



**Comparative Study on the Health
of Québec's Population
and on the Performance
of its Health Care System**

HIGHLIGHTS

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On September 11, 2000, at a meeting in Ottawa, the federal, provincial and territorial premiers affirmed the importance of being accountable to their respective populations by publishing clear public reports on the state of public health and the quality of health care systems.

The premiers instructed their respective health ministers to collaborate in designing a complete framework, including mutually acceptable indicators for comparison, which the governments would use to begin reporting on their activities by September 2002.

This paper presents highlights from the Comparative Study on the Health of Québec's Population and on the Performance of its Health Care System: Indicators and Trends. The report covers thirteen of the fourteen originally stated indicators. The indicator for hospital readmission rates could not be handled in a satisfactory manner. The indicators that were analyzed reflect the current situation and changes in the health of Quebecers, and the degree of effectiveness and progress achieved by Québec's health care system.

GENERAL FINDINGS

A high proportion of Quebecers enjoy excellent health. Not only do people assert it in repeated surveys, their perception is confirmed by an infant mortality rate ranking among the lowest in Canada, and a life expectancy—whether at birth, at age 65 or even disability-free—comparable to the highest in the world.

However, despite recent improvements, certain situations remain worrying. High smoking rates among young people aged 12 to 19, especially girls, a rising incidence of and mortality (adjusted for age) due to lung cancer among women, and diabetes, especially among men, are some problems that need more sustained attention in coming years.

Looking at the health care system itself, Quebecers generally enjoy good access to most health services, especially front-line services. This is illustrated by factors such as access by 99% of Quebecers to the CLSC Info-Health line, where nearly 80% of calls obtained a response from the nurse on duty in less than four minutes. The 35% increase in use of home care services, now used by at least one woman in five aged 75 or older, is another obvious example.

As for waiting periods, more than 87% of users of health services say that they are satisfied with the wait for consultation with general practitioners, and more than 85% are satisfied with the wait for hospital admission. Nonetheless, efforts are needed to reduce waits for certain specialized services such as consultations with medical specialists and day surgery.

With regard to effectiveness, the public can count on a health system that meets the great majority of its expectations. According to the latest surveys, more than eight out of ten people who used health care services consider themselves quite satisfied or very satisfied with the care they received. Moreover, 85% of people who used health care services considered the quality of services as “good” or “excellent.” These proportions are comparable to findings in the Canadian provinces.

Certain basic services such as vaccination—in both regular vaccination schedules and mass campaigns—have eliminated many contagious diseases with grave health consequences for the most vulnerable. The probability of surviving most cancers for five years after being diagnosed is similar to other Canadian provinces. However, the probability of surviving lung cancer is among the highest in Canada. In another area, the use of arthroplasty to resolve joint problems in the hip or knee appears clearly insufficient. Despite these few shortcomings, Québec's health care system appears, in the Canadian context, to be among the most apt to solve the big problems in health care.

GENERAL STATE OF HEALTH

Two measures were used to illustrate the general state of public health—self-assessment of health and life expectancy indicators at birth and age 65, with and without disability.

- ***Almost nine in ten Quebecers assert that they are in good, very good or excellent health***

In 2000-01, according to survey data, 87.5% of women and 90.3% of men—nearly 9 people in 10—considered themselves to be in good, very good or excellent health. In fact, 59% of women and 64% of men said they were in very good or excellent health, equal to 61% of the total population. This percentage obviously changes with age structure, falling from 73% among adolescents 12 to 19 years old to 36% for people 65 or older.

In the Canadian context, Québec has the second-lowest proportion of people who say they are in "fair" or "bad" health, namely 11.1% compared to 10.5% for Albertans.

- ***Disability-free life expectancy the highest***

In 1999, life expectancy at birth reached 78.5 years: 81.5 years for women and 75.4 years for men. Moreover, upon reaching age 65, women and men can expect to live 20.2 and 15.9 more years, respectively.

Over the last two decades, Quebecers have made the greatest advances in Canada in life expectancy at birth. It currently ranks fifth, less than two years below first-place British Columbia. The advance in life expectancy at age 65 among Quebecers is also among the strongest in Canada.

However, disability-free life expectancy is a far better index of a population's health since it factors quality of life into the equation. In 1996, this figure in Québec was 70.2 years at birth and 12.5 years at age 65. In both cases, the figures are the highest in Canada for both women and men. This result stems from a lower rate of declared disability than in the rest of Canada.

RISK FACTORS

The risk factors for personal health include low birth weight, smoking, sedentary lifestyle and obesity.

- ***Premature births on the rise, but low birth weight rates in sharp decline***

The main factors behind the rise in premature births are an increase in multiple births, more pregnancies at a later age, fewer stillbirths, and developments in obstetrical practice. The prematurity rate rose from 5.6% in 1981 to 7.5% in 1998.

In contrast, the low birth weight problem is trending downward. In 1961, 8.3% of babies born in Québec were underweight; 38 years later, the low birth weight rate is 5.7%.

Children whose mother did not finish high school display much higher rates of premature birth (9.0% in 1998) and lower birth weight (8.2% in 1998) than those whose mother had at least 16 years of education (6.0% and 4.4% respectively).

- ***One of the highest rates of non-smokers exposed to tobacco smoke***

In 2000-01, 34% of Québec non-smokers aged 12 or older said that they were exposed to tobacco smoke every day or almost daily. This proportion jumps to 50% when looking only at young people aged 12 to 19. Québec has one of the highest rates in Canada of non-smokers exposed to tobacco smoke.

- ***A stunning advance in the proportion of ex-smokers since 1994-95***

A sharp drop in smoking rates in the 20-44 age group since the mid-1990s has translated into a significant decline in the proportion of regular or occasional smokers among Quebecers aged 12 or older. Between 1994-95 and 2000-01, this proportion declined from 34% to 30%. During the same period, the proportion of ex-smokers in this group grew by 10 percentage points, rising from 28% to 38%.

However, despite some improvement evident in recent surveys, the percentage of smokers among 12- to 19-year-olds remains one of the highest in Canada at 29% for girls and 24% for boys in 2000-01.

- ***A significant increase in physical leisure activity since 1994-95***

In 1994-95, just over a third (35%) of Quebecers aged 12 or older considered themselves active in the sense that they practised a physical leisure activity, while 60% said they were inactive. In 2000-01, a significant improvement was observed; the proportions now stand at 39% active versus 55% inactive.

Only 12- to 19-year-olds currently show a higher percentage of actives (58%) than inactives (30%). In general, the proportion of active people is higher among men than women. The greatest difference is found in the 12-19 age group. In 2000-01, 65% of boys aged 12 to 19 considered themselves active compared to 50% of girls of the same age. Among inactives, the proportions were 21% and 40% respectively.

Compared to the rest of Canada, Québec's proportions are similar to the Atlantic Provinces; there are fewer active people and more inactive people than in most provinces west of the Ottawa River.

- ***One of the lowest obesity rates***

The body mass index establishes whether a person's weight is low, acceptable (normal) or too high. In 2000-01, 44% of Quebecers aged 20 to 64 were overweight. This proportion has remained stable since the mid-1990s.

At all ages, a higher proportion of women were underweight than men. Moreover, a higher proportion of women than men are of normal weight. The largest variation occurs in the 35-44 age group, where 60% of women are of normal weight versus 45% of men. Conversely, 36% of women and 52% of men are overweight. However, this is the second-lowest obesity rate in Canada, after British Columbia.

INCIDENCE AND PREVALENCE OF DISEASES

Two categories of disease were selected to measure incidence: infectious diseases (tuberculosis, *Chlamydia* and *Escherichia coli*) and cancers (lung, breast, prostate and colorectal). Diabetes was used to illustrate prevalence.

- ***Incidence of tuberculosis among the lowest***

In 2001, the adjusted incidence tuberculosis in Québec was 3.5 cases per 100,000 population. In contrast, regions with a high density of immigrants and aboriginals had much higher rates, specifically 8.2 in Montréal-Centre, 53.4 in the Cree Lands of James Bay and 103.6 in Nunavik. Excluding the immigrant population, Québec's rate of tuberculosis incidence was among the lowest in Canada.

- ***Incidence of Chlamydia among the lowest***

The adjusted incidence of the genital infection *Chlamydia trachomatis* has risen significantly since 1998, climbing from 99.0 cases per 100,000 population to 142.7 cases in 2001. Young people between 15 and 24 are most affected, showing a gross incidence of 721.1 cases per 100,000 population in 2001. Young women are especially affected, with a gross incidence of 1,161.2 cases per 100,000 women. However, this is largely explained by a systematic screening of females due to elevated risks of serious complications at pregnancy. Compared to the other Canadian provinces, Québec had one of the lowest gross incidence rates for this disease in 2001.

- ***Declining incidence of verotoxin-producing Escherichia coli infections***

In 2001, the adjusted incidence of verotoxin-producing *Escherichia coli* (*E. coli*) was four cases per 100,000 individuals. It was 6.5 in 2000. This problem affects mainly young people under 20 years of age, especially young children (under five years old). Women are generally more affected than men. Québec's rate stands in the middle of the scale of Canadian provinces.

- ***Adjusted rate of lung cancer incidence in women 2.7 times higher today than 20 years ago***

In Québec, breast cancer in women and lung cancer in men lead cancer incidence statistics, with 98.8 new cases per 100,000 women and 103.4 new cases per 100,000 men in 1997. However, the strongest increase occurred lung cancer among women, which stands 2.7 times higher today than 20 years ago.

The incidence of breast cancer in women is also the lowest after Newfoundlanders. However, Québec has the highest rate of lung cancer among men in Canada.

- ***High prevalence of diabetes among the elderly***

Among people 20 or older, the adjusted rate for diabetes was 4.7% in 1999-2000—4.3% among women and 5.2% among men. In all age groups except the 20-39 range, the rate was higher for men than women. Among men, it peaked at 19.1% for ages 75 to 79, while for women, it reached a high of 16.4% in the 80-84 age group.

MORTALITY

Three types of indicators will be used to illustrate mortality—infant mortality, age-adjusted general mortality rates, and potential years of life lost due to premature death, i.e. death before the reference age of 75. In the latter two cases, the types of diseases selected were cardiovascular disease (acute myocardial infarction and stroke), and the cancers (lung, breast, prostate and colorectal).

- ***With an infant mortality rate of 4 deaths per 1000 live births, Québec ranks among the lowest***

In 1999, 293 babies died before their first birthday in Québec, aggregating respective infant mortality rates of 4.4, 3.6 and 4.0 deaths per 1000 live births of boys, girls and both taken together. Twenty years earlier, the overall rate was 10.4. The current rate of 4.0 per 1000 ranks it third-lowest in Canada.

Low birth weight and prematurity are the two principal risk factors associated with infant mortality. In 1997-98, Québec's infant mortality rate was 200 times higher for babies who weighed less than 1,500 grams at birth than for those who weighed between 3,500 and 3,999 grams. In that year, two thirds of deaths in the first months were premature babies.

- ***Cardiovascular disease remains the leading cause of mortality***

Although mortality due to acute myocardial infarction and strokes has decreased by almost half over the last twenty years, for both women and men, cardiovascular diseases are still the leading cause of mortality. Steady advances in prevention, diagnosis, treatment, rehabilitation and physiotherapy are contributing significantly to a remarkable improvement in survival of this type of disease.

Québec ranks first in Canada with the lowest mortality rate due to strokes. In contrast, its mortality rate due to acute myocardial infarction is superior to rates west of the Ottawa River.

- ***Strong rise in mortality due to lung cancer among women***

The increase in smoking among women has resulted in a significant rise in female mortality due to lung cancer over the past two decades. Since 1980, the adjusted mortality rate due to this cause has more than doubled, rising from 15.5 deaths per 100,000 women to 36.7 in 1999.

- ***Adjusted mortality rate due to prostate cancer among the lowest***

Among men, mortality due to prostate cancer has decreased since the beginning of the 1990s, no doubt thanks to better treatment of the disease and greater use of early detection techniques, even if they are still controversial. Currently, the adjusted mortality rate due to this cause is 26 deaths per 100,000 men, one of the lowest in Canada.

- ***From best to worst, depending on the type of cancer***

Compared to the other Canadian provinces, Québec ranks among the best with one of the lowest adjusted rates of mortality due to prostate cancer, but it ranks in the middle of the scale for breast cancer. As for lung cancer and colorectal cancer, Québec displays the highest rates in Canada for both women and men.

- ***Québec's rate of Potential Years of Life Lost caused by accidental injuries among the lowest***

As a general rule, gross rates of potential years of life lost (PYLL) are much higher for men than women, regardless of the cause of mortality considered, except for breast cancer, obviously.

In 1990, the highest PYLL rate for both men and women resulted from accidental injuries, at 1441.6 PYLL per 100,000 men and 466.2 per 100,000 women. Ten years later, the highest rates were caused by

suicide among men, with 1218.3 PYLL per 100,000, and lung cancer among women, with 457.1 PYLL per 100,000. Furthermore, among the main causes of premature mortality, suicide for both sexes and lung cancer for women were the only ones generating a rising PYLL rate.

Québec now has one of the lowest PYLL rates due to accidental injury in Canada. However, it stands in the middle of the scale for rates related to breast and prostate cancer. For the other causes studied, Québec rates are among the highest.

ACCESS TO SERVICES

To illustrate access to services, indicators were selected which relate to front-line services, the entry points into the health care system. These include the CLSC Info-health line, home care services and outpatient services to treat health problems without necessarily hospitalizing the patient. Indicators reflecting waiting time for a doctor's appointment, day surgery and hospital admission were also used.

- ***In 2000-01, 78% of questions to CLSC Info-Health were answered in under 4 minutes***

Since 1995, the CLSC Info-Health line has been implemented throughout Québec, except in the far north. Currently, 99% of Quebecers have access to this service 24 hours a day, seven days a week. About 95% of callers feel that Info-Health helped them resolve the problem they presented to the nurse on duty. In an estimated 30-40% of cases, a call to the CLSC Info-Health line prevented a medical consultation either in emergency or elsewhere.

During a period of 12 consecutive months, 23% of individuals aged 15 or older called the Info-health line at least once. This percentage climbed to 32% for households with a child, and 58% if the child was under 2 years old

In 1997-98, 59% of questions called in to Info-health were answered in under four minutes. In 2000-01, this proportion rose to 78%.

- ***Home care use rising strongly, especially among the elderly***

From 1996-97 to 2000-01, the use of home care services by Quebecers aged 18 or older rose from 2.0% to 2.7%, a leap of 35%. Among only people aged 75 or over, nearly 18% used this service in 2000-01.

In all age groups, women are larger users of home care services than men. For example, 19.6% of women aged 75 or older used these services in 2000-01, compared to 14.3% of men of the same age. The frequency of use of home care services by Quebecers is similar to that observed in the Maritime Provinces.

- ***One of the lowest admission rates for health problems that could have benefited from outpatient care***

In Québec, the hospital admission rate for health problems that could have benefited from outpatient care has fallen steadily since the mid-1990s. The Québec rate now stands at 355 admissions per 100,000 individuals. The rate is higher for men than women.

Although hospital admissions for problems that could be handled by outpatient care are generally declining across Canada, the fact remains that Québec has the second-lowest such rate in the country.

- *Nine out of ten were satisfied with the waiting time to see a general practitioner*

In 1998, one person in six was able to see a general practitioner on the day he or she made an appointment, and more than half within a week. However, close to 3% had to wait three months or more. Nearly nine in ten individuals said they were satisfied with the waiting time to see a general practitioner. This proportion is eight in ten for seeing a specialist.

- *In 1998, 86% of hospitalized patients were satisfied with wait periods*

Nearly 80% of individuals were admitted to hospital within a week in 1998. In contrast, a little under 7% had to wait three months or more. Nearly 86% of hospitalized individuals said they were satisfied with the waiting period for admission to hospital. However, a quarter of individuals considered the waits for day surgery a little long or too long.

EFFECTIVENESS OF SERVICES

Indicators used to measure service effectiveness were arthroplasty (operations on the hip or knee), vaccinations against certain infectious or viral diseases (flu, meningococcus, measles, *Hib*), and survival of cancer (lung, breast, prostate and colorectal). User satisfaction with services and their evaluation of the quality of care received were also taken in to consideration.

- *Adjusted rates of total hip or knee arthroplasty clearly insufficient*

In 1999-2000, the adjusted rate of total hip replacement stood at 36 operations per 100,000 population, a clear increase since 1996-97, for both women and men. The rate was the aggregate of 35.6 operations per 100,000 women and 36.2 operations per 100,000 men.

The adjusted rate of total knee replacement stood at 34.2 operations per 100,000 population. Since the mid-1990s, the male rate for this type of operation has always been lower than the rate for women. In 1999-2000, the male rate was 31.0 while the female rate was 36.5.

Québec has by far the lowest rate of total arthroplasty, for both hip and knee, in Canada. Despite a steady rise since the mid-1990s, they are still around half the highest rate observed among Canadian provinces.

- *In 2000-01, nearly seven in ten individuals aged 75 or older received flu shots*

In 2000-01, nearly six in ten Quebecers aged 65 or more said they received a flu shot in the last year, twice as many as in 1996-97. Looking at people aged 75 and over, almost seven in ten received flu shots during the year, a proportion higher than forecast in *Priorités nationales de santé publique 1997-2000* (national public health priorities 1997-2000).

In contrast, among Canadian provinces, Québec has one of the highest proportions of individuals aged 65 or older who were never vaccinated against the flu, with a little over 30% in 2000-01.

- *Invasive serogroup C meningococcal disease practically eliminated by vaccines*

Invasive meningococcal disease is endemic. It especially strikes youth under 20, and is among the most frequent causes of meningitis, in particular among young children. Mass vaccination campaigns in 1993

and 2001 practically eliminated cases of serogroup C infections within the vaccinated population. However, the incidence of serogroup B infections remained high, at around one case per 100,000 population.

- ***Measles almost totally eliminated***

Since the end of the 1960s, Québec has made enormous progress in controlling measles. Excluding the epidemic of 1989, the number of identified cases has continued to decline, falling from more than 10,000 cases in 1965 and 1967 to less than 5 cases at the end of the 1990s.

- ***Invasive *Haemophilus influenzae* Type B disease at under one case per 100,000 population***

With the 1992 introduction of the vaccine in the regular vaccination calendar for children under age five, the incidence of invasive *Haemophilus influenzae* Type B (*Hib*) disease literally plunged, falling, according to Quebec data, from 19 cases per 100,000 population in 1992 to five cases in 1993. The rate, which varied between 19 and 22 cases per 100,000 at the beginning of the 1990s, stood at less than one per 100,000 population at the beginning of the 2000s. Until 1994, the incidence of invasive *Haemophilus influenzae* Type B disease was systematically higher than the Canadian rate. With the introduction of the vaccine in the regular calendar in all provinces, the Québec incidence of this disease is now similar to rates found across Canada.

- ***One of the best 5-year survival probabilities with lung cancer***

In Québec, the probability of surviving cancer for five years after the first diagnosis, adjusted for age, was 17% for lung cancer and 53% for colorectal cancer. For breast cancer, the 5-year survival probability stands at 79%, the same as for prostate cancer.

In Canada as a whole, Québec men showed the best 5-year probability of surviving lung cancer, and women ranked second in this regard.

- ***Nine in ten quite satisfied or very satisfied with medical services received***

In 2000-01, more than eight in ten Quebecers said they were quite satisfied or very satisfied with health services they received. Eighty percent of people who received hospital services said they were quite satisfied or very satisfied, compared to 90% with regard to medical services.

The elderly population and young people showed the most satisfaction with health services received. Satisfaction rates even exceeded 95% for medical services received by youth aged 15 to 19 years, and for hospital, medical and community services received by persons aged 75 or older. In general, the degree of satisfaction of Quebecers with health services received is similar to that observed in the Canadian provinces.

- ***Fully 85% of health care patients deemed the quality of care "good" or "excellent"***

Among people who received health care in 2000, 85% considered the services to be "excellent" or "good." Again, when taking into account all health care received, people 75 or older displayed the highest percentages, with rates widely exceeding 90%, depending on the type of care. However, for a given type of care, the highest rate is shown by adolescents aged 15 to 19; 97% of them considered the quality of

medical care as excellent or good. By and large, results obtained were similar to those observed in Canada overall.