

## PUBLIC POLICY AND

# Health

## Alcohol Consumption and Public Health in Québec: Summary



### Background

This edition of the Public policy and Health series is a summary of a scientific advisory written by Nicole April, Claude Bégin and Réal Morin of the Direction du développement des individus et des communautés of Institut national de santé publique du Québec (INSPQ). This advisory on alcohol consumption in Québec is submitted to the Minister of Health and Social Services for the purposes of implementing section 54 of the Public Health Act.

The synthesis is produced by the INSPQ's Public Policy team (Roseline Lambert, Geneviève Lapointe and Maude Chapados) and is intended to facilitate knowledge transfer to a broad audience.

Overall, alcohol consumption in Québec is rising:

- Increase in alcohol consumption, especially wine
- Increase in alcohol consumption among women
- Increase in riskier patterns of drinking

a) Readers who would like more details or full bibliographic references can consult the full report (in French) on the following Web site: [www.inspq.gc.ca/publications/default.asp?NumPublication=1087](http://www.inspq.gc.ca/publications/default.asp?NumPublication=1087).

### Highlights

Alcohol consumption is a public health issue because it causes many health and social harms:

- Alcohol consumption is associated with deaths, chronic diseases, cancers, injuries, violence, mental health problems, addiction and social problems.
- In 2002, the World Health Organization (WHO) estimated that alcohol was the third leading risk factor for mortality and morbidity in developed countries, after smoking and high blood pressure. In North America, alcohol accounts for 14.2% of the burden of disease in men and 3.4% in women. In Québec, 1.8% of deaths are attributable to alcohol.
- Total alcohol-related healthcare costs are approximately the same as revenue from alcohol sales in Québec; in 2002 in the province, over \$3 billion in costs were attributable to alcohol, the equivalent of \$416 per inhabitant. Healthcare costs represent 22% of this total, that is, \$651 million; this is about equal to the net income from alcohol sales for that year.

Measures to prevent alcohol-related problems:

- Tax alcohol and set prices high
- Restrict access to alcohol
- Maintain state monopoly
- Adopt measures to deter drinking and driving
- Offer clinical services to at risk drinkers and alcoholics

## Impacts of alcohol on health and well-being

**Alcohol consumption is a public health issue because it causes many health and social harms**

Alcohol is very present in many societies around the world and in the lives of most Quebecers. It is served with meals, during festive occasions and when it is time to relax. Low and moderate levels of alcohol can protect against heart disease in older men and postmenopausal women. It also protects against type 2 diabetes. However, alcohol consumption causes more social and health problems than it prevents.

**Alcohol consumption is a major determinant of health among Quebecers**

*The third leading risk factor for mortality and morbidity*

In 2002, WHO estimated that alcohol was the third leading risk factor with the greatest impact on mortality and morbidity (measured in disability-adjusted life years) in developed countries, after smoking and high blood pressure. However, this estimate does not take into account the harms of alcohol consumption to others, such as the families and friends of drinkers.

*Estimate of alcohol-related mortality and morbidity in Québec*

It is estimated that in Québec in 2002, 1.8% of all deaths were attributable to alcohol. Since these deaths occur mostly among young people, the estimated potential years of life lost is 38,668 years. For this same year, 405,353 episodes of ambulatory care and 48,307 hospitalization diagnoses in Québec were attributable to alcohol.

*Negative impacts of alcohol on health and well-being*

- Alcohol causes biochemical changes in cells that can lead to chronic conditions including several types of cancers (mouth, pharynx, larynx, oesophagus, breast, liver and colorectal), liver cirrhosis, pancreatitis and hypertension. For some diseases, the risk increases even if consumption is moderate.
- Intoxication that results from heavy drinking over a limited time period increases the risk of acute health and social problems, such as traumatism (injuries, traffic accidents) and violence.
- Alcohol dependence is a mental health problem that maintains alcohol consumption and can lead to acute and chronic social problems.

It is important to note that alcohol consumption is associated with higher incidence of sexually transmitted infections. Prenatal exposure to alcohol is a risk factor for malformations and for foetal and child developmental disorders. Moreover, the harmful effects of alcohol are not limited to individuals who drink but also affect their families, friends, and society in general. These consequences have been poorly documented to date.

*Alcohol consumption measure and standards*

- Studies have shown that an increase in consumption of one litre of pure alcohol per person increases all-cause mortality by 2.9%, suicides by 4%, accidents by 5.9 % in men, and cirrhosis by 16% in men and 12% in women.
- According to Canada's low-risk alcohol drinking guidelines, having fewer than 15 drinks<sup>b</sup> a week for men and fewer than 10 for women, with a maximum of two drinks a day, is considered low risk.
- However, some people should not use alcohol or should limit their use to less than these maximum amounts: pregnant women, people using certain medications, people with drinking problems, liver disease or psychiatric illnesses, people who operate service vehicles, and young adolescents.

**Healthcare costs attributable to alcohol and economic benefits from the sale of alcoholic beverages in Québec**

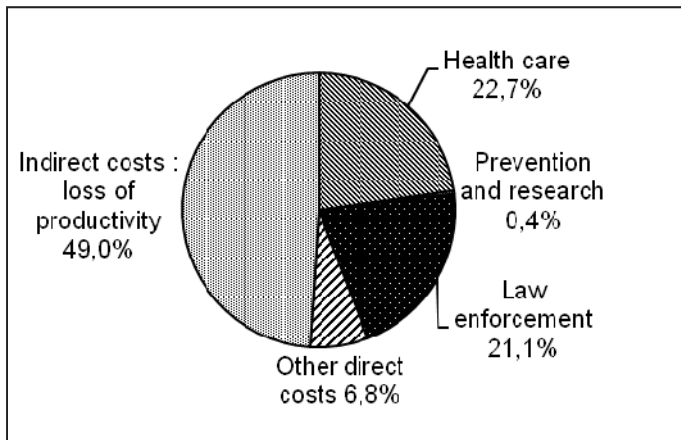
*Economic benefits from alcohol in Québec*

The government's net benefits from the control and sale of alcoholic beverages have increased constantly since 1994, from \$695 million in 2002 to almost \$925 million in 2008.

Note that for the year 2002-2003, income from the control and sale of alcoholic beverages was \$695 million and is comparable to alcohol-related healthcare costs, estimated at \$651 million.

*Estimated costs of alcohol*

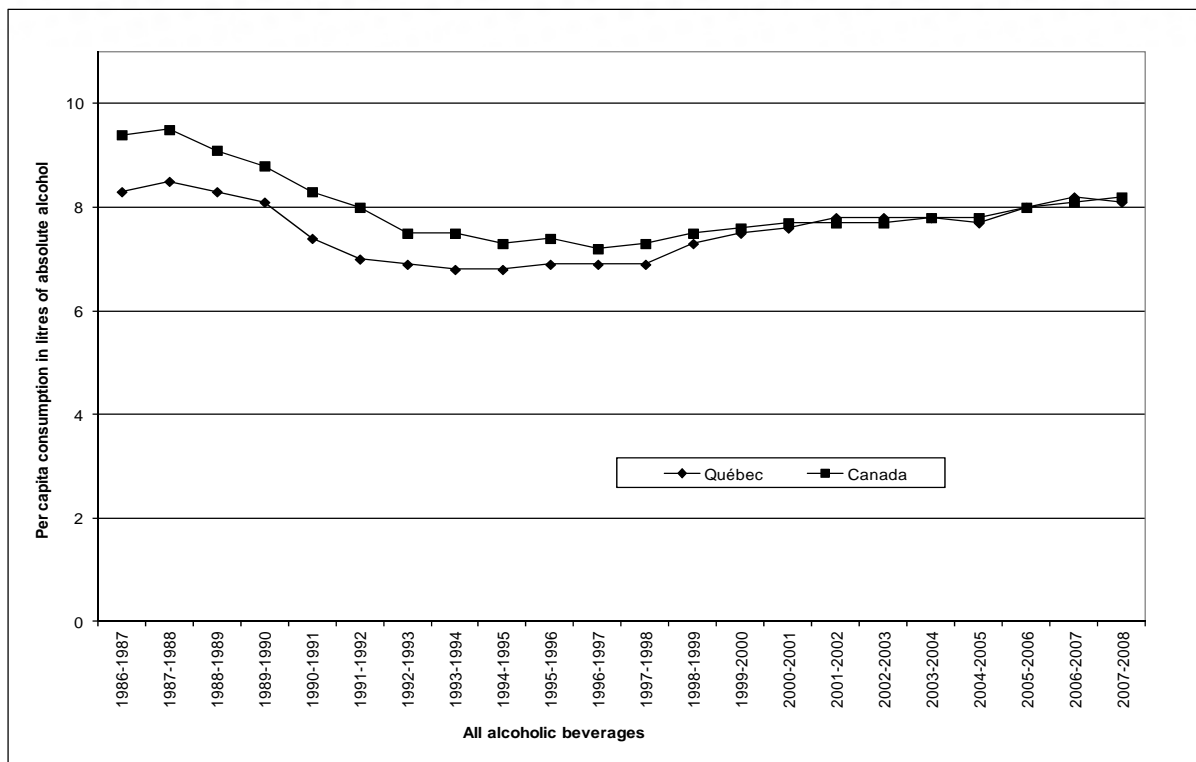
In Québec in 2002, over \$3 billion in costs were attributable to alcohol, which amounts to \$416 per inhabitant. Healthcare costs represent 22% (or \$651 million) of the total.



**FIGURE 1 COSTS ATTRIBUTABLE TO ALCOHOL IN CANADA, 2002**

b) In Canada, one standard drink equals 17 ml of pure alcohol (13.6 g).

## Evolution of alcohol consumption in Canada and Québec



**FIGURE 2** EVOLUTION OF CONSUMPTION PER CAPITA (PEOPLE AGED 15 YEARS OR OVER) IN LITRES OF PURE ALCOHOL, QUÉBEC, CANADA, 1986-1987 TO 2007-2008

Source : Statistics Canada, The Control and Sale of Alcoholic Beverages in Canada, Fiscal year ended March 31, no. 63-202-XIE, no. 63-202-XIB, annual catalogues 1986-1976 to 2007-2008.

After decreasing until the early 1990s, alcohol sales in Québec began to rise. From 1994–1995 to 2007–2008, consumption of alcoholic beverages per capita rose 19.1%, from 6.8 litres to 8.1 litres of pure alcohol<sup>c</sup> per person.

Alcohol consumption is on the rise in Canada and Québec

### *Increase in per capita consumption<sup>d</sup>*

In 2003, per capita consumption of pure alcohol in Canada was lower than in a number of comparable western countries.

However, it has been increasing since the mid-1990s, unlike the downward trend seen in several countries, including France.

### *Increase in wine consumption*

Wine is increasingly popular and is the main source of increase in alcohol consumption in Québec. However, beer remains the alcoholic drink of choice, on a pure alcohol-equivalent basis. For example, in 2007–2008, beer accounted for 56.8% of per capita alcohol consumption. Consumption of spirits is lower than that of other products and has remained relatively stable since the early 1990s.

c) Pure alcohol is free of water. In Canada, a standard drink (a glass) is 341 ml of 5% beer, 142 ml of 12% wine, 43 ml of 40% spirits or 85 ml of 18% fortified wine (e.g. port). These figures are the equivalent of 17 ml (13.6 g) of pure alcohol.

d) Average consumption per person aged 15 years or over.

*Increase in alcohol consumption among women in Québec*

Men drink more than women, but the increase in consumption is particularly significant among women. From 1994–1995 to 2005, the proportion of women who drink alcohol rose from 76.2% to 81.8%; overall, the figures for men were stable. Similar increases in women's consumption have also been observed in other countries.

*Increase in riskier drinking patterns in Québec*

From 1994–1995 to 2005, the percentage of drinkers who exceeded low-risk alcohol drinking guidelines rose from 6% to 9.5%.

From 1994–1995 to 2005, the proportion of men who exceeded low-risk alcohol drinking guidelines increased from 8.1% to 11.2%. The figure more than doubled among women, increasing from 3.8% to 7.8%.

Data from 2005 revealed that 21% of Quebecers aged 15 and over who drink alcohol—over a million people—reported heavy drinking (5 or more drinks on an occasion at least once a month), which is likely to have harmful consequences.

*Increase in heavy drinking in Québec*

Heavy drinking is defined as consuming 5 or more drinks on one occasion at least once a month over the past year.

In Québec in 2005, 29.5% of men and 11.9% of women reported having engaged in heavy drinking at least once a month over the past year. In 1994–1995, the figures were 17.6% and 4.3%, respectively. Initial analyses of 2007 data seem to confirm this upward trend.

Heavy drinking among young people is particularly worrisome. Among 15- to 24-year-olds who drink, the rate rose from 18% to 35% from 1994–1995 to 2005. Among 25- to 44-year-olds, the figure doubled during the same period.

*Drinking among Québec high-school students*

In 2008, a majority of high-school students, 59.7%, reported drinking alcohol in the past year, and 14.3% said they drank regularly. However, the trend was downward from 2000 to 2008.

Moreover, still in 2008, 67.2% of these young drinkers engaged in heavy drinking—5 or more drinks on one occasion—at least once in the past 12 months, and 21.9% of them did so repeatedly, that is, 5 times or more during the same period.

*Drinking during pregnancy*

According to the 2005 Survey on Breastfeeding in Québec, 34% of women reported drinking alcohol during the most recent pregnancy. However, according to Canadian survey results, alcohol drinking during pregnancy is declining in Québec.

## Public policies for prevention of alcohol-related problems

### Alcohol public policies around the world

WHO has been committed to preventing problems related to alcohol consumption since at least 1979. In the first decade of the twenty-first century, the organization confirmed the importance of alcohol as a health determinant worldwide. A number of its strategies targeted alcohol, including in the areas of road safety, mental health, health promotion and healthy lifestyle habits. Moreover, a discussion regarding a global strategy to reduce the harmful use of alcohol is planned for the World Health Assembly of May 2010.

Various tools have been developed for international comparison of alcohol policies. According to one of these tools, the *Alcohol Policy Index*, Canada ranked tenth among Organization for Economic Cooperation and Development countries for its alcohol public policies. However, the comparison indicates that Canada could improve in matters of sales taxes on alcohol adjusted to purchasing power, advertising, and driving under the influence.

### Effectiveness of measures to prevent alcohol-related harms

According to international experts, the most effective measures evaluated to prevent alcohol-related problems are public policies that target accessibility: taxation, minimum legal age limit for purchasing alcoholic beverages, and control of physical access, notably through retail state monopoly. Other effective measures to reduce alcohol-related harm include driving under the influence countermeasures, as well as treatment and interventions for people who drink too much. Educational and persuasive measures have not been shown to have sustained effects on consumption but can facilitate social policy making.

### Responsibilities regarding alcohol: Canada and Québec

Canadian alcohol legislation focuses on importation, duties and taxes, advertising, bottling, labelling, and the *Criminal Code* for impaired driving. Alcohol laws and regulations are applied by the Canada Border Services Agency, the Canadian Food Inspection Agency, the Canadian Radio-television and Telecommunications Commission (CRTC) and the Competition Bureau of Canada.

Québec is responsible for legislation pertaining to business opening hours, retail sale conditions on-premises, permits, business practices, sales ethic, and minimum drinking age. Moreover, the province is responsible for administrative control of the provincial liquor board, through the Société des alcools du Québec (SAQ) and the Régie des alcools, des courses et des jeux (RACJ). Only the SAQ has the authority to import alcoholic beverages or to purchase them from another province. The RACJ controls advertising, educational preventive programs, permits, and offences relating to alcoholic beverages.

### Measures to prevent alcohol-related harms

#### *Tax alcohol and set prices high*

Increasing alcoholic beverage prices is an effective lever in reducing demand for alcohol among all population groups, particularly young people. Research indicates that increases in price and taxes can reduce several alcohol-related problems (deaths due to liver cirrhosis, all-cause mortality, and criminal or violent acts).

Alcohol taxation is a relatively inexpensive measure to implement and is the most cost effective. Although the effectiveness of decreasing taxes on low-alcohol products has not been demonstrated, this measure was implemented in Australia and proposed in British Columbia, with the goal of reducing alcohol consumption. Fixing minimum prices on alcoholic beverages that are revised regularly, is a measure to which young people are particularly sensitive.

In Canada, there are three types of taxes that affect the price of alcoholic beverages: 1) federal excise taxes; 2) environmental taxes and provincial mark-ups; and 3) federal and provincial sales taxes. The various taxes constitute a large proportion of the purchase price of alcoholic beverages in Canada. Moreover, federal laws establish minimum prices on alcoholic beverages based on alcohol content. Since 1990 in Québec, the RACJ has controlled the minimum price of beer sold in off premise outlets. Under this regulation and beginning in 1994, the minimum price of beer is adjusted based on the Consumer Price Index for Canada, and varies according to percentage of alcohol by volume.

According to the authors of this summary report, although alcohol price control has been shown to be the most effective measure, it could be difficult to use this means more often, given the current context where public opinion is unfavourable. However, maintaining current taxes and adjusting taxes as income and cost of living change could be the approach to adopt, in terms of economic accessibility.

#### *Maintain state monopoly*

State monopolies, such as the SAQ in Québec, can limit alcohol consumption and alcohol-related problems; conversely, elimination of these monopolies can increase total alcohol consumption. State monopoly is an effective preventive measure as long as it carries social responsibility and pursues public health objectives. In this type of market structure, various aspects of accessibility to alcoholic beverages can be managed, such as locations and hours of operation, enforcement of laws regarding sales to minors and intoxicated persons, and responsible marketing strategies.

However, over the past few decades, the mission of state monopolies—to control the sale of liquor—has been gradually eroded in Québec, Canada and other countries.

In 1921, Québec was one of the first in North America to adopt a law creating a state monopoly controlled at the time by the Québec Liquor Commission. The SAQ is now responsible for the trade of alcoholic beverages and operates under the authority of the Minister of Finance.

#### *Deter drinking and driving*

The risk of being involved in a traffic accident increases significantly when a driver's blood alcohol concentration level is 40 mg (or 0.04 g) per 100 ml of blood. The risk is about five times greater at 100 mg and 140 times higher at 240 mg, relative to a blood alcohol content of 0 mg.

A number of experts note that to act effectively in regard to drinking and driving, it is important to increase the public's perception of the risk of being apprehended, notably by intensifying police surveillance (e.g. controls and sobriety checkpoints). Alcohol ignition interlock devices and enforcement of administrative and legal sanctions are other effective deterrents.

In 2008, 88 countries had blood alcohol concentration limits equal to or less than 50 mg per 100 ml. In Canada, the *Criminal Code* was amended in 1969 to make it a criminal offence to drive with a blood alcohol concentration of over 80 mg of alcohol per 100 ml of blood (0.08 g/100 ml). According to the *Table québécoise de la sécurité routière*, all territories and provinces except Québec have sanctions for drivers with alcohol blood concentrations below 80 mg per 100 ml of blood. In Québec, if a person is caught driving while impaired, he or she could be subject to penalties under two levels of government—federally, under the *Criminal Code*, and provincially, under the *Highway Safety Code*. A driver with a blood alcohol level above 80 mg per 100 ml or, in the case of a holder of a learner's permit or probationary licence, over 0 mg has his or her permit suspended immediately for a period of 90 days.

#### *Provide clinical services*

There is an ongoing need to provide a range of clinical services to drinkers at risk and to alcoholics. Services designed to be preventive, especially those for drinkers at risk who want to reduce their alcohol consumption, complement measures that act on the social environment of consumption.

In Québec, people who drink more than the amounts deemed to be low risk can obtain services to assess their alcohol consumption and support to reduce such consumption. The Alcochoix+ program is offered in health and social services centres; it includes an evaluation as well as support and follow-up by a professional, as needed. Rehabilitation centres for people with alcohol or drug addictions offer specialized services in all regions of the province.

Private and community centres also provide services for individuals with addictions to alcohol and other substances. The Ministère de la Santé et des Services sociaux has implemented an accreditation and quality control process for these centres.

### *Limit marketing and advertising*

The alcohol industry is very aggressive when it comes to marketing and promoting its products; the industry relies on modern marketing strategies and has important financial means. Studies have demonstrated that alcohol advertising can have harmful effects on young people. Indeed, for this reason, WHO recommends that marketing of alcoholic beverages be regulated. Private businesses, such as bars, and state monopolies engage in a multitude of promotional practices.

One form of marketing is advertising through price reductions. In prior analyses, the INSPQ documented the SAQ's marketing strategies, notably promoting products through price reductions, usually adjusted according to the volume of alcohol products purchased or to various holiday periods. The authors of this report consider that the effect of these practices is increased economic accessibility to alcohol products. Before the 2000s, these various forms of discounts were almost non-existent but have since flourished. They show of a shift in state alcohol control and prevention policies toward profit-motive objectives. This situation has also been observed in Canada and other countries.

Alcohol advertising in Canada is governed in three ways: 1) the *Code for Broadcast Advertising of Alcoholic Beverages* at the federal level; 2) provincial standards that build on the federal regulations; and 3) Advertising Standards Canada, which identifies industry standards for alcohol advertising. In Québec, the *Act respecting offences relating to alcoholic beverages* prohibits representation by any means that an alcoholic beverage is beneficial to health or possesses nutritive or curative value.

In Québec, the industry has given itself a code of ethics. The Ethics Council of the Alcoholic Beverage Industry receives complaints, ensures compliance with the code, and issues recommendations which are made public. No organization in Canada or Québec exercises any control on alcohol advertising and promotion on the Internet.

Québec has implemented several alcohol public policies in addition to making alcohol a target in the *2003–2012 Québec Public Health Program* and the *Plan d'action interministériel en toxicomanie 2006-2011*. The recommendations formulated by the INSPQ in this scientific opinion, produced pursuant to section 54 of the *Public Health Act*, are part of existing measures to prevent alcohol-related problems in Québec. The recommendations are made to maintain and strengthen measures targeting alcohol consumption that have already been implemented.



## INSPQ's recommendations for the prevention of alcohol-related problems

### Alcohol pricing

Although alcohol price control has been shown to be the most effective measure to reduce alcohol consumption and its harmful consequences, a context where public opinion is unfavourable would make difficult an increasing use of this means. However, maintaining current taxes and adjusting taxes as income and cost of living change could be the approach to adopt, in terms of economic accessibility.

- Maintain current tax measures on alcohol products while taking into account consumer price index and change in household incomes.
- Conduct studies on the effects of changes in alcohol pricing on consumption in Québec and, subject to data availability, by different socioeconomic groups.

### Legal framework and responsibilities of state monopoly

State monopolies are important tools to ensure a balance between requirements of alcoholic beverages business management and population health interests.

- Maintain the Société des alcools du Québec's state monopoly and current powers of the Régie des alcools, des courses et des jeux.
- Reaffirm the social responsibility of the Société des alcools regarding alcohol consumption; support the SAQ's commitment to encourage responsible alcohol consumption, particularly through its participation in Educ'alcool, and invite it to examine, in light of its sales ethics policy, its promotion practices centred on discounts according to volume purchased or on various forms of price cuts.

### Alcohol marketing

Because alcohol can have harmful effects, especially among youth, the World Health Organization recommends that all countries strictly regulate the marketing of alcoholic beverages.

In Québec, it is important to look at the conditions that are acceptable to society and to verify the legal feasibility of partial or total restrictions on alcohol advertising and promotion practices in drinking environments, such as "2-for-1s" or happy hours.

### Drinking and driving

The general population is largely in favour of measures to reduce drinking and driving. Such measures already exist but should be reinforced. More specifically,

- increase controls at random or in sobriety checkpoints;
- make the use of alcohol interlock devices mandatory for people found guilty of impaired driving;
- decrease the permitted blood alcohol concentration for vehicle drivers to 50 mg per 100 ml, and introduce administrative and legal sanctions, such as demerit points and fines, for motor vehicle drivers whose blood alcohol concentrations are between 50 mg and 79 mg of alcohol per 100 ml of blood.

### Epidemiological surveillance

Knowledge about data on changes in alcohol consumption and associated problems is required when formulating public policies on alcohol. Such analyses are also relevant to the population. They can eventually arouse the public's interest in efforts to implement policies designed to improve population health, safety and well-being. To better understand changes in consumption habits and their consequences among different population groups, epidemiological surveillance activities must be continuous and over prolonged periods. Specifically, this involves the following:

- Monitor changes in alcohol consumption, at-risk patterns of drinking, morbidity, mortality, and associated social costs.
- Maintain continuity across surveys and in variables studied to enable long-term follow-up of patterns of alcohol consumption. To this end, maintain data collection as performed since the year 2000 in Québec high schools and ensure continual monitoring of indicators of alcohol consumption habits through Canadian Community Health Surveys and other surveys.
- Document the alcohol consumption habits of women of childbearing age and pregnant women, and conduct studies to determine the frequency of foetal alcohol spectrum disorders.
- Communicate the results of these surveillance analyses to the public.

To realize these recommendations, collaboration among all concerned ministries and governmental organizations is required. As proposed in Canada, in several countries and by WHO, the recommendations could eventually be part of a governmental alcohol policy. These recommendations correspond with those of the global strategy to reduce the harmful use of alcohol that will be studied during the Sixty-third World Health Assembly in May 2010.

For bibliographic references, see the full scientific advisory (in French) at the following address: [www.inspq.qc.ca/publications/default.asp? NumPublication=1087](http://www.inspq.qc.ca/publications/default.asp? NumPublication=1087).

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