Inequities in alcohol-related chronic disease in Victoria

RESEARCH SUMMARY

Introduction

There is substantial evidence that alcohol-related harms are increasing despite alcohol consumption trends remaining stable in Australia. This pattern may be due to sub-population groups experiencing greater risk of high alcohol consumption and more related harms. However, recent research has indicated that groups which experience greater harm do not necessarily consume more alcohol than other groups and in some instances are drinking less than the average Australian. Therefore, it is important to focus beyond consumption to other factors that may increase a person's vulnerability to alcohol-related harms.

VicHealth funded Turning Point to examine a range of factors that influence alcohol consumption, and vulnerability to alcohol-related harms in Victoria. These factors are referred to in this report as the social determinants of health and health inequities.

This research aims to inform policies and programs to address the inequitable burden of alcohol-related chronic disease on the Victorian community. It highlights the increasing burden and unequal distribution of alcohol-related chronic disease in Victoria. It also emphasises the prominent role that age, gender, residential location and social disadvantage may play in the differential levels of alcohol consumption and chronic harm. While not explored in this research, it is important to acknowledge that there are a range of other social determinants that are likely to influence the risk of alcohol-related harms.

Social determinants of health are conditions in which people are born, grow, live, work, play and age that influence health. The **social determinants of health inequities** are these conditions and the social processes that distribute them unequally in society. Resulting inequities in health are therefore socially produced, systematic in their unequal distribution, avoidable and unfair. Ultimately, social determinants cause unequal and unjust health outcomes across population (Dahlgren & Whitehead 1991).

Fair Foundations: the VicHealth framework for health equity (page 2) depicts the social determinants of health inequities as three layers of influence:

- socioeconomic, political and cultural context
- daily living conditions
- individual health-related factors.

The layers of influence illustrate how the governance, policy, norms and values of a given society create a process of social stratification, whereby power, money and resources are unequally distributed. This results in different levels of exposure and vulnerability to daily living conditions that are protective or damaging to health. Individuals' health-related knowledge, attitudes and behaviours result from and are responses to these broader influences. These three layers result in differences in health outcomes between social groups. The framework has been used to interpret the findings of this research.

The graded relationship between social position and health, whereby health outcomes progressively improve with increasing social position, is known as the **social gradient in health** (Marmot 2004). In Australia, as in most other countries, clear social gradients exist for a range of preventable health conditions and their behavioural risk factors including tobacco use, poor nutrition and inadequate physical activity, leading to overweight and obesity, type 2 diabetes, and cardiovascular diseases (Friel 2009).

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Fair Foundations: the VicHealth framework for health equity draws on a conceptual framework developed by the World Health Organization Commission on the Social Determinants of Health (Solar and Irwin 2010). **www.vichealth.vic.gov.au/fairfoundations**

Alcohol consumption in Victoria

This study examined Victorian responses to the National Drug Strategy Household survey across the previous four survey years; 2001, 2004, 2007, and 2010 (Australian Institute of Health and Welfare, 2011). Two measures of alcohol consumption were examined: consuming more than two standard drinks of alcohol on average per day, and consuming five or more standard drinks of alcohol on a single drinking occasion at least monthly. Broadly, drinking four or more standard drinks during a single sitting significantly increases injury risk, while drinking more than two standard drinks on average per day is a predictor of chronic disease. The findings showed similar consumption patterns to the Australian population.

- Forty per cent of the Victorian population drink alcohol at risky levels, being five or more standard drinks on a single occasion, and 11 per cent of the population drink more than two standard drinks daily.
- Males consume more than females across both consumption measures. One in four males and one in ten females exceed more than two drinks daily. Forty-two per cent of males consume at risky levels at least monthly which is twice that of females.
- Alcohol consumption levels were found to decrease as age increases. However, one in three 36-50 year olds and one in four 51-65 year olds consume at risky levels at least monthly. Also, an average of 18 per cent of each of these age group are consuming more than two drinks daily putting them at risk of alcohol-related chronic disease.
- Victorians living in regional areas were found to consume more alcohol than metropolitan residents for both consumption measures.
- Victorians who were not currently employed (i.e. unemployed, home duties and others out of the workforce) were less likely to consume alcohol at risky levels or exceed daily limits. Employment status is sometimes used as a measure of socioeconomic status. This finding therefore illustrates that those with a higher socioeconomic status are consuming more alcohol.

Alcohol-related chronic disease in Victoria

Wholly alcohol-attributable chronic diseases (WACD) are conditions definitively caused by alcohol, such as alcohol-related liver disease. Partially alcohol-attributable chronic diseases (PACD) are conditions which are partly caused by alcohol consumption in addition to other risk factors such as cardiovascular diseases and some cancers. This Turning Point study examined Victorian hospitalisation rates from 1999 to 2008, and trends in death rates from 1999 to 2007 for both these groups of chronic disease. The key findings were as follows:

HOSPITALISATION

- From 1999 to 2008, hospital admissions[1] for WACD increased by 80 per cent and hospital patient[2] rates increased by 40 per cent in Victoria.
- Hospital admissions for PACD increased by 10 per cent over the same period whereas hospital patient rates remained static.

DEATH

- WACD cause of death rates declined in Victoria by 25 per cent from 1999 to 2008.
- There was a 10 per cent increase in deaths where WACD was reported as a contributing cause over the same time period. A similar trend in death rates was observed for PACD.

These findings highlight the elevated and potentially increasing pressure on Victoria's health system. Although treatment and survival of these conditions are improving, alcohol-related chronic diseases are still contributing to a large number of deaths in Victoria.

Forty per cent of the Victorian population drink alcohol at risky levels

[1] 'Hospital admissions' refers to the number of admissions recorded for the disease and may include multiple admissions for one person.

[2] 'Hospital patients' refers to the number of persons admitted to the hospital for the first time with the disease

Note: Both these rates account for population growth during this time period.

Social determinants of health

This study examined alcohol-related chronic disease hospitalisation and death trends in Victoria by a range of factors including age, gender, residential location and social disadvantage.[3] Although gender and age are biological factors, the cultural and social norms in our society influence alcohol consumption at difference ages and for different genders. For example, as illustrated before, males and young people engage in riskier drinking behaviours than females and older people. Exploring chronic disease in the context of these conditions may highlight potential sub-population characteristics that are driving trends in alcohol-related harm in Victoria. The key findings were as follows:

GENDER

- Males accounted for seven out of ten WACD hospital patients and deaths.
- Gender distribution was relatively equal for both hospitalisations and death rates due to PACD. This may be because one of the chronic diseases included in this group is breast cancer which is predominantly experienced by women, and therefore may skew the data. This trend may also be influenced by life expectancy. Women live longer than men, so women may be hospitalised more often in their life time for a given condition.

AGE

- People with WACD have a hospitalisation median age range from 47 to 49 years and a median age of death range from 58 to 62 years.
- PACD hospitalisation and death occurred later in life than for WACD, with the median age of hospitalisation ranging from 70 to 71 years, and median age of death ranging from 80 to 83 years.

RESIDENTIAL LOCATION

- While regional residents experienced more hospitalisations for WACD, from 1999 to 2008 there was a greater increase in hospital patient rates in metropolitan areas than in regional areas.
- WACD death rates remained higher in regional areas than metropolitan areas for both cause of death and contributing cause of death.
- Regional Victorian residents were at greater risk of hospitalisation and death from PACD.

SOCIAL DISADVANTAGE

- The most disadvantaged groups were significantly more likely to experience hospitalisation or death due to WACD and PACD. For example, in 2006, the likelihood of being a WACD patient was 59 per cent greater for those living in the most disadvantaged neighbourhoods. This demonstrates a social gradient is evident between social position and alcohol-related chronic disease in Victoria (refer to Figure 1).

The most disadvantaged groups are significantly more likely to experience hospitalisation or death due to wholly alcohol-attributable chronic diseases and partially alcohol-attributable chronic diseases

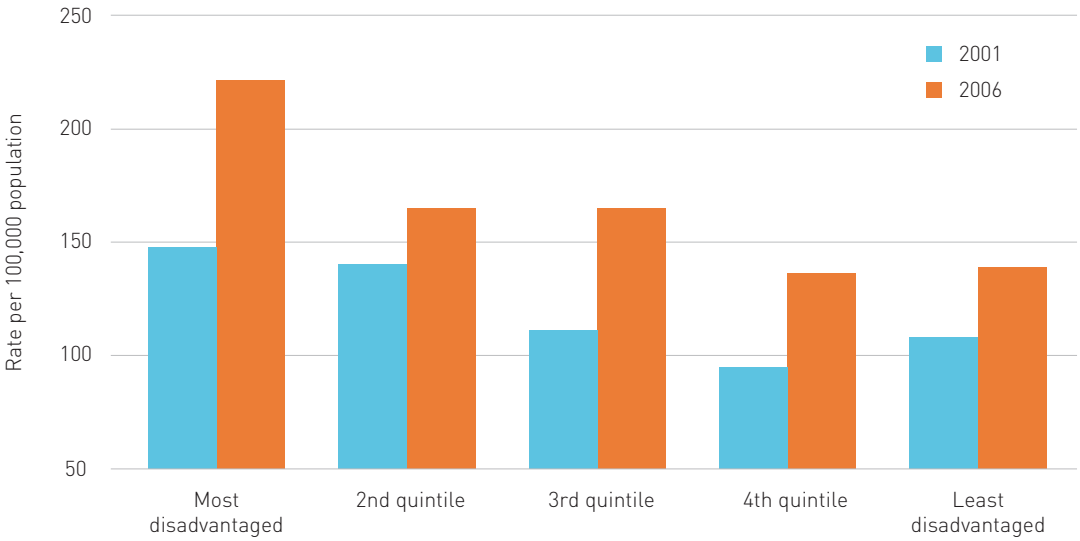
Implications

There is an increasing burden of alcohol-related chronic diseases in the Victorian community. These diseases are being experienced more by men, those aged between 50 to 70 years old, regional residents and those living in disadvantaged areas. While per capita consumption of alcohol in Australia has remained relatively stable over the past five to ten years at approximately 10 litres of pure alcohol per person, consumption rates grew rapidly in the 1970s, peaking at 13.1 litres of pure alcohol per person in 1974–75 (Australian Bureau of Statistics, 2011). This past consumption trend may be contributing to the recent increase in hospitalisations for alcohol-related chronic diseases. Unfortunately, there is no alcohol consumption data by demographic, prior to 1998, to assist with interpreting the sub-population group findings. However, current consumption trends show men, young people and those living in regional areas are more likely to drink at levels that put them at risk of alcohol-related chronic disease. There is a more complex alcohol consumption pattern in disadvantaged communities.

The 2010 National Drug Strategy Household Survey showed that alcohol consumption has remained relatively stable across all respondents, regardless of their income. Further, abstaining from alcohol was generally higher among the most disadvantaged participants (Australian Institute of Health and Welfare 2011). However, research by Livingston (2013) showed that while risky levels of drinking (five or more standard drinks) on a monthly basis was consistent across groups, drinking more than 20 standard drinks on a monthly basis was significantly more likely among both the most disadvantaged and most advantaged neighbourhoods.

[3] This study used the Socio-Economic Index for Areas (SEIFA) to measure social disadvantage. SEIFA summarises a range of variables including income, education level, employment, living conditions and wealth by a neighbourhood area.

Figure 1: Trends in WACD patient rates per 100,000 population by socioeconomic disadvantage (postcode-based), Victoria, 2001 and 2006



Evidence suggests that disadvantaged populations experience greater acute and chronic alcohol-related disease and death across all consumption patterns (Makela 1999). This means that alcohol consumption alone cannot explain why the most disadvantaged groups are experiencing a greater burden of alcohol-related chronic disease. Therefore further consideration is needed into how a lower social position in society can increase an individual's exposure and/or vulnerability to factors that influence alcohol-related harms.

These factors can influence individuals at each layer of the Fair Foundations framework. For example, within the **socioeconomic, political and cultural context**, policies that regulate the availability and promotion of alcohol in Australia do not address the unequal distribution of alcohol advertising and/or bottle shop outlets in more disadvantaged neighbourhoods. Additionally, broader health, education and welfare policies can potentially lead to an unequal distribution and access to resources which impact on the health needs of the most disadvantaged groups in the Victorian community.

Alcohol consumption alone cannot explain why the most disadvantaged groups are experiencing a greater burden of alcohol-related chronic disease

The **daily living conditions** which the most disadvantaged groups are exposed to may make them more vulnerable to experiencing alcohol-related chronic disease. For example, this group are more likely to experience life stressors, adverse childhood events, have difficultly affording health care, live in poor housing and move frequently, live in neighbourhoods with a higher density of alcohol sales outlets, to suffer financial hardships from consequences of illness and suffer from co-morbidities such as mental health problems (Loring 2014).

These wider social determinants produce differences in **individual health-related factors** including knowledge, attitudes and behaviours. For example, individuals of lower social position are likely to have poorer health literacy about alcohol due to reduced access to education, and also have less power, money and resources required for sustained behaviour and lifestyle changes.

Recommendations

A comprehensive approach is needed to address the unequal distribution of alcohol-related chronic disease in Victoria. This potentially requires action under each layer of influence in the Fair Foundations framework.

SOCIOECONOMIC, POLITICAL AND CULTURAL CONTEXT

Legislation and policies that aim to change people's drinking behaviours, such as regulating the price and availability of alcohol, will have an impact on future health outcomes of the whole population. These approaches could be complemented by actions that challenge the widespread acceptance of intoxication in Victoria. They should aim to foster a drinking culture that reduces risky drinking and prevents alcohol-related harm.

While these strategies do not explicitly target sub-populations, it is important that these interventions do not inadvertently exacerbate existing inequities, but promote equity between population groups as far as possible. These universal approaches could be complemented by targeted interventions and policies that address the social determinants affecting vulnerable communities and the inequalities in the distribution of alcohol-related chronic diseases in Victoria.

DAILY LIVING CONDITIONS

Changing the physical environment in which people live may also impact alcohol-related inequities. Research by Livingston found that the density of packaged liquor outlets (bottle shops) is substantially higher in more disadvantaged areas in Victoria. This research also found that the greater the density of packaged liquor outlets the higher the rate of alcohol-related chronic diseases (Livingston 2011, 2012a, 2012b). Therefore planning authorities could consider restricting new packaged liquor licences in disadvantaged areas.

The greater the density of packaged liquor outlets the higher the rate of alcohol-related chronic diseases (Livingston 2011, 2012a, 2012b)

Accessibility and quality of health care services has a strong influence on an individual's health outcomes. The inverse care law suggests that those who need healthcare least use the services more, and more effectively, than those with the greatest need (Hart 1971). To improve accessibility and effectiveness of health services for people with greatest need, it is recommended that Victorian health services consider conducting equity-focused health impact assessments and/or audits as part of service and program planning. This would identify issues with respect to provision and access to these services for disadvantaged communities, and priorities for action to address health inequities within these services.

Hospital admissions for alcohol-related chronic diseases have steadily increased over the study period. As a consequence there may be potential opportunities to address alcohol consumption when treating related conditions. The provision of early intervention is a key opportunity to reduce the impact of alcohol-related disease on health care services. There is considerable evidence that brief alcohol interventions are effective in addressing hazardous and harmful drinking in the primary healthcare setting (O'Donnell et al. 2014). These interventions are a cost-effective preventative approach and could be more routinely administered, particularly in regional and disadvantaged areas.

There may be an opportunity to incorporate brief interventions on alcohol consumption into existing chronic disease prevention, early intervention or management programs delivered through primary and community care. Further exploration of how the interventions may be incorporated would be required. Training may also be required to ensure health professionals have a greater understanding of the factors that influence the unequal distribution of alcohol-related harms in our society.

The provision of early intervention is a key opportunity to reduce the impact of alcohol-related disease on health care services

INDIVIDUAL HEALTH-RELATED FACTORS

Given the level of risky drinking in the Victorian population, and the rise in hospitalisations for alcohol-related chronic diseases, it is important to increase awareness among drinkers about the long-term health risks of drinking alcohol.

There is a lack of relevant evidence on why risky alcohol consumption affects different social groups in different ways. Gathering data on attitudes that influence drinking and other health-related behaviours would address gaps in current knowledge in relation to individual health-related factors that may contribute to the trends identified in this research. This would enable health professionals and policy makers to have a comprehensive understanding of factors that influence alcohol-related inequities and target interventions appropriately.

Existing population level surveys could be used to collect data to identify and monitor changes in attitudes that influence drinking. Opportunities may exist at both a national or state level.

Victorian Health Promotion Foundation
PO Box 154 Carlton South, VIC 3053 Australia
T +61 3 9667 1333 F +61 3 9667 1375
vichealth@vichealth.vic.gov.au
www.vichealth.vic.gov.au

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Conclusion

This research highlights the increasing burden and unequal distribution of alcohol-related chronic disease in Victoria. It also emphasises the prominent role that age, gender, residential location and social disadvantage may play in the differential levels of alcohol consumption and chronic harm. While not explored in this research, it is important to acknowledge that there are a range of other social determinants that are likely to influence the risk of alcohol-related harms such as perinatal health including in vitro exposure to alcohol, early childhood development, access to education, and security and conditions of employment.

Australia has extensive data on alcohol consumption and related harms but more research that considers these harms within the context of the social determinants of health, and especially in relation to inequity, is needed. Targeted interventions and policies are also required to address the social determinants affecting vulnerable communities and the inequalities in the distribution of alcohol-related chronic diseases in Victoria.

Limitations

It is important to note that there are a number of limitations that must be considered when examining the data presented in this report.

This project involved the analysis of secondary data sources including hospital admissions and deaths. Such administrative datasets are collected by health or government agencies for operational purposes, and there are inherent limitations including incomplete or inconsistent data coding. However, exploration of trends over time allows for adjustment of such anomalous events in the data. Nonetheless, missing or incomplete data may contribute to under-representation of certain sub-populations and thereby affect our understanding of alcohol-related chronic harms in the context of social determinants of health.

Alcohol consumption surveys are limited by poor response rates, meaning inherent differences between participants and those who decline can mask true consumption patterns as high alcohol consumers may be more reluctant to participate. There may also be under-sampling in hard-to-reach populations. Another limitation to this survey is that self-reported consumption estimates are generally lower than actual consumption rates.

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