concerning the acquisition of their data; verify the quality of the data; determine and comply with the conditions necessary to ensure the confidentiality of data; establish and update information systems; conduct studies and surveys; and transform data banks or micro files into workable files. Moreover, the design of new indicators and new information systems is often necessary. The entire process should ensure a flow of varied, meaningful and accurate data which are produced regularly or occasionally, depending on the need.

Activities related to information output

Given that the ultimate goal of surveillance is to produce relevant and up-to-date information, both on the population's health and well-being status as well as their determinants, the data must have a meaning for the targeted public. Thus, the raw data must be processed, analyzed and interpreted so that the information produced is both useful and understandable to the public for whom it is intended. It is necessary to integrate the data, whether according to their temporal (past, present and future) or spatial (national, regional or local) dimensions.

There are different types of information products. Some are based on basic analyses, for the whole population or a specific group, and make it possible to monitor the status of their health and well-being as well as to study specific problems. Other products report on analyses that increase our knowledge and thus our understanding of major problems and emerging problems. The output of surveillance may also include analyses based on prospective scenarios and hypotheses on the development of general or specific health problems.

The national report and regional reports on the population's health status, provided for under section 10 of the Public Health Act are the key products in the area of surveillance. The national report enables a comparison of the health outcomes obtained throughout Québec and in the different regions; it also enables a comparison of health outcomes with those of other provinces or countries. The regional reports, for their part, enable a comparison of health outcomes obtained in the local territories that make up the region. It is expected that the reports on the population's health status will be prepared in close collaboration with participating actors at the regional and national levels.

The national report on the population's health status, under different forms, examines the main problems related to health and well-being and establishes the links with the program's activities. It may also present a portrait of the main indicators of health and well-being so as to bring out the main trends and to diagnose the situation in Québec. Thematic documents or synopses on issues of concern or that provide an in-depth cross-analysis of certain health problems —for example, according to life stages or social settings—may be produced as a complement to the report on the population's health status.

Activities related to the dissemination of information

The purpose of the information generated by surveillance is to inform the population as well as professionals and decision-makers, whether or not they are part of the health and social services network. It is important that the information be adapted to the targeted groups within the population. Thus, it must be understandable, that is, clear and easy to interpret. The dissemination of information on health status will take various forms—including newsletters, statistical reports or profiles. It may also be disseminated through various means of communication, such as regular or electronic mail, a Web site, presentations at seminars or conferences and scientific journals. Dissemination strategies, including the harmonization of different release schedules, should ensure that each product receives the attention that it deserves.

Activities involved in the ongoing surveillance of the population's health status

■ ○ Develop national and regional surveillance plans

Activities related to data provision

■ ● Carry out activities linked to the availability of data contained in administrative or clinical files from the health and social services network and to timely access to these data.

■ ◐ Determine needs related to the information to be collected through surveys on health and social issues, which will be conducted by the Institut de la statistique du Québec (ISQ).

■ ○ Conclude formal agreements on the acquisition and provision of data produced by third parties.

Activities related to information output

■ ○ Produce national and regional reports on the population's health status.

■ ● Produce analyses of temporal and spatial variations.

■ ○ Produce analyses of major problems and emerging problems.

■ ○ Produce prospective analyses of certain health problems.

Activities related to the dissemination of information

■ ○ Disseminate national and regional reports on the population's health status.

◐ Disseminate any other information to the population regarding the population's health status.

◐ Disseminate any other information to decision-makers and actors in the health and social services network regarding the population's health status.

Legend
- ■ Activity to be conducted in 2003-2005
- ● Existing activity to be maintained
- ◐ Existing activity to be consolidated
- ○ Activity to be implemented

Classification of objects of surveillance

- **Demographic conditions:** total population, age and sex structure, population movement.
- **Socio-cultural conditions:** lifestyle, language, immigration.
- **Socio-economic conditions:** educational level, income, employment.
- **Physical environment:** water, air, soil, food, housing, work environment.
- **Social environment and social adjustment:** social support, family situation, social adjustment, skills development.
- **Lifestyles, risk factors and preventive behaviours:** diet, tobacco, alcohol, drugs and gambling, body weight, exercise, pregnancy, birth, breastfeeding, protective behaviour.
- **Health services:** preventive services (dental services, mammography, Pap test, vaccination), primary care services (drugs and methadone, Info-Santé CLSC), other health services as needed.
- **Overall health status:** perception of health status, life expectancy, healthy life expectancy, loss of autonomy, mortality by age.
- **Status of physical health:** loss of autonomy, prevalence of physical health problems, morbidity and mortality by cause.
- **Status of mental health:** perception of mental health status and self-esteem, mental health problem, distress and stress, suicidal thought and suicide attempt, suicide, depression, hospitalization for mental disorder.

OBJECTS OF SURVEILLANCE

Surveillance focuses on elements that concern the population's health and well-being status as well as its determinants: these are the objects of surveillance. A number of these are useful to some, if not all the actors in the health and social services network and affect all public health program areas. These objects of surveillance make it possible to describe and analyze the demographic, economic, social or cultural conditions linked to the health and well-being of the population as well as the lifestyles, health services, social services and the state of the general, physical and mental health of the population. Other objects of surveillance make it possible to describe and analyze the realities specific to each program area. Among the latter objects are the major health and well-being problems on which activities are focused in each program area and certain factors that are associated with these problems.

The Public Health Act and the Québec Public Health Program provide the framework for the development of surveillance practices. The design of the first surveillance plans, recourse to the Comité d'éthique de santé publique and possibly to the CAIQ, the determination of guidelines on data provision and the establishment of transitional measures to guarantee access to the necessary data are all steps in the preparation of the first products related to surveillance mentioned in the program. A complementary document will present the surveillance plans, which will determine all the objects of surveillance to be included in the Québec Public Health Program as well as the indicators and data sources that can be used to measure them. This will be followed by systematic output through the joint efforts of the national and regional surveillance teams, the first collaborative report on the population's health status, and products concerning surveillance in different program areas.

CHAPTER 5

PUBLIC HEALTH INTERVENTIONS AND SERVICES TO THE POPULATION

In this chapter, the contribution of public health to enhancing the health and well-being of the population for the next ten years is expressed concretely in the stated objectives regarding health problems, psychosocial problems or their determinants, the list of activities to be offered – a number of which will be implemented during the first stage of the program, i.e. between 2003 and 2005 — and the research to be carried out to support the proposed activities. These elements are presented in six separate parts, each devoted to a specific program area. The chapter ends with a description of activities that are not specific to any program area and are based on the community development strategy.

All intervention areas are presented in the same way. A brief analysis of the major health and psychosocial problems and their related determinants and risk factors is followed by a part dealing with intervention, in which current activities and orientations guiding the choice of activities for the coming years are briefly described. The objectives set and the activities proposed to achieve them are then specified. The presentation of activities is based on a logic that changes from program area to program area – presentation based on problems, presentation based on a set of problems or on functions — depending on the dynamics of intervention specific to each program area. The general orientations guiding the research to support the implementation of the program are then set out.

Major health and psychosocial problems

The problems and determinants considered are those for which public health intervention can be expected to make gains in terms of enhancing the health and well-being of the population. The importance of the problems is established on the basis of their magnitude and seriousness, whether they are already existing, emerging or re-appearing.

Objectives set

The stated health and social objectives relate to changing the determinants of health and well-being, enhancing health or reducing health or psychosocial problems. Wherever existing data permit, an estimate of the expected reduction in the rate or percentage is specified. This estimate reflects the approximate extent of the expected outcomes. The quantification of expected outcomes will depend on their accurate estimation based on surveillance data. Lastly, it should be understood that public health activities constitute but one of the many contributions to the achievement of these outcomes – including those made by other actors in the health and social services system and, in most cases, those made by actors in other sectors.[55]

Proposed activities

The proposed activities relate to one of the following public health functions: promotion of health and well-being; prevention of diseases, psychosocial problems and injuries; health protection; and regulation, legislation and public policies that have an impact on health.[56] This is the first criterion used to determine whether or not to include activities in the program. The second criterion is effectiveness which, in the majority of cases, is determined on the basis of evaluations conducted according to strict protocols, the results of which are reported in scientific publications; in other cases, it is based on the consensus of experts. In the latter case, although the effectiveness of these activities has not yet been proven, they relate to determinants that have a considerable and clearly established influence on health. This is true of certain activities that relate to living conditions and environments – in the intervention area of development, social adjustment and integration – or to lifestyles – in the intervention area of lifestyles and chronic diseases. Evaluative research will be conducted to ensure that these activities truly help to achieve the expected outcomes. Lastly, the activities selected are in keeping with the strategies that were given priority.

Several of the selected activities are drawn from government policy documents and are entirely consistent with them. This is true of activities that relate to the first theme of the strategy statement on combating poverty and social exclusion,[57] and involve reducing disparities in health and well-being through prevention and development of people's potential. Moreover, many activities are in line with the aims of the very recent Act to combat poverty and social exclusion[58] regarding the support to be provided to local and regional actions and social mobilization in order to combat poverty. Lastly, many of the proposed activities ensure the continuity of actions advocated in policy documents or departmental action plans on health and social services, including the objectives and activities of *The Policy on Health and Well-being*[59] and *Québec Priorities in Public Health 1997-2002*.[60] As the choice of activities specific to each intervention area is based on statements drawn from policies and departmental action plans, the latter will be referred to below in the introduction to each intervention area.

Some of the activities selected will be conducted during the next three years, that is, during the first stage of the program (2003-2005). These had to meet an essential feasibility criterion, that is, the real capacity, at the national, regional and local levels, for them to be maintained, consolidated or developed and for concrete outcomes to be achieved by the end of the program's first stage. Other activities will be conducted during the program's second and third stages (2006-2008 and 2009-2012).

The activities to be conducted during the first stage of the program at the national, regional and local levels make up the set of services that are common to all Québec regions and local areas for this period. Other activities will be added when regional and local action plans are drawn up, either to respond to the specific needs of regional or local populations, or where possible, to broaden the entire range of services offered. Moreover, activities that are linked with service organization as a health determinant may be added in the regional action plans. These involve activities which are already ongoing and focused on front-line health and social services, activities which integrate promotion and prevention services into primary care and specialized services, or activities which are based on the self-care approach, in particular, in the treatment of chronic diseases.

Two types of activities prescribed in several intervention areas need to be explained further. These are communication campaigns and activities relating to the promotion and support of clinical preventive practices.

REMINDER

Some of the activities included in the program already exist. Some of them are to be continued as they are – existing activities to be maintained — while others are to be consolidated – existing activities to be consolidated. The remaining activities are new and must be introduced – activities to be implemented.

Symbols used

- ■ Activity to be conducted during the first stage of the program (2003-2005)
- ● Existing activity to be maintained
- ◐ Existing activity to be consolidated
- ○ Activity to be implemented

Communication campaigns are thus provided for various themes. These campaigns include communication activities ranging from messages disseminated through different means of mass communication to information and awareness activities organized at the national, regional or local level.

Activities to promote and support clinical preventive practices involve disseminating knowledge on the most effective practices and producing tools to encourage clinicians to use these practices. Clinicians may include, among others, physicians, midwives, nurses, social workers, or dentists. The clinical preventive practices selected are those which target major health problems and those which, from a public health perspective, can be expected to considerably enhance the health of the population or specific groups. Many of the clinical preventive practices selected are measures whose effectiveness has been recognized by the Canadian Task Force on the Periodic Health Examination.[61] Others are based on expert opinions, particularly regarding the early identification of psychosocial problems. A clear distinction needs to be made between the latter activities, which focus on identifying as early as possible people who have various symptoms of a problem, and opportunistic or systematic screening of a problem in asymptomatic people.[62]

Research and innovation

Themes have been selected for each of the intervention areas in order to further knowledge to meet the needs of the program. This knowledge will result in a better understanding of health and psychosocial problems, health determinants, effective strategies and interventions as well as the conditions and practices that should be taken into account. An additional document will define the specific research needs for the first stage of the program (2003-2005) and the courses of action that will be given priority in order to coordinate efforts in exercising this function.

It should be specified that, although activities are presented for each of the intervention areas, they will not be implemented simultaneously. The activities require overall planning, regardless of the program area to which they relate, either because they are intended for the same population groups, they relate to common determinants of health and well-being, or because the actions relating to different determinants jointly affect the health and well-being of the population. The activities presented in the last part of this chapter clearly illustrate the type of integration desired.

Program Area of Development, Social Adjustment and Integration

PROBLEMS, RISK FACTORS AND DETERMINANTS

The intervention area relating to development, social adjustment and integration includes all psychosocial problems which affect children and adolescents as well as adults and the elderly. These are problems of abuse, neglect and violence, problems related to drug and alcohol use, mental health problems and suicide. This program area also includes certain problems relating to the development and physical health of young children as well as specific problems affecting the social adjustment of children and adolescents.

Children, adolescents and young adults

Despite the advances observed in recent years, many social and health problems continue to affect or threaten the development and social adjustment of children and adolescents. Thus, the continuous increase in the percentage of prematurity over the last twenty years and the recent increase in the percentage of low-birth-weight babies[63] need to be examined closely. It should be noted that some low-birth-weight babies are born prematurely or affected by intra-uterine growth retardation. Other problems relating to pregnancy, birth or the first few months of life can also jeopardize children's development. These include congenital rubella, neural tube defects, fetal alcohol syndrome, phenylketonuria and congenital hypothyroidism.

The proportion of premature live births rose from 5.6% in 1981 to 7.5% in 1998.

The proportion of low-birth-weight babies, which was 5.7% in 1993, rose to 6.1% in 1998. The proportion is higher among babies born to mothers who are under 18.

Certain physical health problems, such as gastro-intestinal infections and respiratory infections, which are relatively common among infants but can definitely be protected against through breastfeeding, are also likely to affect children's development. The same can be said about iron deficiency anemia whose prevalence seems to be greater among certain groups, in particular low-birth-weight newborns and children from socio-economically disadvantaged backgrounds.[64]

Motor, cognitive, language or social developmental delays can appear very early in children.[65] It is often these children who are observed to have adjustment problems and learning disabilities when they reach day care or school.

Approximately 20% of two-and-a-half-year-old children are affected by cognitive developmental delay.

It is estimated that about one in 12 adolescent girls will become pregnant before her18th birthday and about one in four before her 20th birthday.[66] The pregnancy rate among girls aged 14 to 17 seems to have stabilized since the early 1990s (between 19 and 20 per 1,000 adolescents from 1992 to 1998). It also seems to have stabilized among young women aged 18 and 19 (68 per 1,000 young women in 1998). The use of elective abortion has also increased.[67] In total, every year, approximately 3,000 babies are born to mothers under 20 years old.[68] The consequences of a full-term early pregnancy for the mother and baby's health are numerous and can be of a physical, psychological or social nature, including increased risk of prematurity, of low birth weight or that the mother will drop out of school.

Many children are victims of physical or psychological abuse, sexual abuse or neglect. Although the real extent of these problems cannot be assessed due to the paucity of data, a 1999 study showed that 6.6% of a sample of 2,469 Québec mothers resorted to excessive physical violence against their children at least once during the year preceding the survey.[69] The consequences for the victims are numerous: injuries, growth retardation and developmental delay, behavioural disorders, delinquency, addictions and other problems of violence in adulthood, and in particular intimate partner violence. Moreover, many children who are exposed to intimate partner violence have multiple psychosocial and health problems and are also more likely to be victims of abuse, and even to develop violent behaviours

as a result of their exposure to inappropriate models of behaviour.

Behavioural disorders, including violence against others, are another important problem among children and adolescents, affecting 6% to 16% of boys and 2% to 9% of girls. These disorders seriously handicap the development of young people and have damaging effects on their families and social settings.[70] The disorders manifest themselves in different ways and contexts, including school, the neighbourhood and intimate relationships. Behavioural disorders, in particular, persistent aggressiveness at a young age, constitute a risk factor for delinquency. If delinquency persists, the young person will experience social integration problems which will often continue into adulthood.

Problems related to drug and alcohol use among young people continue to be a cause for concern.[71] They are often associated with other psychosocial and health problems, such as delinquency, academic failure, high-risk sexual behaviours, suicide and injuries. Moreover, it seems that the use of drugs, in particular marijuana,[72] is increasing and starts early in the lives of children and adolescents.[73] In addition, the frequency of heavy consumption of alcohol is increasing (i.e., at least five drinks at any one time, five times or more within a 12-month period).[74] Moreover, gambling seems to be gaining popularity among young people, some of whom may become addicted to it. Indeed, 3.5% of high school students have a gambling problem or are likely to develop one[75] and therefore particular attention must be paid to them.

Approximately 6% of high school students have a drug and alcohol problem.

Approximately 25% of 9 year-olds have severe emotional disorders and nearly 22%[76] of 13 year-olds have a high level of psychological distress. However, a high level of psychological distress is most prevalent among young people aged 15 to 24, 28% of whom fall into this category.[77]

Another specific problem is dissatisfaction with body weight and body image.[78] Although 80% of young people have a normal weight, 45% of children and 60% of adolescents are dissatisfied with their body image. Weight-control practices such as skipping meals, fasting the whole day, starting to smoke or taking up smoking again seem to be well-entrenched habits among many adolescents.[79] These problems can lead to eating disorders such as anorexia and bulimia.

Other aspects of young people's mental health should also be examined. Although suicidal thoughts occur very early, even as early as 9 years old,[80] the prevalence of suicidal thoughts (7.4%) and suicide attempts (1.4%) is the greatest among young people aged 15 to 24.[81] Since 1990, the number of suicides among young people – in particular among those aged 15 to 19[82] – has increased, with Québec having the highest adolescent suicide rate among the industrialized countries.[83] Moreover, suicide is becoming more common among young people aged 10 to 14 and is the leading cause of death among young men aged 15 to 29.[84]

In 1999, 112 young Quebecers aged 10 to 19 committed suicide, including 91 boys and 21 girls.

Problems related to the development and social adjustment of children and adolescents are often the result of the combination and interaction of a set of determinants and risk factors. Thus, certain characteristics of the mothers – young age, low educational level, multiple births, drug or alcohol use, smoking – have an effect on prematurity and low birth weight and are also associated with developmental delays in young children. In addition, it seems that alcohol use by the mother during pregnancy can increase the risk of congenital defects and is also one of the leading causes of intellectual deficiency. Moreover, breastfeeding, which has beneficial effects for both the mother's health and the child's growth and development, helps reduce certain physical health problems. Conditions such as poverty, unemployment, social isolation, intimate partner violence and lack of parental skills are other factors that threaten the child's development and are often associated with the onset of abuse or behavioural disorders. The risk factors associated with suicide attempts among young people are related to, in particular, a dysfunctional family, a history of physical or sexual abuse, previous attempts to run away, certain stressful life events, low self-esteem and mental health problems, including depression. Easy access to the means to commit suicide also increases the risk of carrying it out.

Adults and the elderly

Several social adjustment and integration problems experienced in adolescence or childhood also affect adults and the elderly. This is true of alcohol use which is increasing among these people and, when excessive, is associated with numerous social and health problems. Although more difficult to quantify, drug use among adults is also a cause for concern. The use of psychotropic drugs, often inappropriately, is particularly widespread among the female population, in particular among elderly women.[85] Lastly, special attention should be paid to the growing popularity of gambling among adults, and hence to people who are most likely to develop a gambling problem.

A high level of psychological distress is reported by many adults, a greater proportion of whom are women, the unemployed, those with a low educational level or a low income. Although this proportion has decreased in recent years, it seems that the negative effects have increased among these people, who are affected for a longer period of time and rarely consult a professional to discuss it.[86] Risk factors are related to personal characteristics, stressful events (e.g., a chronic disease, mourning a close relative, a separation, a divorce or the loss of employment), and certain living conditions. Thus, poor people suffer from mental disorders more often than do rich people, due to a combination of stress factors.

In 1998, 20% of adults aged 25 to 44 and 19% of those aged 45 to 64 considered that they had a high level of psychological distress.

The recent increase in the prevalence of suicidal thoughts—which is the same for women and men—from 3.1% in 1987 to 3.9% in 1998, suggests that the phenomenon is not improving. The prevalence of suicide attempts is estimated to be 5 per 1,000 population per year.[87]

Since the early 1990s, an increase in the suicide rate has been observed among the adult population of both sexes and in all age groups.[88] However, the problem is worse among men under 50,[89] with Québec having one of the highest male suicide rates among the industrialized countries. Among the known risk factors, mental disorders (including depression) and abuse of psychoactive substances have the highest correlation with suicide and suicidal behaviours. However, these are not the only factors associated with the risk of suicide—other risks, related to social and family background, the environment and life circumstances should also be taken into consideration.[90]

From 1997 to 1999, annual suicide mortality rates were 31.5 per 100,000 men and 8.4 per 100,000 women.

Violence against women is still a big problem, particularly intimate partner violence. From 1997 to 2000, the number of reported cases of women victims of intimate partner violence increased by 16%. Women victims of intimate partner violence account for 38% of all women who are victims of crimes against persons.[91] Furthermore, it is estimated that 34% of Québec women aged 18 or over have been sexually abused at least once since reaching the age of 16.[92] Intimate partner violence and sexual abuse, whether experienced in childhood, adolescence or adulthood, have short- and long-term consequences for the victims.

Abuse and neglect of the elderly is a problem that is attracting more and more attention. This problem affects around 4% of the elderly living in a household or on their own,[93] and 8% to 13% of recipients of health and social services.[94] Several factors related to the socio-economic context or the family are associated with the abusive situations.[95]

Lastly, loss of autonomy is another problem that is likely to hinder the social integration of the elderly. Thus, the prevalence of loss of autonomy due to a disability is estimated to be 18% among people aged 65 to 74 and 39% among people aged 75 or over.[96] In addition to chronic diseases which are the leading causes of disability and dependency among people aged 65 or over, other risk factors such as lack of exercise, malnutrition, social isolation, alcohol use, inappropriate use of drugs as well as falls, are likely to affect the autonomy of the elderly.

INTERVENTION

A series of measures to improve the conditions surrounding the birth and health of the very young should be consolidated. First, to reduce the number of teenage pregnancies, efforts should be made to continue implementing youth clinic services, providing information on sexual matters and contraception, and increasing accessibility to emergency oral contraception and elective abortion services. Moreover,

support should be provided to clinical preventive practices during the perinatal period to reduce congenital defects, the consequences of certain hereditary diseases as well as physical health problems among young children. Breastfeeding, already advocated in *Québec Priorities in Public Health 1997-2002*, is especially encouraged through the establishment of the "Amis des bébés" network ("Baby-friendly Hospital Initiative") in the maternity units of hospitals and in CLSCs. This is the main measure selected by the Ministère to promote breastfeeding.[97]

Efforts made in recent years to support the development of young children from socio-economically disadvantaged backgrounds so as to prevent problems of abuse and neglect and to foster their social adjustment must be continued. Thus, the implementation of activities such as *Equal at birth – Growing in health* and of a number of other activities to provide early educational support to pre-school children, which were already included in the Québec priorities, is continued. The implementation of the *Programme de soutien aux jeunes parents* (support for young parents program), which is intended for mothers under 20 years of age and their children, also continues. The *Fluppy* program, focused more particularly on the development of the social skills of nursery school and Grade 1 children, along with a comprehensive and coordinated intervention in schools, are added to the services offered to children and adolescents. More particularly, intervention in the school setting must include activities oriented towards the development of skills and behaviours that promote health and well-being, encourage the establishment of a positive, healthy and safe school and community environment, and lastly, create links between school, family and community.

In addition to activities to promote the health and well-being of children and adolescents and preventing a series of problems affecting their development and social adjustment, there are interventions that target specific problems and are largely aimed at the whole population. For example, to act on addictions and suicide, three courses of action are given priority: promotion activities, prevention activities and intersectoral collaboration.

As regards addictions, the program also adheres to the proposals contained in the new ministerial policies on the prevention of these problems.[98] The promotion of safe and healthy lifestyles as well as the prevention of the damaging effects of drug and alcohol use are given priority. Moreover, the promotion and support of clinical preventive practices help to reduce the effects of these problems.

As regards suicide, a ministerial policy document[99] and the priority actions defined in 1999 in the *Québec Priorities in Public Health 1997-2002*[100] marked the beginning of a greater commitment by public health actors. Apart from continuing with these activities, the training of physicians on suicide prevention is also given priority.

Furthermore, particular attention is given to the means to reduce prejudice against people with mental health problems in order to encourage the latter to ask for help and, as a result, to reduce the prevalence of anxiety and depressive disorders as well as other forms of suffering and psychological distress. Informing and raising awareness among the public and health and social services professionals of the warning signs of these problems as well as about the activities and services offered are the means selected to achieve this.

Problems of violence and sexual abuse have received particular attention in recent years, both in the *Québec Priorities in Public Health 1997-2002* and in the development of government policies on intimate partner violence[101] and sexual abuse.[102] In the coming years, in addition to the activities already mentioned relating to the prevention of violence among young people through the development of social skills and the promotion of peaceful behaviours, other activities of violence prevention focused on intimate relationships will be implemented in schools. Efforts will also be made in the prevention of intimate partner violence and sexual abuse, in particular through awareness and information campaigns addressed to the general public. Furthermore, clinicians will be trained to detect the slightest sign of sexual abuse and intimate partner violence among adults as well as any sign of abuse or neglect of the elderly. Lastly, it is through activities to reduce the use of psychotropic drugs or problems of abuse and neglect that the loss of autonomy among the elderly can be delayed. The prevention of loss of autonomy will be achieved by taking early action on the other health problems experienced by the elderly, including chronic diseases and unintentional falls, and by encouraging the elderly to adopt healthy lifestyles.

Objectives

By 2012

- Reduce the teenage pregnancy rate to under 15 per 1,000;
- Reduce the prematurity rate;
- Reduce the rate of low-birth-weight babies (weight under 2,500 g);
- Reduce the number of children born with severe congenital defects or other serious health problems such as neural tube defects, fetal alcohol syndrome and congenital rubella syndrome;
- Reduce morbidity due to phenylketonuria or congenital hypothyroidism;
- Reduce respiratory infections, gastro-intestinal infections and iron deficiency anemia in infants;
- Increase the proportion of children aged 0 to 4 whose motor, language, cognitive and social development is normal;
- Reduce problems of physical and psychological abuse, sexual abuse and neglect of children and adolescents;
- Reduce behavioural disorders, including violence against others and delinquency, among children and adolescents;
- Reduce problems related to drug and alcohol use;
- Reduce the use of psychotropic drugs among the elderly by 10%;
- Increase the proportion of people of all ages who are mentally healthy;
- Reduce the number of suicide attempts and suicides;
- Reduce problems of sexual abuse and intimate partner violence affecting women;
- Reduce problems of abuse and neglect of the elderly;
- Delay loss of autonomy among the elderly.

Activities

■ ◐ Generalizing services related to consultation about sexual matters – youth clinic type – and emergency oral contraception as well as free-of-charge elective abortion services to all regions of Québec.[1]

■ ◐ Promoting and supporting the following clinical preventive practices[2]:
- women of childbearing age taking a sufficient dose of folic acid;
- case-finding and counselling pregnant women on alcohol use;
- counselling pregnant women on smoking;
- counselling on breastfeeding;
- systematic screening of newborns for phenylketonuria and congenital hypothyroidism;
- physicians recommending that disadvantaged families receive home visits during the perinatal period and early childhood;
- referring disadvantaged children to childcare centres for early educational interventions;
- training physicians on suicide prevention.

■ ○ Establishing the "Amis des bébés" ("Baby-friendly Hospital Initiative") network in hospital maternity units and in CLSCs.

■ ◐ Providing intervention through activities such as *Equal at birth – Growing in health* and the *Programme de soutien aux jeunes parents* (support for young parents program).

■ ◐ Providing intervention related to early educational support (intervention in day care centres – centres de la petite enfance) for pre-school children from disadvantaged backgrounds.

■ ◐ Providing intervention to develop children's social skills (*Montreal's Experimental Program – Fluppy*) in disadvantaged primary school settings.[3]

■ ◐ Developing and implementing, in collaboration with the education network and other community partners, a comprehensive and coordinated intervention to promote the health and well-being of children and adolescents and to prevent social adjustment problems.[4]

- ■ ◐ Organizing Québec-wide communication campaigns to promote children's and adolescents' personal and social skills, and preventing psychosocial problems that affect them such as violence, sexual abuse and mental health problems.
- ■ ◐ Organizing Québec-wide communication campaigns aimed at adults on the prevention of intimate partner violence and sexual abuse.
- ■ ◐ Raising awareness among the public and health and social services professionals of warning signs for anxiety and depressive disorders, and disseminating information on the activities and services offered.[5]
- ◐ Promoting and supporting physicians' practices in case-finding and counselling on alcohol use.
- ◐ Promoting the application of laws and regulations to restrict accessibility to alcohol for young people under 18.
- ◐ Providing intervention to encourage moderation in drinking, for example *Alcochoix*.
- ■ ◐ Raising awareness among ministries and public and private organizations of the negative effects on health of measures which increase economic, legal and physical accessibility to alcohol.
- ■ ◐ Promoting and increasing accessibility to replacement therapies (for example, methadone) for users of psychotropic substances.
- ◐ Providing intervention aimed at consumers, prescribers and distributors of drugs to prevent inappropriate use of psychotropic drugs among the elderly.
- ■ ◐ Providing comprehensive intervention in suicide prevention by promoting and supporting clinical preventive practices, organizing activities to raise awareness of the dangers that drugs and firearms kept in the home represent and the measures to restrict access to them, establishing sentinel networks,[6] and collaborating with the health network partners and partners in the other sectors in order to reduce tolerance for and trivialization of suicide.
- ◐ Training clinicians to detect the slightest sign of sexual abuse or intimate partner violence in adults and the elderly as well as any abuse or neglect of which these people are victims.

1. These services also help to reduce sexually transmitted infections and HIV/AIDS.
2. Other clinical preventive practices, in particular rubella vaccination coverage, help to reduce congenital defects and developmental problems in children.
3. Intervention to be determined with the school network, based on the comprehensive and coordinated intervention to promote health and well-being and prevent adjustment problems in primary schools.
4. Given that several social adjustment problems have the same risk and protection factors, emphasis is put on the development of personal and social skills, social support, development of environments conducive to health and well-being, and support for parental skills. The themes to be considered are: peaceful behaviours, equal gender relations between boys and girls, sexuality, sexual abuse, violence in intimate relationships, body image, excessive concern with body weight, addictions and suicide. In addition, there are themes relating to lifestyles, such as not smoking, healthy eating, exercise and dental hygiene. The entire framework for intervention will be reviewed on the basis of the contents of the agreements relating to complementary services to respond to the needs of children and young people — agreements which are currently being drawn up by the ministère de la Santé et des Services sociaux (MSSS) and the ministère de l'Éducation (MEQ). These activities will be implemented in schools gradually from now until 2012 and based on the needs expressed by the school authorities.
5. Adult mental health problems are also examined in the area of intervention relating to occupational health.
6. These are people who are trained and given the support needed to recognize suicidal people and ensure that they are referred to aid resources.

Legend
- ■ Activity to be conducted in 2003-2005
- ● Existing activity to be maintained
- ◐ Existing activity to be consolidated
- ○ Activity to be implemented

RESEARCH AND INNOVATION

As regards children and adolescents, the research focuses on furthering knowledge on certain physical health problems, family-related issues, physical or psychological abuse, sexual abuse and suicide. As regards adults, efforts are mainly made in research on mental health in order to determine the effectiveness of the activities to reinforce the factors that protect against anxiety and depressive disorders and at reducing the risk factors associated with these problems. Another priority is to improve knowledge on problems of intimate partner violence and sexual abuse and on the effective ways to prevent them. Research is also needed to determine the effectiveness of activities focused on preventing pathological gambling among adolescents and adults. As regards loss of autonomy among the elderly, two research themes have been selected: prevention of inappropriate drug use and better understanding of dementia. Lastly, particular attention is paid to furthering knowledge on social health determinants.

Program area of lifestyles and chronic diseases

The intervention area relating to lifestyles and chronic diseases deals with the following types of conditions: cardiovascular diseases, cancers, diabetes, chronic obstructive pulmonary disease (COPD), asthma, osteoporosis and obesity, as well as oral and dental diseases, and the determinants of these conditions. These diseases can be prevented to some extent through activities focused mainly on their common determinants, in particular three lifestyle choices — smoking, an unbalanced diet, and lack of exercise. All these diseases have common characteristics: the fact that they are not contagious; the combination and interaction of a set of health determinants and risk factors throughout an individual's life; a long latent period and a slow progress; functional disorders or disabilities; and the fact that they are often incurable.[103]

PROBLEMS, RISK FACTORS AND DETERMINANTS

The mortality rate[104] due to cardiovascular diseases has been dropping markedly for over 20 years.[105] However, these diseases are still the leading cause of death and hospitalization. This drop seems to be less pronounced among women.[106] In addition to smoking and lack of exercise, hypercholesterolemia, hypertension, diabetes and obesity are known to be major risk factors for these diseases.[107] By the age of 9, one in 4 children has a modifiable risk factor for cardiovascular diseases.[108]

From 1977 to 1999, the mortality rate due to cardiovascular diseases decreased by 50%, from 492.4 to 228.7 per 100,000 population.

In less than 10 years, cancers may become the number one cause of mortality, population aging being the principal factor accounting for this trend.[109] The annual incidence of cancers is around 34,000 cases and the number of deaths attributed to this disease is estimated to be over 16,000 every year.[110] The overall mortality rates for the different types of cancer[111] remain stable or are decreasing in the whole population, except for certain cancers when the data are examined according to sex. For example, the female mortality rate due to cancer of the trachea, bronchus and lung tripled between 1977 and 1998, a direct result of the increased prevalence in smoking. The cancers targeted here are those which are among the most common and whose incidence can be decreased through the adoption of healthy lifestyles or for which the effectiveness of screening tests has been proved.

In 1999, mortality rates (per 100,000 population) attributable to cancers were as follows:

- Trachea, bronchus, lung: 63.9;
- Breast: 28.0;
- Prostate: 27.2;
- Colon and rectum: 25.4;
- Cervix: 2.2.

An increasing number of people are suffering from asthma and COPD, which considerably deteriorate their quality of life. In 1998, the prevalence of asthma was around 5% while the prevalence of COPD was around 2.5%.[112] The mortality rate due to COPD almost doubled from 1977

to 1998. It increased sharply until the mid-1980s, mainly due to its continuous rise among women, smoking being the major underlying cause.[113]

For the last 10 years, the mortality rate due to COPD has stabilized at around 37 per 100,000 population.

In 1999-2000, the prevalence of diabetes was 4.9% among people aged 20 or over.[114] Type 2 diabetes, which mainly affects adults over age 45, represents 90% of all diagnosed cases of diabetes. This disease can result in many complications, including risks of cardiopathies, nephropathies and strokes. However, it is estimated that approximately one third of people who have diabetes are not aware of their condition.[115]

Obesity is also a fast growing chronic disease.[116] It is described as epidemic in Canada and elsewhere in the world, among both children and adults.[117] This disease is associated with hypertension[118] and is also a risk factor for type 2 diabetes and cardiovascular diseases.

The proportion of obese adults rose from 8.3% to 12.4% between 1987 and 1998.

Osteoporosis is one of the main muscular-skeletal diseases in Canada which affects 30% of women and 10% of men over age 65, and 50% of women and 25% of men over age 75.[119] Osteoporosis is a major risk factor for fractures among the elderly.

Lastly, tooth decay and periodontal diseases – which affect the tissues supporting the teeth – are the most common oral diseases.[120]

Nearly the whole population is affected by tooth decay, including 56% of 7 and 8 year-old children and 75% of 14 year-olds.

Several health determinants influence the onset and development of the chronic diseases mentioned above. They are: biological (including genetic characteristics), individual (age, among others), psychosocial and behavioural (including the feeling of being in control of one's life, emotional support and lifestyles) or environmental (among others, living conditions, access to resources – including health services – and physical environment), and their effects are often interrelated. People from disadvantaged backgrounds are more affected by chronic diseases. These diseases account for a large part of the disparities in life expectancy between the richest and poorest population groups.[121]

Smoking, poor eating habits and lack of exercise — lifestyles that are common to the main chronic diseases — are the three principal direct causes of mortality (all causes combined), with smoking being the most important avoidable cause of early death.[122] More particularly, 65% of cancers are attributed to smoking, an unbalanced diet, and lack of exercise[123] while overweight and even obesity contribute to, for example, 51% of cases of type 2 diabetes, 27% of endometrium cancer cases, and 18% of coronary diseases in Canada.[124]

Studies show that improvements can still be made regarding these common health determinants — smoking, poor eating habits and lack of exercise. In fact, in 2001, approximately one quarter or 24% of Quebecers aged 15 or over were smokers. However, this proportion has been declining since 1994 when it was 38%.[125] In 2000, 29% of high school young people smoked.[126] It should be added that tobacco smoke also affects non-smokers who are exposed to it.

As regards diet, it is observed that adults aged 18 to 74 do not consume enough of the recommended foods[127] – in particular, fruits, vegetables and whole grain cereals; their intake in many nutrients is too low and their fat intake is too high.[128] These eating habits, combined with lack of exercise, can result in overweight, a risk factor in several chronic diseases. The proportion of people aged 20 to 64 who are overweight increased by 45%, from 20% in 1987 to 28.9% in 1998.[129]

A major obstacle to a balanced diet is individuals' capacity to purchase nourishing foods in sufficient quantity in order to ensure their food security. In 1998, it was estimated that 8% of households experienced food insecurity during the year, of whom 23% were single-parent families,[130] and over 10% of young people did not have enough to eat.[131] This situation clearly illustrates that lifestyles are not simply the result of individual choice or personal control over conditions which help people to make informed choices conducive to health, but that these choices and conditions are

largely determined by the social, economic, legal and physical environments.

Lastly, as regards lack of exercise, the proportion of people aged 15 or over who are considered to be "hardly active or inactive" during their leisure time or when getting from one place to another rose from 17.4% to 21.3% between 1993 and 1998.[132] Moreover, 46.5% of these people do not achieve the level recommended by the experts, that is, 30 minutes of exercise per day.

INTERVENTION

For a number of years, the activities proposed in the intervention area relating to lifestyles and chronic diseases have included actions to combat smoking and breast cancer – two themes addressed in the *Québec Priorities in Public Health 1997-2002*[133] – actions to promote heart health which involved focusing on a set of risk factors for cardiovascular diseases, and lastly, projects to integrate the promotion of healthy lifestyles and the prevention of the principal chronic diseases into social settings, in particular among young people in schools.

For the coming years, public health activities in this program area will be conducted on the basis of an approach that includes two aspects of intervention: the first involving a set of determinants and the second combining several types and strategies of intervention. On the one hand, the intervention targets a set of determinants and risk factors that are common to the principal chronic diseases;[134] on the other hand, the intervention combines actions related to health education, actions which modify environmental conditions, and actions related to the systematic screening for certain chronic diseases. The aim of the actions related to health education is to change individual behaviours and to encourage the adoption of healthy lifestyles. These actions are intended for the whole population and are generally offered as part of consultations with health care professionals. Environmental actions, for their part, help to modify the social, economic and physical environments that influence and support the individual's healthy lifestyle choices. They deal with, in particular, the social standards that are linked with healthy lifestyles, the planning of venues for exercise, or regulations concerning access to quality food products. The aim of the actions related to the screening for chronic diseases is to intervene rapidly in the development of these diseases among asymptomatic people.

Moreover, public health actors support what is considered here to be a health determinant, that is, the organization and delivery of the most effective services for the treatment of chronic diseases. This contribution is achieved mainly through the search for effective strategies to improve clinical practice so as to reduce the extent of chronic diseases – management of high risk, early detection and treatment – and through the definition of models that integrate primary care into actions in social settings.

More specifically, the priority activities include the organization of communication campaigns focused on the adoption of healthy lifestyles, the promotion and implementation of policies, laws and regulations that promote the adoption of healthy lifestyles, the organization of promotion and prevention activities regarding healthy lifestyles in social settings, the promotion and support of clinical preventive practices and, lastly, systematic screening for breast cancer. The activities related to the prevention of oral and dental diseases include: dental hygiene education, in particular through clinical preventive practices, the promotion of optimal use of fluoridation as well as dental sealants, and, lastly, individualized preventive actions for children and adolescents who are at risk of having tooth decay.

Many prevention and health promotion activities planned under the *Plan québécois de lutte contre le tabagisme* (Québec plan to combat smoking) are included in the activities selected.[135] The *Programme québécois de lutte contre le cancer* (Québec plan to combat cancer) also contains activities to combat smoking as well as activities to promote healthy eating and early screening for breast and cervical cancers, some of which are an integral part of the activities selected.[136] Lastly, the activities selected for oral and dental health and prevention of tooth decay are included in the *Programme public de services dentaires préventifs* (public program for preventive dental services).[137]

The activities in this program area will help to increase healthy life expectancy, to reduce the incidence of chronic diseases and their consequences, both in terms of morbidity and early mortality, and to generate considerable benefits for the health of the population. However, only in ten years' time will it be possible to assess the first impacts of the activities offered, in particular the evolution of the principal chronic diseases among the Québec population.

Objectives related to chronic diseases

By 2012

- Decrease by 3% per year the mortality and morbidity rates due to cardiovascular diseases (including ischemic heart diseases and strokes);[1]
- Reduce by 25% the breast cancer mortality rate among women aged 50 to 69;
- Reduce by 30% the rates of mortality and morbidity due to COPD;
- Reduce by 40% the rates of mortality and morbidity due to asthma;
- Reduce by 30% the incidence of diabetes[2] (by 40% in Native communities);
- Reduce the prevalence of overweight from 28% to 22% and that of obesity from 13% to 10% among adults, plus prevent overweight and obesity in both children and adolescents;
- Reduce the prevalence of osteoporosis among people aged 65 or over;
- Reduce by 40% the average number of decayed, missing or filled tooth surfaces among young people under 18;
- Reduce the prevalence of periodontal diseases (gum disease and destructive periodontal diseases) among adults aged 18 or over.

Objectives related to lifestyles

By 2012

- Reduce smoking among high school youth;
- Reduce from 24% to 18% the proportion of people aged 15 or over who smoke;
- Reduce exposure to environmental tobacco smoke;
- Increase to 80% the proportion of people who consume at least five servings of fruits and vegetables per day;
- Reduce the prevalence of food insecurity to under 8%;
- Increase regular exercise among young people under 15;
- Increase by 5% the proportion of people aged 15 or over who achieve the level of exercise recommended;
- Improve oral and dental hygiene habits in all age groups.

Activities

Organization of communication campaigns focused on the adoption of healthy lifestyles

Promoting healthy lifestyles that include :

■ ○ healthy eating (daily intake of at least five servings of fruits and vegetables);

■ ○ regular exercise (30 minutes of moderate exercise per day);

■ ● not smoking

Promotion and implementation of policies, laws and regulations favouring the adoption of healthy lifestyles

■ ○ Reviewing the *Politique québécoise en matière de nutrition* (1977) (Québec policy on nutrition) and *Orientations en matière d'alimentation dans le milieu scolaire* (1988) (food policies in schools) and their implementation.

■ ◐ Conducting inspection to ensure compliance with the measures contained in chapters 2, 3 and 4 of the Tobacco Act, that is, measures that restrict the use of tobacco in most public places, measures related to the sale of tobacco products – in particular the prohibition to sell tobacco to minors – as well as measures related to the promotion, advertising and packaging of tobacco products.

■ ◐ Promoting optimum fluoridation measures.

Promotion and prevention relating to healthy lifestyles in social settings

- ■ ◐ Consolidating local and regional joint actions on food security that promote the accessibility and availability of healthy and nourishing food.
- ■ ◐ Promoting the creation of safe[3] and accessible[4] environments and contexts of activity that favour regular exercise and that aim at, for example, the optimum use of equipment, access to infrastructures, urban planning and support for organized networks.
- ■ ◐ Designing and organizing activities in primary and secondary schools that focus on the adoption of healthy lifestyles –including not smoking, healthy eating, exercise and dental hygiene – as part of a comprehensive and coordinated intervention in health promotion and in prevention.[5]

Promotion and support of clinical preventive practices

- ■ ◐ Counselling on smoking, eating habits, exercise and the use of fluorides, either in teeth brushing or by taking fluoride supplements.
- ■ ◐ Integrating brief consultation services on how to quit smoking, information, telephone referral and consultation services on smoking, and intensive screening and consultation services related to smoking.
- ■ ◐ Training clinicians to detect early signs of the following chronic diseases: breast cancer, cervical cancer (Pap test) and hypertension in adults and the elderly, as well as managing the people affected.
- ■ ● Providing individualized preventive follow-up in schools to allow nursery school to Grade 3 children who meet the criteria on risk of tooth decay to receive two topical fluoride applications per year and dental educational activities.
- ■ ◐ Providing application of dental sealants to allow children aged 5 to 15 who meet the criteria on risk of tooth decay to have sealants applied to the surfaces of permanent molars that have fossa and sulci

Systematic screening program for certain chronic diseases

- ■ ◐ Implementing the *Programme québécois de dépistage du cancer du sein* (breast cancer screening program) in all regions and consolidating quality assurance at the regional level.

1. Rates adjusted to take account of age and sex.
2. Percentage based on American estimates in *Healthy People 2010*, to be adjusted according to Québec data.
3. The notion of safety refers to the following aspects: physical (equipment and venues), psychological (confidence) and social (social cohesion and support). See, in particular, the unintentional injuries intervention area relating to the safety of bicycle paths and footpaths.
4. Accessibility relates to access to the infrastructures and activities adapted to the needs of the different clienteles (including timetable, level and type of activity as well as age).
5. Links are to be made with activities in the intervention area of development, social adjustment and integration. The entire framework for intervention will be reviewed on the basis of the contents of the agreements relating to complementary services to respond to the needs of children and young people — agreements which are currently being drawn up by the ministère de la Santé et des Services sociaux (MSSS) and the ministère de l'Éducation (MEQ). These activities will be implemented in schools gradually from now until 2012 and based on the needs expressed by the school authorities.

Legend
- ■ Activity to be conducted in 2003-2005
- ● Existing activity to be maintained
- ◐ Existing activity to be consolidated
- ○ Activity to be implemented

RESEARCH AND INNOVATION

The approach chosen for research focuses on the promotion of healthy lifestyles and the prevention of chronic diseases and therefore the impact of the following determinants will be examined:— social (including social status, education, wealth distribution and social cohesion), political (public policies, among others), economic (including mass communication strategies) and cultural (including gender identity) — on the adoption of healthy lifestyles and behaviours that foster health and well-being. Priority is given to: first, the design of effective activities that combine actions related to health education and environmental actions aimed at specific groups (including young people and the disadvantaged groups); second, the evaluation of these activities in the social settings; and third, the surveillance of the long-term effects of these activities on the health of the population, including cost-benefit analyses. The third theme of the research is screening for chronic diseases. Support for the organization of services will be examined from the perspective of models and strategies that integrate primary care services and actions into the community or social settings and also from the perspective of the economic effects of chronic diseases on quality of life, the use of primary care services and the support to be given to people suffering from chronic diseases.

Program Area of Unintentional Injuries

PROBLEMS, RISK FACTORS AND DETERMINANTS

The intervention area relating to unintentional injuries includes all injuries and poisonings that occur unintentionally and are mostly preventable.[138] Although, on the whole, the proportion of deaths due to unintentional injuries has decreased in recent years, this is still an important cause of mortality in Québec. The victims are most often men, young people, the elderly and people living in less urbanized regions.[139] Unintentional injuries rank third among the leading causes of potential years of life lost.[140] Moreover, these injuries result in activity limitations, numerous consultations with health professionals and a high consumption of services in short-term care institutions.

Despite the advances observed during the last decade, road traffic injuries, whether they occur on or off public roads, continue to cause numerous victims. In 1999, these injuries were the leading cause of mortality from unintentional injuries.[141] A great number of motor vehicles occupants, bicyclists, motorcyclists, pedestrians, and drivers of all-terrain vehicles and snowmobiles are victims of these road traffic injuries. While pedestrians' deaths are largely among people aged 65 or over,[142] deaths due to other road traffic injuries particularly affect young people under 30. Fatal or serious injuries observed among road users are associated with a great number of risk factors, the main ones being drunk driving, excessive speed, poor road construction and sub-optimal use of safety equipment – including seat belts by motor vehicle passengers and helmets by bicyclists.

In 1999, road traffic injuries caused 729 deaths.

Falls are among the most important causes of death attributed to unintentional injuries.[143] Mortality rates also show that, after having been relatively stable between 1985-1987 and 1994-1996, deaths due to falls have increased slightly.[144] The main victims are people over 65. Moreover, falls are the leading cause of hospitalization for unintentional injuries, accounting for 40% of all hospitalizations,[145] for all age groups. The most common risk factors for falls among the elderly are: poor balance, poor muscular coordination, use of psychotropic drugs and dangers in their immediate environments, including poor maintenance of sidewalks in winter;[146] a further risk factor is to have had a previous fall.[147] Other factors related to individual lifestyles, in particular malnutrition,[148] increase the risk that an older person will fall thus resulting in injuries and a decrease in autonomy.

In 1999, 648 deaths due to falls were recorded.

Over one-third of unintentional injuries occur in the home, the home being the place where young people under 15 and adults aged 45 or over get injured most frequently. In addition to falls, which are responsible for over half of

injuries in the home, other types of unintentional injuries occur in the home and need to be examined closely.[149] These are:

- poisonings, which are responsible for more deaths today among the Québec population[150] and occur mainly through the ingestion of a toxic product or a drug, with accessibility to these products being the leading determinant in the occurrence of these poisonings;
- burn injuries which are mainly associated with the lack of a functional smoke detector, the type of housing occupied – including a rooming house – the use of a back-up heating system, smoking while drunk, the high tap water temperature and the inflammability of clothing;
- choking, strangulation and suffocating due to the ingestion of foreign bodies, which are attributed to, among other causes, the incomplete anatomical development in young children, poor dentition as well as diseases affecting motor coordination and mental functions.

From 1976-1978 to 1997-1998, the mortality rate due to unintentional poisonings rose from 0.5 cases to 1.6 cases per 100,000 population.

Deaths and serious injuries also occur as a result of recreational and sports activities[151] and particularly affect young men aged 15 to 19. Injuries related to the use of snowmobiles, bicycles and all-terrain vehicles are often considered to be road traffic injuries. These, in addition to injuries attributed to aquatic sports as well as collisions and falls during sports activities, are responsible for most of the deaths or hospitalizations due to recreational or sports injuries.[152] The risk factors include the following: not wearing safety equipment, alcohol use, lack of safety regulations or control regarding facilities as well as the type and design of play equipment.

Approximately 20% of trauma resulting in injury occur in recreational and sports venues.

INTERVENTION

For over two decades, prevention programs based on different approaches have markedly reduced the number of injuries and deaths which occur on roads, in the home or during recreational and sports activities. These have involved actions to change individual behaviours, make the environment safer, or reinforce the control and safety measures provided for by law. The *Québec Priorities in Public Health 1997-2002* emphasized the prevention of road traffic injuries – not drinking while driving, wearing a bicycle helmet, legislation and regulation to promote safety and prevent injuries – the prevention of injuries in the home as well as the prevention of falls among the elderly. These activities are to be continued.

Reducing the number of road traffic victims must remain an ongoing concern of the health and social services network and its partners. Thus, the factors involved must be monitored properly and the implementation of measures must be supported. These measures aim at, among other things, enhancing road safety, promoting the use of safety equipment, preventing impaired driving and reinforcing laws and regulations in order to enhance the safety of users.

Given that the population is aging, a phenomenon which will reach an unprecedented high in the coming years, preventing falls is a major challenge that will allow the elderly to preserve their autonomy and quality of life for as long as possible.

Enhancing safety in the home and safety in the practice of recreational and sports activities requires a sustained commitment and collaboration on the part of actors in the health and social services network as well as collaborators in other sectors such as schools, childcare centres and municipalities.

A final priority is the promotion of clinical preventive practices whose effectiveness in preventing unintentional injuries has been recognized.

Objectives

By 2012

- Reduce by 30% the number of deaths observed among road users and off-road vehicle drivers;
- Reduce morbidity and mortality due to falls and injuries in the home;
- Reduce morbidity and mortality due to recreational or sports injuries.

Activities to prevent road traffic injuries

Intended for the whole population

◐ Training and supporting clinicians to counsel patients on the use of safety devices– child car restraint, bicycle helmets, helmets for motorcyclists and their passengers, and for drivers and passengers of all-terrain vehicles, and automobile seat belt.

■ ● Collaborating in the definition and implementation of measures to regulate traffic and to plan intersections.

■ ◐ Promoting the use of safety equipment by road users — child car restraint, bicycle helmets, helmets for motorcyclists and their passengers, and for drivers and passengers of all-terrain vehicles, and automobile seat belt –in compliance with the legislative measures in force.

◐ Designing and promoting an intersectoral strategy related to impaired driving.

◐ Taking preventive action to reduce the risks associated with drug and alcohol use, including training waiters, using ride services or designated drivers.

● Promoting the reinforcement of control and safety measures provided for by the laws and regulations for road users and off-road vehicle drivers.

Activities to prevent falls and injuries in the home

Intended for children and adolescents

■ ○ Integrating activities related to the prevention of injuries and other trauma in the home whether caused by a fall, poisoning, choking, burns, drowning or near drowning, into preventive actions aimed at babies, young children and their parents – such as *Born equal – Growing in health, the Programme de soutien aux jeunes parents* (support for young parents program) and activities related to early educational support.

● Promoting the optimum implementation and reinforcement of existing laws and regulations on the packaging and sale of hazardous products such as chemical products, parasiticides and household pesticides.

● Promoting the optimum implementation and reinforcement of existing laws and regulations on the sale of medicinal products so that they are offered in containers with safety caps.

Intended for the elderly

◐ Promoting and supporting clinicians' multidisciplinary evaluation of risk factors for falls among the at-risk elderly.

■ ◐ Promoting and supporting multifactorial measures[1] to prevent falls aimed at the at-risk elderly, in particular those who have already suffered a fall.

ACTIVITIES TO PREVENT RECREATIONAL OR SPORTS INJURIES

Intended for the whole population

- ◐ Implementing selective application programs[2] related to motorboating; the measures to be emphasized are: encouraging the wearing of a personal flotation device and controlling impaired motorboating.
- ◐ Promoting the reinforcement of control and safety measures provided for by the laws and regulations on the practice of glide sports in Québec, the wearing of a personal flotation device, and the safe layout of residential pools.

Intended for children and adolescents

- ◐ Promoting adequate application of the existing safety standard related to facilities such as playing fields, play areas and play equipment by municipalities, schools and childcare centres.

1. The main multifactorial measures targeted by this activity relate to health status and physical capacity –including balance and muscular strength – behaviours, including drug use and risk taking – and the environment – including the home and outside the home. This activity targets the elderly who have already suffered a fall or have other risk factors for falls.
2. A selective application program involves a joint, intensive action carried out through activities to develop or modify a behaviour within a population. It usually includes a media component coupled with police intervention.

Legend
- ■ Activity to be conducted in 2003-2005
- ● Existing activity to be maintained
- ◐ Existing activity to be consolidated
- ○ Activity to be implemented

RESEARCH AND INNOVATION

The primary research theme in the program area of unintentional injuries relates to the furtherance of knowledge on risk factors and prevention of road traffic injury. As regards injuries which occur in the home, particular emphasis is put on research on burn prevention. Lastly, efforts are made in research on falls among the elderly and on actions to prevent recreational or sports injuries.

Program area of infectious diseases

PROBLEMS, RISK FACTORS AND DETERMINANTS

The intervention area relating to infectious diseases includes diseases caused by biological agents which are transmitted in different ways. The symptoms and evolution of infectious diseases vary according to the agent involved, certain biological or behavioural factors related to individuals or populations, the social environment and the organization of the health care system. Some infections remain asymptomatic or very benign while others are very serious and can even result in death.[153] Like elsewhere in the world, Québec has recently experienced new problems due to infectious or toxic agents as well as a resurgence of infections which had hitherto been controlled. Some of the infections and diseases which represent a threat to the population's health are being examined closely because of their occurrence, reappearance, magnitude, seriousness, their potential to spread or the existence of effective means of intervention.

Diseases preventable by immunization

Many infectious diseases can be prevented or controlled to different degrees by immunization. Some are even on the verge of being eliminated, that is, only imported cases may occur and these will not generate an epidemic within the population since the latter is well protected.[154]

Thus, diphtheria and poliomyelitis, for example, are no longer seen in Québec. However, these diseases still exist elsewhere in the world and the population must continue to be protected against them. Measles, rubella, mumps, whooping cough, tetanus and *Haemophilus influenzae* type b infections are diseases whose propagation has been successfully prevented or controlled by immunization,[155] although isolated cases and outbreaks can always occur. For example, in 2000, an outbreak of measles struck 29 people in a community which was not adequately immunized.[156]

Although invasive serogroup C meningococcus infections are rare, even when there is a resurgence, they are often serious, unpredictable and occur suddenly. From 1996 to 2000, the incidence of these infections was low with an average of under 10 cases per year. However, an epidemic of 57 cases was confirmed in 2001.[157]

In 2001, a particularly virulent bacterial clone provoked a resurgence of cases of invasive serogroup C meningococcus infections, making it necessary to conduct a vast and rapid immunization campaign for all Quebecers aged 20 or under.

Chickenpox is a viral disease which affects 90% of children under 10 and may recur later in life as shingles in 10% to 20% of the people who were previously infected. Chickenpox results in 400 to 500 hospitalizations per year.[158]

Pneumococcal infections are very common,[159] especially in children and can lead to serious complications. Approximately 5,000 Quebecers are hospitalized every year for an invasive pneumococcal infection[160] and at least 12% of them will die of it.[161]

Influenza, usually called the flu, is also very common.[162] Serious complications and deaths occur mainly among people suffering from chronic diseases and people aged 65 or over. Since it is possible that an influenza pandemic may occur in the coming years, the population needs to be protected.[163]

It is estimated that, during a seasonal flu epidemic, between 300,000 and 500,000 Quebecers are affected, 10,000 to 50,000 of whom are hospitalized and between 1,000 and 1,500 people will die from complications of this illness.

Hepatitis B is a serious liver disease which is preventable by immunization. Nearly 10% of infected adults will be chronic carriers and can transmit the disease. Twenty-five per cent of these chronic carriers will develop a cirrhosis which, in some cases, will be followed by liver cancer. There is no treatment for the disease in its acute phase.[164]

In 2000, the general crude incidence rate for acute hepatitis B was still relatively low, with 2.5 cases per 100,000 population, this result being partly attributed to vaccination.

Hepatitis A is another infectious liver disease which is preventable by immunization. In 2000, 102 cases of hepatitis A were reported; in the majority of cases, the infection was contracted abroad.[165] Numerous other diseases, including malaria, typhoid, bowel diseases and rare infectious diseases, affect travellers.

HIV/AIDS and hepatitis C

By December 31, 2000, a total of 5,860 AIDS cases had been reported in Québec since the beginning of the epidemic.[166] People most affected by AIDS are men who have sex with other men, people from countries where the infection is endemic, and injection drug users. The annual number of reported AIDS cases and the number of deaths have dropped[167] since effective treatments became widely available. AIDS is still a major cause of death among men aged 35 to 39.[168]

The number of reported AIDS cases decreased from 531 in 1995 to 93 new cases in 1999.

Approximately 16,000 people are HIV-infected, the prevalence rate being eight times higher in the Montréal-Centre region than in the rest of the province.[169] However, it is estimated that the number of people living with HIV and its

resulting problems with social adjustment and integration continues to rise.

Approximately 40,000 people are affected by hepatitis C, a viral infection that is transmitted mainly by blood and can gradually develop into a cirrhosis or liver cancer.[170] The majority of new cases occur among injection drug users. The hepatitis C virus is detected in 50% to 60% of HIV-infected individuals.[171]

Sexually transmitted infections

Sexually transmitted infections affect mainly adolescents and young adults aged 15 to 24, women, Native people, men who have sex with other men, sex-trade workers and their customers.

Chlamydia trachomatis genital infection, *Neisseria gonorrhoeae* infection, genital herpes virus infection and human papilloma virus infection are all highly common nowadays and have been on the rise in recent years.[172]

From 1997 to 2001, the annual incidence rate of *Chlamydia trachomatis* genital infections rose from 87 to 133 per 100,000 population. The average incidence rate among young people aged 15 to 19 reached 956 per 100,000 population.

In 2001, 831 cases of gonorrhea were reported, that is, an incidence rate of 10.8 per 100,000 population.

Although a steady decrease in the number of syphilis cases was observed in the last decade, the trend has since reversed. In 2001, the incidence rate of recent syphilis in Québec was 0.2 per 100,000 population as the number of cases per year rose from 3 in 1998 to 15 in 2001.[173]

Among women, *Chlamydia trachomatis* genital infections are the most common cause of infertility.[174] All these infections can generate considerable morbidity and irreversible damage to, among other things, the reproductive system and the health of newborns.[175]

Other infectious diseases

Other infectious diseases transmitted by water, food, air or aerosols, animals or other vectors constitute important problems.

Resistance to antimicrobial agents is a phenomenon that is spreading throughout the world,[176] and is a considerable problem in the treatment of pneumococcal infections,[177] mycoses, viral infections such as HIV and influenza, parasitoses as well as in the case of other bacterial diseases such as tuberculosis and gonorrhea.[178]

In 2000, 15% of pneumococcus strains that were sent from sentinel hospitals to the surveillance program of the Québec Public Health Laboratory were found to be resistant to penicillin G, compared to 10% in 1996.

Nosocomial infections, such as influenza, which occur in care settings, are increasing morbidity and mortality related to hospitalization.[179] It is estimated that around 60,000 nosocomial infections occur every year – including 6,000 bacteriemias – representing around 6 nosocomial infections for every 100 hospital admissions.[180]

In recent years, the occurrence and transmission of nosocomial infections due to multiresistant bacteria, including methicillin-resistant *Staphylococcus aureus* (MRSA)[181] and vancomycin-resistant enteroccus,[182] have created serious challenges in the context of reorganization of the health care system, in particular for ambulatory care.[183]

The prevalence of methicillin resistant *Staphylococcus aureus* in microbiology laboratories which was under 1% in 1995, rose to 30% in 2001, whereas the prevalence and incidence of vancomycin-resistant enteroccus are considered to be low for the time being.

The presence of blood-borne micro-organisms requires measures to prevent the contamination of blood products and the transmission to blood product recipients.[184]

Bowel diseases occur as a result of the ingestion of contaminated water or food and are particularly linked with environmental health problems. For the last 10 years, between 5,600 and 7,200 cases of bowel disease have been reported every year, corresponding to only a small fraction of the number of real cases.[185]

Rabies is a lethal zoonotic disease. In 2000, a 9-year-old boy died from rabies after being bitten by a rabies-infected bat.[186] The previous indigenous case in Québec dates back

to 1964.[187] Other reportable zoonoses – Q fever, tularemia, brucellosis, psittacosis, trichinosis – are also rare, with 388 cases reported between 1991 and 2000.[188] Zoonoses that have appeared recently, such as infection by the West Nile virus,[189] are also relatively infrequent.

The proven presence of the West Nile virus in Québec suggests that, in the coming years, more and more people will be affected.

Tuberculosis is still a major health problem today. The resurgence of tuberculosis in several regions of the world is linked with HIV infection and the presence of antibiotic-resistant strains. In Québec, owing to the implementation of rigorous control and treatment measures, the number of cases remains low. However, tuberculosis is highly prevalent in the Nunavik, Cree Lands of James Bay and Montréal-Centre regions.[190]

From 1996 to 1999, the average annual incidence rate for tuberculosis was 4.4 cases per 100,000 population; the number of cases and the annual rate dropped to a historic low in 1998 with 290 reported cases and a rate of 4 per 100,000 population.

INTERVENTION

Many infectious diseases have been successfully prevented and controlled through enhanced hygiene measures, vaccines and antimicrobial agents.[191] Infectious diseases — whether they have disappeared, are being eliminated, are on the rise again or are re-appearing — require constant surveillance and sustained effort in prevention so as to reduce both avoidable morbidity and mortality and to protect the health of the population.[192]

Activities relating to infectious diseases are based on approaches designed to encourage the population to adopt and maintain safe behaviours for example through sex education or the promotion of vaccination. They are also based on biomedical approaches which help to enhance individual resistance to pathogenic agents (in particular immunization), to prevent the transmission of these agents (including barrier methods), to prevent the onset of the disease after exposure to these agents through screening, early detection and post-exposure prophylaxis and, lastly, to protect the population against real or apprehended threats by implementing emergency measures and guidelines to investigate cases, preventing secondary cases and controlling outbreaks.

Activities in this program area ensure the continuity of the *Québec Priorities in Public Health 1997-2002*[193] and other public health activities implemented to date. They are focused on maintaining the outcomes obtained in terms of prevention and control of infectious diseases – through, among other things, basic immunization and the application of protocols related to control measures – or on consolidating elements that need to be improved – including knowledge about risk factors, surveillance of certain sexually transmitted diseases, vaccination coverage, and immunizing products as well as access to early treatment. Other activities — such as the use of new vaccines, intervention with new at-risk groups, and establishment of an information system on vaccination – depend on future development within the program area of infectious diseases.

The activities selected to support people's potential, to reach the groups that are vulnerable and to protect the population relate to various functions and require different strategies including: promotion of preventive behaviours, protection of the health of the population in the event of a real or apprehended threat, intersectoral action and support of clinical preventive practices. Several activities are prescribed by the Public Health Act, namely regarding the vaccination registry, health surveillance, and implementation of control measures for reportable intoxications, infections and diseases, and compulsory treatment of contagious diseases or infections. Health surveillance is essential to guarantee that the population is protected against real or apprehended threats; surveillance requires access to the information needed in order to start an epidemiological investigation into the reported cases, outbreaks, aggregates or epidemics.

Objectives

Diseases preventable by immunization

By 2006

- Maintain zero annual incidence of indigenous cases of diphtheria, poliomyelitis, tetanus and rabies;
- Maintain the average annual incidence of measles, rubella and mumps under the elimination threshold;
- Maintain at under 5 per year the average number of cases of invasive *Haemophilus influenza* type b disease among children under 5;
- Reduce by 50% the average annual incidence of whooping cough compared to the 1997-2002 period;
- Reduce to zero indigenous rubella infection during pregnancy and congenital rubella;
- Reduce by 50% (to 2.5/100,000 population) the average annual incidence of reported cases of hepatitis A;
- Reduce by 50% (to 1/100,000 population) the average annual incidence of reported cases of acute hepatitis B;
- Reduce to under 5 cases the average annual incidence of invasive serogroup C meningococcus infections in the population aged 20 or under;
- Reduce by 40% the annual incidence of invasive pneumococcal infections in the adult population groups eligible for vaccination.

By 2012

- Reduce chickenpox to elimination threshold;
- Reduce by 60% the average annual incidence of invasive pneumococcal infections in children aged 6 months to 2 years;
- Reduce by 25% the annual hospitalization rate for influenza and pneumonia in people aged 65 or over;
- Maintain essential services in the event of an influenza pandemic;
- Maintain the average annual incidence of infectious diseases contracted abroad.

HIV/AIDS, hepatitis C and sexually transmitted infections

By 2012

- Reduce the annual incidence of HIV infection.

By 2006

- Reduce to under 5 per year the number of HIV-infected newborns;
- Reduce the annual *Chlamydia trachomatis* infection rate to under 50 cases per 100,000 population;
- Reduce by 50% the annual *Chlamydia trachomatis* infection rate among young people aged 15 to 24;
- Maintain the overall annual incidence of recent infectious syphilis under the elimination threshold (under 0.2 cases per 100,000 population);
- Reduce to 0 the number of newborns infected with congenital syphilis;
- Maintain under the elimination threshold the annual incidence of sexually transmitted rare bacterial infections.

By 2012

- Reduce the incidence of hepatitis C;
- Reduce the proportion of people infected with hepatitis C who develop liver cirrhosis;
- Reduce *Neisseria gonorrhoeae* infections to under the elimination threshold;
- Reduce to under 10 per 1,000 the frequency of complications (ectopic pregrancies) of *Chlamydia trachomatis* infection and gonococcal infection;
- Reduce the annual incidence of sexually transmitted viral infections in general.

Other infectious diseases

By 2006

- Reduce by 15% the average annual incidence of nocosomial infections in care institutions and, more particularly, stop the transmission of bacteria with multiple resistance to antibiotics so as to prevent endemic disease in hospitals and other care institutions;
- Reduce by 50% the incidence rate of *E. coli* 0157 infections and *Salmonella enteriditis* infections and by 30% the rate of *Campylobacter* infections;
- Reduce viral infections transmissible by blood products;
- Reduce the annual incidence rate of active tuberculosis to 3.5 per 100,000 population and more precisely:
  - reduce the annual incidence rate of active tuberculosis to 8 per 100,000 population in the Montréal-Centre region;
  - maintain a maximum annual incidence rate of 2 per 100,000 population in the other regions of Québec;
- Maintain under 20 the annual number of sporadic cases of zoonotic diseases other than rabies.

By 2012

- Reduce resistance to antimicrobial agents in the case of
  - methicillin-resistant *Staphylococcus* aureus infections;
  - penicillinase-producing *Neisseria gonorrhoeae* infections;
  - pneumococcal infections;
  - tuberculosis and nosocomial infections.

Activities

All infectious diseases

Protection of the health of the population in the event of a real or apprehended threat

■ ◐ Implementation of guidelines for case investigation, prevention of secondary cases and control of outbreaks, as provided for under chapter XI of the Public Health Act.

Diseases preventable by immunization

Vaccination

■ ◐ Vaccination of young people[1] against diphtheria, poliomyelitis, measles, rubella, *Haemophilus influenzae* type b infections, mumps, whooping cough, tetanus, and group C meningococcus infections (basic immunization).

■ ◐ Vaccination of third-year secondary school students (Grade 9).

■ ○ Vaccination of young people[2] against chickenpox.

■ ◐ Vaccination against hepatitis A of people belonging to the vulnerable groups as recognized in the Québec Immunization Program.

■ ● Vaccination against hepatitis B of Grade 4 pupils and people belonging to the vulnerable groups as recognized in the Québec Immunization Program.[3]

■ ◐ Vaccination against pneumococcal infections of people belonging to the vulnerable groups as recognized in the Québec Immunization Program.[4]

■ ○ Vaccination of young people[5] against pneumococcal infections.

■ ◐ Vaccination against influenza of people belonging to the vulnerable groups as recognized in the Québec Immunization Program.[6]

■ ◐ Pre-exposure vaccination against human rabies offered to people targeted by the provincial intervention protocol on human rabies.[7]

■ ○ Definition of vaccination strategies for whooping cough, hepatitis B and influenza.

Promotion of preventive behaviours

■ ◐ Implementation of a vaccination promotion plan.

◐ Promotion of vaccination against diseases contracted abroad (including typhoid, hepatitis A and hepatitis B) of people travelling to a developing country.

Surveillance system for diseases preventable by immunization

■ ○ Establishment of a vaccination information system so that people can be recorded in the vaccination registry as provided for under chapter VII of the Public Health Act.

Quality assurance of immunizing products

■ ◐ Management of immunizing products, particularly with a computerized system in order to ensure the quality of these products.

Protection of the health of the population in the event of a real or apprehended threat

■ ◐ Development of an emergency plan in the event of pandemic influenza, for Québec and all its regions.

Support for clinical preventive practices

■ ◐ Support for clinical preventive practices in the screening of rubella and hepatitis B in pregnant women.

HIV/AIDS, hepatitis C and sexually transmitted infections

Prevention of infections by HIV/AIDS, hepatitis C and sexually transmitted infections among vulnerable adolescent and adult groups

■ ◐ Prevention among adolescents and adults belonging to groups who are vulnerable to being infected by HIV/AIDS, hepatitis C and sexually transmitted infections.[8]

■ ● Intervention involving needle exchange to prevent the transmission of the hepatitis B virus and hepatitis C virus as well as the transmission of HIV.

■ ◐ Intervention to retrieve used needles or syringes (hepatitis B, hepatitis C, HIV).

■ ◐ Organization of integrated screening services for HIV/AIDS, hepatitis C and sexually transmitted infections.

■ ● Free drugs to treat sexually transmitted infections.

◐ Preventive intervention with partners of a person who has contracted a sexually transmitted infection and, at the request of the attending physician, with a person who has contracted HIV.

■ ◐ Post-exposure prophylaxis of HIV transmission.

Support for clinical preventive practices

■ ◐ Support for clinical preventive practices by systematically offering HIV testing to pregnant women.

Promotion of preventive behaviours

■ ○ Promotion of preventive behaviours by raising public awareness of the consequences of HIV/AIDS, hepatitis C and sexually transmitted infections.

Other infectious diseases

Promotion of preventive behaviours

◐ Promotion of preventive behaviours through chemoprophylaxis and by providing advice to travellers.

◐ Providing primary care physicians with information concerning exposure to the rabies virus and training them in preventive measures.

Protection of the health of the population in the event of a real or apprehended threat

- ■ ◐ Knowledge of the regional epidemiology relating to nosocomial infections, dissemination of recommendations and guidelines for prevention of these infections and definition of the means to facilitate the implementation of these recommendations.
- ● Implementation of recommendations on rabies epizootic among racoons adapted to the transmission patterns of this disease.
- ■ ◐ Management of close contacts of people with contagious tuberculosis.
- ■ ◐ Provision of tuberculin testing to HIV-positive individuals and treatment of the tuberculosis-infected individuals.
- ■ ◐ Initial evaluation, treatment and follow-up of recently admitted immigrants, as is recommended in the provincial intervention protocol on tuberculosis.
- ● Dissemination to the targeted populations of the recommendations established on the basis of the investigation into outbreaks of zoonotic diseases other than human rabies and adapted to the transmission patterns of these diseases.
- ■ ● Implementation of provincial recommendations regarding the prevention and surveillance of West Nile encephalitis, with these recommendations being adapted to the transmission patterns of this disease.

Support for clinical preventive practices

- ■ ◐ Support for clinical preventive practices to screen for the group B streptococcus colonization in pregnant women.

1. 95% of young people.
2. 95% of young people.
3. 90% of Grade 4 pupils and people belonging to the vulnerable groups as recognized in the Québec Immunization Program.
4. 80% of people belonging to the vulnerable groups as recognized in the Québec Immunization Program.
5. 95% of young people.
6. 80% of people belonging to the vulnerable groups as recognized in the Québec Immunization Program.
7. 90% of people targeted by the provincial intervention protocol on human rabies.
8. The strategy to control HIV/AIDS, sexually transmitted infections and hepatitis C virus specifies the elements related to this activity.

Legend
- ■ Activity to be conducted in 2003-2005
- ● Existing activity to be maintained
- ◐ Existing activity to be consolidated
- ○ Activity to be implemented

RESEARCH AND INNOVATION

The primary research theme in the program area of diseases preventable by immunization relates to the use of new vaccines, the implementation of new vaccination strategies, the increase in vaccination coverage – in particular regarding the organization of primary care services – as well as the effects of the strategies included in the Québec Immunization Program and strategies of surveillance of these diseases. The second research theme relates to the furtherance of knowledge on the epidemiology of sexually transmitted infections and blood-borne diseases, groups vulnerable to these infections, determinants of these infections and their related risk factors, strategies and prevention activities whose effectiveness has been proven, the accessibility and use of preventive services as well as the surveillance of these infections. Lastly, efforts are made to enhance knowledge on prevention and control of other infectious diseases, in particular strategies to break down resistance to antimicrobial agents.

Program Area of Environmental Health

PROBLEMS, RISK FACTORS AND DETERMINANTS

The intervention area relating to environmental health includes health problems that are caused or aggravated by the biological, chemical or physical contamination of air, water or soil. The major problems are: aggravation of cardiorespiratory diseases caused by air pollution and intense heat, problems related to the quality of indoor air, allergic asthma, allergic rhinitis, problems related to the quality of water, environmental cancers (skin, lung and mesothelioma) as well as environmental poisonings.

Numerous epidemiological studies demonstrate that an increase in air pollution (in particular by ozone, nitrogen and sulphur oxides, carbon monoxide and respirable particles) leads to an increase in the risk for premature mortality, a significant increase in average daily mortality among people aged 65 or over as well as increased morbidity among children and disadvantaged people who live near the polluted areas. A greater concentration of ozone in the air also affects the incidence of respiratory diseases.[194]

Between 1984 and 1993, in Montreal, the increase in average daily mortality during air pollution peaks was 5% among people who suffered from respiratory diseases and 4.2% among those who suffered from heart failure.

Asthma ranks 11th among the health problems reported by the Québec population. This disease whose prevalence has increased continuously for the last ten years, generates an increase in medical consultations and a reduction in activity.[195] The link between high concentrations of aeroallergens and the onset of asthma, particularly among children, has been clearly demonstrated. Moreover, 48.5% of asthmatic adults had their first symptoms before the age of 5.[196] It is recognized that the pollution of indoor and outdoor air, including that caused by tobacco smoke, is likely to contribute to the onset or aggravation of asthma and to provoke allergic reactions. Fortunately, the control of environmental risk factors can help to reduce the frequency and severity of the crises.

Between 1987 and 1998, the prevalence of asthma increased from 2.3% to 5% among the general population and from 3.4% to 6.6% among young people under 15.

Compared to non-asthmatics, more asthma sufferers

- Consult a physician during a two-week period (24.4% vs. 14.1%);
- Are admitted to hospital (15.2% vs. 14.1%);
- Experience activity limitations (36.0% vs. 15.9%).

Poor air quality as well as hygiene and sanitation problems in certain buildings cause an increase in the prevalence and seriousness of health problems such as asthma, allergic and irritant manifestations, acute and chronic poisonings, or cancers in people who live or work there. This is either because they have been repeatedly exposed to air contaminants or because they belong to the population groups who are vulnerable, such as individuals suffering from respiratory illnesses, infants, young children and people aged 65 or over. The main indoor air contaminants are: tobacco smoke, combustion products (breathable particles, carbon oxides, other wood combustion products), biological contaminants (molds), certain volatile organic compounds and radon.[197]

Allergic rhinitis, an inflammation of mucous membranes of the nose associated with a hypersensitivity to seasonal aeroallergens, affects more and more young people aged 15 to 24 and adults aged 25 to 44. It ranks fifth among the health problems that are most often reported and has more than doubled among people aged 15 to 44 in one decade.[198] Among the seasonal aeroallergens, ragweed pollen alone is responsible for 50% to 90% of all cases of allergic rhinitis.[199]

Although tobacco is the leading cause of lung cancer, several other carcinogenic contaminants are found in the environment and can contribute to the onset of this type of cancer. The main contaminants are: radon, asbestos and polycyclic aromatic hydrocarbons.[200]

Around 5% of lung cancer deaths are attributed to occupational exposure and 2% to other environmental exposure.

The ingestion of and contact with contaminated water cause health problems such as gastroenteritis, epidemic diarrheas, dermatitis, folliculitis and acute poisonings. Between 1989 and 1999, 147 water-related epidemics affecting 3,600 people[201] were reported in Québec. Water contamination can be attributed to several causes, among others, failures in water treatment or in maintenance of water distribution systems as well as pollution by agricultural or industrial activities and by domestic or industrial wastewater.

Skin cancers are the most common of all cancers in Canada and have been increasing continuously for at least 25 years in Québec.[202] Over 90% of these cancers are attributed to prolonged exposure to natural or artificial ultra-violet radiation. Children are especially vulnerable since from 50% to 80% of the lifetime sun exposure is received by the age of 18 and sunburns suffered at an early age and in adulthood are the principal risk factors associated with skin cancer.[203]

For 2001, Statistics Canada predicted that there would be 73,800 new cases of skin cancer in Canada. In Québec, from 1983 to 1990, the incidence of epithelioma increased every year by 14.3% for men and 10.1% for women while the incidence of melanoma increased by 10.9% for men and 6.4% for women.

The most common environmental poisonings are those due to carbon monoxide, hydrocarbons and pesticides. They result in many deaths and serious health problems. Among pesticide poisoning cases, 45% of the victims are children under 6.[204]

From 1990 to 2000, 80 serious cases of carbon monoxide poisoning treated in hyperbaric chamber and 13 deaths due to these poisonings as well as 1,200 calls to the Centre anti-poison du Québec (Québec poison control centre) were recorded annually. Poisonings by hydrocarbons and pesticides generate over 5,000 calls per year.

Heavy metals, such as lead and mercury, are the cause of poisonings affecting populations that are vulnerable, such as Native people, fishermen, children in underprivileged urban environments and people living near industrial districts.[205] The presence of these contaminants in the environment generates considerable costs for the health care system in terms of consultations and all types of care and also causes long-term effects on the body – repeated spontaneous abortions, cancers, immunosuppressive diseases, and developmental delays or problems in children. However, the extent of the exposure of Québec population groups to these contaminants is not well known and must be examined further.

Lastly, it should be noted that climate changes and the depletion of ecosystems have important direct and indirect consequences for health. Thus, certain health problems are likely to be aggravated and new problems that affect the population's health could well appear.

INTERVENTION

Public health — in collaboration with the *ministère de l'Environnement*, the *ministère de l'Agriculture, des Pêcheries et de l'Alimentation,* the *ministère des Ressources naturelles, and* the *ministère des Transports*, as well as municipalities, waterworks managers, and other actors responsible for the protection as well as the conservation of social settings and ecosystems — plays a leading role in protecting the population against environmental health problems.

The aim of the actions is to prevent or reduce environmental exposures. Thus, public health actors determine the sources of contamination based on epidemiological investigations. They monitor certain health problems closely, such as skin cancers, poisonings, asthma or aggravations of cardiac and respiratory diseases due to air pollution. They inform people who are exposed to risks or who are vulnerable about ways to protect themselves and avoid exposure, in particular by promoting clinical preventive practices relating to skin cancer, and they analyze the effects on health of different known or new environmental situations.

During the last five years, public health departments have been working together to deal with several issues and to develop, update and disseminate knowledge, to produce opinions and comments related to the effects on health of policies and laws, to design information tools as well as to harmonize the practices of actors. The following elements and problems have been examined: indoor air (molds and sanitation), drinking water (trihalomethanes, cyanobacteria and biological contaminants), outdoor air (ragweed, pollution, polycyclic aromatic hydrocarbons), risk assessment

and management, environmental poisonings (carbon monoxide) as well as agricultural pollution (stock production). The legislation on drinking water was also examined.

The aim of the orientations in the program area of environmental health for the coming years is to consolidate most of the current activities. Thus, a special effort will be made to harmonize practices related to epidemiological investigations, particularly regarding contamination of drinking water, hydric diseases, environmental poisonings and the quality of indoor air. Preventive and awareness-raising activities about asthma, skin cancers, seasonal allergies, and problems linked with air quality are also planned. Intersectoral collaboration and the promotion of effective means to enhance the quality of indoor and outdoor air are included in the activities selected. Lastly, in order to support the creation of living environments that are conducive to health, public health departments are carrying on with their work which involves assessing the consequences of environmental projects and developing an emergency environmental plan that includes activities related to nuclear, biological and chemical hazards as well as to the management of risks of industrial accidents.

Objectives

By 2012

- Reduce health problems associated with air pollution;
- Reduce morbidity attributed to ragweed pollen;
- Reduce morbidity and mortality due to asthma among people under 45;
- Reduce morbidity and mortality due to poor quality of indoor air and poor sanitation in residences and public buildings;
- Contribute to reducing lung cancer attributed to exposure to radon, asbestos and polycyclic aromatic hydrocarbons;
- Decrease the incidence of skin cancers;
- Reduce morbidity and mortality due to hydric diseases;
- Reduce by 25% environmental poisonings and their effects on health;
- Reduce the effects on health of emergencies and environmental disasters.

Activities

Diseases related to quality of indoor and outdoor air

Environmental cardiorespiratory diseases

■ ◐ Promoting effective means to improve the quality of outdoor air (including use of public transport, mandatory inspection programs for used vehicles).

Allergic rhinitis

■ ● Promoting effective means to reduce exposure to ragweed pollen through:

- information and training activities intended for municipal actors dealing with ragweed control measures;
- activities to raise public awareness regarding identification of ragweed and the control measures to be implemented in the immediate environment;
- activities intended for partners in other sectors regarding the health problems attributed to ragweed.

Allergic asthma

◐ Promoting a joint intervention to reduce exposure to environmental aeroallergens in primary and secondary schools, day care groups and ministries concerned by the problem.

◐ Holding consultation with organizations in the housing and building sectors in order to set a ventilation standard for new rental buildings.

Problems related to sanitation of buildings

■ ◐ Participating in the organization of public, sectoral and intersectoral services related to the quality of indoor air in each of the Québec regions.

■ ◐ Conducting epidemiological investigations and organizing appropriate activities whenever there are reports on health problems due to quality of indoor air or sanitation and hygiene in schools, childcare centres and institutions of the health and social services network.

Other environmental diseases

Lung cancer

■ ● Participating in monitoring the removal and repair of asbestos covering in school buildings where these projects are planned and providing support to the evaluation of asbestos presence in all health care institutions.

◐ Working out a strategy to deal with radon exposure in the home.

Skin cancers

■ ◐ Providing information to parents about the effective means to protect their children aged 0 to 18 from ultra-violet rays.

Hydric diseases

■ ◐ Conducting epidemiological investigations and organizing appropriate activities when water-related outbreaks or poisonings are reported and conducting epidemiological investigations into all cases of exceedance of fecal *E. coli* in the water distribution systems.

■ ◐ Promoting awareness and collaboration so that all public health departments can have timely access to reports on outbreaks, poisonings or exceedances related to water quality. These reports are necessary for early intervention to protect the health of the population.

Environmental poisonings

◐ Raising public awareness of the use of a carbon monoxide detector in the home.

■ ◐ Promoting the process of mandatory reporting of environmental poisoning cases, in particular by carbon monoxide or pesticides, and conducting epidemiological investigations when these cases are reported.

All environmental diseases

■ ◐ Participating in the various stages of the environmental impact assessment procedure as well as in the implementation of the policy on soil protection and rehabilitation of contaminated lands.

■ ● Participating in the process of reviewing development plans proposed by the regional county municipalities and urban communities.

■ ◐ Collaborating in regional activities concerning risk management for major industrial accidents, pursuant to the Civil Protection Act, and in preparing civil protection plans.

■ ● Developing an environmental health emergency plan, including actions related to nuclear, biological[1] and chemical hazards in the case of bioterrorism.

1. Activities related to biological hazards are carried out in collaboration with people who work in the program area of infectious diseases.

Legend
■ Activity to be conducted in 2003-2005
● Existing activity to be maintained
◐ Existing activity to be consolidated
○ Activity to be implemented

RESEARCH AND INNOVATION

The primary research theme in environmental health relates to exposure to air pollutants, environmental allergens, indoor air contaminants, radon, asbestos and polycyclic aromatic hydrocarbons as well as drinking water contaminants; the effects of these products on health are examined closely. Efforts are made in research on environmental poisonings, with a special focus on agricultural production methods, climate changes and toxic hazards. Lastly, the other research themes include: environmental emergency, support for activities related to health protection and contribution of environmental policies to the health of the population.

Program Area of Occupational Health

PROBLEMS, RISK FACTORS AND DETERMINANTS

The intervention area relating to occupational health includes health problems that are attributed to exposure to physical, chemical or biological stressors in the workplace as well as problems associated with the organizational characteristics of workplaces. This is a specific program area in which public health actors take action mainly under a contract granted to the regional health and social services boards (RRSSSs) and CLSCs by the *Commission de la santé et de la sécurité du travail* (CSST, workers' compensation commission) but also under a mandate of public health protection held by the public health directors and the national public health director. The CSST acts as administrator of the Québec system and is responsible for ensuring the health and safety of workers. Public health activities in this program area involve priority preventive actions determined by the CSST in collaboration with its partners. Moreover, emerging problems in public health are also being closely examined. Lastly, the workplace provides a favourable context for health promotion and prevention of problems that are not specific to the workplace.

Problems targeted by priority interventions determined by the CSST

According to the *Québec Health and Social Survey 1998*, muscular-skeletal lesions are the leading cause of disability in the Québec population and a great proportion of these disabilities are workplace-related.[206] For 2000, the CSST spent no less than $500 million in compensating workers affected by muscular-skeletal disorders, which represents over 40% of the total compensation costs for occupational lesions.[207]

A chronic form of berylliosis has begun to reappear. In the 1940s, beryllium was used in the manufacturing of fluorescent light tubes which resulted in cases of acute berylliosis. Eventually, the disease disappeared once the United States had set a standard relating to workers' exposure. However, more recently, cases of chronic berylliosis following prolonged or repeated exposure have been reported. By the end of 1998, the first cases of chronic berylliosis were reported in Québec.

Silicosis is another physical health problem that is attributed to the workplace. From 1988 to 1997, the CSST recognized that 298 workers suffered from silicosis; 40% of them were employed in mines, 21% in smelting works and 10% worked with stone. Cases of accelerated silicosis were also recorded. This form of the disease mainly occurs in younger workers who have not been exposed to silica for as long a time. Accelerated silicosis is strongly associated with the use of sand in abrasive blasting.[208]

Asbestos-related diseases are the pulmonary diseases that are most often compensated by the CSST and include certain pulmonary cancers and mesothelioma, in addition to asbestosis. People suffering from these diseases work mainly in the construction sector, in the repair and maintenance of structures or products that contain asbestos, in mines or in asbestos processing.[209] As asbestos exposure in the construction and processing industries is still poorly regulated,[210] and asbestos-related diseases only develop after a latent period of 20 to 40 years, it is to be expected that new cases of these diseases will continue to appear for many years.

From 1988 to 1997, of the 691 workers recognized by the CSST, there were 378 cases of asbestosis, 209 pulmonary cancers and 191 mesothelioma, all workplace-related.

Occupational asthma is the most common pulmonary disease in industrialized countries, where it is estimated that 15% of all asthma cases are occupational.[211] The prevalence of asthma in the Québec population is 5%.[212] Exposure to sensitizers such as isocyanates, flour and crustaceous proteins is the cause of a great number of occupational asthma cases in Québec.[213]

Poisoning in the workplace occurs frequently. Carbon monoxide, sulphide hydrogen (H_2S) and certain irritant gases, such as ammonia (NH_3), sulphur dioxide (SO_2) or nitrous oxides (NO_x) are the principal agents responsible for these poisonings. They are the cause of severe and permanent cases, hospitalizations and sometimes even of death. An average of ten cases of carbon monoxide poisoning are treated in hyperbaric chamber every year, showing how serious these poisonings are.[214] Other contaminants such as pesticides, organic solvents and lead are the cause of poisonings which, in general, occur more insidiously, but whose consequences are far from negligible.[215] The lack of measures or the ineffective measures to control and manage the contaminants used or generated in the workplace are among the principal factors which contribute to occupational poisonings, in particular in the cases involving the use of pesticides and organic solvents.

The serious consequences of occupational infectious diseases are well known. However, little is known about the frequency of occupational exposures to blood and other biological liquids. Since many of these exposures do not result in work days lost, they are not always reported and therefore not included in the CSST statistics. Through a surveillance project – the information system on surveillance of exposures to blood – 5,641 exposures to blood and other biological liquids were recorded among health care workers in 16 short-term care hospitals over a 5-year period.[216]

In Québec, preliminary CSST data relating to exposures to biological agents suggest that 138 and 202 industrial accidents were reported in 1999 and 2000 respectively; around 70% of these incidents are potential contacts with HIV.

Moreover, over a 3-year period, the Montréal-Centre region's consultation service for post-exposure prophylaxis assessed 1,445 people who were accidentally exposed to blood or other biological liquids. Nearly 80% of these exposures were work-related. As regards accidental exposures to *Mycobacterium tuberculosis*, 123 claims were accepted by the CSST between 1995 and 2000. A considerable proportion of employees who made these claims worked in health and social services institutions or in detention centres. Although the cases of exposure to biological hazards are under-reported, this form of exposure nevertheless constitutes an important problem for certain population groups.

Furthermore, several substances found in the workplace (including arsenic, cadmium, asbestos, chromium, nickel and its components, hydrocarbon smoke) have proven to be carcinogenic. However, not all the substances which are internationally recognized as being carcinogenic are recorded as such in the Québec regulation. Studies estimate that from 5% to 40% of diagnosed cancers, depending on their etiology, are work-related.[217] Respiratory tract cancers (trachea, bronchus, lung) and bladder cancer are those that cause the most deaths.[218] Although relatively rare, mesothelioma is probably one of the sentinel cancers[219] that are most strongly associated with occupational exposure.

Noise, a stressor that is still very much present in workplaces, can affect the health and even the safety of workers. It is estimated that 20% of cases of adult deafness are due to noise in the workplace and may occur as a result of either short- or long-term exposure. Occupational deafness ranks second among the occupational diseases in terms of the number of cases compensated by the CSST.[220] Deafness results in a change in the ability to hear and communicate which may have serious consequences for all spheres of life.[221]

Approximately 1,000 cases of occupational deafness are compensated by the CSST every year, while around 500,000 workers are exposed daily to harmful noise levels and may to develop deafness.

Lastly, it is also recognized that certain ergonomic conditions in which pregnant women work (extended period of work in standing position, carrying heavy loads, physical efforts, etc.) are associated with higher rates of premature births, intrauterine growth delay, spontaneous abortions and stillbirths.[222] In addition, exposure to chemical, biological and physical agents can seriously jeopardize the health of the unborn baby, the breastfed child and the mother.[223]

Emerging problems

In recent years, other problems have attracted the attention of public health actors because of their possible link with the workplace. These emerging problems are considered to be major problems by the Minister and even though they are not targeted by the priority interventions determined by the CSST, they need to be examined further.

Some of these problems seem to be associated with work-generated stress. This is true of cardiovascular diseases which are the leading cause of death, disability and illness in Canada, while being responsible for 37% of all deaths and the highest number of hospitalizations.[224] In fact, it is estimated that around 20% of cardiovascular diseases are related to work organization.[225]

Stress is also related to mental health problems associated with the workplace. The rate of disability as a result of work-related mental health problems rose from 7% to 13%, with a duration of absence from work that has tripled from 1987 to 1998.[226] Claims made to the CSST for occupational lesions related to stress, burn-out and other psychological factors nearly doubled from 1990 to 1997, as did the amounts paid by private wage insurance companies.[227] Although for the moment it is difficult to assess the real increase in these problems since the progression recorded is likely to partly reflect the importance that has been attached to them recently, the fact remains that they should be examined further.

Furthermore, the interest in workplace harassment is relatively recent. Despite the paucity of studies that rigorously assess the extent of this problem, 18% of workers reported that they have been victims of intimidation at work during 1998.[228] The consequences of workplace harassment for the mental and physical health of individuals are considerable.[229] Organizational factors such as poorly managed conflicts, managerial incompetence, job insecurity and work intensification influence the emergence of these problems.[230]

Other problems addressed by activities in the workplace[231]

Many chronic diseases – including cardiovascular diseases, cancers, diabetes and certain obstructive respiratory diseases — are responsible for high proportions of mortality and morbidity recorded in the adult population. These diseases are associated with smoking, a poor diet and lack of exercise. Moreover, drug and alcohol problems as well as suicide occur generally in adulthood, in particular among workers. The workplace provides a favourable context for influencing lifestyles or factors associated with social adjustment and integration.

INTERVENTION

Activities stipulated by the MSSS-CSST agreement

Most of the activities stipulated in the program area of occupational health are, as in previous years, priority activities determined by the CSST pursuant to the agreement concluded between the MSSS and the CSST.

The action of public health teams within public health departments and CLSCs involves organizing the activities stipulated in the health programs specific to the institution (PSSE) in the regulated sectors. These activities are mainly based on four aspects:

- determining and assessing health risks related to the presence of physical, chemical and biological stressors and to the organization of work;
- health surveillance, through which health problems are prevented and screened for based on the risks determined and assessed previously;
- informing and training workers and employers about the existing risks, their effects on health as well as the means to prevent, control or eliminate them;
- first aid and primary care services based on the recommendations made on the organization of these services and the training on specific aspects.

Furthermore, the CSST also entrusts the health and social services network with specific responsibilities under the implementation of the *Pour une maternité sans danger* program (for a safe maternity program). This program allows pregnant women or breastfeeding women to be re-assigned to duties that do not involve risks for themselves, the unborn child or the breastfed child, or to be withdrawn from the workplace if no such re-assignment is possible.

Moreover, at the CSST's request, studies on industrial hygiene are conducted in order to process the compensation claims for occupational diseases.

Public health teams working in the program area of occupational health also collaborate in the implementation of provincial intervention programs dealing with the risks targeted in the sectors identified, including asbestos in the construction sector; noise in the sawmill sector; risks associated with welding smoke, electrostatic dusting and industrial processes that use isocyanates; risks associated with either silica, in workplaces where silica sand is used in abrasive blasting, or beryllium, in the smelting works and aeronautics sectors. Poisonings by carbon oxide and solvents, muscular-skeletal lesions, and certain biological hazards are also dealt with in activities intended for specific population groups.

All these activities in the workplace aim at the health problems mentioned or certain aspects of these problems and mostly involve only the regulated sectors. Activities outside the regulated sectors are also offered, according to the provincial or regional priorities selected. The occupational health teams also respond to requests from workplaces, mainly from health and safety committees. However, problems affecting certain workplaces may not be included in the priorities established. Other activities will be conducted in the regions jointly with the CSST's regional offices so as

An agreement on occupational health programs was concluded between the Minister of Health and Social Services and the Commission de la santé et de la sécurité du travail (CSST) pursuant to section 10 of the Act respecting the ministère de la Santé et des Service sociaux (R.S.Q., c. M-19.2) and section 170 of the Act respecting occupational health and safety (R.S.Q., c. S-2.1). The latter Act stipulates that the CSST's function is to establish priorities for intervention in matters of occupational health and safety. According to the agreement, the Commission must also deal with any priority issue deemed as such by the MSSS. The MSSS, for its part, coordinates the implementation of occupational health programs, collaborates with the Commission in the analysis of data on occupational health and safety, and also deals with any priority issue deemed as such by the Commission.

Moreover, an overall operational framework provides structure to the collaboration between the CSST, the MSSS and their respective networks as well as to the activities related to occupational health services. The MSSS-CSST permanent committee, which was created under the agreement, is the preferred forum where any topic of interest to both parties can be discussed, so that the occupational health programs can be implemented. One of the responsibilities of the committee is to disseminate the province's policies, priorities and objectives in the area of prevention and to define the necessary indicators. It also liaises with the regional roundtables and the respective actors of both networks. Other mechanisms for collaboration also exist at the local and regional levels.

Other partners are also given responsibilities by the CSST. They are, among other actors, the joint sector-based associations for occupational health and safety, which provide training, information and counselling services on occupational health and safety matters; and the Institut de recherche Robert-Sauvé en santé et sécurité du travail (IRSST, occupational health and safety research institute) which conducts scientific research, trains researchers and performs laboratory services related to environmental (industrial hygiene), toxicological and microbiological analyses. The Institut national de santé publique du Québec (the INSPQ, Québec public health institute) also contributes by examining new issues, producing scientific opinions, and supervising research in the program area of occupational health and safety.

To implement the agreement with the MSSS, the Commission concludes a specific contract with every regional board, as stipulated in section 109 of the Act respecting occupational health and safety, whereby the regional board undertakes to provide the services required for the implementation of the health programs in its territory, according to the budgets allocated for this purpose by the Commission. Under this contract, the public health departments and the local community service centres (CLSCs) will provide health prevention services to workers.

to take into account the health problems that exist locally. The public health teams can also propose specific activities focused on health promotion and prevention in the workplace, together with the CSST and businesses concerned with a problem.

Investigations related to reportable diseases

Public health actors can also intervene in investigations into reportable diseases (MADO) in order to look for the occupational or non-occupational etiology of these diseases.

Issues deemed to be public health priority issues

Under the *Québec Public Health Program 2003-2012* and pursuant to the MSSS-CSST agreement, it is also stipulated that public health actors, following the usual mechanisms for collaboration with the CSST, notify the Commission of certain specific aspects of the problems already targeted by the priority activities. The major issues raised are: occupational poisonings, occupational cancers, occupational deafness and risk management, in the case of, for example, an adverse pregnancy outcome due to the workplace.

Other activities related to health promotion and prevention in the workplace

Certain activities relating to lifestyles and chronic diseases or to development, social adjustment and integration can be organized in the workplace.[232] This is true of activities that involve communication campaigns focused on the adoption of healthy lifestyles or with environmental measures that promote healthy eating and regular exercise. Activities dealing with the prevention of drug and alcohol problems and their related risks as well as suicide prevention can also be offered in workplaces.

Objectives

By 2012

- Decrease the prevalence, duration and seriousness of disabilities due to muscular-skeletal lesions;
- Decrease the incidence of berylliosis, silicosis and asbestosis among workers by reducing their exposure to beryllium, silica and asbestos;
- Decrease the incidence of occupational asthma due to isocyanates, flour and its components, or crustacean proteins as well as the severity of this disease's manifestations;
- Decrease the incidence of occupational poisonings caused by carbon oxide, sulphur hydrogen, pesticides or irritant gases and reduce the prevalence of diseases of the nervous system caused by lead and organic solvents;
- Decrease the incidence of occupational infectious diseases among workers exposed to biological agents;
- Decrease the incidence of respiratory tract cancers, bladder cancers and other cancers by reducing workers' exposure to carcinogenic substances;
- Decrease the incidence of occupational deafness and its consequences by reducing workers' exposure to noise in the workplace;
- Decrease the frequency of problems that can lead to an adverse pregnancy outcome due to the workplace (prematurity, spontaneous abortion, stillbirth) and growth delays or physical health problems in children;
- Improve lifestyles and decrease the incidence of chronic diseases;
- Reduce suicide and drug and alcohol problems.

ACTIVITIES

■ ● The activities provided for under the MSSS-CSST[1] agreement relate to the following problems:

- muscular-skeletal lesions;
- berylliosis;
- silicosis;
- asbestosis;
- occupational asthma;
- occupational poisonings;
- occupational infectious diseases;
- occupational cancers;
- occupational deafness;
- problems that can lead to an adverse pregnancy outcome due to the workplace.

◐ Representations with the CSST on the following themes[2]: occupational poisonings, occupational cancers, noise and occupational deafness as well as risk management.

◐ Activities related to health promotion and prevention in the workplace involving lifestyles, chronic diseases, social adjustment and integration.

1. The amounts needed to conduct these activities come from the CSST.

2. More specifically and for each theme, the representations will focus on the following: examining effective interventions to prevent cases of occupational poisonings — by carbon monoxide, sulphide hydrogen, pesticides and irritant gases; determining the necessity to revise the standard for certain carcinogens or to add carcinogens to the list of those which are recognized by regulation; the most effective strategies to replace and control carcinogenic substances; the information to be given to workers about certain carcinogens such as asbestos, hydrocarbons, nickel and chromium; the information to be given to attending physicians about the most common occupational cancers; determining the necessity to revise the standard related to noise exposure; examining the continuity of the services provided to workers who are in danger of being affected or who are affected by occupational deafness (promotion, prevention, protection) based on an assessment of the activities which have already been conducted in this area; and the usefulness of a reference framework for risk management, in particular with respect to adverse pregnancy outcomes that are workplace-related.

Legend
■ Activity to be conducted in 2003-2005
● Existing activity to be maintained
◐ Existing activity to be consolidated
○ Activity to be implemented

RESEARCH AND INNOVATION

The primary research theme in the program area of occupational health relates to the furtherance of knowledge on emerging problems and the effective means to prevent them. Particular emphasis is put on research on work-related mental health problems, harassment in the workplace and cardiovascular diseases attributed to work. Another research theme is surveillance of certain workplace-related health problems. Lastly, research examines ways to enhance the effectiveness of activities to prevent certain occupational problems such as muscular-skeletal lesions, berylliosis, poisonings, infectious diseases and deafness.

Community development activities

The links between environment, lifestyles and health and well-being of individuals or populations have been clearly demonstrated. In fact, the power of individuals to change their lifestyles or control their life situation in terms of health and well-being depends not only on their will and capacity to act but also on the conditions that exist in their immediate environment – whether socio-economic, physical, social or cultural. The very place where people live has an impact on their health. Moreover, it is known that poverty contributes greatly to enduring inequalities in health and well-being.

The activities included in the strategy to develop communities aim precisely at preventing psychosocial and physical health problems that are influenced by the context in which people live. These activities therefore have a great potential for enhancing people's health and well-being. They are instrumental in improving the living conditions and the quality of life of communities, in particular those that are vulnerable and disadvantaged. Members of the communities can thus strengthen their autonomy and social cohesion, change their situation and participate in creating environments that are adapted to their everyday context. These activities are based on intersectoral action and are complementary to those focused on the behaviours of individuals, at-risk groups or the population, and even reinforce them.

Moreover, the projects conducted under this strategy are defined and managed by members of the communities themselves. Thus, the aim of public health intervention, rather than to prevent a specific problem, is to support and develop the skills of individuals and groups as well as to improve their physical, social and economic environment in order to create an overall context that is conducive to the long-term health and well-being of all Quebecers.

Community development projects are particularly relevant when the problems and their risk factors as well as the context in which they arise are sufficiently understood,[233] and when the social context and the environments have a definite influence on these problems or risk factors. This is true, for example, of activities which aim at enhancing the social support available to individuals or at changing certain lifestyles.

EXAMPLES OF PROMISING INTERVENTIONS DRAWN FROM A COMMUNITY DEVELOPMENT STRATEGY

- Support activities offered to families with young children.
- Activities to enhance the social support for children and adolescents.
- Activities focused on food security.
- Activities focused on the safety of neighbourhoods, villages or municipalities, or on the quality of environments.
- Activities related to the adoption of healthy lifestyles in social settings, particularly in the workplace.
- Activities to promote the social integration of the elderly.
- Other multidimensional activities that deal with several health determinants (including a youth leisure project to develop their social skills, and for which a safe and ecological means of transportation is provided).

Many interventions related to the development of communities are promising. They include, on the one hand, a theoretical basis regarding their effectiveness and, on the other hand, empirical evidence which supports at least some elements of the theoretical model.[234]

The development of communities is achieved through increased accessibility to information on the health status of members of the communities, through community-based projects to enhance the health and well-being of members, through a consolidation of intersectoral actions that promote health and, lastly, through the strengthening of activities focused on reducing inequalities in health and well-being. The activities selected are presented in the table below; they leave room for the definition of activities adapted to the specific needs of a group or a community. By giving priority to community-based initiatives, this strategy fosters innovation, new relationships between the experts and the population as well as intersectoral collaboration.

TABLE 1 COMMUNITY DEVELOPMENT ACTIVITIES

Types of public health activity	Goals pursued	Contribution of the national, regional and local levels
1. Activities to keep in touch with the population and to make information on their health and well-being status accessible to them	• Understand communities' concerns about their health and the means they want to take to maintain or enhance it. • Make accessible to the communities the information on their health status and determinants. • Consult people's forum.	• Production of national and regional health portraits that are accessible to the population.
2. Activities based on community involvement.	• Create a context that is conducive to health and well-being.	• National and regional planning that takes account of the necessary conditions for implementing local and regional mechanisms for collaboration. • Implementing activities that involve actors in the community. • National, regional support (in planning, funding, evaluation) and local support (in planning and execution) to projects proposed by communities, in particular those relating to support for families, social support for children, adolescents, adults and the elderly, development of young children, socialization of children and adolescents, food security as well as safety of neighbourhoods, villages and municipalities.
3. Activities based on intersectoral collaboration	• Encourage the commitment of actors from other sectors in implementing community health activities.	• Support intersectoral alliances to set up activities so as to act on the determinants of health and well-being.
4. Activities that reduce inequalities in health and well-being and favour the most disadvantaged communities	• Improve access to social settings conducive to health and to health resources and services targeting the vulnerable groups and, more specifically, the socio-economically disadvantaged communities and groups.	• Set up and support interventions that help to reduce inequalities in health and well-being, and those intended for the most disadvantaged communities.

CHAPTER 6

PROGRAM EVALUATION: FEEDBACK TO GUIDE ACTION

Through the evaluation of the Québec Public Health Program, it is possible to assess the practice of public health in general, to follow up the activities proposed under the program based on its fundamental components and to determine the extent to which the desired outcomes have been achieved. On the one hand, the evaluation of the public health functions allows for a critical look at the practice of public health so as to strengthen its role and capacity for intervention within the health and social services system. On the other hand, the aim of evaluating activities and observed outcomes is to obtain information on the implementation of these activities and on the extent to which the objectives pursued have been achieved. Generally speaking, the evaluation results make it possible to determine whether the program is achieving the desired outcomes and, if needed, to make the necessary adjustments.

FOUNDATIONS OF PROGRAM EVALUATION

The approach to the evaluation of the Québec Public Health Program is guided by a number of orientations. First of all, whenever practical, the program evaluation will be based on existing information systems, instruments and data. In the same way, the evaluation should contribute to the development of these systems and instruments so that data collection is adapted to the program structure. Secondly, it is crucial for the evaluation of the program to allow for the comparison of data between national, regional and local levels as well as at different points in time so that the evolution of outcomes over time can be assessed. The success of the evaluation depends on partnership, that is, on the contribution of actors at each level of public health and respect for each of their mandates and specific responsibilities. Their input is sought not only with regard to the collection of the necessary data but also the analysis of this data and their use in improving the program and enriching regional and local action plans. In addition, the evaluation must respect the values and ethical principles on which the program is based and which can support decision making regarding the respect for confidentiality, free and informed consent of participants during evaluative research as well as the careful use of nominative data when this is absolutely necessary. Moreover, data collection must be limited to information that is truly relevant and include an equitable sharing of the responsibilities between the actors involved in this process. Finally, it is essential that evaluation results be produced and disseminated promptly so as to allow any needed corrections to be made within the desired time limits.

DIMENSIONS OF EVALUATION

The evaluation of the Québec Public Health Program focuses on the public health functions as well as the proposed activities and their effects. Table 2 below presents the core elements of the program evaluation framework. Some elements concern the content of the evaluation, that is, the types of evaluation and objects of the evaluation, while others relate to the evaluation procedures and specify the responsibilities at each level as well as the data sources and frequency of data collection.

Evaluation of the public health functions

The evaluation of the public health functions consists in assessing the various aspects of performance of the core functions and support functions according to three categories of indicators. These indicators concern: the availability of infrastructure; resources (human, technological and financial) and necessary skills; the quality of links and support between the national, regional and local levels; and the capacity of each function to achieve its aims.

Assessment of the performance of the public health functions makes it possible to determine which functions need to be consolidated so as to improve intervention, since the exercise of public health depends mainly on the ability of actors to accomplish these functions. Thus, it is hoped that by enhancing the quality and capacity of the intervention by these actors, their contribution to the health and social services system will also be improved. The elements that result from the evaluation of the public health functions ultimately serve to redefine the major strategic orientations in public health. The responsibility for the successful evaluation of the functions lies at the national level. This type of evaluation may require the collaboration of a limited number of key actors, as part of a periodic process of analyzing the exercise of public health.

The evaluation of the public health functions will draw on existing models which can be adapted to the Québec reality. The Pan American Health Organization (PAHO) has already established an evaluation process which relies on instruments that have been especially designed for this purpose. Instruments specific to Québec can be developed on the basis of the PAHO model. A first evaluation of all the functions will be carried out when the program is implemented,

that is, in 2003-2004, in order to establish baseline measures. Should this exercise reveal any problematic aspects of one or more functions, these aspects can be re-evaluated, for example at the end of the first stage of the program. Thus, it can be determined whether the recommended corrections have been made and whether they have had a positive effect on the exercise of public health. The timing of this exercise for the other stages of the program (2006-2008 and 2009-2012) will be determined in due course.

Evaluation of activities and their effects

The evaluation of all the program activities is based on three types of evaluation, that is, the follow-up to implementation, the monitoring of social and health indicators, and specific evaluative studies. The first phase of the evaluation focuses on the activities conducted during the first stage of the program (2003-2005). The subsequent evaluation phases will probably correspond to the two other stages of the program (2006-2008 and 2009-2012).

Follow-up to implementation of activities

The objectives of the follow-up to implementation of activities are to determine the extent to which the activities are offered, to describe the gaps between observed and planned activities, that is, the expected outcome according to the description of each activity and, finally, to evaluate the level of satisfaction among individuals who have benefited from the activities.

The follow-up to implementation of activities requires careful planning, given the large number of activities provided for and the fact that certain activities are already ongoing while others have yet to be implemented. The objects of the evaluation must therefore be adapted to the degree of implementation of the activities. Thus, the context in which new activities are implemented will first be examined (including the availability and expertise of resources) while the information on the activities and on the individuals who benefit from them will be collected for activities that are already well established. In addition, the use, where possible, of data that have already been collated in existing information systems will also help to lessen the work involved in the follow-up of the implementation of program activities. Existing information systems should be gradually adapted to facilitate the collection of information on program activities. Finally, the workload involved in this aspect of evaluation must be taken into account when deciding on the frequency at which activities will be followed up. It can be expected that a national progress report and regional progress reports will be produced every three years, that is, corresponding to the three program stages (2003-2005, 2006-2008 and 2009-2012).

The national level will assume a leadership role in designing common instruments for data collection and agreeing on their use in the follow-up of the implementation of activities, since a degree of standardization in the methods and tools used in data collection is necessary in order to integrate these data into the national progress report. An evaluation plan will guide the staff in the regions in collecting valid, reliable and appropriate data on the implementation of each activity. In addition, since the activities are mainly offered in the regions and local territories, the regional and local levels are chiefly responsible for collecting the data and producing results and this work depends on close partnership between these two levels.

Monitoring social and health indicators

The monitoring of social and health indicators makes it possible to determine whether or not the program's objectives have been achieved and to describe the disparities observed. In order to determine whether or not the social and health objectives have been achieved, the data will be analyzed mainly at the national and regional levels, based on the data sources that are already used for this purpose (including the Med-Écho file, death records and surveys) or on new indicators defined as part of the surveillance innovations provided for under the program. In this regard, it must be underlined that the program evaluation approach is closely linked with the surveillance function. In fact, several of the social and health indicators used will come from the surveillance activities that focus on monitoring the population's health status.

Specific evaluative studies

Aspects of certain activities will be examined in more detail in specific studies, including the influence of regional or local contextual variations in the implementation of activities, or the causal relationship between these activities and their expected effects. Given their complexity, these studies will focus on precise objects and will necessarily involve the development of a research design and appropriate instruments. The contribution of regional and local levels is

essential not only to weigh the need and relevance of such evaluative studies, but also to participate in the design of protocols as well as data collection and analysis. Collaboration at the national level, through the Institut national de santé publique du Québec (INSPQ) and the ministère de la Santé et des Services sociaux (MSSS) will be essential in carrying out this type of work, particularly when several regions are affected. Links between the program evaluation and the exercise of the research and innovation function are crucial: for example, in conducting such studies, research teams could provide support to actors in the field in order to carry out action research. In addition, the public health directors may conduct evaluative studies which they consider necessary in their region. Specific evaluative studies will be carried out as the need arises and will take into account the questions raised by the implementation of activities and available resources.

The evaluation of the program, through the assessment of the public health functions as well as the evaluation of the activities and their effects, is essential to understanding the progress of the implementation of the program and to analyzing its capacity to achieve the targeted outcomes. In addition, the results of the program evaluation provide an appreciable source of information that will help to renew and develop the program. The main elements of the framework for program evaluation are defined, but much remains to be done in order to make it operational: additional documents on the operational aspects of the framework (including the assessment of core functions, the measurement of the objectives pursued, the description of the indicators or data collection questionnaires) will be produced at a later date.

TABLE 2 EVALUATION COMPONENTS OF THE QUÉBEC PUBLIC HEALTH PROGRAM

	CONTENT		PROCEDURES		
PROGRAM COMPONENT	**Type of evaluation**	**Objects of evaluation**	**Responsibilities**	**Data sources**	**Frequency**
Public health functions	Measurement of performance in relation to public health functions	• Effectiveness in exercise of functions • Infrastructure, resources and skills • Links and support between levels (national, regional and local)	National level	Instruments and methods that draw on the Pan-American Health Organization and adapted to the Québec reality	2003-2005: baseline evaluation for all functions 2006-2008 and 2009-2012: evaluation of aspects specific to certain functions
Activities: emphasis on activities to be conducted between 2003 and 2005 as well as on their effects on health and well-being (to be repeated for the other program stages, 2006-2008 and 2009-2012)	Follow-up to implementation of activities: • measurement of degree of implementation of activities • description of disparities between what was planned and what has been achieved • measurement of level of satisfaction among individuals who have benefited from activities	Sequential emphasis on certain aspects of activities Existing activities to be maintained: • individuals who have benefited from activities • use and accessibility of services Existing activities to be consolidated: • specific elements Activities to be implemented: • resources allocated • resources available	National leadership for standardization of data collection methods and tools and integration of these data for production of the national evaluation progress report Regional and local partnership (data collection and analysis)	• Information in already existing management systems • Production of new evaluation tools common to all regions	National progress report and regional progress reports in 2006, 2009 and 2012
	Monitoring of social and health indicators to determine extent of achievement of activities	Program objectives	Data collection and analysis at national and regional levels	• Already existing files (e.g. Med-Écho, death records, cancer registry) • Surveys on health and social issues	National report and regional reports on health status
	Specific evaluative studies, as needed, to explain elements particular to certain activities.	Effects of certain program activities	Regional and local partnership (data collection and analysis) Collaboration at the national level (e.g., the INSPQ, Direction générale de la santé publique – DGSP, public health department)	Instruments and protocols adapted to the situation	*Ad hoc*

CHAPTER 7

IMPLEMENTING THE PROGRAM

It will be through its implementation that the *Québec Public Health Program 2003-2012* will play the structuring role expected of such a planning tool. The program will be implemented with the contribution of public health actors at each level of intervention, according to different stages and following, for example, mechanisms introduced under the Public Health Act or certain processes common to the entire health and social services network.

FOSTERING A DYNAMIC AT EACH LEVEL AND BETWEEN LEVELS

Regional and local action plans

To put the program into action, it is first necessary to create a dynamic at each level and between the levels of public health that fosters the appropriation and implementation of the program. In this regard, the principal actors targeted are the Ministère, the INSPQ, regional boards and, in particular, their respective public health departments (DSPs), as well as the CLSCs.

The first steps in creating this dynamic, which is essential to the program's implementation, will be to develop regional and local action plans and establish a program follow-up committee.

Indeed, the development of regional action plans is a first collaborative step to get the implementation of the program under way. The public health departments, in co-operation with the CLSCs, will have to develop regional action plans that allow the program to be adapted to the specific characteristics of the territory covered by their respective regional boards. The development of these plans requires that the DSPs and CLSCs be completely familiar with the contents of the program so as to be able to determine how it should be applied and adjusted to enhance the population's health at the regional or local level. In this regard, collaboration with the CLSCs will facilitate the preparation of local action plans by the latter and ensure that the local and regional plans are consistent with each other. The CLSCs will make use of their main partners to ensure that the local action plans, while respecting the contents of the regional plans, provide for the public health services that are best adapted to the needs of the local population. In this regard, the community organizations are key partners. In accordance with their mission, geographical coverage and the policies guiding their contribution to the health and social services network, they will be invited to take an active part in the preparation of the local plans. Thus, the development of the regional and local action plans is a crucial stage in the implementation of the program because, from the very start of the process, it fosters the appropriation and partnership that are essential to its success. A cooperative planning strategy at the regional and local levels could facilitate the implementation of the regional and local public health action plans.

Finally, both the national program and the regional and local plans can only make an optimal contribution to the improvement of the population's health if they are firmly rooted in all the activities of the health and social services network. This is why the orientations of the main sets of activities included in the national public health program and regional public health plans must be integrated into national and regional strategic planning.

The Québec Public Health Program Follow-up Committee

The program can only be implemented if there is collaboration and agreement between the actors at the different levels of public health. The main purpose of establishing a Québec Public Health Program Follow-up Committee is to provide a forum for debate and discussion so as to ensure that the program will play its role effectively, that is, through effective structuring and a high level of consistency of the public health activities proposed to enhance the health and well-being of the population throughout Québec The primary mandate of this committee is to help ensure that the main actors appropriate the program's components and that there is a smooth transition between the national priorities in public health and the program. This method is used by the Ministère to generate the co-operation needed for the delivery of services and the implementation of the public health interventions provided for under the national program. The committee's mandate can be broadened as needed to include actions to review and renew the program. The knowledge acquired, particularly through evaluation of the program and the research and innovation function, will provide the committee with crucial information on how the program is unfolding.

The committee will be composed initially of representatives of the Ministère, the INSPQ, the DSPs and CLSCs, allowing it to rely on existing structures such as the roundtables and groups that play a consultative role at the national level. Other persons may be invited to participate when their expertise is needed to better identify the problems that arise

and propose appropriate solutions. For the Québec Public Health Program Follow-up Committee to be effective, a fundamental condition must be met: there must be a willingness on the part of the representatives of all public health levels to become involved in the implementation and renewal of the program, that is, to take an active part in identifying the problems encountered and determining the solutions to be proposed and improvements to be made to the program.

SHARING RESPONSIBILITIES

The different responsibilities related to the Québec Public Health Program are determined by the Act respecting health services and social services (HSSSA – R.S.Q., c. S-4.2) the Public Health Act (PHA – R.S.Q. c. 60) and the Act respecting Institut national de santé publique du Québec (R.S.Q., c. I-13.1.1). On the one hand, the population's needs in terms of public health services and, in particular, the necessary evolution of the organization of these services, must be taken into account by the Ministère and the regional boards when developing their triennial strategic plans. Similarly, it will be possible, through the management and accountability agreements between the different levels of the network, to specify the expected outcomes at the end of each planning cycle. On the other hand, the development, implementation and evaluation of the program rely on a sharing of responsibilities between the actors at the different levels of the health and social services network.

Responsibilities for the overall program

The primary responsibility of the Minister, regional boards and CLSCs is to develop and update, at their respective levels, the national public health program and the regional and local public health action plans. In addition, they have responsibilities relating to the allocation of resources and accountability.

First of all, the Minister must allocate public health resources to the regions of Québec. The regional boards must then distribute these resources among the CLSCs and the other regional and local actors. The allocation of public health resources is based on the same criteria that prevail for the entire ministère de la Santé et des Services sociaux and within the regional boards. The Ministère allocates resources on the basis of equity and a program logic. The logic of equity is reflected in an allocation that takes into account the characteristics and needs of the population

It is the responsibility of the Minister to develop the Québec Public Health Program and to update it regularly, as well as to ensure its national and interregional coordination. The Minister shall also ensure coordination between the health and social services network and the INSPQ as regards the delivery of services and the implementation of public health activities, as provided in the national program. The Minister shall also ensure that activities that concern health issues in the work environment be developed in collaboration with the Commission de la santé et de la sécurité du travail (PHA, c. II).

For their part, the regional boards must, in collaboration with the institutions, in particular the CLSCs, develop, implement, evaluate and regularly update a regional action plan which is consistent with the prescriptions of the Québec Public Health Program and takes into account the specific characteristics of the population living in the territory (PHA, c. II). The regional boards entrust the management of the regional public health action plan to the public health directors (HSSSA, s. 371). The regional action plan must include a plan providing for the mobilization of the resources of the health and social services institutions in the territory concerned to be able, if needed, to conduct an epidemiological investigation and to take the measures considered necessary if the population's health is threatened. In their regional action plan, the regional boards may provide that certain activities or services will be offered to the population by other resources than DSPs or CLSCs, in particular by physicians practicing in their territory. (PHA, c. II). Before implementing this plan, the regional boards must consult the people's forum (HSSSA, s. 343.1) and the various actors concerned by the plan. They must also deposit this plan with the Minister before implementing the public health activities and services that it proposes (PHA, c. II).

The CLSCs shall develop, implement, evaluate and regularly update a local action plan which must be consistent with the prescriptions of the Québec Public Health Program and must define the measures to be taken at the local level to achieve the objectives identified in the regional plan, having regard for the specific characteristics of the population served by these institutions. The local action plans must be developed by the CLSCs in collaboration with, in particular, the community organizations concerned. Each CLSC must deposit its local action plan with the regional board concerned before implementing the services it proposes (PHA, c. II).

while the program logic (as opposed to one based on institutions) fosters greater integration of the activities to be carried out. A regular follow-up of the services delivered, resources assigned to these services and expenditures made will reveal the real situation of the commitments made in terms of investing in public health and consolidating the services offered. It should be specified that the Québec Public Health Program has been designed to be implemented on the basis of existing resources, which implies that resources may need to be redeployed from current activities which are not part of the program to those which are part of the program. Moreover, additional resources will be needed to consolidate the activities provided for under the program.

The Minister, regional boards and CLSCs must, at their respective levels, provide for mechanisms of accountability and a framework for evaluating the outcomes related to the national program, as well as the regional and local action plans (PHA, c. II). These mechanisms must integrate the capacity to meet the expectations contained in the management and accountability agreements between the Ministère and the regional boards, as well as between the regional boards and the CLSCs and the other actors in the region who are involved in implementing the program.

Specific responsibilities related to the public health functions

The public health functions can only be exercised in an optimal way if the responsibilities of the public health actors are clearly defined at each level. These responsibilities, which are largely determined by the Public Health Act, clarify the roles of the actors of the health and social services network, in particular those who work in public health and their partners, in the exercise of each of the functions. Appendix II describes these responsibilities.

The regional and local public health action plans, their consistency with national and regional strategic planning, the linkage between accountability mechanisms and the new logic of resource allocation are all elements which, combined with the support of the program follow-up committee, should facilitate the implementation of the Québec Public Health Program.

Conclusion

The *Québec Public Health Program 2003-2012* is among the measures prescribed by the Public Health Act. It provides direction for public health activities in order to revitalize them for the next ten years. The program defines the field of public health action based on the public health functions. It includes the activities, grouped together under intervention areas, that have been proven to be the most effective in reducing the major problems affecting health and well-being. Strategies will be adopted to guide these activities towards the achievement of the objectives set. While many of these activities are part of the set of services that are common to all Québec regions, the program also leaves room for action aimed at the realities specific to each region, as well as community-based initiatives and innovation. The program is followed up according to an evaluation framework to measure the extent to which the objectives pursued have been achieved and to adjust action to the observed outcomes. It also includes measures to support the implementation of the program and to ensure that it is renewed during its three stages.

This document describes the first Québec public health program. Although the program is consistent with actions taken to date, the program entails changes that will be implemented gradually. It is expected that the experience acquired during the first stage of the program will contain many lessons that can be used in the subsequent stages. New surveillance systems and indicators, new knowledge resulting from research, innovation and practice as well as results of program evaluation are all elements that will enrich this program and contribute to its evolution and improvement.

The *Québec Public Health Program 2003-2012* is ambitious. The population, communities, actors in the health and social network and intersectoral partners are invited to work together to achieve its goals through a set of concerted actions that promote health and well-being.

Notes

1. The program's structure draws on the *Cadre de référence pour l'élaboration du programme de santé publique et pour l'organisation du réseau de santé publique*, published by the ministère de la Santé et des Services sociaux in 1992.
2. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.
3. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.
4. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Rapport comparatif sur la santé de la population québécoise et sur la performance du système de santé québécois: indicateurs et tendances*, Québec City, Direction des communications, ministère de la Santé et des Services sociaux, 2002, 265 p.
5. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

   CANADIAN INSTITUTE FOR HEALTH INFORMATION, *Health Care in Canada 2001*, Ottawa, Canadian Institute for Health Information, 2001, 87 p.
6. Unintentional injuries mainly include traffic injuries and falls as well as injuries that occur in the home and during sports and recreational activities.
7. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.
8. These are crude rates which exclude hospitalizations of newborns and hospitalizations in psychiatric, rehabilitation, residential and long-term care institutions.
9. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Hospitalisations de courte durée dans les installations de soins généraux et spécialisés (MED-ÉCHO), année 1998-1999*, Québec City, Service du développement de l'information, ministère de la Santé et des Services sociaux, 2002.
10. M. LEVASSEUR and L. GOULET, "Problèmes de santé," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 273-296. (Collection La santé et le bien-être).
11. M.A. FOURNIER and J. PICHÉ, "Recours aux services des professionnels de la santé et des services sociaux," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 387-407. (Collection La santé et le bien-être).
12. F. VITARO and C. GAGNON (eds.), *Prévention des problèmes d'adaptation chez les enfants et les adolescents, tome I: Les problèmes internalisés*, Sainte-Foy, Presses de l'Université du Québec, 2000, 535 p.

    F. VITARO and C. GAGNON (eds.), *Prévention des problèmes d'adaptation chez les enfants et les adolescents, tome II: Les problèmes externalisés*, Sainte-Foy, Presses de l'Université du Québec, 2000, 616 p.
13. M.E. CLÉMENT et al., *La violence familiale dans la vie des enfants du Québec, 1999*, Québec City, Institut de la statistique du Québec, 2000, 117 p. (Collection La santé et le bien-être).

    GOUVERNEMENT DU QUÉBEC, *Orientations gouvernementales en matière d'agressions sexuelles*, Québec City, ministère de la Santé et des Services sociaux, 2001, 90 p.
14. MINISTÈRE DE LA SÉCURITÉ PUBLIQUE, *La violence conjugale: Statistiques sur la violence conjugale 2000*, Québec City, ministère de la Sécurité publique, 2001, 65 p.

    GOUVERNEMENT DU QUÉBEC, *Orientations gouvernementales en matière d'agressions sexuelles*, Québec City, ministère de la Santé et des Services sociaux, 2001, 90 p.

15. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Plan d'action en toxicomanie 1999-2001*, Québec City, ministère de la Santé et des Services sociaux, 1998, 43 p.

S. CHEVALIER and O. LEMOINE, "Consommation d'alcool," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 117-133. (Collection La santé et le bien-être).

S. CHEVALIER and O. LEMOINE, "Consommation de drogues et autres substances psychoactives," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 135-147. (Collection La santé et le bien-être).

P. MORISSETTE, N. DEDOBBELEER and M. ROJAS VIGER, "Consommation de substances psychoactives," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 211-229. (Collection La santé et le bien-être).

16. G. LÉGARÉ et al., "Santé mentale," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 333-352. (Collection La santé et le bien-être).

17. R. BOYER et al., "Idées suicidaires et parasuicides," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 355-366. (Collection La santé et le bien-être).

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX (coordinated by G. Mercier and D. St-Laurent), *Stratégie québécoise d'action face au suicide: S'entraider pour la vie*, Québec City, ministère de la Santé et des Services sociaux, 1998, 94 p.

18. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Surveillance de la mortalité au Québec: 1977-1998*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2001, 252 p. (Collection Analyses et surveillance, Nº. 14).

19. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Hospitalisations de courte durée dans les installations de soins généraux et spécialisés (MED-ÉCHO), année 1998-1999*, Québec City, Service du développement de l'information, ministère de la Santé et des Services sociaux, 2002.

20. F. VITARO and C. GAGNON (eds.), *Prévention des problèmes d'adaptation chez les enfants et les adolescents, tome I: Les problèmes internalisés*, Sainte-Foy, Presses de l'Université du Québec, 2000, 535 p.

F. VITARO and C. GAGNON (eds.), *Prévention des problèmes d'adaptation chez les enfants et les adolescents, tome II: Les problèmes externalisés*, Sainte-Foy, Presses de l'Université du Québec, 2000, 616 p.

J.J. BRETON et al., *Enquête québécoise sur la santé mentale des jeunes de 6 à 14 ans, 1992: Prévalence des troubles mentaux et utilisation des services, volume 2*, Montréal, Hôpital des Prairies and Santé Québec, in collaboration with the ministère de la Santé et des Services sociaux, 1997, 224 p.

INSTITUT DE LA STATISTIQUE DU QUÉBEC, "Santé mentale et adaptation sociale." in *Enquête sociale et de santé auprès des enfants et des adolescents québécois, 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 431-519. (Collection La santé et le bien-être).

21. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Surveillance de la mortalité au Québec: 1977-1998*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2001, 252 p. (Collection Analyses et surveillance, Nº. 14).

22. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Hospitalisations de courte durée dans les installations de soins généraux et spécialisés (MED-ÉCHO), année 1998-1999*, Québec City, Service du développement de l'information, ministère de la Santé et des Services sociaux, 2002.

23. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

24. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

25. J. LOISELLE and B. PERRON, *L'alcool, les drogues, le jeu: les jeunes sont-ils preneurs? Enquête québécoise sur le tabagisme chez les élèves du secondaire, 2000, volume 2*, Québec City, Institut de la statistique du Québec, 2002, 95 p. (Collection La santé et le bien-être).

S. BERNIER and D. BROCHU, "Usage du tabac," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 99-115. (Collection La santé et le bien-être).

S. CHEVALIER and O. LEMOINE, "Consommation d'alcool," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 117-133. (Collection La santé et le bien-être).

S. CHEVALIER and O. LEMOINE, "Consommation de drogues et autres substances psychoactives," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 135-147. (Collection La santé et le bien-être).

26. G. LÉGARÉ et al., "Santé mentale," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 333-352. (Collection La santé et le bien-être).

R. BOYER et al., "Idées suicidaires et parasuicides," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 355-366. (Collection La santé et le bien-être).

27. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Surveillance de la mortalité au Québec: 1977-1998*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2001, 252 p. (Collection Analyses et surveillance, Nº. 14).

28. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Hospitalisations de courte durée dans les installations de soins généraux et spécialisés (MED-ÉCHO), année 1998-1999*, Québec City, Service du développement de l'information, ministère de la Santé et des Services sociaux, 2002.

29. M. LEVASSEUR and L. GOULET, "Problèmes de santé," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 273-296. (Collection La santé et le bien-être).

30. WORLD HEALTH ORGANIZATION, *The World Health Report*, Geneva, World Health Organization, 2002, 282 p.

GOUVERNEMENT DU QUÉBEC, *Orientations gouvernementales en matière d'agressions sexuelles*, Québec City, ministère de la Santé et des Services sociaux, 2001, 90 p.

GOUVERNEMENT DU QUÉBEC, *Politique d'intervention en matière de violence conjugale: Prévenir, dépister, contrer la violence conjugale*, Québec City, 1995, 77 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX (coordinated by G. Mercier and D. St-Laurent), *Stratégie québécoise d'action face au suicide: S'entraider pour la vie*, Québec City, ministère de la Santé et des Services sociaux, 1998, 94 p.

31. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Surveillance de la mortalité au Québec: 1977-1998*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2001, 252 p. (Collection Analyses et surveillance, Nº. 14).

32. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Hospitalisations de courte durée dans les installations de soins généraux et spécialisés (MED-ÉCHO), année 1998-1999*, Québec City, Service du développement de l'information, ministère de la Santé et des Services sociaux, 2002.

33. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

34. L. PARÉ and M. LEVASSEUR, "Problèmes auditifs et problèmes visuels," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 297-305. (Collection La santé et le bien-être).

35. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Surveillance de la mortalité au Québec: 1977-1998*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2001, 252 p. (Collection Analyses et surveillance, Nº. 14).

36. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Hospitalisations de courte durée dans les installations de soins généraux et spécialisés (MED-ÉCHO), année 1998-1999*, Québec City, Service du développement de l'information, ministère de la Santé et des Services sociaux, 2002.

37. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Surveillance de la mortalité au Québec: 1977-1998*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2001, 252 p. (Collection Analyses et surveillance, Nº. 14).

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Hospitalisations de courte durée dans les installations de soins généraux et spécialisés (MED-ÉCHO), année 1998-1999*, Québec City, Service du développement de l'information, ministère de la Santé et des Services sociaux, 2002.

38. M.J. PAPILLON et al., "Consommation de médicaments," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 445-460. (Collection La santé et le bien-être).

L. BARNARD, S. LANTIN and L. ROBERGE, *Portrait quotidien de la consommation médicamenteuse des personnes âgées non hébergées: Régime d'assurance médicaments administré par la Régie de l'assurance maladie du Québec – les 9 juin 1996, 7 juin 1998 et 11 juin 2000*, Québec City, Régie de l'assurance maladie du Québec, 2001, 87 p.

39. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

40. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

41. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

R. CHOINIÈRE, "Les disparités géographiques de la mortalité dans le Montréal métropolitain, 1984-1988: Étude écologique des liens avec les conditions sociales, économiques et culturelles," *Cahiers québécois de démographie*, Vol. 20, Nº. 1, spring 1991, pp. 117-146.

M. PAGEAU and M. FERLAND, *Portrait de santé: La région et ses territoires de CLSC*, Québec City, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Québec, 2002, 346 p.

J.B. ROBICHAUD et al., *Les liens entre la pauvreté et la santé mentale: De l'exclusion à l'équité*, Boucherville, Gaëtan Morin éditeur and Comité de la santé mentale du Québec, 1994, 270 p.

42. R. PAMPALON, R. CHOINIÈRE and M. ROCHON, "L'espérance de santé au Québec," in J. Camirand et al., *Enquête québécoise sur les limitations d'activités 1998*, Québec City, Institut de la statistique du Québec, 2001, pp. 399-414.

43. M. LEVASSEUR, "Perception de l'état de santé" in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 259-269. (Collection La santé et le bien-être).

44. C.J.L. MURRAY and A.D. LOPEZ, *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries and Risk Factors in 1990 and Projected to 2020*, Cambridge (Massachusetts), Harvard School of Public Health, 1996, 990 p.

WORLD HEALTH ORGANIZATION, *The World Health Report 2001 – Mental Health: New Understanding, New Hope*, Geneva, World Health Organization, 2001.

45. Internet site of the ministère de la Santé et des Services sociaux, Service du développement de l'information, April 2002. [www.msss.gouv.qc.ca]

46. Web site of the Premier, Grands dossiers category, Finances publiques sub-category, 2002. [www.premier.gouv.qc.ca]

47. Web site of the ministère de la Santé et des Services sociaux, Service du développement de l'information, avril 2002. [www.msss.gouv.qc.ca].

48. CANADIAN INSTITUTE FOR HEALTH INFORMATION, *National Health Expenditure Trends 1975-2001*, December 2001.

49. Web site of the Premier, Grands dossiers category, Finances publiques sub-category, 2002. [www.premier.gouv.qc.ca]

50. Web site of the ministère de la Santé et des Services sociaux, Service du développement de l'information, April 2002. [www.msss.gouv.qc.ca]

51. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Les dépenses du réseau de la santé et des services sociaux par programme-clientèle 2000-2001*, Québec City, Direction générale de la planification stratégique, de l'évaluation et de la gestion de l'information, ministère de la Santé et des Services sociaux, 2002, 221 p.

52. See Appendix I for a detailed description of the public health functions.

53. The following discussion of ethics draws on the following references:

    R. MASSÉ (in collaboration with J. Saint-Arnaud), *Éthique et santé publique*, Québec City and Brussels, Presses de l'Université Laval and De Boeck, forthcoming.

    N. GUTTMAN, *Public Health Communication Interventions: Values and Ethical Dilemmas*, Thousand Oaks (California), Sage Publications, 2000, 286 p.

    B.R. DAVIS, "The principlism debate: A critical overview," *Journal of Medicine and Philosophy*, Vol. 20, Nº. 1, 1995, pp. 85-105.

    G. BOURGEAULT, "Éthique et santé publique: à propos des conflits de valeurs," *Ruptures. Revue transdisciplinaire en santé*, Vol. 5, Nº. 2, 1998, pp. 225-240.

    R. ZUSSMAN, "The contributions of sociology to medical ethics," *The Hastings Center Report*, Vol. 30, Nº. 1, 2000, pp. 7-11.

    N.E. KASS, "An ethics framework for public health," *American Journal of Public Health*, Vol. 91, Nº. 11, 2001, p. 1776-1782.

54. The community development strategy will be presented in detail in a further document related to this program.

55. Moreover, the estimation of expected outcomes should be adjusted to the new *Policy on Health and Well-being* and any other related ministry document.

56. Activities related to ongoing surveillance of the population's health status were examined in the previous chapter while those related to research and innovation are dealt with under the next point. Activities linked to the function of skills development and maintenance will be examined in the chapter devoted to program implementation.

57. MINISTÈRE DE L'EMPLOI ET DE LA SOLIDARITÉ SOCIALE, *La volonté d'agir, la force de réussir: Stratégie nationale de lutte contre la pauvreté et l'exclusion sociale*, Québec City, ministère de l'Emploi et de la Solidarité sociale, 2002, 23 p.

58. GOVERNMENT OF QUÉBEC, Bill 112: An Act to Combat Poverty and Social Exclusion, Québec City, Éditeur officiel du Québec, 2002, 13 p.

59. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *The Policy on Health and Well-being*, Québec City, ministère de la Santé et des Services sociaux, 1992, 192 p.

60. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Québec Priorities in Public Health 1997-2002*, Québec City, ministère de la Santé et des Services sociaux, 1997, 103 p.

61. The clinical practices from the *Canadian Guide to Clinical Preventive Health Care* developed by the Canadian Task Force on the Periodic Health Examination, and revision by the Canadian Task Force on Preventive Health Care are type A Recommendations (maneuvers for which there is good evidence for inclusion in the periodic health examination) or type B Recommendations (maneuvers for which there is fair evidence for inclusion in the periodic health examination).

62. While early case identification is based on knowledge of the various symptoms of a health or psychosocial problem, screening requires the use of a proven screening instrument, in particular regarding its sensitivity – i.e., its capacity to detect an asymptomatic problem in individuals who have such a problem – and its specificity – i.e., its capacity to not mistakenly attribute a problem to individuals who are not affected by it.

63. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

64. J.W. FEIGHTNER, "Prevention of Iron Deficiency Anemia in Infants," Canadian Task Force on the Periodic Health Examination, *The Canadian Guide to Clinical Preventive Health Care*, Ottawa, Health Canada, Supply and Services Canada, 1994, pp. 276-286.

65. J. BROUSSEAU, R.H. BAILLARGEON and H.X. WU, "Le développement cognitif des enfants de 17 mois à 29 mois," in *Étude longitudinale du développement des enfants du Québec (ELDEQ 1998-2002) – De la naissance à 29 mois*, Québec City, Institut de la statistique du Québec, Vol. 2, No. 8, 2002, 40 p. (Collection La santé et le bien-être)

66. M. ROCHON, *Taux de grossesse à l'adolescence, Québec, 1980 à 1995, régions sociosanitaires de résidence, 1993-1995 et autres groupes d'âge*, Québec City, Service de la recherche, Direction générale de la planification et de l'évaluation, ministère de la Santé et des Services sociaux, 1997, 38 p.

67. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

68. *Registre des événements démographiques du Québec*, Institut de la statistique du Québec and ministère de la Santé et des Services sociaux (fichier des naissances).

69. M.E.CLÉMENT et al., *La violence familiale dans la vie des enfants du Québec, 1999*, Québec City, Institut de la statistique du Québec, 2000, 117 p. (Collection La santé et le bien-être)

70. C. GAGNON and F. VITARO, "La prévention du trouble des conduites, avec centration sur les comportements violents," in F. Vitaro and C. Gagnon (eds.), *Prévention des problèmes d'adaptation chez les enfants et les adolescents, tome II: Les problèmes externalisés*, Sainte-Foy, Presses de l'Université du Québec, 2000, pp. 231-290.

71. L.GUYON and L. DESJARDINS, "La consommation d'alcool et de drogues," in *L'alcool, les drogues, le jeu: les jeunes sont-ils preneurs? Enquête québécoise sur le tabagisme chez les élèves du secondaire, 2000, volume 2*, Québec City, Institut de la statistique du Québec, 2002, pp. 35-66. (Collection La santé et le bien-être)

72. S. CHEVALIER and O. LEMOINE, "Consommation d'alcool," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 117-133. (Collection La santé et le bien-être)

    S. CHEVALIER and O. LEMOINE, "Consommation de drogues et autres substances psychoactives," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 135-147. (Collection La santé et le bien-être)

    MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Plan d'action en toxicomanie 1999-2001*, Québec City, ministère de la Santé et des Services sociaux, 1998, 43 p.

73. L.GUYON and L. DESJARDINS, "La consommation d'alcool et de drogues," in *L'alcool, les drogues, le jeu: les jeunes sont-ils preneurs? Enquête québécoise sur le tabagisme chez les élèves du secondaire, 2000,* Vol. 2, Québec City, Institut de la statistique du Québec, 2002, pp. 35-66. (Collection La santé et le bien-être)

    P. MORISSETTE, N. DEDOBBELEER and M. ROJAS VIGER, "Consommation de substances psychoactives," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 211-229. (Collection La santé et le bien-être)

    MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Plan d'action en toxicomanie 1999-2001*, Québec City, ministère de la Santé et des Services sociaux, 1998, 43 p.

74. S. CHEVALIER and O. LEMOINE, "Consommation d'alcool," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 117-133. (Collection La santé et le bien-être)

75. S. CHEVALIER, D. ALLARD and C. AUDET, "Les jeux de hasard et d'argent," in *L'alcool, les drogues, le jeu: les jeunes sont-ils preneurs? Enquête québécoise sur le tabagisme chez les élèves du secondaire, 2000, volume 2*, Québec City, Institut de la statistique du Québec, 2002, pp. 67-90. (Collection La santé et le bien-être)

76. J.J. BRETON et al., "Santé mentale," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 433-450. (Collection La santé et le bien-être)

77. G. LÉGARÉ et al., "Santé mentale," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 333-352. (Collection La santé et le bien-être)

78. Problems of overweight and obesity are addressed in the *Lifestyles and Chronic Diseases* Area.

79. M. LEDOUX, L. MONGEAU and M. RIVARD, "Poids et image corporelle," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 311-344. (Collection La santé et le bien-être)

80. J.J. BRETON et al., "Santé mentale," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 433-450. (Collection La santé et le bien-être)

81. R. BOYER et al., "Idées suicidaires et parasuicides," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2002, pp. 355-366. (Collection La santé et le bien-être)

82. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

    MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Fichier des décès 1999*, specially compiled by Clermont Bouchard, October 2002.

83. J.J BRETON and R. BOYER, "La prévention du suicide," in F. Vitaro and C. Gagnon (eds.), *Prévention des problèmes d'adaptation chez les enfants et les adolescents, tome I: Les problèmes internalisés*, Sainte-Foy, Presses de l'Université du Québec, 2000, pp. 271-304.

84. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX (coordinated by G. Mercier and D. St-Laurent), *Stratégie québécoise d'action face au suicide: S'entraider pour la vie*, Québec City, ministère de la Santé et des Services sociaux, 1998, 94 p.

85. S. CHEVALIER and O. LEMOINE, "Consommation d'alcool," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 117-133. (Collection La santé et le bien-être)

    S. CHEVALIER and O. LEMOINE, "Consommation de drogues et autres substances psychoactives," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 135-147. (Collection La santé et le bien-être)

    COMITÉ PERMANENT DE LUTTE À LA TOXICOMANIE, *Le point sur la situation de la toxicomanie au Québec en l'an 2000*, Montréal, Comité permanent de lutte à la toxicomanie, ministère de la Santé et des Services sociaux, 2000, 21 p.

86. G. LÉGARÉ et al., "Santé mentale," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 333-352. (Collection La santé et le bien-être)

87. R. BOYER et al., "Idées suicidaires et parasuicides," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2002, pp. 355-366. (Collection La santé et le bien-être)

88. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

89. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Fichier des décès 1999*, specially compiled by Clermont Bouchard, October 2002.

    MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX (coordinated by G. Mercier and D. St-Laurent), *Stratégie québécoise d'action face au suicide: S'entraider pour la vie*, Québec City, ministère de la Santé et des Services sociaux, 1998, 94 p.

90. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX (coordinated by G. Mercier and D. St-Laurent), *Stratégie québécoise d'action face au suicide: S'entraider pour la vie*, Québec City, ministère de la Santé et des Services sociaux, 1998, 94 p.

91. MINISTÈRE DE LA SÉCURITÉ PUBLIQUE, *La violence conjugale: Statistiques sur la violence conjugale 2000*, Québec City, ministère de la Sécurité publique, 2001, 65 p.

92. GOUVERNEMENT DU QUÉBEC, *Orientations gouvernementales en matière d'agressions sexuelles*, Québec City, ministère de la Santé et des Services sociaux, 2001, 90 p.

93. E. PODNIEKS et al., *National Survey on the Abuse of the Elderly in Canada: The Ryerson Study*, Toronto, Ryerson Polytechnical Institute, 1990, 121 p.

94. M. REIS and D. NAHMIASH, *When Seniors are Abused: A Guide to Intervention*, Toronto, Captus Press, 1995, 90 p.

95. O. FIRBANK and J.P. FORTIN, *Dépistage de l'abus à l'endroit des personnes âgées: un programme de sensibilisation d'une communauté et de ses acteurs témoins*, Laval, Régie régionale de la santé et des services sociaux de Laval, 1998, 59 p. and annexes.

96. C. GOSSELIN, R. CHOINIÈRE and R. WILKINS, "Désavantage lié à l'incapacité," in J. Camirand et al., *Enquête québécoise sur les limitations d'activités 1998*, Québec City, Institut de la statistique du Québec, 2001, pp. 121-142.

97. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *L'allaitement maternel au Québec: lignes directrices,* Québec City, ministère de la Santé et des Services sociaux, 2001, 75 p.

98. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Pour une approche pragmatique de prévention en toxicomanie: Orientations, axes d'intervention, actions,* Québec City, Direction des communications, ministère de la Santé et des Services sociaux, 2001, 59 p.

99. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX (coordinated by G. Mercier and D. St-Laurent), *Stratégie québécoise d'action face au suicide: S'entraider pour la vie*, Québec City, ministère de la Santé et des Services sociaux, 1998, 94 p.

100. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Les traumatismes intentionnels: le suicide – Complément du chapitre 3 des Priorités nationales de santé publique, 1997-2002*, Québec City, ministère de la Santé et des Services sociaux, 1999, 11 p.

101. GOUVERNEMENT DU QUÉBEC, *Politique d'intervention en matière de violence conjugale: Prévenir, dépister, contrer la violence conjugale*, Québec City, 1995, 77 p.

102. GOUVERNEMENT DU QUÉBEC, *Orientations gouvernementales en matière d'agressions sexuelles*, Québec City, ministère de la Santé et des Services sociaux, 2001, 90 p.

103. M.T. MCKENNA et al., "Current issues and challenges in chronic disease control," in R. C. Brownson, P.L. Remington and J.R. Davis (eds.), *Chronic Disease Epidemiology and Control*, 2nd edition, Washington (District of Columbia), American Public Health Association, 1998, pp. 1-26.

J.F. LÉVESQUE and V. DÉRY, *Vers la santé durable: l'organisation des interventions en santé du cœur – le modèle promotion des habitudes de vie saines et prévention des maladies chroniques non transmissibles*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 2001.

104. The reported mortality rates are age-adjusted rates; the population of reference is that of 1996.

105. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Surveillance de la mortalité au Québec: 1977-1998,* Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2001, 252 p. (Collection Analyses et surveillance, No. 14).

106. The decrease in mortality rates due to cardiovascular diseases is less marked in women than in men, when age unadjusted crude mortality rates are considered.

107 S.M. GRUNDY et al., "Diabetes and cardiovascular disease: A statement for healthcare professionals from the American Heart Association," *Circulation*, Vol. 100, No. 10, September 7, 1999, pp. 1134-1146.

108. G. PARADIS et al., "Facteurs de risque de maladies cardiovasculaires," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois, 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 345-370. (Collection La santé et le bien-être)

109. NATIONAL CANCER INSTITUTE OF CANADA, *Canadian Cancer Statistics 2001*, Toronto, Canada, 2001.

HEALTH CANADA, *Canadian Strategy for Cancer Control: Draft synthesis report*, Ottawa, Health Canada, 2001, 64 p.

110. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

111. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

112. INSTITUT DE LA STATISTIQUE DU QUÉBEC, *Enquête sociale et de santé 1998,* Québec City, Les Publications du Québec, 2000, 642 p. (Collection La santé et le bien-être)

113. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Surveillance de la mortalité au Québec: 1977-1998,* Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2001, 252 p. (Collection Analyses et surveillance, Nº. 14).

HEALTH CANADA, *Respiratory Disease in Canada*, Ottawa, Canadian Institute for Health Information, 2001, 102 p.

114. V. ÉMOND*, Prévalence du diabète au Québec et dans ses régions: premières estimations d'après les fichiers administratifs*, s.l., Institut national de santé publique du Québec, 2002, 16 p.

115. HEALTH CANADA, *Diabetes in Canada: National Statistics and Opportunities for Improved Surveillance, Prevention and Control*, Ottawa, Health Canada, 1999, 75 p.

116. INSTITUT DE LA STATISTIQUE DU QUÉBEC, *Enquête sociale et de santé 1998,* Québec City, Les Publications du Québec, 2000, 642 p. (Collection La santé et le bien-être)

L. MONGEAU, B. NOLIN and D. HAMEL, *Analyse des données de l'Enquête Santé Québec 1987 et des enquêtes sociales et de santé 1992-1993 et 1998*, Institut national de santé publique du Québec (unpublished study).

117. WORLD HEALTH ORGANIZATION, *Obesity, Preventing and Managing the Global Epidemic*, Geneva, World Health Organization, 1998, 275 p.

118. C.L. BIRMINGHAM et al., "The cost of obesity in Canada," *Canadian Medical Association Journal*, Vol. 160, Nº. 4, February 23, 1999, pp. 483-488.

119. A. TENENHOUSE et al., "Estimation of the prevalence of low bone density in Canadian women and men using a population specific DXA reference standard," The Canadian Multicentre Osteoporosis Study (CaMos), *Osteoporosis International*, Vol. 11, Nº. 10, 2000, pp. 897-904.

120. J.M. BRODEUR et al., *Étude 1994-1995 sur la santé buccodentaire des adultes québécois de 35 à 44 ans*, Québec City, ministère de la Santé et des Services sociaux du Québec, 1998, 159 p. (Collection Analyses et surveillance, Nº. 8).

J.M. BRODEUR et al., *Étude 1998-1999 sur la santé buccodentaire des élèves québécois de 5-6 ans et de 7-8 ans*, Québec City, ministère de la Santé et des Services sociaux, 2001, 151 p. (Collection Analyses et surveillance, Nº. 18).

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, *Oral Health in America: A report of the Surgeon General*, Rockville (Maryland), U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000, 332 p.

121. R.PAMPALON and G. RAYMOND, "A Deprivation Index for Health and Welfare Planning in Quebec," *Chronic Diseases in Canada*, Vol. 21, Nº. 3, 2000, pp. 113-122.

122. L.H. KUSHI and S.B. FORESTER, "Diet and Nutrition," in R.C. Brownson, P.L. Remington and J.R. Davis (eds.), *Chronic Disease Epidemiology and Control*, 2nd edition. Washington (District of Columbia), American Public Health Association, 1998, pp. 215-259.

123. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Programme québécois de lutte contre le cancer: Pour lutter efficacement contre le cancer, formons équipe*, Québec City, ministère de la Santé et des Services sociaux, 1998, 185 p.

124. C.L. BIRMINGHAM et al., "The cost of obesity in Canada," *Canadian Medical Association Journal*, Vol. 160, Nº. 4, February 23, 1999, pp. 483-488.

125. HEALTH CANADA, *Canadian Tobacco Use Monitoring Survey: Results for first half of 2001 – February to June 2001,* Ottawa, Surveillance and Risk Assessment Division, Health Canada, 2001.

126. J. LOISELLE, *Enquête québécoise sur le tabagisme chez les élèves du secondaire, 2000, volume 1*, Québec City, Institut de la statistique du Québec, 2001, 123 p.

127. One of the recommendations of *Canada's Food Guide to Healthy Eating* is to consume five servings of fruits and vegetables per day. In 1990, nearly half of the Québec population did not meet this standard.

128. SANTÉ QUÉBEC and L. BERTRAND (eds.), *Les Québécoises et les Québécois mangent-ils mieux? Rapport de l'Enquête québécoise sur la nutrition, 1990*, Montréal, ministère de la Santé et des Services sociaux, 1995, 317 p.

129. C. SCHAEFER and L. MONGEAU, *L'obésité et la préoccupation excessive à l'égard du poids: Éléments d'une problématique et réflexions pour l'action*, Montréal, Le collectif action alternative en obésité, 2000, 85 p.

130. INSTITUT DE LA STATISTIQUE DU QUÉBEC, *Enquête sociale et de santé 1998,* Québec City, Les Publications du Québec, 2000, 642 p. (Collection La santé et le bien-être)

131. INSTITUT DE LA STATISTIQUE DU QUÉBEC, *Enquête sociale et de santé auprès des enfants et des adolescents québécois 1999,* Québec City, Institut de la statistique du Québec, 2002, 520 p. (Collection La santé et le bien-être)

132. B. NOLIN et al., *Enquête québécoise sur l'activité physique et la santé 1998*, Québec City, Institut de la statistique du Québec, Institut national de santé publique du Québec and Kino-Québec, Les Publications du Québec , 2002, 137 p.

133. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Québec Priorities in Public Health 1997-2002*, 2nd edition, Québec City, ministère de la Santé et des Services sociaux, 1998, 103 p.

134. J.R. DAVIS et al., "Intervention methods for chronic disease control," in R.C. Brownson, P.L. Remington and J.R. Davis (eds.), *Chronic Disease Epidemiology and Control*, 2nd edition, Washington (District of Columbia), American Public Health Association, 1998, pp. 77-116.

135. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Plan québécois de lutte contre le tabagisme 2001-2005*, Québec City, Direction des communications, ministère de la Santé et des Services sociaux, 2001, 28 p.

136. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Programme québécois de lutte contre le cancer: Pour lutter efficacement contre le cancer, formons équipe*, Québec City, ministère de la Santé et des Services sociaux, 1998, 185 p.

137. COMITÉ D'ORIENTATION DU PROGRAMME DE SANTÉ DENTAIRE PUBLIQUE, *Programme public de services dentaires préventifs, révision 1990*, s.l., 1990, 30 p.

138. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

139. D. HAMEL, *Évolution des traumatismes au Québec de 1991 à 1999*, Québec City, Institut national de santé publique du Québec, 2001, 462 p.

140. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

141. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Fichier des décès 1999*, specially compiled by Clermont Bouchard, October 2002.

142. D. HAMEL, *Évolution des traumatismes au Québec de 1991 à 1999*, Québec City, Institut national de santé publique du Québec, 2001, 462 p.

143. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Fichier des décès 1999*, specially compiled by Clermont Bouchard, October 2002.

D. HAMEL, *Évolution des traumatismes au Québec de 1991 à 1999*, Québec City, Institut national de santé publique du Québec, 2001, 462 p.

144. D. HAMEL, *Évolution des traumatismes au Québec de 1991 à 1999*, Québec City, Institut national de santé publique du Québec, 2001, 462 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Surveillance de la mortalité au Québec: 1977-1998*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2001, 252 p. (Collection Analyses et surveillance, Nº. 14)

145. INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC, *Le portrait de santé: Le Québec et ses régions, édition 2001*, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

146. F. TRICKEY et al., *Évaluation du Programme Intégré d'Équilibre Dynamique (P.I.E.D.) pour la prévention des chutes chez les aînés*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 1999, 141 p.

147. F. TRICKEY et al., *Évaluation du Programme Intégré d'Équilibre Dynamique (P.I.E.D.) pour la prévention des chutes chez les aînés*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 1999, 141 p.

H. LUUKINEN et al., "Social status, life changes, housing conditions, health, functional abilities and lifestyle as risk factors for recurrent falls among the home-dwelling elderly," *Public Health*, Vol. 110, Nº. 2, 1996, pp. 115-118.

R. RUTHAZER and L.A. LIPSITZ, "Antidepressants and falls among elderly people in long-term care," *American Journal of Public Health*, Vol. 83, Nº. 5, May 1, 1993, pp. 746-749.

S.R. LORD et al., "Postural stability, falls and fractures in the elderly: results from the Dubbo Osteoporosis Epidemiology Study," *The Medical Journal of Australia*, Vol. 160, Nº. 11, 1994, pp. 684-691.

148. S. OUELLETTE, *La problématique de malnutrition chez les personnes âgées: Résumé de la littérature scientifique*, Montréal, Ordre professionnel des diététistes du Québec, 1999, 26 p.

G. FERLAND et al., "Personnes âgées," in *Manuel de nutrition clinique*, Montréal, Ordre professionnel des diététistes du Québec, 3rd ed., 2000, chap. 2.5.

H. PAYETTE and R. CYR, *Évaluation de l'état nutritionnel des bénéficiaires âgés des services d'aide à domicile: rapport de recherche*, Sherbrooke, Centre de recherche en gérontologie et gériatrie, 1992, 26 p.

149. Y. ROBITAILLE et al., "Accidents avec blessures," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 313-332. (Collection La santé et le bien-être)

150. D. HAMEL, *Évolution des traumatismes au Québec de 1991 à 1999*, Québec City, Institut national de santé publique du Québec, 2001, 462 p.

151. Y. ROBITAILLE et al., "Accidents avec blessures," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 313-332. (Collection La santé et le bien-être)

152. D. HAMEL, *Évolution des traumatismes au Québec de 1991 à 1999*, Québec City, Institut national de santé publique du Québec, 2001, 462 p.

153. J. CHIN, *Control of Communicable Diseases Manual,* 17th ed., Washington (District of Columbia), American Public Health Association, 2000, 624 p.

G.L. MANDELL, J.E. BENNETT and R. DOLIN. *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases*, 5th ed., Philadelphia (Pennsylvania), Churchill Livingstone, 2000, 3263 p.

154. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Priorités nationales de santé publique 1997-2002, Vers l'atteinte des résultats attendus: 2e bilan*, Québec City, ministère de la Santé et des Services sociaux, 2000, 203 p.

155. R.P. WENZEL et al.., "Control of communicable diseases," in R.B. Wallace and B.N. Doebbeling (eds.), *Maxcy-Rosenau-Last Public Health & Preventive Medicine,* 14th ed., chap. 6, Stamford (Connecticut), Appleton & Lange, 1998, pp. 69-87.

156. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Priorités nationales de santé publique 1997-2002, Vers l'atteinte des résultats attendus: 4e bilan*, Québec City, ministère de la Santé et des Services sociaux, 2002, 220 p.

157. P. DE WALS, *Évaluation du coût et des avantages potentiels d'une campagne d'immunisation contre le méningocoque de sérogroupe C au Québec*, Sherbrooke, Institut national de santé publique du Québec, 2001, 15 p.

158. COMITÉ SUR L'IMMUNISATION DU QUÉBEC, *Rapport sur l'utilisation d'un vaccin contre la varicelle au Québec*, Québec City, Institut national de santé publique du Québec, 2000, 84 p.

159. L. JETTÉ, *Programme de surveillance du pneumocoque: Rapport annuel 2000*, Laboratoire de santé publique du Québec, 2001, 21 p.

160. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX DU QUÉBEC, *Protocole d'immunisation du Québec,* Québec City, ministère de la Santé et des Services sociaux, 1999, 392 p.

161. M. J. FINE et al., "Prognosis and outcome of patients with community-acquired pneumonia: a meta-analysis," *The Journal of the American Medical Association*, Vol. 275, 1996, pp. 134-141.

162. HEALTH AND WELFARE CANADA and LABORATORY CENTRE FOR DISEASE CONTROL, "Canadian consensus conference on influenza," *Canada Communicable Disease Report*, Vol. 19, 1993, pp. 136-146.

163. CENTERS FOR DISEASE CONTROL AND PREVENTION, "Prevention and control of influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP)," *Mortality and Morbidity Weekly Review*, Vol. 50 (RR-4), 2001, pp. 1-40.

164. COMITÉ SUR L'IMMUNISATION DU QUÉBEC, *Contrôle de l'hépatite B par l'immunisation au Québec*, December 1991.

165. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Priorités nationales de santé publique 1997-2002, Vers l'atteinte des résultats attendus : 4e bilan*, Québec City, ministère de la Santé et des Services sociaux, 2002, 220 p.

166. CENTRE QUÉBÉCOIS DE COORDINATION SUR LE SIDA, *Surveillance des cas de syndrome d'immunodéficience acquise (sida) : Cas cumulatifs 1979-2001 – Mise à jour no 2001-2, au 31 décembre 2001*, Montréal, ministère de la Santé et des Services sociaux, 2002, 38 p.

167. R. LOUCHINI et al., *Surveillance des maladies infectieuses et des intoxications chimiques à déclaration obligatoire au Québec, de 1990 à 1999*, Québec City, Bureau de surveillance épidémiologique, Direction de la protection de la santé publique, ministère de la Santé et des Services sociaux, 2001, 279 p. (Collection Analyses et surveillance, No. 16)

168. INSTITUT DE LA STATISTIQUE DU QUÉBEC, L. DUCHESNE, *La situation démographique au Québec : Bilan 2000 – Les régions métropolitaines*, Québec City, Les Publications du Québec, 2000, 292 p.

169. C. ARCHIBALD and J. GEDULD, *Estimating HIV prevalence and incidence, Province of Quebec, 1999*, Ottawa, Health Canada, Population and Public Health Branch, Centre for Infectious Disease Prevention, Bureau of HIV/AIDS, STD and TB, March 2001, unpublished data.

R. REMIS, P. LECLERC and A.C. VANDAL, *La situation du sida et de l'infection au VIH au Québec*, 1996, Québec City, Direction des communications, ministère de la Santé et des Services sociaux, 1999, 61 p.

170. R. SCHABAS, *Report on the Meeting of the Expert Panel on Hepatitis C Epidemiology, Toronto, June 17–18, 1998*, Ottawa, Health Canada, 1998, 58 p.

171. CANADIAN ASSOCIATION FOR STUDY OF THE LIVER (CASL), "Hepatitis C infection: Its sequelae and outcomes – State-of-the-Art Workshop, September 24 to 25, 1998," *The Canadian Journal of Gastroenterology*, Vol. 14, supp. B, July-August 2000, pp. 49B-58B.

172. R. PARENT, *Analyse des cas d'infection génitale à* Chlamydia trachomatis*, de gonorrhée, d'hépatite B et de syphilis déclarés au Québec par année civile – 1997-2001*, Québec City, ministère de la Santé et des Services sociaux, 2002, 15 p. and annexes, forthcoming. (Collection Analyses et surveillance, No. 22)

173. R. PARENT, *Analyse des cas d'infection génitale à* Chlamydia trachomatis*, de gonorrhée, d'hépatite B et de syphilis déclarés au Québec par année civile – 1997-2001*, Québec City, ministère de la Santé et des Services sociaux, 2002, 15 p. and annexes, forthcoming. (Collection Analyses et surveillance, No. 22)

174. S. GUASCHINO and F. DE SETA, "Update on *Chlamydia trachomatis*," *Annals of the New York Academy of Sciences*, Vol. 900, 2000, pp. 293-300.

175. K.K. HOLMES et al. (eds.), *Sexually Transmitted Diseases*, 3rd ed., New York, McGraw-Hill, Health Professions Division, 1999, p. 410.

176. HEALTH CANADA and THE CANADIAN INFECTIOUS DISEASE SOCIETY, "Controlling Antimicrobial Resistance: An Integrated Action Plan for Canadians," *Canada Communicable Disease Report*, Vol. 23S7, November 1997, pp. 1-32.

177. L. JETTÉ, *Programme de surveillance du pneumocoque: Rapport annuel 2000*, s.l., Laboratoire de santé publique du Québec, Institut national de santé publique du Québec, 2001, 21 p.

178. HEALTH CANADA and THE CANADIAN INFECTIOUS DISEASE SOCIETY, "Controlling Antimicrobial Resistance: An Integrated Action Plan for Canadians," *Canada Communicable Disease Report*, Vol. 23S7, November 1997, pp. 1-32.

179. W.R. JARVIS, "Selected aspects of the socioeconomic impact of nosocomial infections: Morbidity, mortality, cost, and prevention," *Infection Control and Hospital Epidemiology*, Vol. 17, Nº. 8, August 1996, pp. 552-557.

180. R. W. HALEY et al., "The efficacy of infection surveillance and control programs in preventing nosocomial infections in US hospitals," *American Journal of Epidemiology*, Vol. 121, Nº. 2, February 1985, pp. 182-205.

181. GROUPE DE SURVEILLANCE PROVINCIALE DES INFECTIONS NOSOCOMIALES (SPIN), *Rapport de surveillance des bactériémies nosocomiales: Novembre 2000 à mai 2001 (SPIN-2)*, 2002.

182. GROUPE DE SURVEILLANCE PROVINCIALE DES INFECTIONS NOSOCOMIALES (SPIN), *Rapport de surveillance des bactériémies nosocomiales: Novembre 2000 à mai 2001 (SPIN-2*), 2002.

183. J. CONLEY, "Controlling antibiotic resistance by quelling the epidemic overuse and misuse of antibiotics," *Canadian Family Physician*, Vol. 44, 1998, pp. 1769-1773.

184. R.Y. DODD, "Overview of infectious disease," in J.V. Linden and C. Bianco (eds.), *Blood Safety and Surveillance*, New York, Marcel Dekker Inc., 2001, s.p.

185. R. LOUCHINI et al., *Surveillance des maladies infectieuses et des intoxications chimiques à déclaration obligatoire au Québec, de 1990 à 1999*, Québec City, Bureau de surveillance épidémiologique, Direction de la protection de la santé publique, ministère de la Santé et des Services sociaux, 2001, 279 p. (Collection Analyses et surveillance, Nº. 16)

186. R. LOUCHINI et al., *Surveillance des maladies infectieuses et des intoxications chimiques à déclaration obligatoire au Québec, de 1990 à 1999*, Québec City, Bureau de surveillance épidémiologique, Direction de la protection de la santé publique, ministère de la Santé et des Services sociaux, 2001, 279 p. (Collection Analyses et surveillance, Nº. 16)

187. P.V. VARUGHESE, "Rabies and post-exposure rabies prophylaxis in Canada, 1986," *Canada Diseases Weekly Report*, Vol. 14, 1988, pp. 89-94.

188. R. LOUCHINI et al., *Surveillance des maladies infectieuses et des intoxications chimiques à déclaration obligatoire au Québec, de 1990 à 1999*, Québec City, Bureau de surveillance épidémiologique, Direction de la protection de la santé publique, ministère de la Santé et des Services sociaux, 2001, 279 p. (Collection Analyses et surveillance, Nº. 16)

189. C. GARIÉPY et al., *Épidémiologie et effets de l'infection par le virus du Nil occidental sur la santé humaine*, Québec City, Institut national de santé publique du Québec, 2002, 86 p.

190. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Épidémiologie de la tuberculose, province de Québec, 1996-1999*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2000, unpublished study.

191. R.P. WENZEL et al., " Control of communicable diseases," in R.B. Wallace and B.N. Doebbeling (eds.), *Maxcy-Rosenau-Last Public Health & Preventive Medicine*, 14th ed., Chap. 6, Stamford (Connecticut), Appleton & Lange, 1998, pp. 69-87.

192. An additional document will specify all the elements involved in the fight against HIV/AIDS, sexually transmitted infections and hepatitis C.

193. MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Québec Priorities in Public Health 1997-2002*, 2nd ed., Québec City, ministère de la Santé et des Services sociaux, 1998, 103 p.

194. R.T. BURNETT, S. CAKMAK and J. BROOK, "The effect of the urban ambient air pollution mix on daily mortality rates in 11 Canadian cities," *Canadian Journal of Public Health*, Vol. 89, No. 3, May-June 1998, pp. 152-156.

M. GOLDBERG et al., *Identifying Subgroups of the General Population That May Be Susceptible to Short-Term Increases in Particulate Air Pollution: A Time-Series Study in Montreal, Quebec*, Cambridge (Massachusetts), Health Effects Institute, Research Report 97, 2000, 113 p.

R.T. BURNETT, S. CAKMAK and J. BROOK, "The effect of the urban ambient air pollution mix on daily mortality rates in 11 Canadian cities," C*anadian Journal of Public Health*, Vol. 89, No. 3, May-June 1998, pp. 152-156.

R.T. BURNETT et al., "Effects of low ambient levels of ozone and sulfates on the frequency of respiratory admissions to Ontario hospitals," *Environmental Research*, Vol. 65, No. 2, 1994, pp. 172-194.

R.J. DELFINO, M.R. BECKLAKE and J.A. HANLEY, "The relationship of urgent hospital admissions for respiratory illnesses to photochemical air pollution levels in Montreal for population-based studies of air pollution," *Environmental Research*, Vol. 67, No. 3, 1994, pp. 1-19.

R.J. DELFINO et al., "Effect of air pollution on emergency room visits for respiratory illnesses in Montreal, Quebec," *American Journal of Respiratory and Critical Care Medicine*, Vol. 155, No. 2, February 1997, pp. 568-576.

R.J. DELFINO, A.M. MURPHY-MOULTON and M.R. BECKLAKE, "Emergency room visits for respiratory illnesses among elderly in Montreal: Association with low level ozone exposure," *Environmental Research*, Vol. 76, 1998, pp. 67-77.

195. M. LEVASSEUR and L. GOULET, "Problèmes de santé," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 273-296. (Collection La santé et le bien-être)

A. ÉMOND and L. GUYON, *L'enquête Santé Québec: Faits saillants 1987*, Québec City, ministère de la Santé et des Services sociaux, 1998, 45 p.

196. NATIONAL ASTHMA CONTROL TASK FORCE, *The Prevention and Management of Asthma in Canada: A Major Challenge Now and in the Future*, Ottawa, Health Canada, 2000, 65 p.

197. N. KING, *Impact des conditions de logement sur la santé publique: Recension des écrits et proposition d'une approche de santé publique*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 2000, 74 p.

COMMITTEE ON ENVIRONMENTAL HEALTH, "Toxic effects of indoor mold," *Pediatrics*, Vol. 101, No. 4, April 1998, pp. 712-714.

H. BURGE, "Bioaerosols: Prevalence and health effects in the indoor environment," *Journal of Allergy and Clinical Immunology*, Vol. 86, No. 5, 1990, pp. 687-701.

WORLD HEALTH ORGANIZATION, *Guidelines for Air Quality*, Geneva, World Health Organization, 1999, 143 p. and annexes.

CANADA MORTGAGE AND HOUSING CORPORATION, *The Clean Air Guide: How to Identify and Correct Indoor Air Problems in Your Home*, Ottawa, Canada Mortgage and Housing Corporation, 1998.

198. M. LEVASSEUR and L. GOULET, "Problèmes de santé," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp 273-296. (Collection La santé et le bien-être) Vol. 7, supplement 1, November 1996, pp. S1-S9.

199. E. MASSON, and E. GRIGNON, *Programme d'intervention visant le contrôle de l'herbe à poux et la réduction de la prévalence de la rhinite allergique saisonnière en Montérégie: Rapport d'activités*, Longueuil, Régie régionale de la santé et des services sociaux de la Montérégie, 1998, 76 p.

200. R. CLAPP, "Environment and health: 4. Cancer," *Canadian Medical Association Journal*, Vol. 163, No. 8, 17 October 2000, pp. 1009-1012.

HARVARD CENTER FOR CANCER PREVENTION, "Harvard report on cancer prevention – vol. 1: Causes of human cancer," *Cancer Causes and Control*, Vol. 7, supplement 1, November 1996, pp. S1-S9.

201. D.G. BOLDUC and M. CHAGNON, *Circonstances et causes des épidémies d'origine hydrique survenues au Québec de 1989 à 1993*, Beauport (Québec), Comité de santé environnementale du Québec, Conseil des directeurs de santé publique du Québec, 1996, 15 p. and annexes.

D.G. BOLDUC, *Bilan des éclosions de maladies d'origine hydrique signalées dans les directions régionales de la santé publique du Québec en 1993, 1994 et 1995,* Beauport (Québec), Comité de santé environnementale du Québec, Conseil des directeurs de santé publique, 1998, 8 p. and annex.

202. NATIONAL CANCER INSTITUTE OF CANADA, *Canadian Cancer Statistics 2001*, Toronto, Canada, 2001.

203. M. RHAINDS (adapted from), "Rayonnement ultraviolet et cancer," in *L'oncogénèse environnementale au Québec*, Québec City, Comité de santé environnementale, 1996, pp. 14-28.

H.K. KOH et al., "Skin cancer prevention and control," in P. GREENWALD, B.S. KRAMER and D.L.WEED (ed.), *Cancer Prevention and Control*, New York, Marcel Dekker Inc., 1995, pp. 537-545.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX, *Le bronzage artificiel au Québec: Bilan des connaissances et recommandations – Rapport du comité conjoint sur l'exposition aux rayons ultraviolets et le bronzage artificiel*, Québec City, ministère de la Santé et des Services sociaux, 1998, 83 p.

204. CENTRE ANTI-POISON DU QUÉBEC, *Rapport annuel 1995*, Sainte-Foy (Québec), 1996, 29 p. and annexes.

CENTRE ANTI-POISON DU QUÉBEC, *Rapport annuel 1996*, Sainte-Foy (Québec), 1997, 30 p. and annexes.

CENTRE ANTI-POISON DU QUÉBEC, *Rapport annuel 1996: Statistiques sur les intoxications par les pesticides*, Sainte-Foy (Québec), 1997, 25 p.

CENTRE ANTI-POISON DU QUÉBEC, *Rapport annuel 1997*, Sainte-Foy (Québec), 1998, 20 p. and annexes.

CENTRE ANTI-POISON DU QUÉBEC, *Rapport annuel 1997: Statistiques sur les intoxications par les pesticides*, Sainte-Foy (Québec), 1998, 29 p.

COMITÉ PROVINCIAL SUR LES INTOXICATIONS AU MONOXYDE DE CARBONE AU QUÉBEC, *Étude descriptive des intoxications involontaires au monoxyde de carbone au Québec,* Québec City, Institut national de santé publique du Québec, 1997, 56 p. and annexes.

C. PRÉVOST and L. JACQUES, *Décès par intoxication involontaire au monoxyde de carbone au Québec de 1989 à 1994*, Saint-Hubert (Québec), Direction de la santé publique, Régie régionale de la santé et des services sociaux de la Montérégie, 1997, 42 p.

205. NORTH AMERICAN COMMISSION FOR ENVIRONMENTAL COOPERATION, *Background Paper prepared for the Symposium on North American Children's Health and the Environment – Toronto (Canada), May 10, 2000*, s.l., Secretariat of Commission for Environmental Cooperation, 38 p.

206. R. ARCAND et al., "Travail et santé," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 525-570. (Collection La santé et le bien-être)

207. *TMS, troubles musculo-squelettiques, Ça coûte cher à tout le monde!*, information leaflet, Québec City, Commission de la santé et de la sécurité du travail, August 2002, 2 p.

208. S. BRISSON, S. PROVENCHER and L. DE GUIRE, *Étude de nouveaux cas de maladies professionnelles pulmonaires reliées à l'exposition à la silice au Québec de 1988 à 1997*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 2002, 30 p. and annexes.

209. S. PROVENCHER and L. DE GUIRE, *Étude des nouveaux cas de maladies professionnelles pulmonaires reliées à l'exposition à l'amiante au Québec de 1988 à 1997*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 2001, 101 p.

210. R. SIMARD, *Bilan de situation concernant l'exposition à l'amiante dans l'industrie de la transformation de Montréal-Centre*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 1998, 15 p. and annexes.

211. M. R. BECKLAKE, J.L. MALO and M. CHAN-YEUNG, "Epidemiologic approaches," in I.L. Bernstein et al., *Asthma in the Workplace*, 2nd ed., New York, Marcel Dekker Inc., 1999, pp. 27-66.

212. M. LEVASSEUR and L. GOULET, "Problèmes de santé," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 273-295. (Collection La santé et le bien-être)

213. J. TURCOT, *Bilan des cas d'asthme professionnel indemnisés par la CSST de 1988 à 1996*, Québec City, Commission de la santé et de la sécurité du travail, 1998, 7 p.

214. L. BHÉRER et al., Critères d'une intoxication et d'une exposition significative: Les gaz irritants – Fichier des maladies à déclaration obligatoire, (Proposal of the Comité de santé environnementale du Québec and the Conseil des directeurs de santé publique du Québec at the ministère de la Santé et des Services sociaux du Québec), Québec City, Comité de santé environnementale du Québec, 1999, 22 p.

215. R. PLANTE et al., *Critères d'une intoxication et d'une exposition significative: Le plomb – Fichier des maladies à déclaration obligatoire*, Québec City, Comité de santé environnementale du Québec, 1998, 16 p.

O. SAMUEL, *Critères d'une intoxication et d'une exposition significative: Les insecticides organophosporés et carbonates – Fichier des maladies à déclaration obligatoire*, Québec City, Comité de santé environnementale du Québec, 1999, 15 p. and annexes.

A. TURCOT et al., *Surveillance médicale des travailleurs exposés au styrène*, Québec City, Comité provincial en santé au travail, 1998, 10 p.

216. P. ROBILLARD, E. ROY and S. Venne, *Recommandations visant la prise en charge des travailleurs exposés au sang et aux autres liquides biologiques*, Québec City, ministère de la Santé et des Services sociaux, 2001, 24 p.

217. R. DOLL and R. PETO, "The causes of cancer," *Journal of the National Cancer Institute*, Vol. 66, Nº. 6, June 1981, pp. 1191-1308.

P. VINEIS and L. SIMONATO, "Proportion of lung and bladder cancers in males resulting from occupation: A systematic approach," *Archives of Environmental Health*, Vol. 46, Nº. 1, 1991, pp. 6-15.

L. SIMONATO et al., " Lung cancer and cigarette smoking in Europe: An update of risk estimates and an assessment of inter-country heterogeneity," *International Journal of Cancer*, Vol. 91, Nº. 6, March 15, 2001, pp. 876-887.

218. P.B. BURNS and G.M. SWANSON, "Risk of urinary bladder cancer among blacks and whites: The role of cigarette use and occupation," *Cancer Causes and Control*, Vol. 2, 1991, pp. 371-379.

P. VINEIS and L. SIMONATO, "Proportion of lung and bladder cancers in males resulting from occupation: A systematic approach," *Archives of Environmental Health*, Vol. 46, Nº. 1, 1991, pp. 6-15.

A. MANNETJE et al., "Occupation and bladder cancer in European women," *Cancer Causes and Control*, Vol. 10, Nº. 3, June 1999, pp. 209-217.

219. R.J. MULLAN and L.I. MURTHY, "Occupational sentinel health events: An updated list for physician recognition and public health surveillance," *American Journal of Industrial Medicine*, Vol. 19, 1991, pp. 775-799.

220. S. HELEY, C. LAROCHE and L. BHÉRER, "Analyse des services diagnostiques et de réadaptation prescrits et obtenus par des travailleurs dépistés pour surdité professionnelle," *Travail et santé*, Vol. 15, Nº. 2, 1999, pp. 8-12.

221. F. TURCOTTE et al., *Rapport du Comité aviseur sur les examens auditifs en milieu de travail*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, March 1995, 49 p.

J.M. TARDIF et al., *Bruit et surdité professionnelle, document de réflexion sur les orientations provinciales du réseau de la santé et des services sociaux*, Comité de coordination en santé publique, ministère de la Santé et des Services sociaux, 1998, 31 p.

222. E.L. MOZURKEWICH et al., "Working conditions and adverse pregnancy outcome: A meta-analysis," *Obstetrics and Gynecology*, Vol. 95, Nº. 4, April 2000, pp. 623-635.

223. P. MAUREEN, *Occupational and Environmental Reproductive Hazards: A Guide for Clinicians*, Baltimore (Maryland), Williams and Wilkins, 1993, 436 p.

224. HEART AND STROKE FOUNDATION OF CANADA, *The Changing Face of Heart Disease and Stroke in Canada 2000*, Ottawa, Heart and Stroke Foundation of Canada, 1999, 107 p. [http://www.hcsc.gc.ca/hpb/lcdc/bcrdd/hdsc2000/pdf/card2ke.pdf]

225. T. THEORELL, "How to deal with stress in organization? – A health perspective on theory and practice," *Scandinavian Journal of Work, Environment and Health*, special issue, Vol. 25, Nº. 6, 1999, pp. S616-S624.

226. M. VÉZINA and R. BOURBONNAIS, "Incapacité de travail pour des raisons de santé mentale," in *Portrait social du Québec: Données et analyses*, Québec City, Institut de la statistique du Québec, 2001, pp. 279-287. (Collection Les conditions de vie)

227. CENTRE PATRONAL DE SANTÉ ET DE SÉCURITÉ DU TRAVAIL DU QUÉBEC, "Les problèmes de santé mentale : une des principales causes d'absences prolongées au travail," *Convergence*, Vol. 15, Nº. 4, August 1999, pp. 3-4.

228. R. ARCAND et al., "Travail et santé," in *Enquête sociale et de santé 1998,* Québec City, Institut de la statistique du Québec, 2000, pp. 525-570. (Collection La santé et le bien-être)

229. M. VÉZINA et al., "Violence physique et intimidation au travail dans les pays de l'Union européenne," Proceedings of the 2nd International Colloquium on Psychodynamics and Psychopathology of Work, Paris, Laboratoire de psychologie du travail du CNAM, 1999, pp. 243-254.

GROUPE D'ÉTUDE ET DE RÉFÉRENCE SUR LES IMPACTS DES CONDITIONS ET DE L'ORGANISATION DU TRAVAIL SUR LA SANTÉ – GÉRICOTS, *Rapport d'enquête*, Lille (France), Institut de médecine du travail du Nord de la France, 49 p.

230. M.F. HIRIGOYEN, *Malaise dans le travail: Harcèlement moral – Démêler le vrai du faux*, Paris, Édition La Découverte et Syros, 2001, 289 p.

231. Just like *Development*, *Social Adjustment and Integration, Lifestyles and Chronic Diseases* make up a distinct intervention area within the Québec Public Health Program.

232. For details about these activities, see the intervention areas called *Lifestyles and Chronic Diseases* and *Development, Social Adjustment and Integration*.

233. D. EASTERLING et al., Promoting Health by Building Community Capacity: Evidence and Implications for Grantmakers, Denver (Colorado), The Colorado Trust, 1998, 24 p.

234. B.D. SMEDLEY and S.L. SYME (eds.), *Promoting Health: Intervention Strategies From Social and Behavioral Research*, Washington (District of Columbia), National Academy Press, 2000, 508 p.

APPENDIX

Appendix I: PUBLIC HEALTH FUNCTIONS

Public health activities mainly fall within four groups of core functions which, while not exclusive to public health, distinguish its action. These core functions are: ongoing surveillance of the population's health status; promotion of health and well-being; prevention of diseases, psychosocial problems and injuries; and health protection.

The exercise of these core functions is supported by three other functions: regulation, legislation and public policies that have an impact on health; research and innovation; and skills development and maintenance.

ONGOING SURVEILLANCE OF THE POPULATION'S HEALTH STATUS

The surveillance function is defined as a continuous process of evaluation of the population's health status and health determinants. Through this function it is possible to inform the population on its health status and to support the people who are responsible for planning, organizing and evaluating services and interventions at the national, regional or local levels. This function involves:

- ensuring both access to information and quality management of data by: (a) concluding agreements in order to have access to the necessary data that belong to the health and social services network or to the partner networks (including CLSCs, Institut de la statistique du Québec, the Régie de l'assurance maladie du Québec, the Commission de la santé et sécurité du travail, the ministère de l'Éducation and the Société de l'assurance automobile du Québec); (b) setting quality standards for the use of administrative files for health surveillance purposes; and (c) creating, if necessary, the required surveillance systems;
- describing and analyzing the population's health status, health determinants, trends as well as observed temporal and spatial variations in order to: (a) determine the major health problems and detect emerging problems; (b) prepare prospective scenarios of the population's health status; and (c) monitor the evolution of specific health problems and their determinants within the population;
- producing and disseminating useful and workable information on the population's health status and health determinants as well as on their evolution, for the population, actors and decision makers by: (a) updating statutory data from regular files; (b) producing and disseminating national and regional reports on the population's health status and on specific health problems;[1] and (c) defining the indicators that help to assess the magnitude and seriousness of certain health problems.

Exercising the surveillance function includes developing surveillance plans "which specify the objects of the surveillance, the personal or non-personal information it will be necessary to collect, the proposed sources of information, and the analytic study of this information [...]."
(Public Health Act, section 35)

PROMOTION OF HEALTH AND WELL-BEING

The health and well-being promotion function includes all actions intended to have an impact on health determinants so that individuals and communities can have greater control over their health. This function involves:

- based on existing knowledge, identifying and describing health determinants as well as effective actions to promote health;
- informing public health actors, actors in other sectors and the population about: (a) knowledge related to the principal health determinants; (b) the appropriateness of acting on certain determinants or maintaining existing programs; and (c) the most promising health promotion strategies and activities;
- offering effective activities, with emphasis on the adoption and reinforcement of personal skills as well as the development of living environments and establishment of living conditions that are conducive to health;

1. The MSSS is in the process of defining the parameters of reports on the population's health status, as stipulated in section 10 of the Public Health Act.

- establishing or strengthening intersectoral collaboration (with other government departments, municipalities, the education, community, labour and recreation sectors as well as with the private sector, for example) and mobilizing individuals and communities, for example, by developing personal skills or creating an environment that is conducive to health within a community;
- encouraging, at the national, regional and local levels, the adoption of policies that promote the population's health.

The Minister of Health and Social Services is the "advisor of the Government on any public health issue. The Minister shall give the other ministers any advice he or she considers advisable for health promotion and the adoption of policies capable of fostering the enhancement of the health and welfare of the population."

(Public Health Act, section 54, paragraph 1)

PREVENTION OF DISEASES, PSYCHOSOCIAL PROBLEMS AND INJURIES

The prevention function includes activities that allow actors to intervene as early as possible to reduce the risk factors and consequences associated with diseases, psychosocial problems and injuries, as well as to detect and deal with the early signs of problems. Depending on the case, it may concern the whole population or vulnerable groups and involves:

- identifying and describing on the basis of existing knowledge: (a) the risk factors of diseases, psychosocial problems and injuries as well as their consequences; (b) the populations who are at risk or vulnerable; and (c) strategies and effective preventive actions to reduce these diseases, psychosocial problems or injuries, taking account of the characteristics of the targeted population (including age, sex, educational level);
- informing and raising awareness among the population as well as public health actors and those in other sectors of: (a) knowledge about risk factors, vulnerable groups, and strategies or effective preventive actions; (b) the appropriateness of acting on certain risk factors or maintaining existing activities;
- notifying the authorities concerned by a situation that puts the population or a group of individuals at high risk of avoidable mortality or morbidity, and participating in the search for an appropriate solution when effective solutions exist for reducing or eliminating these risks;
- introducing effective preventive activities based on: (a) approaches focused on the most vulnerable groups; (b) comprehensive strategies to intervene in living environments; and (c) approaches that combine, whenever appropriate, passive measures with activities to reduce the source of health risks and screening activities;
- through the development and use of awareness strategies, promoting the implementation by primary care workers — including pharmacists, physicians, midwives, social workers and dentists — of preventive approaches known to be effective, and training them to apply these approaches.

Public health directors may "formally request the authorities whose intervention appears useful to participate in the search for a solution adapted to the circumstances," in the event of real or apprehended situations that put the health and well-being of the population at risk and for which "effective solutions exist for the reduction or elimination of those risks."

(Public Health Act, section 55)

Prevention is exercised through activities to disseminate and support effective clinical preventive practices, in particular those recommended in the *Canadian Guide to Clinical Preventive Health Care*.

HEALTH PROTECTION

The health protection function refers to an authoritative public health intervention with individuals, groups or the whole population in the event of real or apprehended threats to health. This intervention is characterized as authoritative because it allows health authorities to require the information they consider necessary for conducting an epidemiological investigation and to order, within their jurisdiction, the implementation of measures to deal with or correct a situation that is dangerous to the health of the population.

"A threat to the health of the population means the presence within the population of a biological, chemical or physical agent that may cause an epidemic if it is not controlled."

(Public Health Act, section 2, paragraph 2)

"[...], the public health authorities include the Minister of Health and Social Services, the national public health director [...] and the public health directors [...]."

(Public Health Act, section 2, paragraph 3)

To protect the population's health, public health teams must actively participate with other partners in the design and establishment of emergency measures. Exercising this function also requires constant monitoring in order to act rapidly. The powers granted to these teams assure that they exercise health monitoring of the particular objects related to the following: reportable diseases attributed to physical, chemical or biological agents, diseases subject to compulsory treatment, unusual clinical manifestations related to vaccination and reporting of health threats.

Health monitoring is a process which allows threats to the population's health to be identified in real time.

The exercise of the health protection function calls for the establishment of links between the Canadian and international networks for monitoring as well as surveillance, control and management of health problems or risks in situations which represent a real or apprehended threat; the maintenance and improvement of accessibility to laboratory services and the capacity of these laboratories to process tests in specific investigation situations as well as the design of the informational resources necessary for exercising health monitoring.

The protection function involves:

- in the event of real or apprehended threats to health: (a) investigating to describe the event (outbreak, aggregate, epidemic or isolated case), identifying the characteristics of the populations affected as well as the causes and circumstances of this event and evaluating the health risks, so as to confirm the threats and determine how urgently they must be addressed; (b) implementing public health measures or recommending to actors that the situation requires that relevant protection measures be implemented rapidly, and monitoring the evolving health situation, if applicable, in collaboration with all the institutions of the health care system and with other sectors;
- preparing the intervention in emergencies by: (a) developing, disseminating and following up intervention protocols with the targeted partners; (b) planning activities related to risk prevention, reduction of the harmful consequences of an event, and organization of relief in collaboration with all the institutions of the health and social services system as well as with actors in other sectors; and (c) implementing emergency measures and participating in simulated emergencies.

REGULATION, LEGISLATION AND PUBLIC POLICIES THAT HAVE AN IMPACT ON HEALTH

The function related to regulation, legislation and public policies that have an impact on health includes all the activities focused on the establishment of rules, laws and policies that promote the health and well-being of the population. This function involves:

- identifying the problems and situations which call for a regulatory, legislative or policy-based solution in order to enhance or maintain the health of the population or population groups;
- assessing the consequences of public policies – whether national, regional or local – for the population's health and recommending measures to reduce their negative effects on health;
- carrying out mandates related to the application of regulations, laws or policies which come under spheres other than public health in order to prevent certain health problems.

The Minister of Health and Social Services "shall be consulted in relation to the development of the measures provided for under an Act or regulation that could have significant impact on the health of the population."

(Public Health Act, section 54)

Certain mandates are entrusted to public health, in particular under the Act respecting occupational health and safety, the Act respecting Héma-Québec and the haemovigilance committee, the Act respecting medical laboratories, organ, tissue, gamete and embryo conservation, ambulance services and the disposal of human bodies, the Tobacco Act, the Civil Protection Act, and the Environment Quality Act (Regulation respecting the quality of drinking water).

RESEARCH AND INNOVATION

The research and innovation function includes all activities focused on the production, dissemination and application of scientific knowledge as well as on innovation. These activities are necessary for the exercise of other public health functions and for the development of public health expertise; it also includes evaluative research. The ultimate purpose of applied rather than fundamental research is to guide practices through the application of knowledge derived from a scientific process. This function involves:

- producing applied studies and conducting systematic reviews of knowledge in order to better understand the population's health problems as well as the risk factors and health determinants considered to be important;
- designing and evaluating promising or effective activities related to health promotion and protection as well as prevention of health problems by: (a) systematically reviewing knowledge and applied research on the implementation, efficacy and cost-effectiveness of existing public health strategies and activities; (b) developing strategies and projects based on the application of scientific knowledge (including pilot and demonstration projects); and (c) providing support to actors in the field to evaluate pilot and demonstration projects; and (d) creating the necessary instruments, laboratory tests, tools and indicators;
- understanding and evaluating the effects of the health care and social services system on the population's health by conducting applied research on: (a) the organization of this system, in particular preventive and primary care services; (b) the ethical aspect of public health practice, in particular equity in health;
- understanding the effects of public policies on the population's health and on social inequities by conducting appropriate research;
- encouraging the optimal use of research results through strategies related to the communication and dissemination of these results as well as by creating links between producers and users.

SKILLS DEVELOPMENT AND MAINTENANCE

The function of skills development and maintenance includes all activities that allow for the transfer of knowledge and practices to public health actors in order to support the implementation of the program. These actors will have skills not only as experienced observers of the health and well-being of the population but also as leaders in the implementation of public health projects in communities and living environments. This function involves:

- determining the skills needed to introduce and implement the public health program;
- determining training needs and developing a continuing education program for the medical, professional and technical staff based on the requirements of the program and the effectiveness of training strategies;
- ensuring that there is a fit between the program's requirements and the basic training in public health and related disciplines of the professional and technical staff working in public health.

Appendix II: RESPONSIBILITIES ASSOCIATED WITH THE QUÉBEC PUBLIC HEALTH PROGRAM

The responsibilities related to the Québec Public Health Program are determined by the Act respecting health services and social services (R.S.Q., c. S-4.2), the Public Health Act (R.S.Q. c. 60) and the Act respecting Institut national de santé publique du Québec (R.S.Q., c. I-13.1.1).

1. EXERCISING THE FUNCTION OF ONGOING SURVEILLANCE OF THE POPULATION'S HEALTH STATUS

Ongoing surveillance of the population's health status is a function conferred exclusively on the Minister and the public health directors. However, the Minister may confer on the Institut national de santé publique du Québec (INSPQ) the mandate to exercise all or part of the surveillance function. The Minister may also confer such a mandate on another organization, but in such a case, the mandate must first be submitted to the Commission d'accès à l'information du Québec (CAIQ) for an opinion.

The Minister develops the national plan for the surveillance of the population's health status while the public health directors develop the regional surveillance plans. The Minister and directors must submit these plans to the Comité d'éthique de santé publique (public health ethics committee) and, where applicable, to the CAIQ for an opinion. The Minister and each public health director must periodically re-evaluate the national surveillance plan and the regional surveillance plans as well as the necessity of making changes to them.

The Minister defines the parameters of the national and regional reports on the population's health status so as to ensure that data between the different regions of Québec can be compared. The national public health director is responsible for preparing the national report on the population's health status in collaboration with the public health directors and for submitting it to the Minister, who must make it public and ensure its dissemination. The public health directors, for their part, prepare the regional reports on the population's health status, make them public and disseminate them in their respective regions. The INSPQ supports the Minister and public health directors in preparing the national report and regional reports on the population's health status.

The Minister is responsible for conducting national surveys on health and social issues or for ensuring that the information collected in the course of surveys conducted by other resources is transmitted to him or made available to the public health directors. He determines the objectives of these surveys after consulting the public health directors. The latter are responsible for conducting regional surveys on health and social issues as required. The Minister and public health directors submit the proposed surveys on health and social issues to the Comité d'éthique de santé publique for an opinion, unless the ethical review of the survey in question is conducted by the ethics committee of the Institut de la statistique du Québec (ISQ).

To exercise the surveillance function, the Minister establishes and maintains a system for the collection of sociological and health-related personal or non-personal information on births, stillbirths and deaths, the mechanics of which are fixed by regulation. In addition, the Minister establishes and maintains systems for the collection of data and personal and non-personal information on the prevalence, incidence and distribution of health problems and in particular on problems having significant impacts on premature mortality and on morbidity and disability. The particulars of the system are also fixed by regulation. The Minister may personally assume the management of the data collection systems or entrust their management to another public body.

For their part, the local community service centres (CLSCs) may be required to provide certain information that is contained in their files and is needed to carry out the national and regional surveillance plans in a form that enables information to be obtained by CLSC territory, municipality, borough or ward.

Many partners contribute to the exercise of the surveillance function. First, the CAIQ examines, where applicable, the mandate of ongoing surveillance of the health status entrusted by the Minister to a third person. In addition, pursuant to the Act respecting Access to documents held by public bodies and the Protection of personal information, the CAIQ sometimes gives an opinion on the communication of personal information proposed in surveillance plans. Second, physicians, public or private medical laboratories,

health and social services institutions, any government department or any body may be required to provide the information needed to carry out a national surveillance plan and regional plans in a form that enables information to be obtained by CLSC territory, municipality, borough or ward. Third, the ISQ carries out the national surveys entrusted to it by the Minister in accordance with the objectives established by the latter. Finally, certain contributions are necessary to collect the social and health information from data collection systems established for surveillance. This is true for physicians, midwives or people assisting a woman during childbirth who must complete a certificate of birth, as well as institutions in which a death occurs that must take the necessary measures to ensure that a certificate of death is drawn up by a physician.

2. EXERCISING THE FUNCTION OF PROMOTING HEALTH AND WELL-BEING

The Minister, public health directors and CLSCs establish, at the national, regional and local levels respectively, mechanisms providing for concerted action between various resources able to act on situations that may present risks of premature mortality, morbidity or disability. They promote, each at the appropriate level of intervention, health and the adoption of public social policies capable of fostering the enhancement of health among various resources whose actions may have an impact on the health of the general population or of certain groups. They are responsible, at their respective levels, for organizing information and awareness campaigns among the population and for contributing to such campaigns. In addition, at the national, regional, or local level, they support actions which, within a community, foster the creation of an environment conducive to health. For their part, the CLSCs offer most of the services that focus on health promotion to the population of their respective territories.

Furthermore, the Minister advises the Government on public health issues. The Minister gives the other ministers any advice he or she considers advisable for health promotion and the adoption of policies capable of fostering the enhancement of the population's health.

3. EXERCISING THE FUNCTION OF PREVENTING DISEASE, PSYCHOSOCIAL PROBLEMS AND INJURIES

The Minister, public health directors and CLSCs promote and support among health care professionals, each at the appropriate level of intervention, preventive health care practice. They identify and assess, again at their respective level, situations involving health risks.

In addition, where the Minister or public health directors become aware of a situation of high risk of avoidable mortality, morbidity or disability and when, in their opinion effective solutions exist for the reduction or elimination of those risks, they may request, each at their respective level, that the authorities whose intervention appears useful participate in the search for a solution. Authorities who receive such an invitation by the Minister or public health directors are required to participate in such a search.

As for the CLSCs, their mission is to organize the public health activities in their respective territories; these institutions are responsible for providing a major portion of the preventive services offered according to population size.

4. EXERCISING THE HEALTH PROTECTION FUNCTION

In exercising the protection function, the Minister is responsible for drawing up the list of

(a) intoxications, infections and diseases that must be reported to the appropriate public health director or the national public health director;

(b) the contagious diseases or infections for which any person affected is obligated to submit to the medical treatments required to prevent contagion.

The Minister may, for the purposes of clinical preventive care or health protection, make regulations establishing registries in which personal information on certain health services or health care received by the population is recorded (for example, the vaccination registry). The Minister may personally assume the management of the registry or entrust the management to another public body.

The power to carry out investigations is a major responsibility of the health authorities in the field of health protection. The public health directors carry out an epidemiological investigation in the following situations:

(a) in any case where they receive a notice that a person who is likely to be suffering from a disease that requires compulsory treatment is refusing to be examined or to submit to the appropriate treatment, and if the person refuses to be examined or treated, they may apply to the Court for an order enjoining the person to do so;

(b) in any case where they receive a notice that a person who is likely to be suffering from a disease that requires compulsory treatment is refusing to comply with the prophylactic measures prescribed, and if the person continues to refuse to comply with these measures, they may apply to the Court for an order enjoining the person to do so;

(c) in any situation where they believe on reasonable grounds that the health of the population is or could be threatened, in particular where they receive a report of an unusual clinical manifestation following vaccination, a report of an intoxication, infection or reportable disease, a notice to the effect that a person is refusing to be examined or treated or to comply with compulsory prophylactic measures, or when they receive a report that the health of the population is threatened

Where a public health director becomes aware during an epidemiological investigation that an authority has powers necessary to ascertain the presence of a biological, chemical or physical agent that constitutes a threat to the population's health, he or she must inform the authority concerned of the situation and request that it carry out the necessary inquiry or investigation. Authority concerned means a ministry, a local municipality or a body that has, and may exercise, under another Act, a municipal by-law or an agreement, the necessary powers of inspection, inquiry or investigation. If a ministry, a local municipality or a body refuses to collaborate or delays in doing so, the public health director must notify the national public health director.

In addition, if during an epidemiological investigation, public health directors are of the opinion that they are unable to intervene effectively or within the time required to complete the investigation or to protect the health of the population, they may implement the resource mobilization plan of their territory's health or social services institutions.

A public health director who becomes aware during an epidemiological investigation that a threat to the population's health appears to have its origin in a health or social services institution, a facility maintained by such an institution, or in a deficient practice within such an institution, must notify the director of professional services or, if there is no such director, the executive director. The public health director must also inform the national public health director of the situation. The Minister may, if he or she considers it necessary, request the public health director to continue the epidemiological investigation under way in the institution in order to identify the source of a threat and determine the control measures that need to be taken.

Where, during an epidemiological investigation, a public health director is of the opinion that there exists a real threat to the population's health, he or she may exercise certain powers provided for under the Act (including the closing of premises, the evacuation of a building, the isolation of a person, a medical examination or a prophylactic measure).

The Minister, with the assistance of the national public health director, may choose to coordinate the actions of several public health directors or to exercise the powers granted to the public health directors where the national public health director informs the Minister that he or she has received a report concerning an intoxication, infection or reportable disease, where the Minister is informed of a situation that is likely to constitute a threat to the population's health in more than one region, or where the Minister is informed of a situation that is likely to constitute a real or apprehended threat to the population and it is necessary to inform health authorities outside Québec. The Minister may also, at the request of a public heath director or the national public health director, mobilize the resources of any health or social services institution to respond to a public health emergency.

The Government or the Minister, if he or she has been so empowered by the Conseil des ministres, may implement control measures (including compulsory vaccination, closing of an institution) to protect the health of the population in the event of an extreme public health emergency.

Finally, the regional boards must ensure that all personal and confidential information obtained by public health directors in the exercise of the health protection function, for all cases of intoxication, infection or reportable disease is kept by the public health department in such manner as to preserve its confidentiality and that the staff having access to the information undertake to respect confidentiality.

Many partners of the health and social services network and other networks contribute to the protection of the population's health:

(a) physicians, nurses, directors of a public or private laboratory or medical biology department: for reporting reportable diseases and unusual clinical manifestations following a vaccination;

(b) physicians: for reporting diseases for compulsory treatment;

(c) government departments, government bodies and local municipalities, health and social services institutions, directors of institutions constituting work environments or living environments, health professionals working in these institutions and physicians: for reporting threats to the health of the population to the public health director of their territory or the national director, or for participating in epidemiological investigations;

(d) health professionals: for recording, in the registries, information required by regulations;

(e) the CAIQ: for giving an opinion to the Minister on draft regulations to establish registries for the purposes of clinical preventive care or health protection.

5. EXERCISING THE SUPPORT FUNCTIONS

Regulations, legislation and public policies that have an impact on health

The Minister, public health directors and CLSCs, each at the appropriate level, promote the optimum recourse to regulations, laws or policies so as to maintain or enhance the health of the population or population sub-groups.* In addition, the Minister must be consulted during the drafting of regulations or laws that could have a significant impact on the population's health.

Public health actors must also collaborate in the application of regulations and laws enacted by other actors in the health and social services network or other networks, by fulfilling the responsibilities assigned to them pursuant to the following acts:

– the Act respecting occupational health and safety;
– the Act respecting Héma-Québec and the haemovigilance committee;
– the Act respecting medical laboratories, organ, tissue, gamete and embryo conservation, ambulance services and the disposal of human bodies;
– the Tobacco Act;
– the Civil Protection Act;
– the Environment Quality Act, particularly the Regulation respecting the quality of drinking water.

Research and innovation

The Minister is responsible for establishing research priorities so as to facilitate the implementation of the Québec Public Health Program.* Moreover, through the mission entrusted to it, the INSPQ plays a central role in providing research support to the Québec Public Health Program. The mission of the institute is to contribute to the development, consolidation, dissemination and application of knowledge in the field of public health. The INSPQ, in collaboration with the various research organizations and funding bodies, is also responsible for developing and promoting research in the field of public health. It also establishes channels of communication with various organizations, both within Canada and at the international level, to promote cooperation and the exchange of information.

Furthermore, the public health directors are responsible for the conduct of research studies of regional interest and, in collaboration with the INSPQ, may contribute to national research studies. For their part, the CLSCs, just like other health and social services institutions, may contribute as needed to research studies undertaken by the INSPQ or by the public health directors, particularly as regards the carrying out of pilot projects or demonstration projects and evaluative research.*

* This responsibility is not directly supported by any legislative measure.

Skills development and maintenance

It is the responsibility of the Minister to determine the skills needed to implement the Québec Public Health Program.* The INSPQ, in collaboration with universities and the professional orders concerned, is responsible for designing and implementing continuing education programs in the field of public health. In addition, it collaborates with universities in designing and updating undergraduate programs in the field of public health. The Minister, public health directors and CLSC directors, each at the appropriate level, are responsible for determining the training needs of their staff as well as those of the partners involved in activities related to the Québec Public Health Program.*

* This responsibility is not directly supported by any legislative measure.

Summary of principal responsibilities[1]

Object of responsibility	National level	INSPQ	Regional level	Local level	Partners
Overall program	• Development and updating of program, national and interregional coordination • Network collaboration in organizing activities • Collaboration with CSST • Assessment and reporting	• Contribution to development and updating of program	• Development, implementation, evaluation and updating of regional action plan • Consultation of people's forum before implementing regional action plan • Deposit of regional action plan with MSSS • Assessment and reporting	• Collaboration in development, implementation and updating of regional action plan • Development, implementation, evaluation and updating of local action plan • Deposit of action plan with RRSSS • Assessment and reporting	• Contribution of community organizations to development of local action plans
Ongoing surveillance of the population's health status	• Development of national surveillance plan, presentation to the Comité d'éthique, implementation and re-evaluation • Definition of parameters of national report and regional reports on the population's health status • Preparation and dissemination of national report on the population's health status • Planning of surveys on health and social issues and presentation of reports to the Comité d'éthique • Establishment and maintenance of systems for the collection of sociological and health-related information (births, stillbirths, deaths, and health problems)	• Carrying out surveillance mandates conferred by the Minister • Support for Minister and DSPs in preparing national report and regional reports on population's health status	• Development of regional surveillance plans, presentation to the Comité d'éthique, implementation and re-evaluation • Preparation and dissemination of regional report on population's health status • Planning and conducting regional surveys of health and social issues	• Contribution to execution of surveillance plans by providing necessary data	• Examination by CAIQ of surveillance mandates entrusted to third person • Transmission of opinion by CAIQ on communication of personal information provided for under surveillance plans • Conduct of national surveys by the ISQ • Transmission of information needed for implementation of surveillance plans by physicians, private and public medical laboratories, health and social services institutions and other government departments or bodies

Object of responsibility	National level	INSPQ	Regional level	Local level	Partners
Promotion of health and well-being	• Establishment of mechanisms for national collaboration • Preparation of proposals or opinions to other government departments for the adoption of policies that enhance health	• Providing research support	• Establishment of mechanisms for regional collaboration	• Offer population services that focus on health promotion • Establishment of mechanisms for local collaboration • Creation of living environments conducive to health	
Prevention of diseases, psychosocial problems and injuries	• National coordination and support for DSPs for introduction and implementation of preventive programs • Request to national partners for participation in search for a solution in the event of a threat to health • Setting up management of registries	• Providing research support	• Regional coordination and support for CLSCs and other actors for introduction and implementation of preventive programs • Requests to regional partners for participation in search for solution in the event of a threat to health • Design of tools for implementation of preventive programs	• Offer population services that focus on prevention	• Participation by authorities concerned in search for a solution in the event of a threat to health
Regulation, legislation and public policies that have an impact on health	• Optimum recourse to regulations, laws or policies so as to enhance population's health and well-being • Recognition of problems that call for a regulatory, legislative or policy - based solution • Support for analysis of impact of public policies	• Contribution to impact analysis of public policies	• Optimum recourse to regulations, laws or policies so as to enhance population's health and well-being • Recognition of problems that call for a regulatory, legislative or policy-based solution	• Optimum recourse to regulations, laws or policies so as to enhance population's health and well-being • Recognition of problems that call for a regulatory, legislative or policy-based solution	

Summary of principal responsibilities (cont.)[1]

Object of responsibility	National level	INSPQ	Regional level	Local level	Partners
Research and innovation	• Establishment of research priorities	• Development, consolidation and dissemination of knowledge • Development and promotion of research • Collaboration in updating continuing education programs in the public health field • Establishment of channels of communication with Canadian and international organizations to promote cooperation and exchange of information.	• Carrying out research studies of regional interest • Contribution to research studies of national interest	• Contribution to research undertaken by the INSPQ and DSPs	• Collaboration of universities and university institutes
Skills development and maintenance	• Determination of skills needed to implement program • Determination of training needs for implementation of program	• Design and implementation of continuing education programs	• Determination of training needs	• Determination of training needs	• Collaboration of universities and professional orders

1 This table summarizes the main responsibilities and should not be seen as an exhaustive list of the responsibilities related to the program and the exercise of the public health functions.

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TABLES DE CONCERTATION NATIONALE (national roundtables)

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Table de concertation nationale en promotion – prévention
Table de concertation nationale en maladies infectieuses
Table de concertation nationale en santé environnementale
Table de concertation nationale en santé au travail
Table de concertation nationale en surveillance

Bibliography

ARCAND, R., et al. "Travail et santé," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 525-570. (Collection La santé et le bien-être)

ARCHIBALD, C., and J. GEDULD. *Estimating HIV prevalence and incidence, Province of Quebec, 1999*, Ottawa, Health Canada, Population and Public Health Branch, Centre for Infectious Disease Prevention, Bureau of HIV/AIDS, STD and TB, March 2001, unpublished data.

BARNARD, L., S. LANTIN and L. ROBERGE. *Portrait quotidien de la consommation médicamenteuse des personnes âgées non hébergées : Régime d'assurance médicaments administré par la Régie de l'assurance maladie du Québec – les 9 juin 1996, 7 juin 1998 et 11 juin 2000*, Québec City, Régie de l'assurance maladie du Québec, 2001, 87 p.

BECKLAKE, M.R., J.L. MALO and M. CHAN-YEUNG. "Epidemiologic Approaches," in I.L. Bernstein et al., *Asthma in the Workplace*, 2nd ed., New York, Marcel Dekker Inc., 1999, pp. 27-66.

BERNIER, S., and D. BROCHU. "Usage du tabac," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 99-115. (Collection La santé et le bien-être)

BHÉRER, L., et al. *Critères d'une intoxication et d'une exposition significative: Les gaz irritants – Fichier des maladies à déclaration obligatoire*, (Proposal of the Comité de santé environnementale du Québec and the Conseil des directeurs de santé publique du Québec to the ministère de la Santé et des Services sociaux du Québec), Québec City, Comité de santé environnementale du Québec, 1999, 22 p.

BIRMINGHAM, C.L., et al. "The cost of obesity in Canada," *Canadian Medical Association Journal*, Vol. 160, No. 4, 23 February 1999, pp. 483-488.

BOLDUC, D.G. *Bilan des éclosions de maladies d'origine hydrique signalées dans les directions régionales de la santé publique du Québec en 1993, 1994 et 1995*, Beauport (Québec), Comité de santé environnementale du Québec, Conseil des directeurs de santé publique, 1998, 8 p. and appendix.

BOLDUC, D.G., and M. CHAGNON. *Circonstances et causes des épidémies d'origine hydrique survenues au Québec de 1989 à 1993*, Beauport (Québec), Comité de santé environnementale du Québec, Conseil des directeurs de santé publique du Québec, 1996, 15 p. and appendices.

BOURGEAULT, G. "Éthique et santé publique : à propos des conflits de valeurs," *Ruptures. Revue transdisciplinaire en santé,* Vol. 5, No. 2, 1998, pp. 225-240.

BOYER, R., et al. "Idées suicidaires et parasuicides," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 355-366. (Collection La santé et le bien-être)

BRETON, J.J., et al. "Santé mentale," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 433-450. (Collection La santé et le bien-être)

BRETON, J.J., et al. *Enquête québécoise sur la santé mentale des jeunes de 6 à 14 ans, 1992: Prévalence des troubles mentaux et utilisation des services, volume 2*, Montréal, Hôpital des Prairies and Santé Québec, in collaboration with the ministère de la Santé et des Services sociaux, 1997, 224 p.

BRETON, J.J., and R. BOYER. "La prévention du suicide," in F. Vitaro and C. Gagnon (eds.), *Prévention des problèmes d'adaptation chez les enfants et les adolescents, tome 1: Les problèmes internalisés*, Sainte-Foy, Presses de l'Université du Québec, 2000, pp. 271-304.

BRISSON, S., S. PROVENCHER and L. DE GUIRE. *Étude de nouveaux cas de maladies professionnelles pulmonaires reliées à l'exposition à la silice au Québec de 1988 à 1997*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 2002, 30 p. and appendices.

BRODEUR, J.M., et al. *Étude 1998-1999 sur la santé buccodentaire des élèves québécois de 5-6 ans et de 7-8 ans*, Québec, ministère de la Santé et des Services sociaux, 2001, 151 p. (Collection Analyses et surveillance, No.18).

BRODEUR, J.M., et al. *Étude 1994-1995 sur la santé buccodentaire des adultes québécois de 35 à 44 ans*, Québec City, ministère de la Santé et des Services sociaux, 1998, 159 p. (Collection Analyses et surveillance, No. 8)

BROUSSEAU, J., R.H. BAILLARGEON and H.X. WU. "Le développement cognitif des enfants de 17 mois à 29 mois," in *Étude longitudinale du développement des enfants du Québec (ELDEQ 1998-2002) – De la naissance à 29 mois*, Québec City, Institut de la statistique du Québec, Vol. 2, Nº. 8, 2002, 40 p. (Collection La santé et le bien-être)

BURGE, H. "Bioaerosols: Prevalence and health effects in the indoor environment," *Journal Allergy and Clinical Immunology*, Vol. 86, Nº. 5, 1990, pp. 687-701.

BURNETT, R.T., et al. "Effects of low ambient levels of ozone and sulfates on the frequency of respiratory admissions to Ontario hospitals," *Environmental Research*, Vol. 65, Nº. 2, 1994, pp. 172-194.

BURNETT, R.T., S. CAKMAK and J. BROOK. "The effect of the urban ambient air pollution mix on daily mortality rates in 11 Canadian cities," *Canadian Journal of Public Health*, Vol. 89, Nº. 3, May-June 1998, pp. 152-156.

BURNS, P.B., and G.M. SWANSON. "Risk of urinary bladder cancer among blacks and whites: The role of cigarette use and occupation," *Cancer Causes and Control*, Vol. 2, 1991, pp. 371-379.

CANADA MORTGAGE AND HOUSING CORPORATION *The Clean Air Guide: How to Identify and Correct Indoor Air Problems in Your Home,* Ottawa, Canada Mortgage and Housing Corporation, 1998.

CANADIAN ASSOCIATION FOR STUDY OF THE LIVER (CASL). "Hepatitis C infection: Its sequelae and outcomes – State-of-the-Art Workshop, September 24 to 25, 1998," *The Canadian Journal of Gastroenterology*, Vol. 14, supp. B, July-August 2000, pp. 49B-58B.

CANADIAN INSTITUTE FOR HEALTH INFORMATION. *Health Care in Canada 2001*, Ottawa, Canadian Institute for Health Information, 2001, 87 p.

CANADIAN INSTITUTE FOR HEALTH INFORMATION. *National Health Expenditure Trends 1975-2001*, Ottawa, Canadian Institute for Health Information, December 2001.

CENTERS FOR DISEASE CONTROL AND PREVENTION. "Prevention and control of influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP)," *Mortality and Morbidity Weekly Review*, Vol. 50 (RR-4), 2001, pp. 1-40.

CENTRE ANTI-POISON DU QUÉBEC. *Rapport annuel 1997*, Sainte-Foy (Québec), 1998, 20 p. and appendices.

CENTRE ANTI-POISON DU QUÉBEC. *Rapport annuel 1997: Statistiques sur les intoxications par les pesticides*, Sainte- Foy (Québec), 1998, 29 p.

CENTRE ANTI-POISON DU QUÉBEC. *Rapport annuel 1996*, Sainte-Foy (Québec), 1997, 30 p. and appendices.

CENTRE ANTI-POISON DU QUÉBEC. *Rapport annuel 1996: Statistiques sur les intoxications par les pesticides*, Sainte-Foy (Québec), 1997, 25 p.

CENTRE ANTI-POISON DU QUÉBEC. *Rapport annuel 1995*, Sainte-Foy (Québec), 1996, 29 p. and appendices.

CENTRE PATRONAL DE SANTÉ ET SÉCURITÉ DU TRAVAIL DU QUÉBEC. "Les problèmes de santé mentale: une des principales causes d'absences prolongées au travail," *Convergence*, Vol. 15, Nº. 4, August 1999, pp. 3-4.

CENTRE QUÉBÉCOIS DE COORDINATION SUR LE SIDA. *Surveillance des cas de syndrome d'immunodéficience acquise (sida): Cas cumulatifs 1979-2001 – Mise à jour nº 2001-2, au 31 décembre 2001*, Montréal, ministère de la Santé et des Services sociaux, 2002, 38 p.

CHEVALIER, S., D. ALLARD and C. AUDET. "Les jeux de hasard et d'argent," in *L'alcool, les drogues, le jeu: les jeunes sont-ils preneurs? Enquête québécoise sur le tabagisme chez les élèves du secondaire, 2000, volume 2*, Québec City, Institut de la statistique du Québec, 2002, pp. 67-90. (Collection La santé et le bien-être)

CHEVALIER, S., and O. LEMOINE. "Consommation d'alcool," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 117-133. (Collection La santé et le bien-être)

CHEVALIER, S., and O. LEMOINE. "Consommation de drogues et autres substances psychoactives," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 135-147. (Collection La santé et le bien-être)

CHIN, J. *Control of Communicable Diseases Manual*, 17th ed., Washington (District of Columbia), American Public Health Association, 2000, 624 p.

CHOINIÈRE, R. "Les disparités géographiques de la mortalité dans le Montréal métropolitain, 1984-1988: Étude écologique des liens avec les conditions sociales, économiques et culturelles," *Cahiers québécois de démographie*, Vol. 20, Nº. 1, spring 1991, pp. 117-146.

CLAPP, R. "Environment and health: 4. Cancer," *Canadian Medical Association Journal*, Vol. 163, No. 8, October 17, 2000, pp. 1009-1012.

CLÉMENT, M.E., et al. *La violence familiale dans la vie des enfants du Québec, 1999*, Québec City, Institut de la statistique du Québec, 2000, 117 p. (Collection La santé et le bien-être)

COMITÉ D'ORIENTATION DU PROGRAMME DE SANTÉ DENTAIRE PUBLIQUE. *Programme public de services dentaires préventifs, révision 1990*, s.l., 1990, 30 p.

COMITÉ PERMANENT DE LUTTE À LA TOXICOMANIE. *Le point sur la situation de la toxicomanie au Québec en l'an 2000*, Montréal, Comité permanent de lutte à la toxicomanie, ministère de la Santé et des Services sociaux, 2000, 21 p.

COMITÉ PROVINCIAL SUR LES INTOXICATIONS AU MONOXYDE DE CARBONE AU QUÉBEC. *Étude descriptive des intoxications involontaires au monoxyde de carbone au Québec*, Québec City, Institut national de santé publique du Québec, 1997, 56 p. and appendices.

COMITÉ SUR L'IMMUNISATION DU QUÉBEC. *Rapport sur l'utilisation d'un vaccin contre la varicelle au Québec*, Québec City, Institut national de santé publique du Québec, 2000, 84 p.

COMITÉ SUR L'IMMUNISATION DU QUÉBEC. *Contrôle de l'hépatite B par immunisation au Québec*, December 1991.

COMMITTEE ON ENVIRONMENTAL HEALTH. "Toxic effects of indoor molds," *Pediatrics*, Vol. 101, No. 4, April 1998, pp. 712-714.

CONLEY, J. "Controlling antibiotic resistance by quelling the epidemic overuse and misuse of antibiotics," *Canadian Family Physician*, Vol. 44, 1998, pp. 1769-1773.

DAVIS, B.R. "The principlism debate: A critical overview," *Journal of Medicine and Philosophy*, Vol. 20, No. 1, 1995, pp. 85-105.

DAVIS, J.R., et al. "Intervention methods for chronic disease control," in R.C. Brownson, P.L. Remington and J.R. Davis (eds.), *Chronic Disease Epidemiology and Control*, 2nd ed., Washington (District of Columbia), American Public Health Association, 1998, pp. 77-116.

DELFINO, R.J., et al. "Effect of air pollution on emergency room visits for respiratory illnesses in Montreal, Quebec," *American Journal of Respiratory and Critical Care Medicine*, Vol. 155, No. 2, February 1997, pp. 568-576.

DELFINO, R.J., M.R. BECKLAKE and J.A. HANLEY. "The relationship of urgent hospital admissions for respiratory illnesses to photochemical air pollution levels in Montreal for population-based studies of air pollution," *Environmental Research*, Vol. 67, No. 3, 1994, pp. 1-19.

DELFINO, R.J., A.M. MURPHY-MOULTON and M.R. BECKLAKE. "Emergency room visits for respiratory illnesses among the elderly in Montreal: Association with low level ozone exposure," *Environmental Research*, Vol. 76, 1998, pp. 67-77.

DE WALS, P. *Évaluation du coût et des avantages potentiels d'une campagne d'immunisation contre le méningocoque de sérogroupe C au Québec*, Sherbrooke, Institut national de santé publique du Québec, 2001, 15 p.

DODD, R.Y. "Overview of infectious disease," in J.V. Linden and C. Bianco (eds.), *Blood safety and surveillance*, New York, Marcel Dekker Inc., 2001, s.l.

DOLL, R., and R. PETO. "The causes of cancer," *Journal of the National Cancer Institute*, Vol. 66, No. 6, June 1981, pp. 1191-1308.

EASTERLING, D., et al. *Promoting Health by Building Community Capacity: Evidence and Implications for Grantmakers*, Denver (Colorado), The Colorado Trust, 1998, 24 p.

ÉMOND, A., and L. GUYON. *L'enquête Santé Québec: Faits saillants 1987*, Québec City, ministère de la Santé et des Services sociaux, 1998, 45 p.

ÉMOND, V. *Prévalence du diabète au Québec et dans ses régions: premières estimations d'après les fichiers administratifs*, s.l., Institut national de santé publique du Québec, 2002, 16 p.

FEIGHTNER, J.W. "Prevention of Iron Deficiency Anemia in Infants," in Canadian Task Force on the Periodic Health Examination, *The Canadian Guide to Clinical Preventive Health Care*, Ottawa, Health Canada, Supply and Services Canada, 1994, pp. 276-286.

FERLAND, G., et al. "Personnes âgées," in *Manuel de nutrition clinique*, Montréal, Ordre professionnel des diététistes du Québec, 3rd ed., 2000, chap. 2.5.

FINE, M.J., et al., "Prognosis and outcome of patients with community-acquired pneumonia: a meta-analysis," *The Journal of the American Medical Association*, Vol. 275, 1996, pp. 134-141.

FIRBANK, O., and J.P. FORTIN. *Dépistage de l'abus à l'endroit des personnes âgées: un programme de sensibilisation d'une communauté et de ses acteurs témoins*, Laval, Régie régionale de la santé et des services sociaux de Laval, 1998, 59 p. and appendices.

FOURNIER, M.A., and J. PICHÉ. "Recours aux services des professionnels de la santé et des services sociaux," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 387-407. (Collection La santé et le bien-être)

GAGNON, C., and F. VITARO. "La prévention du trouble des conduites, avec centration sur les comportements violents," in F. Vitaro and C. Gagnon (eds.), *Prévention des problèmes d'adaptation chez les enfants et les adolescents, tome II: Les problèmes externalisés*, Sainte-Foy, Presses de l'Université du Québec, 2000, pp. 231-290.

GARIÉPY, C., et al. *Épidémiologie et effets de l'infection par le virus du Nil occidental sur la santé humaine*, Québec City, Institut national de santé publique du Québec, 2002, 86 p.

GOLDBERG, M., et al. *Identifying Subgroups of the General Population That May Be Susceptible to Short-Term Increases in Particulate Air Pollution: A Time-Series Study in Montreal, Quebec*, Cambridge (Massachusetts), Health Effects Institute, Research Report 97, 2000, 113 p.

GOSSELIN, C., R. CHOINIÈRE and R. WILKINS. "Désavantage lié à l'incapacité," in J. Camirand et al., *Enquête québécoise sur les limitations d'activités 1998*, Québec City, Institut de la statistique du Québec, 2001, pp. 121-142.

GOUVERNEMENT DU QUÉBEC. *Bill 112: An Act to Combat Poverty and Social Exclusion*, Québec City, Éditeur officiel du Québec, 2002, 13 p.

GOUVERNEMENT DU QUÉBEC. *Orientations gouvernementales en matière d'agressions sexuelles,* Québec City, ministère de la Santé et des Services sociaux, 2001, 90 p.

GOUVERNEMENT DU QUÉBEC. *Politique d'intervention en matière de violence conjugale: Prévenir, dépister, contrer la violence conjugale*, Québec City, 1995, 77 p.

GROUPE DE SURVEILLANCE PROVINCIALE DES INFECTIONS NOSOCOMIALES (SPIN). *Rapport de surveillance des bactériémies nosocomiales: Novembre 2000 à mai 2001 (SPIN-2)*, 2002.

GROUPE D'ÉTUDE ET DE RÉFÉRENCE SUR LES IMPACTS DES CONDITIONS ET DE L'ORGANISATION DU TRAVAIL SUR LA SANTÉ – GÉRICOTS, *Rapport d'enquête*, Lille (France), Institut de médecine du travail du Nord de la France, 2000, 49 p.

GRUNDY, S.M., et al. "Diabetes and cardiovascular disease: A statement for healthcare professionals from the American Heart Association," *Circulation*, Vol. 100, Nº.10, September 7, 1999, pp. 1134-1146.

GUASCHINO, S., and F. DE SETA. "Update on Chlamydia trachomatis," *Annals of the New York Academy of Sciences*, Vol. 900, 2000, pp. 293-300.

GUTTMAN, N. *Public Health Communication Interventions: Values and Ethical Dilemmas*, Thousand Oaks (California), Sage Publications, 2000, 286 p.

GUYON, L., and L. DESJARDINS. "La consommation d'alcool et de drogues," in *L'alcool, les drogues, le jeu: les jeunes sont-ils preneurs? Enquête québécoise sur le tabagisme chez les élèves du secondaire, 2000*, Vol. 2, Québec City, Institut de la statistique du Québec, 2002, pp. 35-66. (Collection La santé et le bien-être)

HALEY, R.W., et al. "The efficacy of infection surveillance and control programs in preventing nosocomial infections in US hospitals," *American Journal of Epidemiology*, Vol. 121, Nº. 2, February 1985, pp. 182-205.

HAMEL, D. *Évolution des traumatismes au Québec de 1991 à 1999*, Québec City, Institut national de santé publique du Québec, 2001, 462 p.

HARVARD CENTER FOR CANCER PREVENTION. "Harvard report on cancer prevention – Vol. 1: Causes of human cancer," *Cancer Causes and Control*, Vol. 7, supplement 1, November 1996, pp. S1-S9.

HEALTH AND WELFARE CANADA and LABORATORY CENTRE FOR DISEASE CONTROL, "Canadian consensus conference on influenza," *Canada Communicable Disease Report*, Vol. 19, 1993, pp. 136-146.

HEALTH CANADA. *Canadian Strategy for Cancer Control: Draft synthesis report*, Ottawa, Health Canada, 2001, 64 p.

HEALTH CANADA. *Canadian Tobacco Use Monitoring Survey: Results for first half of 2001 – February to June 2001,* Ottawa, Surveillance and Risk Assessment Division, Health Canada, 2001.

HEALTH CANADA. *Diabetes in Canada: National Statistics and Opportunities for Improved Surveillance, Prevention and Control*, Ottawa, Health Canada, 1999, 75 p.

HEALTH CANADA. *Respiratory Disease in Canada*, Ottawa, Canadian Institute for Health Information, 2001, 102 p.

HEALTH CANADA and THE CANADIAN INFECTIOUS DISEASE SOCIETY, "Controlling Antimicrobial Resistance: An Integrated Action Plan for Canadians," *Canada Communicable Disease Report*, Vol. 23S7, November 1997, pp. 1-32.

HEART AND STROKE FOUNDATION OF CANADA. *The Changing Face of Heart Disease and Stroke in Canada 2000*, Ottawa, Heart and Stroke Foundation of Canada, 1999, 107 p. [http://www.hc-sc.gc.ca/hpb/lcdc/bcrdd/hdsc2000/pdf/card2ke.pdf]

HELEY, S., C. LAROCHE and L. BHÉRER. "Analyse des services diagnostiques et de réadaptation prescrits et obtenus par des travailleurs dépistés pour surdité professionnelle," *Travail et santé*, Vol. 15, No. 2, 1999, pp. 8-12.

HIRIGOYEN, M.F. *Malaise dans le travail: Harcèlement moral – Démêler le vrai du faux*, Paris, Éditions La Découverte and Syros, 2001, 289 p.

HOLMES, K.K., et al. (ed.). *Sexually Transmitted Diseases*, 3rd ed., New York, McGraw-Hill, Health Professions Division, 1999.

INSTITUT DE LA STATISTIQUE DU QUÉBEC. *Enquête sociale et de santé auprès des enfants et des adolescents québécois 1999*, Québec City, Institut de la statistique du Québec, 2002, 520 p. (Collection La santé et le bien-être)

INSTITUT DE LA STATISTIQUE DU QUÉBEC. "Santé mentale et adaptation sociale," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois, 1999,* Québec City, Institut de la statistique du Québec, 2002, pp. 431-519. (Collection La santé et le bien-être)

INSTITUT DE LA STATISTIQUE DU QUÉBEC. *Enquête sociale et de santé 1998*, Québec City, Les Publications du Québec, 2000, 642 p. (Collection La santé et le bien-être)

INSTITUT DE LA STATISTIQUE DU QUÉBEC, L. DUCHESNE. *La situation démographique au Québec: Bilan 2000 – Les régions métropolitaines*, Québec City, Les Publications du Québec, 2000, 292 p.

INSTITUT NATIONAL DE SANTÉ PUBLIQUE DU QUÉBEC. *Le portrait de santé: Le Québec et ses régions*, édition 2001, Sainte-Foy, Les Publications du Québec, 2001, 432 p.

JARVIS, W.R. "Selected aspects of the socioeconomic impact of nosocomial infections: Morbidity, mortality, cost, and prevention," *Infection Control and Hospital Epidemiology*, Vol. 17, No. 8, August 1996, pp. 552-557.

JETTÉ, L. *Programme de surveillance du pneumocoque: Rapport annuel 2000*, s.l., Laboratoire de santé publique du Québec, Institut national de santé publique du Québec, 2001, 21 p.

KASS, N.E. "An ethics framework for public health," *American Journal of Public Health*, Vol. 91, No. 11, 2001, pp. 1776-1782.

KING, N. *Impact des conditions de logement sur la santé publique: Recension des écrits et proposition d'une approche de santé publique*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 2000, 74 p.

KOH, H.K., et al. " Skin cancer prevention and control," in P. Greenwald, B.S. Kramer and D.L. Wed (eds.), *Cancer Prevention and Control*, New York, Marcel Dekker Inc., 1995, pp. 537-545.

KUSHI, L.H., and S.B. FORESTER. "Diet and nutrition," in R.C. Brownson, P.L. Remington and J.R. Davis (ed.), *Chronic Disease Epidemiology and Control*, 2nd ed., American Public Health Association, Washington (District of Columbia), 1998, pp. 215-259.

LEDOUX, M., L. MONGEAU and M. RIVARD. "Poids et image corporelle," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 311-344. (Collection La santé et le bien-être)

LÉGARÉ, G., et al. "Santé mentale," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 333-352. (Collection La santé et le bien-être)

LEVASSEUR, M. "Perception de l'état de santé," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 259-269. (Collection La santé et le bien-être)

LEVASSEUR, M., and L. GOULET. "Problèmes de santé," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 273-296. (Collection La santé et le bien-être)

LÉVESQUE, J.F., and V. DÉRY. *Vers la santé durable: l'organisation des interventions en santé du cœur – le modèle promotion des habitudes de vie saines et prévention des maladies chroniques non transmissibles*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 2001.

LOISELLE, J. *Enquête québécoise sur le tabagisme chez les élèves du secondaire, 2000, volume 1*, Québec City, Institut de la statistique du Québec, 2001, 123 p.

LOISELLE, J., and B. PERRON. *L'alcool, les drogues, le jeu : les jeunes sont-ils preneurs? Enquête québécoise sur le tabagisme chez les élèves du secondaire, 2000, volume 2*, Québec City, Institut de la statistique du Québec, 2002, 95 p. (Collection La santé et le bien-être)

LORD, S.R., et al. "Postural stability, falls and fractures in the elderly: results from the Dubbo Osteoporosis Epidemiology Study," *The Medical Journal of Australia*, Vol. 160, No. 11, 1994, pp. 684-691.

LOUCHINI, R., et al. *Surveillance des maladies infectieuses et des intoxications chimiques à déclaration obligatoire au Québec, de 1990 à 1999*, Québec City, Bureau de surveillance épidémiologique, Direction de la protection de la santé publique, ministère de la Santé et des Services sociaux, 2001, 279 p. (Collection Analyses et surveillance, No.16)

LUUKINEN, H., et al. "Social status, life changes, housing conditions, health, functional abilities and life-style as risk factors for recurrent falls among the home-dwelling elderly," *Public Health*, Vol. 110, No. 2, 1996, pp. 115-118.

MANDELL, G.L., J.E. BENNETT and R. DOLIN. *Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases*, 5th ed., Philadelphia (Pennsylvania), Churchill Livingstone, 2000, 3263 p.

MANNETJE, A., et al., "Occupation and bladder cancer in European women," *Cancer Causes and Control*, Vol. 10, No.3, June 1999, pp. 209-217.

MASSÉ, R. (in collaboration with J. Saint-Arnaud). *Éthique et santé publique*, Québec City and Brussels, Presses de l'Université Laval and De Boeck, forthcoming.

MASSON, E., and E. GRIGNON. *Programme d'intervention visant le contrôle de l'herbe à poux et la réduction de la prévalence de la rhinite allergique saisonnière en Montérégie : Rapport d'activités*, Longueuil, Régie régionale de la santé et des services sociaux de la Montérégie, 1998, 76 p.

MAUREEN, P. *Occupational and Environmental Reproductive Hazards: A Guide for Clinicians*, Baltimore (Maryland), Williams and Wilkins, 1993, 436 p.

MCKENNA, M.T., et al. "Current issues and challenges in chronic disease control," in R.C. Brownson, P.L. Remington and J.R. Davis (eds.), *Chronic Disease Epidemiology and Control*, 2nd ed., American Public Health Association, Washington (District of Columbia), 1998, pp. 1-26.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Fichier des décès 1999*, specially compiled by Clermont Bouchard, October 2002.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Hospitalisations de courte durée dans les installations de soins généraux et spécialisés (MED-ÉCHO), année 1998-1999*, Québec City, Service du développement de l'information, ministère de la Santé et des Services sociaux, 2002.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Les dépenses du réseau de la santé et des services sociaux par programme-clientèle 2000-2001*, Québec City, Direction générale de la planification stratégique, de l'évaluation et de la gestion de l'information, ministère de la Santé et des Services sociaux, 2002, 221 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Priorités nationales de santé publique 1997-2002, Vers l'atteinte des résultats attendus : 4e bilan*, Québec City, ministère de la Santé et des Services sociaux, 2002, 220 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Rapport comparatif sur la santé de la population québécoise et sur la performance du système de santé québécois : indicateurs et tendances*, Québec City, Direction des communications, ministère de la Santé et des Services sociaux, 2002, 265 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *L'allaitement maternel au Québec : lignes directrices*, Québec City, ministère de la Santé et des Services sociaux, 2001, 75 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Plan québécois de lutte contre le tabagisme 2001-2005*, Québec City, Direction des communications, ministère de la Santé et des Services sociaux, 2001, 28 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Pour une approche pragmatique de prévention en toxicomanie : Orientations, axes d'intervention, actions*, Québec City, Direction des communications, ministère de la Santé et des Services sociaux, 2001, 59 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Surveillance de la mortalité au Québec: 1977-1998*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2001, 252 p. (Collection Analyses et surveillance, Nº. 14).

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Épidémiologie de la tuberculose, province de Québec, 1996-1999*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, 2000, unpublished study.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Priorités nationales de santé publique 1997-2002, Vers l'atteinte des résultats attendus: 2e bilan*, Québec City, ministère de la Santé et des Services sociaux, 2000, 203 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Les traumatismes intentionnels: le suicide – Complément du chapitre 3 des Priorités nationales de santé publique, 1997-2002*, Québec City, ministère de la Santé et des Services sociaux, 1999, 11 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Protocole d'immunisation du Québec*, Québec City, ministère de la Santé et des Services sociaux, 1999, 392 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Le bronzage artificiel au Québec: Bilan des connaissances et recommandations – Rapport du comité conjoint sur l'exposition aux rayons ultraviolets et le bronzage artificiel*, Québec City, ministère de la Santé et des Services sociaux, 1998, 83 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Plan d'action en toxicomanie 1999-2001*, Québec City, ministère de la Santé et des Services sociaux, 1998, 43 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Québec Priorities in Public Health, 1997-2002*, 2nd ed., Québec City, ministère de la Santé et des Services sociaux, 1998, 103 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Programme québécois de lutte contre le cancer: Pour lutter efficacement contre le cancer, formons équipe*, Québec City, ministère de la Santé et des Services sociaux, 1998, 185 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX (coordinated by G. Mercier and D. St-Laurent). *Stratégie québécoise d'action face au suicide: S'entraider pour la vie*, Québec City, ministère de la Santé et des Services sociaux, 1998, 94 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Québec Priorities in Public Health 1997-2002*, Québec City, ministère de la Santé et des Services sociaux, 1997, 103 p.

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX. *Policy on Health and Well-being*, Québec City, ministère de la Santé et des Services sociaux, 1992, 192 p.

MINISTÈRE DE LA SÉCURITÉ PUBLIQUE. *La violence conjugale : Statistiques sur la violence conjugale 2000*, Québec City, ministère de la Sécurité publique, 2001, 65 p.

MINISTÈRE DE L'EMPLOI ET DE LA SOLIDARITÉ SOCIALE. *La volonté d'agir, la force de réussir: Stratégie nationale de lutte contre la pauvreté et l'exclusion sociale*, Québec City, ministère de l'Emploi et de la Solidarité sociale, 2002, 23 p.

MONGEAU, L., B. NOLIN and D. HAMEL. *Analyse des données de l'Enquête Santé Québec 1987 et des enquêtes sociales et de santé 1992-1993 et 1998*, Institut national de santé publique du Québec (unpublished study).

MORISSETTE, P., N. DEDOBBELEER and M. ROJAS VIGER. "Consommation de substances psychoactives," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 211-229. (Collection La santé et le bien-être)

MOZURKEWICH, E., et al. "Working conditions and adverse pregnancy outcome: A meta-analysis," *Obstetrics and Gynecology*, Vol. 95, Nº. 4, April 2000, pp. 623-635.

MULLAN, R.J., and L.I. MURTHY. "Occupational sentinel health events: An updated list for physician recognition and public health surveillance," *American Journal of Industrial Medicine*, Vol. 19, 1991, pp. 775-799.

MURRAY, C.J.L., and A.D. LOPEZ. *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries and Risk Factors in 1990 and Projected to 2020*, Cambridge (Massachusetts), Harvard School of Public Health, 1996, 990 p.

NATIONAL ASTHMA CONTROL TASK FORCE, *The Prevention and Management of Asthma in Canada: A Major Challenge Now and in the Future*, Ottawa, Health Canada, 2000, 65 p.

NATIONAL CANCER INSTITUTE OF CANADA, *Canadian Cancer Statistics 2001*, Toronto, Canada, National Cancer Institute of Canada, 2001.

NATIONAL CANCER INSTITUTE OF CANADA, *Canadian Cancer Statistics 2000*, Toronto, Canada, National Cancer Institute of Canada, 2000.

NOLIN, B., et al. *Enquête québécoise sur l'activité physique et la santé 1998, Québec City, Institut de la statistique du Québec*, Institut national de santé publique du Québec and Kino-Québec, Les Publications du Québec, 2002, 137 p.

NORTH AMERICAN COMMISSION FOR ENVIRONMENTAL COOPERATION, *Background Paper prepared for the Symposium on North American Children's Health and the Environment – Toronto (Canada), May 10, 2000*, s.l., Secretariat of Commission for Environmental Cooperation, 38 p.

OUELLETTE, S. *La problématique de malnutrition chez les personnes âgées: Résumé de la littérature scientifique*, Montréal, Ordre professionnel des diététistes du Québec, 1999, 26 p.

PAGEAU, M., and M. FERLAND. *Portrait de santé: La région et ses territoires de CLSC*, Québec City, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Québec, 2002, 346 p.

PAMPALON, R., R. CHOINIÈRE and M. ROCHON. "L'espérance de santé au Québec," in J. Camirand et al., *Enquête québécoise sur les limitations d'activités 1998*, Québec City, Institut de la statistique du Québec, 2001, pp. 399-414.

PAMPALON, R., and G. RAYMOND. "A Deprivation Index for Health and Welfare Planning in Quebec," *Chronic Diseases in Canada*, Vol. 21, No. 3, 2000, pp. 113-122.

PAPILLON, M.J., et al. "Consommation de médicaments," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 445-460. (Collection La santé et le bien-être)

PARADIS, G., et al. "Facteurs de risque de maladies cardiovasculaires," in *Enquête sociale et de santé auprès des enfants et des adolescents québécois, 1999*, Québec City, Institut de la statistique du Québec, 2002, pp. 345-370. (Collection La santé et le bien-être)

PARÉ, L., and M. LEVASSEUR. "Problèmes auditifs et problèmes visuels," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 297-305. (Collection La santé et le bien-être)

PARENT, R. *Analyse des cas d'infection génitale à* Chlamydia trachomatis*, de gonorrhée, d'hépatite B et de syphilis déclarés au Québec par année civile – 1997-2001*, Québec City, ministère de la Santé et des Services sociaux, 2002, 15 p. and appendices, forthcoming. (Collection Analyses et surveillance, No. 22)

PAYETTE, H., and R. CYR. *Évaluation de l'état nutritionnel des bénéficiaires âgés des services d'aide à domicile: rapport de recherche*, Sherbrooke, Centre de recherche en gérontologie et gériatrie, 1992, 26 p.

PLANTE, R., et al. *Critères d'une intoxication et d'une exposition significative: Le plomb – Fichier des maladies à déclaration obligatoire*, Québec City, Comité de santé environnementale du Québec, 1998, 16 p.

PODNIEKS, E., et al. *National Survey on the Abuse of the Elderly in Canada : The Ryerson Study*, Toronto, Ryerson Polytechnical Institute, 1990, 121 p.

PRÉVOST, C., and L. JACQUES. *Décès par intoxication involontaire au monoxyde de carbone au Québec de 1989 à 1994*, Saint-Hubert (Québec), Direction de la santé publique, Régie régionale de la santé et des services sociaux de la Montérégie, 1997, 42 p.

PROVENCHER, S., and L. DE GUIRE. *Étude des nouveaux cas de maladies professionnelles pulmonaires reliées à l'exposition à l'amiante au Québec de 1988 à 1997*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 2001, 101 p.

Registre des événements démographiques du Québec, Institut de la statistique du Québec and ministère de la Santé et des Services sociaux (fichier des naissances).

REIS, M., and D. NAHMIASH. *When Seniors are Abused: A Guide to Intervention*, Toronto, Captus Press, 1995, 90 p.

REMIS, R., P. LECLERC and A.C. VANDAL. *La situation du sida et de l'infection au VIH au Québec, 1996,* Québec City, Direction des communications, ministère de la Santé et des Services sociaux, 1999, 61 p.

RHAINDS, M. (adapted from). "Rayonnement ultraviolet et cancer," in *L'oncogénèse environnementale au Québec*, Québec City, Comité de santé environnementale, 1996, pp. 14-28.

ROBICHAUD, J.B., et al. *Les liens entre la pauvreté et la santé mentale : De l'exclusion à l'équité*, Boucherville (Québec), Gaëtan Morin éditeur and Comité de la santé mentale du Québec, 1994, 270 p.

ROBILLARD, P., E. ROY and S. VENNE. *Recommandations visant la prise en charge des travailleurs exposés au sang et aux autres liquides biologiques*, Québec City, ministère de la Santé et des Services sociaux, 2001, 24 p.

ROBITAILLE, Y., et al. "Accidents avec blessures," in *Enquête sociale et de santé 1998*, Québec City, Institut de la statistique du Québec, 2000, pp. 313-332. (Collection La santé et le bien-être)

ROCHON, M. *Taux de grossesse à l'adolescence, Québec, 1980 à 1995, régions sociosanitaires de résidence, 1993-1995 et autres groupes d'âge*, Québec City, Service de la recherche, Direction générale de la planification et de l'évaluation, ministère de la Santé et des Services sociaux, 1997, 38 p.

RUTHAZER, R., and L.A. LIPSITZ. "Antidepressants and falls among elderly people in long-term care," *American Journal of Public Health*, Vol. 83, Nº. 5, May 1, 1993, pp. 746-749.

SAMUEL, O. *Critères d'une intoxication et d'une exposition significative : Insecticides organophosporés et carbonates – Fichier des maladies à déclaration obligatoire*, Québec City, Comité de santé environnementale du Québec, 1999, 15 p. and appendices.

SANTÉ QUÉBEC and L. BERTRAND (eds.). *Les Québécoises et les Québécois mangent-ils mieux? Rapport de l'Enquête québécoise sur la nutrition, 1990*, Montréal, ministère de la Santé et des Services sociaux, 1995, 317 p.

SCHABAS, R. *Report on the Meeting of the Expert Panel on Hepatitis C Epidemiology, Toronto, June 17–18, 1998*, Ottawa, Health Canada, 1998, 58 p.

SCHAEFER, C., and L. MONGEAU. *L'obésité et la préoccupation excessive à l'égard du poids : Éléments d'une problématique et réflexions pour l'action*, Montréal, Le collectif action alternative en obésité, 2000, 85 p.

SIMARD, R. *Bilan de situation concernant l'exposition à l'amiante dans l'industrie de la transformation de Montréal-Centre*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 1998, 15 p. and appendices.

SIMONATO, L., et al. "Lung cancer and cigarette smoking in Europe: An update of risk estimates and an assessment of inter-country heterogeneity," *International Journal of Cancer*, Vol. 91, Nº. 6, March 15, 2001, pp. 876-887.

SMEDLEY, B.D., and S.L. SYME (ed.). *Promoting Health: Intervention Strategies From Social and Behavioral Research*, Washington (District of Columbia), National Academy Press, 2000, 508 p.

TARDIF, J.M., et al. *Bruit et surdité professionnelle, document de réflexion sur les orientations provinciales du réseau de la santé et des services sociaux*, Comité de coordination en santé publique, ministère de la Santé et des Services sociaux, 1998, 31 p.

TENENHOUSE, A., et al. "Estimation of the prevalence of low bone density in Canadian women and men using a population specific DXA reference standard: The Canadian Multicentre Osteoporosis Study (CaMos), *Osteoporosis International*, Vol. 11, Nº. 10, 2000, pp. 897-904.

THEORELL, T. "How to deal with stress in organization? – A health perspective on theory and practice," *Scandinavian Journal of Work Environment and Health*, Special issue, Vol. 25, Nº. 6, 1999, pp. S616-S624.

TMS, troubles musculo-squelettiques. Ça coûte cher à tout le monde!, information leaflet, Québec City, Commission de la santé et de la sécurité du travail, août 2002, 2 p.

TRICKEY, F., et al. *Évaluation du Programme Intégré d'Équilibre Dynamique (P.I.E.D.) pour la prévention des chutes chez les aînés*, Montréal, Direction de la santé publique, Régie régionale de la santé et des services sociaux de Montréal-Centre, 1999, 141 p.

TURCOT, J. *Bilan des cas d'asthme professionnel indemnisés par la CSST de 1988 à 1996*, Québec City, Commission de la santé et de la sécurité du travail, 1998, 7 p.

TURCOT, J., et al. *Surveillance médicale des travailleurs exposés au styrène*, Québec City, Comité provincial en santé au travail, 1998, 10 p.

TURCOTTE, F., et al. *Rapport du Comité aviseur sur les examens auditifs en milieu de travail*, Québec City, Direction générale de la santé publique, ministère de la Santé et des Services sociaux, March 1995, 49 p.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES. *Oral Health in America: A Report of the Surgeon General*, Rockville (Maryland), U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000, 332 p.

VARUGHESE, P.V. "Rabies and post-exposure rabies prophylaxis in Canada, 1986," *Canada Diseases Weekly Report*, Vol. 14, 1988, pp. 89-94.

VÉZINA, M., et al. "Violence physique et intimidation au travail dans les pays de l'Union Européenne," Proceedings of the 2nd International Colloquium on Psychodynamics and Psychopathology of Work, Paris, Laboratoire de psychologie du travail du CNAM, 1999, pp. 243-254.

VÉZINA, M., and R. BOURBONNAIS. "Incapacité de travail pour des raisons de santé mentale," in *Portrait social du Québec: Données et analyses*, Québec City, Institut de la statistique du Québec, 2001, pp. 279-287. (Collection Les conditions de vie)

VINEIS, P., and L. SIMONATO. "Proportion of lung and bladder cancers in males resulting from occupation: A systematic approach," *Archives of Environmental Health*, Vol. 46, No. 1, 1991, pp. 6-15.

VITARO, F., and C. GAGNON (eds.). *Prévention des problèmes d'adaptation chez les enfants et les adolescents, tome I: Les problèmes internalisés*, Sainte-Foy, Presses de l'Université du Québec, 2000, 535 p.

VITARO, F., and C. GAGNON (eds.). *Prévention des problèmes d'adaptation chez les enfants et les adolescents, tome II: Les problèmes externalisés*, Sainte-Foy, Presses de l'Université du Québec, 2000, 616 p.

Web site of the ministère de la Santé et des Services sociaux, Service du développement de l'information, April 2002. [www.msss.gouv.qc.ca]

Web site of the Premier, category Grands dossiers, sub-category Finances publiques, 2002. [www.premier.gouv.qc.ca]

WENZEL, R.P., et al. "Control of communicable diseases," in R.B. Wallace, B.N. Doebbeling (eds.), *Maxcy-Rosenau-Last Public Health & Preventive Medicine*, 14th ed., chap. 6, Stamford (Connecticut), Appleton & Lange, 1998, pp. 69-87.

WORLD HEALTH ORGANIZATION. *Guidelines for Air Quality*, Geneva, World Health Organization, 1999, 143 p. and appendices.

WORLD HEALTH ORGANIZATION. *World Health Report*, Geneva, World Health Organization, 2002, 282 p.

WORLD HEALTH ORGANIZATION. *World Health Report 2001 Mental Health: New Understanding, New Hope*, Geneva, World Health Organization, 2001.

WORLD HEALTH ORGANIZATION. *Obesity, Preventing and Managing the Global Epidemic*, Geneva, World Health Organization, 1998, 275 p.

ZUSSMAN, R. "The contributions of sociology to medical ethics," *The Hastings Center Report*, Vol. 30, No. 1, 2000, pp. 7-11.

The Québec Public Health Program defines the activities to be implemented over the next ten years in order to act on the determinants that have an impact on the physical and psychosocial aspects of health. It also specifies the set of public health services that are common to all Québec regions and CLSC territories.

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