KEY POINTS

- While moderate alcohol consumption is associated with some individual and social benefits, alcohol-related harm contributes significantly to physical, mental and social ill-health, and to Māori: non-Māori health inequities in the Far North.
- National, Northland-wide and local data on the health impacts of alcohol harm offer compelling support for development of local alcohol policies, as one important strategy in a comprehensive approach to reduce alcohol harm in our communities.
- Alcohol-related harm results in significant costs to the health sector. Northland DHB services are involved in health promotion and regulatory alcohol harm reduction activities (through the Public Health Unit), in addition to drug and alcohol, family violence, child health and other clinical services addressing alcohol harm and the multiple impacts it has on health and well-being.
- Northland District Health Board is committed to taking a lead role in reducing alcohol-related harm and supporting Territorial Local Authorities and our communities in reducing this harm.

ALCOHOL-RELATED ISSUES

While moderate alcohol consumption is associated with some individual and social benefits, excessive consumption causes harm to physical, social and mental wellbeing of individuals, whānau and the community (Alcohol Healthwatch, 2012, Connor et al., 2013; Law Commission, 2010; Ministry of Health, 2013).

A key study on the burden of death, disease and disability due to alcohol in New Zealand (Connor et al., 2013) concluded that:

- The pattern of drinking is very important in determining the health effects of alcohol consumption;
- Injury is responsible for half of all alcohol-attributable deaths and almost three quarters of the years of life lost due to alcohol;
- There is a huge burden of disability due to alcohol use disorders that is not reflected in mortality figures; and
- The health burden of alcohol falls inequitably on Māori.

Findings from the recent New Zealand Health Survey (Ministry of Health, 2013) showed that “hazardous drinking” rates were highest in young people, with one in four adults aged 15–24 years drinking at levels that were hazardous to their health. Almost a third of Māori adults (31%) reported drinking at hazardous levels. Māori adults were twice as likely to drink at hazardous levels compared with non-Māori.

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1 Hazardous drinking refers to an established drinking pattern that carries a risk of harming the drinker’s physical or mental health, or having harmful social effects on the drinker or others. Hazardous drinking is defined as a score of 8 points or more on the 10-question Alcohol Use Disorders Identification Test (AUDIT), which includes questions about alcohol use, alcohol-related problems and abnormal drinking behaviour.
The recent New Zealand Health Survey also shows that adults living in the most deprived areas were 1.5 times as likely to be hazardous drinkers as those living in the least deprived areas (Ministry of Health, 2013).

Excessive alcohol consumption is the leading contributing factor to fatal crashes and crash injuries on Northland roads. Alcohol-related crashes are of concern due to the associated number of deaths and/or serious casualties. Alcohol was a factor in 657 injury crashes (392 on local roads and 265 on state highways), representing a total of 41% of fatal and serious crashes and 26% of injury crashes in the region between 2006 and 2010 (New Zealand Transport Agency, 2011). In the Far North District between 2008 and 2012, alcohol was a factor in 216 injury crashes (124 on local roads and 92 on state highways) (New Zealand Transport Agency, 2013). Many studies show that the risk of being involved in a crash increases as a driver’s blood alcohol concentration (BAC) increases (Ministry of Transport, 2013).

Alcohol-related offences are another significant area of harm, with over a third of offenders arrested in Northland having alcohol as a factor related to their arrest. Northland has some of the highest rates of alcohol-related family violence incidents in the country (Statistics New Zealand, 2013).

Given the Far North district’s demographics, and local data on alcohol harm, excessive consumption of alcohol is clearly a major “modifiable risk factor” that significantly affects the health and wellbeing of the community.

ALCOHOL-RELATED ISSUES AMONG YOUTH IN NORTHLAND

The Youth 2007 survey showed that Northland participants drank more frequently and more heavily than those from the rest of New Zealand. Nearly a third of Northland participants said they had been driven by someone who had consumed alcohol compared with 23% nationally (Adolescent Health Research Group, 2011; Ameratunga et al., 2011).

Northland youth consulted in 2010 said that alcohol was a major concern for the Northland community; nearly 36% of participants (compared with 27% nationally) mentioned alcohol as a “big issue”. Participants also highlighted the harm they had seen in their family and friends due to drug and alcohol abuse (Ministry of Youth Development, 2011). A Northland DHB-led study into the patterns of self-reported substance use amongst young people in Northland in 2010 found that alcohol was reportedly consumed in a binge pattern, 1-3 times a week by 80% of 16 year olds and 47% of 13-14 year olds (Freedman Hague and Miller, 2010).

Northland had higher alcohol-related hospital admission rates in young people aged 15-24 years than the average New Zealand rate during 2007–2011, and a significantly higher number of youth with alcohol-related disorders accessed mental health services in this period (Craig et al., 2012). Northland also has a high teenage pregnancy rate (Families Commission, 2011); excessive alcohol consumption in young people is a huge risk for adverse pregnancy outcomes including Fetal Alcohol Spectrum Disorders (FASD), SUDI and poor infant health.

Recent findings from the 2012 national “Youth2000” survey suggest a significant reduction in binge drinking reported by secondary school students since the earlier surveys in 2001 and 2007, but more than 20% of students still report this, and there are significant inequities by ethnicity and deprivation seen nationally (analysis of Northland data is in progress).

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2 A modifiable risk factor is defined as a determinant that can be modified by intervention, thereby reducing the probability of disease.

3 Defined as 5 or more alcoholic drinks in one 4 hour session, with at least one episode in the last month.
NORTHLAND HEALTH SERVICES DATA RELATING TO ALCOHOL HARM

1: Northland Primary Health Organisation alcohol-related harm data
The data below provides an indication of the level of alcohol-related harm in our community. Data collected from primary care (general practice) screening during the three year period 2010-2012 shows that 18% of patients screened (during 32% of total patient visits) in Northland were at risk of excessive alcohol consumption.4

2: Alcohol-attributable Conditions and Hospital Admissions
Excessive alcohol consumption is a causal factor in many diseases, including cardiovascular diseases and cancers (e.g. colorectal, breast, oral and liver cancers (Law Commission, 2010; World Health Organisation, 2011; Connor et al 2013)). Northland hospital admission data analysed over the five-year period from January 2009 to December 2013 show a high number of admissions with "wholly alcohol-attributable" conditions5 in Northland. The total number of hospital admissions with "wholly alcohol-attributable" conditions for Northland increased from 369 in 2009, to 538 in 2013. Although this represents less than 5% of admissions, the burden of illness and deaths from "partly attributable" conditions is likely to be substantially higher.

The number of hospital admissions with wholly alcohol-attributable conditions in residents from the Far North district has been increasing since 2009 (Figure 1) with the highest rate of admissions occurring from Kaikohe (Figure 2).

Figure 1: Hospital admissions for FNDC residents with “wholly alcohol-attributable” conditions (January 2009 to December 2013)

Recent research by Connor et al (2013) provides a more sophisticated national estimation of the burden of illness, disability and death due to alcohol in New Zealand, using the WHO Global Burden of Disease methodology. This study estimates that 5.4% of deaths in 0-79 years in 2007 were attributable to alcohol consumption. While injuries were responsible for a large proportion of the alcohol-attributable mortality burden for both Māori and non-Māori men, breast cancer was the most common cause of alcohol-attributable deaths for Māori and non-Māori women.

4 This pilot project screens patients for alcohol use compared with the recommended drinking guidelines (ALAC).
5 Alcohol-attributable conditions are classified as "wholly attributable" and "partly attributable". Wholly attributable alcohol conditions are those conditions where alcohol is implicated in all cases of the condition; for example, alcohol-induced behavioural disorders and alcoholic liver cirrhosis. Partly attributable alcohol conditions are those conditions where alcohol is causally implicated in a proportion but not all cases of the condition (Jones et al., 2008). The hospital admissions data which include alcohol attributable conditions provide an indication of the health effects of alcohol; however, it does not include the indirect harm caused by alcohol and given coding quality significantly under-estimates alcohol-related causes for admissions.
Alcohol use disorders were the dominant contributor to loss of “alcohol-attributable” disability-adjusted life years (DALYs) in men and women over 30 years old, and road traffic injuries were responsible for the largest proportion of “alcohol-attributable” DALYs lost in 15–29 year old males and females. Alcohol-attributable mortality and morbidity was higher in Māori than non-Māori. Northland data suggests similar patterns and inequities relating to alcohol harm occur in our area.

Figure 2: Map of hospital admissions of FNDC residents with “wholly alcohol-attributable” conditions (January 2009 – December 2013)
3: Emergency Department Alcohol-related Admissions

26% of Whangarei and Kaitaia hospital Emergency Department (ED) presentations in 2013 were injury-related. Of those, 64% were screened for alcohol consumption in the 12 hours prior to their injury. 856 ED presentations were due to alcohol-related injuries from Northland and 259 of those (nearly a third of Northland alcohol-related injury admissions) were domicile of the Far North District. The proportion of Māori presentations was higher than non-Māori, and the peak age group of alcohol-related injury ED presentations was 20-29 years (Figure 3 below).

Figure 3: Alcohol-related injury presentations by FNDC residents to Whangarei and Kaitaia hospitals emergency department by age group (January 2009 – December 2013)

The highest number of alcohol-related injury presentations occurred between 11pm and 1am (midnight) followed by a morning peak at around 10 am (Figure 4 below). The majority of presentations occurred in the weekends (Saturday and Sunday).

The ED alcohol-related injury presentations (from Far North) identified above (including their subsequent inpatient costs when relevant) cost Northland DHB approximately ~$470,000; the true total cost is substantially more, given incomplete identification of alcohol related injuries to date (for example, Bay of Islands ED admissions data are not included in the pilot study). Costs also reflect the age distribution of injuries - see Figure 5 below.

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6 Northland District Health Board (NDHB) implemented a national pilot project (from August 2011) at Whangarei Hospital ED aiming to reduce alcohol-related harm in Northland communities. The project involved screening of patients presenting to the Whangarei Hospital ED with an injury for any alcohol consumption (within 12 hours prior to their injury). The patients, who confirmed positive, were later referred to the Alcohol Drug Helpline for further interventions. Kaitaia ED began screening in 2013.
Figure 4: Alcohol-related injury presentations by FNDC residents to Whangarei and Kaitaia hospital ED by time of presentation (January 2009 – December 2013)

Figure 5: ED and inpatient costs of FNDC residents alcohol-related injury presentations to Whangarei and Kaitaia hospital ED by age group (January 2009 – December 2013)
RELATIONSHIP BETWEEN ALCOHOL HARM AND DENSITY OF ALCOHOL OUTLETS

International and New Zealand studies have examined the relationship between alcohol outlet density and alcohol related harm (Law Commission, 2010). There is a strong relationship between high density of outlets (especially off-licences) and socio-economic deprivation in New Zealand. High off-licence outlet density is also associated with price discounting and longer opening hours.

A recent New Zealand study considered five categories of licences - clubs, bars and night clubs, other on-licences, supermarkets/grocery stores and other off-licences, and examined a number of social harms associated with alcohol from 2006 – 2011 (including police-reported motor vehicle crashes, antisocial behaviour offences, dishonesty offences, property damage, sexual offences and violent offences (including family violence)). The study found a statistically significant relationship between bar and nightclub density and violent offences for some areas in Northland (Whangarei and the mid-North), with each additional bar or nightclub associated with about 5 or more additional violent offences per year (Cameron et al., 2013).

Figure 5: Locally specific point parameter estimates for the relationship between bar and nightclub density and violent offences in the North Island, 2006-2011

ECONOMIC BURDEN OF ALCOHOL-RELATED ISSUES IN NORTHLAND

In addition to the injury, illness, death and disability that excessive alcohol consumption causes, there are significant economic costs to Northland. The total social cost of crashes involving alcohol/drugs was about $710 million in New Zealand (in 2012); 22 percent of the social cost associated with all injury crashes (Ministry of Transport, 2013).

In the health sector, only emergency department admission costs at Whangarei and Kaitaia hospital have been analysed to date; this is a fraction of the total health sector costs in
Northland resulting from alcohol harm. Other service areas including maternal and infant health, sexual health, mental health, and drug and alcohol services bear considerable costs due to alcohol-related harm health impacts.

The impact of alcohol abuse on employment and productivity, and other social costs in Northland have not been analysed - but these are likely to significantly outweigh any economic benefits from the alcohol industry.

SUMMARY

Alcohol-related harm is a major issue in our community. It is costly in health, social and economic terms, and contributes to inequities in health outcomes in Northland. Further measures are needed to address alcohol-related harm more comprehensively within Northland, including local alcohol policies which promote harm reduction. Northland DHB has a key role in supporting and implementing alcohol harm-reduction strategies, as well as providing services for those harmed. We see development of local alcohol policies with our communities as a positive step to improve health and well-being.

REFERENCES


