Council Direction:
N/A

Information:

Summary
Alcohol is a causal factor in 60 types of diseases and injuries and a component cause in 200 others. The World Health Organization (WHO) Report (2010) identified alcohol as the second leading risk factor for mortality, morbidity and disability in high income countries. Second only to tobacco, alcohol creates the most health, social, economic and criminal harms to individuals, families and communities. Some of the health impacts of alcohol include: injuries (both intentional and unintentional, including serious trauma), cancers, heart disease, fetal alcohol spectrum disorder, liver, diabetes and infectious diseases. The harmful effects of alcohol on health significantly outweigh any positive benefits.

The burden of alcohol is estimated to cost the Ontario economy $5.3 billion annually. When comparing the direct costs of alcohol to the direct revenue, there was a deficit of $456 million in 2002-2003.
Alcohol is the most widely used psychoactive drug in Canada and Ontario. In 2009, 79% of Ontario adults reported having a drink within the past 12 months. In 2011, 55% of Ontario Students (grade 7-12) consumed alcohol within the past 12 months.

According to surveys, 22% of Ontario adult respondents exceeded Low Risk Drinking Guidelines with 35% of Hamilton residents reported binge drinking in the past 12 months. Drinking patterns for Ontario adults have fluctuated over the past decade. However, several indicators of heavy drinking and problematic drinking remain at elevated rates. Moreover, women and young adults have shown prominent increases in heavy and problematic drinking over the past decade. These increases are of concern because increased consumption of alcohol is associated with increased risk of injury, health and societal problems. Past year alcohol use, binge drinking and cannabis use is significantly lower in 2011 compared with 1999 amongst students in grades 7-12.

Alcohol pricing, controlling physical availability, curtailing alcohol marketing and alcohol control systems are interventions that are effective at addressing this issue and supported by public health.

Over the past five years progress has been made towards effective alcohol policy in the City of Hamilton, such as the implementation of the Municipal Alcohol Policy and the changes made as a result of the Hess Village Review. For 2012, Hamilton Public Health Services (PHS) will be working to further address alcohol policy and will bring forward recommendations for the consideration of the Board of Health.

**BACKGROUND:**

The Ontario Public Health Standards mandate the Board of Health to address alcohol and other substance use for both “Chronic Disease Prevention” and “Prevention of Injury and Substance Misuse” requirements.

Injuries include all the ways people can be physically and emotionally hurt or killed. Unintentional injuries include motor vehicle crashes, falls, and sport injuries. Intentional injuries are a result of acts of aggression, bullying and relationship violence; or are self-inflicted, as in suicide. Substance misuse can increase the risk of unintentional and intentional injuries, and chronic disease.

**Impacts of Alcohol**

Alcohol is a causal factor in 60 types of diseases and injuries and a component cause in 200 others. The harms from drinking not only affect the drinker; alcohol consumption can harm the well-being and health of others. Serious social implications include sexual and physical violence, child neglect and abuse, traffic crashes, drowning, injuries, fires, suicides, homicides, absenteeism in the workplace and family and financial problems. Furthermore, the diseases and injuries related to alcohol consumption have social
implications including medical costs, which are borne by governments, negative effects on productivity and financial and psychological burdens on families.¹

Next to tobacco, alcohol creates the most health, social, economic and criminal harms to individuals, families, and communities. The World Health Report (2010) identified alcohol as the second leading risk factor for mortality, morbidity and disability in high income countries. The harmful use of alcohol is especially fatal for younger age groups and alcohol is the world’s leading risk factor for death among males aged 15–59².

Human and Social Impacts
Alcohol use is associated with increased levels of health and social harms which have far-reaching effects and are difficult to measure.³ For example, alcohol use has an impact on:

- individuals and families (crisis, disruption, loss of income, housing, employment, impact on children, health, legal costs, etc)
- community services and community safety
- poverty and homelessness
- workplace – lost work days, increased sick time, reduced productivity, injury and job loss
- education – skipped classes, school performance and peer relationships
- the health care system-increased stress on the system and reduced access to appropriate health care

Furthermore, Fetal Alcohol Spectrum Disorder (FASD) is described by researchers as the leading cause of developmental and cognitive disabilities in children. FASD is a lifelong disability which has serious public health, social and economic issues that have cost and societal impacts. Individuals living with FASD are at high-risk of developing secondary disabilities such as: mental health, trouble with the law, difficulties staying in school, unemployment homelessness and addictions.⁴

Alcohol and Disease
The harmful effects of alcohol on health significantly outweigh any positive benefits. Alcohol is related to many types of diseases and it is identified as a carcinogen for several types of cancers.

- Having 1 or more drinks a day increases risk for cancers of the mouth, pharynx, larynx, oesophagus, liver, breast, colon and rectum;
- More than 2 drinks a day increases the risk of high blood pressure; and

• Consuming more than 5 drinks at one time significantly increases the risk for stroke.\(^5\)

Major diseases causally linked to alcohol include:

- **Cancers**: colorectal, female breast, larynx, liver, esophagus, oral cavity and pharynx
- **Cardiovascular diseases**: hypertension, cardiac dysrhythmias and hemorrhagic stroke
- **Gastrointestinal diseases**: liver cirrhosis and pancreatitis (both acute and chronic)
- **Neuropsychiatric disorders**: epilepsy and other alcohol use disorders as defined by the World Health Organization
- **Fetal Alcohol Spectrum Disorder and pre-term birth complications**: FASD is caused only when a mother drinks alcohol during her pregnancy. There are no known treatments, only prevention.\(^6\)
- **Diabetes mellitus**: light to moderate drinking may be beneficial while heavy drinking is detrimental
- **Infectious diseases**: weakens the immune system, pneumonia, tuberculosis, HIV/AIDS and sexually transmitted infections\(^7\)

**Alcohol and Injury – Unintentional and Intentional**

Alcohol is an established risk factor for self-injury, violence, impaired driving, falls, sports and recreational injuries, and injuries related to falls.\(^8\) It is clear that starting at just one drink over a three-hour period, the estimated risk of injury is large and accelerates with each additional drink.\(^9\)

**Alcohol – Related Trauma (serious injury)**

In both Ontario and Hamilton the most common causes of alcohol related trauma involve motor vehicles, falls and assaults.

In Ontario in 2009-2010, just over half (53%) of trauma cases in lead trauma hospitals were tested for blood alcohol concentration (BAC). Of those that were tested, 685 (30%) had a BAC greater than zero, while 543 (24%) had a BAC greater than or equal to the legal limit (0.08%).\(^10\)

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In Hamilton, Hamilton Health Sciences reported just under half (45%) of trauma admissions were tested for BAC. Of those that were tested, 89 (37%) had a BAC greater than or equal to 0.08%.  

Impaired Driving
Impaired driving is the number one criminal cause of death in Canada. In 2005 in Hamilton, almost 7% of the population 16 years of age or older drove a motor vehicle after consuming two or more drinks. That proportion was not significantly higher compared with Ontario’s proportion (5%). In Hamilton from 2000 to 2009, alcohol involvement in collisions averaged 6.2%, compared to 5.5% for the previous 10 years. The percentage of collisions reported with one or more drivers having used alcohol has shown an increasing trend since 1998, although it was at a more typical level in 2009. The rate was 7.0% in 2008, and 5.8% in 2009. The involvement of young drivers in collisions under the age of 21 who had been drinking was 9.4% in 2008 and 6.1% in 2009; a statistic which has shown great variability.

Most recently, the Hamilton Police Service has reported approximately an 8% increase in impaired driving related charges from 2010 to 2011.

Cost of Substance Abuse
The estimated cost of substance abuse (tobacco, alcohol and illegal drugs) in Canada was $39.8 billion in 2002 or $1,267 for every Canadian. Alcohol accounted for about $14.6 billion in costs representing 36.6% of the total costs of substance abuse. The largest costs of alcohol were:

- $7.1 billion for lost productivity due to illness and premature death
- $3.3 billion in direct health care costs
- $3.1 billion in law enforcement costs

The costs attributed to illegal drugs were estimated to be around $8.2 billion or 20.7% of the total costs of substance abuse.

A Canadian FASD specific cost analysis study using data from 2007 found:
- The annual direct and indirect costs of FASD in Canada totals $5.3 billion/year
- Total adjusted annual costs per child/youth with FASD age 0-53 yrs at the individual level was $21,642.

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12 MADD
The annual economic impact of alcohol use in Ontario is estimated at $5.3 billion. When comparing the direct costs of alcohol to the direct revenue, there was a deficit of $456 million in 2002-2003.  

An earlier analysis of costs from 2009, found that alcohol-related injuries (for the top 4 causes of injury) cost $440 million in Ontario. The costs were:

- $156 million for alcohol-related motor vehicle collision injuries
- $117 million for alcohol-related unintentional falls
- $115 million for alcohol-related suicide and self-inflicted injuries
- $52 million for alcohol-related injuries resulting from interpersonal violence.

Drinking Patterns in Ontario and Hamilton

Alcohol is the most widely used psychoactive drug in Canada and Ontario. The proportion of people drinking in a high-risk manner (above Low Risk Drinking Guidelines and above the lower threshold where there is an elevated risk of alcohol related cancer) in Canada is greater than the current prevalence of tobacco smokers.

Canadian Low Risk Drinking Guidelines were recently developed to inform Canadians about how to reduce alcohol-related risks. The guidelines identify limits based on the point where the overall net risk of premature death is equal to that of a lifetime abstainer. The guidelines recommend no more than 10 standard drinks a week for women, with no more than 2 drinks a day most days; and no more than 15 standard drinks a week for men, with no more than 3 drinks a day most days. Further guidelines state certain situations (e.g. driving, pregnancy, mental or physical health problems) when no alcohol should be consumed.
In Ontario, alcohol is easily available and is extensively promoted and marketed. The stage is set to support high levels of consumption and encourage increased drinking. It is of particular concern that youth, women and young adults have shown prominent increases in binge drinking, heavy drinking and problematic drinking over the past decade. These increases are likely due to the aggressive marketing and promotion of alcohol to these groups.

**Ontario Adults Drinking Patterns** (aged 18+), 2009 CAMH eMonitor

- 22% of respondents (drinkers & non-drinkers) exceed Low Risk Drinking Guidelines (> 2 drinks/day or > 9 drinks/week for women and >14 drinks/week for men)
- 13% reported hazardous or harmful drinking (increases likelihood of future medical and physical problems, or indicates harmful consequences of use already experienced)
- 7% reported weekly binge drinking (5 or more drinks on a single occasion at least once a week)

**Hamilton Residents Drinking Patterns** (aged 12+), 2005 Canadian Community Health Survey

- 35% of Hamilton residents reported binge drinking in the past 12 months
- 5% of females and 10% of males report problem drinking behaviour (> 14 drinks/week in males, > 9 drinks/week for females)

**Hamilton Students Drinking Patterns** (grades 7-12), 2009 Hamilton Student Drug Use and Health Survey

- 35% have tried alcohol by grade 9. Some have tried as early as grade 5.
- Nearly one third drank enough to feel drunk by grade 9

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• Almost 29% of high school students and 12% of middle school students drank once or twice per month
• 17% of high school students reported drinking once or twice per week
• 18% reported binge drinking about once a month
• 16% reported binge drinking about once a week
• Binge drinking increases by grade

Addressing The Issue - Effective Action

While illegal drugs create much public concern and discussion, research shows alcohol is the most commonly used substance and causes a large amount of individual and societal problems.

There is a clear role for public health to work with stakeholders and government agencies to effect the changes necessary to reduce alcohol related harm. In Canada, the recommendations for a National Alcohol Strategy, Reducing Alcohol-Related Harm in Canada: Toward a Culture of Moderation were released in 2007. The foundation of the strategy is a notion of sensible alcohol use, or developing a culture where moderation is the goal. Moving towards a culture of moderation signals a new way of thinking about alcohol use that requires an understanding of the different risks involved in drinking – both acute injuries and chronic diseases – and learning how to minimize these risks. It is a comprehensive strategy recommending investments in health promotion, prevention, treatment, enforcement and harm reduction.

According to an international review, the following strategies are the most effective to reduce alcohol consumption and alcohol-related problems:

• Minimum Legal Purchase Age
• Government Monopoly
• Restrictions on hours or days of sale, outlet density
• Alcohol taxes
• Lower alcohol strength
• Random breath testing
• Lowered BAC limits
• Administrative licence suspensions
• Graduated licensing for novice drivers
• Brief interventions for hazardous drinkers
• Treatment and withdrawal management

An effective response to alcohol-related problems must be multidimensional, involving a combination of population-level policies, targeted interventions and special services for those who are high-risk drinkers or dependent on alcohol. Policies should be based on the evidence for their effectiveness and take into account sustainability, feasibility and scope of impact. Population-level interventions are needed to reduce population-level damage from alcohol and reduce high-risk drinking in the future. To supplement these efforts, focused policies and interventions oriented to specific drinking situations, risk behaviours, contexts or sectors of the population are needed.31

Population-Level Interventions:

- Alcohol Pricing – Pricing of alcoholic products needs to be structured so that prices increase as per cent alcohol content increases. Prices also need to be charged at rates indexed to the cost of living, and prevented from falling below fixed minimum retail prices also indexed to the cost of living. Disincentive pricing has the strongest empirical support and widest impact among more than 30 policies or interventions assessed. It leads to lower consumption and reductions in trauma, social problems and chronic disease associated with alcohol use.

- Controlling Physical Availability – This includes controlling days and hours of sale, density of outlets, and legal drinking age. High per capita or geographic density of alcohol outlets, extended hours and days of sale are associated with high-risk drinking and alcohol-related problems. Raising the minimum legal drinking age reduces sales of alcohol to minors and drinking-related problems.

- Curtailing Alcohol Marketing – Policies to restrict the marketing of alcohol products through advertising, promotions and sponsorship as has been done for tobacco; is recommended to control the harms from alcohol.

- Alcohol Control Systems – Government-run retailing systems have stronger potential than private systems to prevent service to minors and intoxicated patrons because staff are trained and the profit motive is not paramount with every sale. However, the positive benefits of government-run retailing systems are greatly reduced if their primary mandate is to make money and they lose sight of public health and control obligations.32

Focused Policies and Interventions:

- **Drinking and Driving** – There is extensive evidence that sobriety checkpoints, random breath-testing, lower limits of legal blood alcohol concentration, ‘zero tolerance’ rules for young drivers, administrative licence suspension and graduated licensing for novice drivers reduce drinking and driving. Drinking and driving will be further reduced by implementing random breath testing and lower legal blood alcohol concentration limits.

- **Changing the Context of Drinking** – Regular monitoring and quality control of server training programs is needed. Other interventions include the implementation and enforcement of house policies in the alcohol service industry, training of staff and management to better handle aggression, enhanced enforcement of laws, and legal precedents regarding server liability.

- **Education and Persuasion** – Resources should be redirected to those programs with a demonstrated positive impact. Evidence supports initiatives aimed at increasing developmental assets and resiliency in youth. Most school-based programs are not effective in reducing drinking and related problems. Educational efforts should focus on increasing awareness of population-level damage from alcohol and the role citizens can play in reducing harms in their community. The public also needs to know about the health effects of alcohol.

- **Increased access to Brief Interventions** – Access to brief interventions should be increased for all adult at-risk drinkers who do not meet the criteria for alcohol use disorders.33

**Efforts in Ontario**

There have been recent efforts to impact alcohol-related policies in Ontario. The resolutions endorsed by the Association of Local Public Health Agencies (alPHA) request the Ontario government to:

- Conduct a formal review and impact analysis of the health and economic effects of alcohol in Ontario and develop a provincial Alcohol Strategy;
- Establish stricter advertising standards for alcohol;
- Create an enhanced public education and promotion campaign on the negative health impacts of alcohol misuse as one component of a comprehensive strategy; and
- Maintain its monopoly on off-premise liquor sales through the LCBO, retain oversight of beverage alcohol at Ontario wineries, microbreweries and the Beer Store, and fully consult with health experts before making any policy changes to the availability of beverage alcohol.34

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By developing and implementing a Provincial Alcohol Strategy and the alPHA resolutions, the government can provide the framework for action to prevent alcohol-related problems in Ontario.

CONCLUSION:

Alcohol is enjoyed by many Canadians, Ontarians and residents of Hamilton. However, there are chronic and acute health and social risks associated with its use. Evidence indicates that alcohol policies that focus on population interventions combined with targeted interventions are the most effective methods in addressing alcohol-related harm. This needs to be a system approach that includes harm reduction, treatment, enforcement and prevention pillars.

Hamilton Public Health Services is mandated by the Ministry of Health and Long-Term Care to meet the 2008 Ontario Public Health Standards which require boards of health to work with municipalities and community partners to develop healthy policies and programs that address alcohol use. Funding is also provided to local health units, including Hamilton Public Health, to implement policies in key priority areas including alcohol and substance misuse. Over the past five years, there has been significant progress made towards effective alcohol policy in the City of Hamilton. However, there are many opportunities to further build upon and strengthen existing healthy public policy, such as acting on the alPHA resolutions.

Utilizing a policy process that balances the interests of health protection, harm prevention, the health benefits of moderation, and the local Hamilton economy is essential to not only improving the health of Hamiltonians, but to reaching the City’s vision of being the best place to raise a child.