

Alcohol and older people

A descriptive analysis of changes in alcohol use in older New Zealanders from 2004 to 2009

Report commissioned by the Health Promotion Agency

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COMMISSIONING CONTACT'S COMMENTS

The Health Promotion Agency commission was managed by Margaret Chartres (Senior Researcher) and Dr. Sarah Wright (Researcher).

The Health Promotion Agency (HPA) is interested in improving our understanding about how older New Zealanders drink alcohol. Alcohol use (and misuse) among older people is an area of increasing concern internationally, and a growing area of research. The intersections between demographic and health variables and the patterns of drinking by older folk are of particular interest, as are the changes in older individuals' drinking over time.

HPA (through the agency of the then Alcohol Advisory Council NZ) commissioned the School of Population Health at the University of Otago (Wellington) to undertake research into older people's drinking In April 2012.

The study uses the Statistics New Zealand *Survey of Family Income & Employment* (SoFIE dataset) to examine the changes in alcohol use in New Zealanders, aged 60 years and over, over a five-year period. SoFIE was a household panel survey, conducted by Statistics New Zealand, which began in 2002 and finished in 2010. Questions about alcohol use were asked in years 2004/05, 2006/07 and 2008/0909 and participants who had had a drink containing alcohol in the last 12 months were included in the analysis pool for the current report. The completed report has been through the Statistics NZ confidentiality checking processes. It looks at the relationship of identified changes in alcohol use to deprivation factors, living arrangements and chronic health conditions. The study is longitudinal, meaning the same individuals were asked the same questions at regular intervals (the SoFIE survey consisted of three 'waves' over an eight year period). A draft report was received in August 2012, and a final report in February 2013.

REVIEW

The report was reviewed externally.

ACKNOWLEDGEMENTS

Feedback on draft reports was provided by Margaret Chartres, Dr. Sarah Wright and Rosie Pears, of HPA and Grant Strachan, Monprose.

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Access to the data used in this study was provided by Statistics New Zealand in a secure environment designed to give effect to the confidentiality provisions of the Statistics Act, 1975. The results in this study and any errors contained therein are those of the author, not Statistics New Zealand.

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FUNDING AND DISCLAIMER

This report was commissioned by the Health Promotion Agency (which since its establishment on 1 July 2012 carries out the functions of the former Alcohol Advisory Council of New Zealand). There is also a report on changes in alcohol use in young people (15-24 years of age) from 2004 to 2009 with a companion literature review of alcohol use and young people.

This research has been carried out by an independent party commissioned by, and under contract to, HPA. The views, observations and analysis expressed in this report are those of the authors and are not to be attributed to HPA.

The SoFIE-Health study was primarily funded by the Health Research Council of New Zealand as part of the Health Inequalities Research Programme.

STATISTICS NEW ZEALAND SECURITY STATEMENT

Access to the data used in this study was provided by Statistics New Zealand in the Statistics New Zealand Data Laboratory (Wellington), a secure environment designed to give effect to the confidentiality provisions of the Statistics Act 1975. The results in this study and any errors contained therein are those of the authors, not Statistics New Zealand.

EXECUTIVE SUMMARY

Current evidence presents a mixed view on the role of socio-economic status, education and family structure in alcohol consumption by older people. Furthermore, little is known about how these factors are associated with the ethnicity of New Zealanders. Information about how older Maori and Pacific peoples drink is especially scarce. This research aimed to provide important information towards addressing the knowledge gap in these areas.

The objective of this report is to examine the changes in alcohol use in New Zealand for older men and women aged 60 years and over, and the association of these changes with socio-economic and deprivation factors, living arrangements and chronic health conditions. The report uses data from the Statistics New Zealand Survey of Family Income and Employment (SoFIE) and the SoFIE-Health sub-study, covering the period from 2002 to 2010.

METHODS

SoFIE was a household panel survey that began in 2002 and finished in 2010, with the first wave of data collection undertaken from October 2002 to September 2003 and the final (eighth) wave undertaken from October 2009 to September 2010. Information was collected once a year from the same individuals on their income levels, sources and any changes to these; on the major influences on their income, such as employment and education experiences, household and family status and any changes to these; and on demographic factors and health status. A series of health questions was asked in Waves 3, 5 and 7, the SoFIE-Health sub-study. The sample population used for the analyses in this paper was SoFIE participants who were original sample members at Wave 1 who responded in all of the health modules in Waves 3, 5 and 7, giving a sample size of 3,465 adults aged 60 years or older at baseline – Wave 3 (this sample would be aged 62 years or older at Wave 5 and 64 years or older at Wave 7).

As part of the health module asked in Waves 3, 5 and 7, participants who had had a drink containing alcohol in the last 12 months were asked how many days in the last four weeks they had drunk alcohol (i.e. frequency); and how many drinks containing alcohol they had consumed on a typical day when they were drinking. This information was used to calculate the average weekly consumption of alcohol. Participants were also specifically asked whether they had ever had eight or more (for men), or six or more (for women), standard drinks on one occasion (defined here as risky drinking) and, if so, on how many occasions they had engaged in risky drinking in the last four weeks. The frequency of risky drinking in those who reported drinking in the past 12 months was categorised as: never risky; risky one to two times a month; risky weekly; or risky weekly to daily.

The current low-risk alcohol drinking advice from ALAC/HPA for adults (including young adults aged 18-24 years) is that, to reduce their long-term health risks:

- women should drink no more than two standard drinks a day and no more than 10 standard drinks a week, and have at least two alcohol-free days every week
- men should drink no more than three standard drinks a day and no more than 15 standard drinks a week, and have at least two alcohol-free days every week.

For older adults, drinking guidelines worldwide have increasingly identified a threshold for risky drinking that is, either a reduction in drinking units from the standard set for the general adult population (Moos, 2004) or simply a proposal that older adults drink less than general population standards.

RESULTS

The main results show that there are high prevalence rates of drinking over time in this population. The trends in drinking vary by age and sex and are influenced by living arrangements and socio-economic factors. Specific findings about the drinking status of the surveyed older people are as follows:

DRINKING STATUS

- A higher proportion of males drink than females
- Overall, the drinking status for most older people remained stable over the study period
- More of the youngest age group (60-64 years at baseline – Wave 3) drank at all Waves, compared to the older age groups (65-74 or 75+ years at baseline – Wave 3)
- A high proportion of New Zealand European respondents drank alcohol
- There was a small decrease (overall 5.6 percent) in the number of drinkers over the entire study period, which was greatest in the oldest age group (75+ years at baseline – Wave 3) for both males and females
- Widowed males and females had lower prevalence rates of drinking than those who were married, with widowed females having the lowest prevalence rates of drinking overall
- Divorced or separated males and married females had high prevalence rates of drinking
- There were high prevalence rates of drinking in both male and female ex-smokers
- There is a linear relationship between self-rated health and drinking, with those who report better health also reporting higher prevalence rates of drinking, and those who report fair/poor health reporting lower prevalence rates of drinking. Those with one to two chronic health conditions reported higher prevalence rates of drinking compared to those with no chronic conditions

- Those with a cancer registration reported a higher prevalence rate of drinking than the overall surveyed population, whereas those with a cardiovascular condition reported a lower drinking prevalence rate than the overall surveyed population
- In general, there was a linear relationship between deprivation (individual and area) and drinking, with the least deprived reporting higher prevalence rates of drinking and the most deprived reporting lower prevalence rates of drinking.

AVERAGE WEEKLY ALCOHOL CONSUMPTION

- Males had over twice the average weekly alcohol consumption of females
- The lowest average weekly alcohol consumption can be seen in the oldest age group (75+ years at baseline – Wave 3) and the highest average weekly alcohol consumption can be seen in the youngest age group (60-64 years at baseline – Wave 3)
- Overall, 53 percent of respondents had no change in their average weekly alcohol consumption over time
- Approximately 25 per cent of respondents decreased their average weekly alcohol consumption, and this was greater for males than for females
- Average weekly alcohol consumption was lowest for widowed, Māori and Pacific respondents, and for sole parents
- Current smokers reported the highest average weekly alcohol consumption
- Respondents who reported their self-rated health as excellent, very good or good had higher average weekly alcohol consumption than those who reported their health as fair/poor
- Females reporting poor self-rated health had the lowest average weekly alcohol consumption
- There was a pattern of increasing average weekly alcohol consumption with increasing household income, with a clear linear trend for females
- There did not appear to be any strong associations between average weekly alcohol consumption and levels of personal income reported
- Respondents without educational qualifications had lower than average weekly alcohol consumption than those with educational qualifications
- There was a clear linear relationship between individual deprivation and average weekly alcohol consumption for both males and females, with those reporting no individual deprivation having higher consumption than those reporting the most deprivation (3+ deprivation factors). For area deprivation, a linear relationship exists for females but not for males, with average weekly alcohol consumption decreasing with increases in area deprivation
- While males in the most deprived quintile (NZDepQ5) had the highest average weekly alcohol consumption, the next highest average weekly alcohol consumption was in the least deprived area (NZDepQ1).

RISKY DRINKING

- Results suggest that, overall, there was a low proportion of respondents engaging in risky alcohol use
- The highest levels of engagement in risky drinking in this sample were seen in the youngest age group (60-64 years) and in males
- Almost 83 percent of older respondents remained never-drinkers
- A higher percentage of never drinkers were female respondents than male respondents
- Approximately 57 percent of respondents who reported engaging in risky drinking (at least monthly) reduced their drinking over time to abstain from engaging in risky drinking
- Engaging in risky drinking at least monthly was higher in those respondents who were never married, were sole parents or who lived in households with multiple persons
- Almost 38 per cent of those who reported their health to be fair/poor never drank; this group also had the lowest level of engagement in risky drinking
- Approximately 12 per cent of current smokers were engaging in risky drinking at least monthly
- Compared to the overall surveyed population, those with a cancer registration had higher prevalence rates of drinking but did not engage in risky drinking
- Engaging in risky drinking was greater in respondents with higher levels of personal and household income compared to those on lower incomes
- Those who were unemployed (not employed but looking for work) engaged in more risky drinking than those who were employed or unemployed and not looking for work
- Those with the lowest levels of deprivation (both individual and area) had the highest proportions of drinkers overall, but these respondents did not normally engage in risky drinking.

CONCLUDING REMARKS

The results from this investigation have shown that three-quarters of the older people (60 years of age and older at baseline – Wave 3) in the SoFIE survey reported drinking. The findings indicate that there was a small and slow decline in the prevalence rates of drinking, with males drinking significantly more than females and also more likely to reduce their drinking. The findings also suggest that only a small proportion of the respondents engaged in risky drinking.

The results depict a complex image of alcohol consumption in older New Zealanders and highlight the dynamic influence of SES and living arrangements on alcohol consumption. On one level these findings indicate “the good-life”, with older people who were in good health (self-perceived) and who were financially comfortable, regularly drinking, with some

engaging in risky drinking. On another level, these findings also suggest there are older people with significant chronic health problems (e.g. cancer, diabetes, asthma) who are drinking more per occasion and more often (note that this investigation cannot determine a causal relationship between alcohol consumption and chronic health conditions or cancer).¹ Additionally, influencing how older New Zealanders drink is their living arrangements and marital status, with divorced, separated or never married older people being more likely to have reported engaging in risky drinking.

Overall, these findings suggest a significant health burden of alcohol for many older New Zealanders, and indicate that interventions and drinking advice would need to be tailored to specific demographics in this older population.

¹ These findings were not the same for those with a chronic cardiovascular condition.

ABBREVIATIONS AND DEFINITIONS

AAD – Alcohol abuse/dependence

ALAC – Alcohol Advisory Council of New Zealand

AUDIT – Alcohol Use Disorders Identification Test

BAC – Blood alcohol content, usually taken as a measure of alcohol intoxication and expressed as the amount of alcohol in a given amount of blood. It is often measured as either grams of alcohol per decilitre of blood (g/dl), milligrams per decilitre (mg/dl), or milligrams of alcohol per millilitres of blood (Alliston, 2012).

HPA – Health Promotion Agency

MOH – Ministry of Health

NZ – New Zealand

NZiDep – A New Zealand-based measure of an individual's level of deprivation

NZDep – A New Zealand-based measure of an area level of deprivation

Risky drinking – For this report, risky drinking is defined as drinking more than eight (for men), or six (for women), standard drinks on one drinking occasion in the last four weeks

SES – Socio-economic status

SoFIE – Survey of Family Income and Employment

SoFIE-Health – Survey of Family Income and Employment-Health sub-study

Standard drink – For this report, a standard drink is defined as a can or small bottle of beer; a small glass of wine; or a single nip of spirits containing 10 g of alcohol. In New Zealand, a standard drink contains 10 g of alcohol.

w –wave – representative of the time in which information was collected

WHO – World Health Organization.

INTRODUCTION

REPORT PURPOSE AND DESCRIPTION

The overall objective of this report is to examine the changes in alcohol use in New Zealand men and women over the age of 60 years, and specifically the relationship between changes in alcohol consumption and socio-economic and deprivation factors, with reference to family structure and chronic illness. The report uses data from the Statistics New Zealand Survey of Family Income and Employment (SoFIE) and the SoFIE-Health sub-study, covering the period from 2002 to 2010 (Carter, Hayward & Richardson, 2008; Carter, Cronin, Blakely, Hayward & Richardson, 2010a).

Alcohol and older people

Alcohol has been reported as the most commonly used recreational drug in New Zealand (Ministry of Health, 2007). While alcohol consumption is reported to decline in older age, it is not considered to be a slow or invariable process and differs between men and women, with men drinking more and for longer than women (Brennan, Schutte, Moos & Moos, 2011; Hajat, Haines, Bulpitt & Fletcher, 2004). As such, older people may be at risk of developing alcohol use disorders (alcohol abuse or dependency) (ALAC, 2008; Moos, Brennan, Schutte & Moos, 2010a; Moos, Brennan, Schutte & Moos, 2010b). The extent to which alcohol use disorders occur in the older population in New Zealand is not currently known. However, given increasingly ageing populations worldwide, combined with frequently under-detected and misdiagnosed alcohol related disorders in older adults, the negative impact of drinking throughout a person's lifetime, particularly for the "baby boomers", is thought to be on the increase (Gfroerer, Penne, Pemberton & Folsom, 2003; Heuberger, 2009; O'Connell, Chin, Cunningham & Lawlor, 2003).

Risky drinking in older adults (>60 years of age) is known to occur in other Western countries, with a significant proportion consuming alcohol to levels exceeding current guidelines and recommendations both in the US and the UK (Blazer & Wu, 2009; Breslow Faden, & Smothers, 2003; Breslow & Smothers, 2004; Hajat et al., 2004; Moos, Schutte, Brennan & Moos, 2004).

General population surveys that have been carried out in New Zealand tend either to have an upper age limit of 64 years (Ministry of Health, 2009) or to group older adults into an 18+ years of age group (ALAC, 2011). As such, there is insufficient information to obtain a clear picture of alcohol use in New Zealand adults over 64 years of age. However, findings from the most recent study of 6,662 New Zealanders using an older age Alcohol Use Disorders Identification Test (AUDIT) indicate that alcohol consumption in 55–70-year olds is high – with approximately 42.3 percent being classified as hazardous drinkers (an AUDIT score of four or more) (Towers et al., 2011).

Factors that influence drinking

Looking at the literature from overseas, health status, income, and history of problem drinking at late middle age, rather than retired status per se, all appear to influence the direction of subsequent late-life drinking trajectories (Brennan et al., 2011; Brennan, Schutte & Moos, 2010). Alcohol related problems in older people have frequently been linked to significant life events, such as loss of a loved one, loneliness, retirement, insomnia, illness or pain (Institute of Alcohol Studies, 2010). Relevant factors that are pertinent to this research report include: socio-economic and deprivation factors, family structure and chronic illness.

Socio-economic status and deprivation factors

It is generally viewed that socio-economically disadvantaged groups experience heavier patterns of drinking, with a higher prevalence of drinking-associated health problems and consequences (Grittner, Kuntsche, Gmel, & Bloomfield, 2012; Grittner, Kuntsche, Graham, & Bloomfield, 2012; Shankar, McMunn, & Steptoe, 2010). However the relationship between socio-economic status (SES) and drinking is not always clear, and frequently varies by age, gender, and country. Furthermore findings differ according to the measures used (Bloomfield, Grittner, Rasmussen & Petersen, 2008; Hajat et al., 2004; Huckle, You & Casswell, 2010; Jatrana, Carter, McKenzie & Wilson, 2011; Towers et al., 2011). In the context of older people, financial resources are also relevant in terms of superannuation status and education as a reflection of SES.

Having financial resources has been shown to be a risk factor for excessive alcohol consumption in older adults, particularly men (Moos et al., 2010b). This has been shown to be consistent over time and is posited by the notion that financial resources may loosen the bonds of social control and enable individuals to pursue more independence (Moos et al., 2010b). Conversely, having limited financial resources has been shown to decrease the amount of alcohol consumed in retirement years (Brennan et al., 2010). Moderate drinking levels have been associated with relative financial security in adults over 75 years of age, and also with good health (Hajat et al, 2004).

There is limited information regarding SES and drinking patterns in New Zealanders over 60 years of age.

Chronic disease and alcohol consumption

The burden of alcohol-related harm is an international issue (Rehm, 2011). According to the World Health Organisation (WHO) report (2010), an estimated 2.5 million people worldwide died of alcohol-related causes in 2004, and alcohol was related to 4.5% of the global burden of disease as measured in disability-adjusted life years lost, even when consideration is given to the modest protective effects, (especially on coronary heart disease) of low consumption of alcohol for some people aged 40 years or older. In New Zealand in 2000 it was estimated that 1,037 deaths were caused by alcohol (Connor, Broad, Rehm, Hoorn, & Jackson, 2005). The burden of death, disability and disease attributable to alcohol was

substantially higher for men (Connor et al., 2005). This may change as the number and impact of older female drinkers is expected to increase over the next 20 years as the disparity between men's and women's drinking rates decreases (Epstein, Fischer-Elber & Al-Otaiba, 2007).

There is evidence to support moderate drinking's protective effect on health, coronary heart disease, stroke and dementia (Lee et al., 2010; O'Connell et al., 2003; Rehm, 2011) (effects which may be more prominent for women (Byles, Young, Furuya, & Parkinson, 2006)), and on quality of life in older men (Chan, von Muhlen, Kritz-Silverstein & Barrett-Connor, 2009; Chen & Hardy, 2009). However, for both men and women the health protection effects afforded by alcohol typically present as a J or U shaped relationship whereby, over a certain threshold, increasing levels of alcohol consumption result in health detriment (Baumberg, 2006; World Health Organisation, 2010). It is widely accepted that older people are less tolerant to the effects of alcohol (Heuberger, 2009). As a result of aging, alcohol is not broken down by the body as efficiently as when young. The ratio of body water to fat tends to fall and alcohol has a faster effect on the brain, meaning that it takes less alcohol to become drunk and this increases the risk of falls and injury (ALAC, 2008; Heuberger, 2009; Institute of Alcohol Studies, 2010; O'Connell et al., 2003). It is anticipated that the aging baby boom cohort will significantly add to the treatment burden associated with alcohol (other substance misuse) in the coming years, with researchers highlighting the special needs of this aging population (Gfroerer et al., 2003; Towers et al., 2011).

Heavy alcohol intake increases the incidence of a host of health conditions: liver cirrhosis, aerodigestive cancer, haemorrhagic stroke, hypertension, diabetes and injuries (particularly falls) (Connor et al., 2005; Poikolainen, 2002; Rehm, 2011). Evidence also suggests that alcohol may be linked to the incidence of chronic pancreatitis and cancers of the liver, mouth, colon and rectum, and breast cancer in women (Connor et al., 2005; Poikolainen, 2002).

Family environment and alcohol consumption

The influence of extended family members on regulating alcohol consumption of older adult members appears to be outweighed by friends' approval of drinking behaviours, engagement in social activities, and financial resources (Moos et al., 2010a). In terms of family environment, divorce or loss of spouse may also contribute to changes in alcohol consumption (Institute of Alcohol Studies, 2010).

There is a lack of information regarding family structure and alcohol consumption for people 64 years of age and over in New Zealand.

Drinking and Māori and Pacific older people

Information pertaining to alcohol consumption in older Māori and Pacific populations is also scarce. However, where studies have included Māori participants, evidence indicates that there is a high burden of alcohol-associated harm (Connor et al., 2005).

The limited information available on middle-aged and older Pacific adults indicates that prevalence rates for the consumption of alcohol are low. However, those few who do drink consume more on an average occasion than their New Zealand European counterparts (Sundborn et al., 2009). SES and gender further impact on drinking patterns. Pacific women drink less than Pacific men and Pacific adults in the middle deprivation groups tend to drink more than the least and most financially deprived (Sundborn et al., 2009). However, Pacific drinkers were also approximately five times more likely to have stopped drinking compared to New Zealand Europeans, citing family and social reasons as their main motivation for stopping drinking (Sundborn et al., 2009).

Summary

In summary, current evidence is limited on the relationship between SES, family structure and chronic illness on alcohol consumption in older New Zealanders (≥ 60 years of age). Furthermore, little is known about how these factors are associated with the ethnicity of New Zealanders. Information about how older Maori and Pacific peoples drink is especially scarce. This report will provide important information toward addressing the knowledge gap in these areas.

METHODS

SURVEY DESIGN AND APPROACH

Survey of Family, Income and Employment-Health

A comprehensive description of the Statistics New Zealand Survey of Family, Income and Employment (SoFIE) can be found at the Statistics New Zealand website (http://www.stats.govt.nz/browse_for_stats/income-and-work/Income/sofie.aspx).

SoFIE was a household panel survey that began in 2002 and finished in 2010, with the first wave of data collection continuing over the period of October 2002 to September 2003 and the final (eighth) wave from October 2009 to September 2010 (Carter et al., 2008; Carter et al., 2010a). Information from the first seven waves was used in this analysis (SoFIE data waves 1-7, version 2).

Information was collected once a year from the same individuals on income levels, sources and changes, and on the major influences on income such as employment and education experiences, household and family status and changes, demographic factors and health status. Every two years (Waves 2, 4, 6 and 8) information on assets and liabilities is collected to monitor net worth and savings. A series of health questions was asked in Waves 3, 5 and 7, the SoFIE-Health sub-study (Carter et al., 2010a).

Population

Eligible participants included the usually resident population of New Zealand living in permanent, private dwellings on the main islands in the North and South Islands (including Waiheke Island), and excluded overseas visitors resident in NZ for <12 months and who intended to stay in NZ for <12 months; non-NZ diplomats and diplomatic staff and their dependants; members of non-NZ armed forces stationed in NZ and their dependants; and people living in institutions or in other non-private dwelling establishments such as boarding houses, hotels, motels and hostels, as well as people living on offshore islands (Statistics New Zealand, 2008, Carter et al., 2010). Children (those aged less than fifteen years) were not asked specific survey questions, but demographic information (age, sex and ethnicity) on all children in the household was collected from the respondent in the household who answered the household questionnaire.

Sampling for SoFIE used a three stage stratified cluster approach, by selecting a random sample of primary sampling units (a group of around 70 dwellings) stratified according to socio-economic and other variables, then a random sample of dwellings within these units (Carter, Cronin, Blakely, Hayward & Richardson, 2010b). The initial SoFIE sample comprised approximately 11,500 responding private households (response rate of 77 percent), with over 29,000 respondents (over 22,000 adults) included in Wave 1, reducing to

over 18,000 in Wave 7 (63 percent of Wave 1 responders) of whom 13,850 were adults (aged 15 years and older; 66 percent of Wave 1). This rate of attrition is similar to other international longitudinal surveys - Household, Income and Labour Dynamics in Australia (HILDA) 69 percent, and the British Household Panel Survey (BHPS) 67 percent (Buck, Burton, Laurie, Lynn & Uhrig, 2006; Wilkins, Warren, Hahn & Houg, 2011).

Appendix Table A1 shows the distribution of all respondents (0-65+ years of age) at Wave 1 across a number of demographic, social and economic characteristics. Although the sampling strategy in SoFIE did not over-sample ethnic minority populations, the ethnic structure of the SoFIE population is relatively similar to the 2001 census population (Statistics New Zealand, 2001). The balanced population (i.e. those who responded in each wave) was 63 percent of the full panel, representing 18,780 participants. Attrition from the full panel was 36 percent. Those who were not followed throughout the study period were more likely to be Māori and other non-New Zealand European, have no qualification, be a sole parent family, be from Auckland and have a low household income.

The sample population used for the analyses in this paper was SoFIE participants who were original sample members at Wave 1, who responded in all of the health modules in Waves 3, 5 and 7 (from 2004 to 2009), giving a sample size of 3,465 aged 60 years or older at Wave 3 (aged 62 years or older at Wave 5 and 64 years or older at Wave 7).

Measures

In SoFIE, face-to-face interviews are used to collect information annually on income levels, sources and changes, and on the major influences on income such as employment and education experiences, household and family status and changes, demographic factors and health status. The SoFIE-Health module was comprised of 20 minutes of questionnaire time in Waves 3 (2004-05), 5 (2006-07) and 7 (2008-09) in the following health-related domains: health status (SF36 & Kessler scale), perceived stress, chronic conditions (heart disease, diabetes, and injury-related disability), tobacco smoking, alcohol consumption, health care utilisation, and an individual deprivation score (Carter et al., 2010).

Level of alcohol consumption

For the purpose of this report, a standard drink is defined as a can or small bottle of beer; a small glass of wine; or a single nip of spirits containing 10 g of alcohol. In New Zealand a standard drink contains 10 g of alcohol (see Appendix Table A3) (ALAC, 2003).

As part of the health module asked in Waves 3, 5 and 7, participants who had had a drink containing alcohol in the last 12 months were asked on how many days in the last four weeks they had drunk alcohol (i.e. frequency); and how many drinks containing alcohol they had consumed on a typical day when they were drinking. This information was used to calculate the average weekly consumption of alcohol.

Participants were also specifically asked whether they had ever had more than eight (for men), or six (for women), standard drinks on one occasion (defined here as risky drinking) and, if so, on how many occasions they did this in the last four weeks (engaged in risky drinking). The frequency of risky drinking in those who reported drinking in the past 12 months was categorised as: never risky; risky one to two times a month; risky weekly; or risky weekly to daily (Jatrana, Carter, McKenzie and Wilson, 2011). This definition was developed in consultation with advisors from ALAC in 2003 and is higher than the current advice for low-risk drinking (ALAC, 2003). ALAC/HPA's current low-risk alcohol drinking advice for adults (including young adults aged 18-24 years) is that, to reduce their long-term health risks:

- women should drink no more than two standard drinks a day and no more than 10 standard drinks a week, and have at least two alcohol-free days every week
- men should drink no more than three standard drinks a day and no more than 15 standard drinks a week, and have at least two alcohol-free days every week
- To reduce their risk of injury on a single occasion of drinking women should drink no more than four and men no more than five standard drinks on any single occasion.

Descriptive variables

Most of the descriptive factors were taken from the Wave 7 interview as follows.

- Age used in this report is age at baseline (Wave 3); therefore in tables where age is used as a descriptive characteristic of alcohol use by wave, it is important to note that, by Wave 7, the age groups will have increased by seven years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5 and 64 to 68 at Wave 7, so essentially this group is moving to retirement age over the study period)
- Age categories (where applicable):
 - 60-64 years at Wave 3
 - 65-74 years at Wave 3
 - 75+ years at Wave 3
- Sex: Male, Female
- Marital status: Married, divorced or separated, widowed
- Ethnicity: New Zealand European, Māori and Other (Pacific and Asian populations are included in Other). Most tables are presented for New Zealand European and Māori only Ethnicity is taken as the most often reported ethnicity across the seven waves of SoFIE and categorised into Māori, Pacific, Asian, Other, New Zealand European
- Family structure: Couple only, couples with children (includes dependent and independent children, sole parent families and not living in a family nucleus)
- Household composition: One-family household, Two or more family household, Other multiple person household e.g. a flatting situation, One-person household
- Education: No qualifications, school, vocational, degree and above

- Labour market activity at interview date: Working, unemployed looking for work, or inactive (unemployed not looking for work).
- Annual personal income is gross (before tax) annual (accrued) personal income from all sources received in a defined 12-month period (between the start and end of the annual reference period), by a person aged 15 years and over; and split into quintiles based on the study population (see Table A2 in the Appendix for income quintiles)
- Annual household income is the total income received from all sources by members of a household in the annual reference period, equivalised for household size and CPI adjusted; and split into quintiles based on the study population
- Individual Deprivation (NZiDep): The NZiDep is a tool used for measuring deprivation for individuals and is a composite score based on eight simple questions ranging from whether respondents had to buy cheaper food so they could pay for other things to whether they had to make use of food banks over the past 12 months (Salmond & Crampton, 2002)
- Area deprivation (NZDep): a measure of small area deprivation which is composed of census variables that reflect aspects of both material and social deprivation (Ministry of Health). NZDep 2001 information was divided into quintiles where NZDepQ1 is the least deprived area and NZDepQ5 is the most deprived
- Housing tenure: whether individual own the houses they currently live in
- Self-rated health: based on the question 'In general would you say your health is: excellent, very good, good, fair or poor?'
- Smoking status: Current smoker, ex-smoker, never smoker
- Cancer: whether an individual has had a cancer registration from the Ministry of Health cancer registry anytime between 1990 and 2010
- Stroke: whether an individual has ever been told by a doctor that they have had a stroke (Yes/No)
- Heart disease: whether an individual has ever been told by a doctor that they have heart disease (Yes/No)
- Diabetes: whether an individual has ever been told by a doctor that they have diabetes (Yes/No)
- Chronic disease status: total sum of the number of chronic diseases including heart disease, stroke, diabetes, cancer, asthma, bipolar/schizophrenia, high blood pressure or high cholesterol (0, 1-2, 3+).

Caveats to the results

The results in this report were not weighted to the New Zealand population and relate only to the SoFIE survey balanced panel sample. The numbers presented in the tables are rounded due to Statistics New Zealand confidentiality protocols; therefore, the numbers in different tables may not be the same.

The SoFIE survey was designed to interview adults about income, families and employment over time. Interviews are conducted in people's homes using computer-assisted

interviewing. Therefore, respondents may have been interviewed together or with other household/family members present, so reported drinking behaviours may be underestimated. Although all interviewers were trained by Statistics NZ they were not trained specifically in health and alcohol related interviewing.

RESULTS

The results have been divided into four sections:

- **Section 1:** Describes the surveyed population
- **Section 2:** Describes how the older people in the surveyed population are drinking i.e. drinking status and changes in drinking status
- **Section 3:** Describes the changes in drinking consumption by the older people in the surveyed population
- **Section 4:** Describes the heavy drinking patterns by the older people in the surveyed population, and also examines socio-economic status and health.

SECTION 1: THE SURVEYED POPULATION

Tables 1 and 2 describe the characteristics of the SoFIE population aged over 60 years at Wave 3 (baseline). Of note is that, by Wave 7 the age groups will have increased by five years e.g. 60-64 years of age at wave 3 will increase to 62-66 years of age at Wave 5 and 64-68 at Wave 7 so essentially this group is moving to retirement age over the study period.

There was a slightly higher proportion of males than females in the 60-64 and the 65-74 age groups. There were more females (27.6 percent) than males (24.3 percent) in the oldest 75+ age group. The distribution of age in the SoFIE sample is slightly younger than that in the general population measured in the 2006 census, possibly due to the sampling frame of the SoFIE survey which only interviewed people living in private dwellings (i.e. does not include rest homes, institutions) (Statistics New Zealand, 2007). The majority of older people at Wave 3 reported New Zealand European ethnicity but the ethnic distribution of respondents is similar to that seen in the 2006 census population aged 60 years and older.

A higher proportion of males were married (74.8 percent) compared to females (53.9 percent). Conversely, more females were widowed (30.8 percent) compared to males (9.6 percent). This probably reflects the longer life expectancy in females and the higher proportion of older females (54.8 percent) compared to males (45.2 percent) in the SoFIE population. This may also be reflected in the higher proportion of females who reported living in a one-person household (35.4 percent, compared to males 17.6 percent) and not in a family (40.4 percent, compared to males 21.7 percent).

There was a higher proportion of males than females who were ex-smokers (49.8 percent) and a greater proportion of females than males who were never smokers (58.6 percent). Similar distributions of self-rated health were seen across both males and females. Females reported a greater number of chronic diseases compared to males. Males had higher proportions of cancer registrations (15.3 percent), stroke (11.5 percent), heart disease (31.3 percent) and diabetes (14.1 percent) compared to females.

Table 1: Demographic characteristics of the baseline SoFIE population aged over 60 years at Wave 3

	All		Males		Females	
	N	%	n	%	n	%
Total	3,465		1,565	45.2	1,895	54.8
Age at baseline (Wave 3)						
60-64	1,105	31.9	520	33.2	585	30.8
65-74	1,455	42.0	665	42.5	790	41.6
75+	905	26.1	380	24.3	525	27.6
Marital status						
Married	2,195	63.4	1,170	74.8	1,025	53.9
Divorced, separated	315	9.1	140	8.9	175	9.2
Widowed	735	21.2	150	9.6	585	30.8
Never married	155	4.5	80	5.1	75	3.9
Ethnicity						
NZ/European	3,090	89.3	1,395	89.1	1,695	89.4
Māori	190	5.5	80	5.1	110	5.8
Pacific	75	2.2	35	2.2	40	2.1
Other	110	3.2	60	3.8	50	2.6
Family type						
Couple only	2,010	58.1	1,065	68.1	945	49.9
Couple with children	205	5.9	120	7.7	85	4.5
Sole parent	95	2.7	20	1.3	75	4.0
Not in a family	1,105	31.9	340	21.7	765	40.4
Household composition						
One family	2,290	66.2	1,190	76.0	1,100	58.0
Two + families	45	1.3	20	1.3	25	1.3
Multiple persons	105	3.0	45	2.9	60	3.2
One person	945	27.3	275	17.6	670	35.4

	All		Males		Females	
	N	%	n	%	n	%
Health measures						
Smoking status						
Current smoker	350	10.1	165	10.5	185	9.8
Ex-smoker	1,345	38.9	780	49.8	565	29.8
Never smoker	1,700	49.1	590	37.7	1,110	58.6
Self-rated health						
Excellent	620	17.9	285	18.2	335	17.6
Very good	1,160	33.5	540	34.5	620	32.6
Good	1,070	30.9	475	30.4	595	31.3
Fair/poor	555	16.0	240	15.3	315	16.6
Number of chronic diseases						
0	510	14.7	270	17.3	240	12.7
1 to 2	1,630	47.1	710	45.4	920	48.5
3+	1,330	38.4	590	37.7	740	39.1
Cancer	445	12.8	240	15.3	205	10.8
Stroke	350	10.1	180	11.5	170	8.9
Heart disease	925	26.7	490	31.3	435	22.9
Diabetes	450	13.0	220	14.1	230	12.1

Table 2 describes the socio-economic characteristics of the population. Most males (83.4 percent) and females (81.8 percent) owned their own homes. A greater proportion of males reported living in the highest household and personal income quintiles. Conversely, greater proportions of females reported living in the lowest income quintiles (see Table A2 in the Appendix for income quintiles). Males had higher levels of education and were more likely to report a post-school vocational qualification, degree or higher compared to females, who were more likely to report a school level qualification or no qualification.

In terms of employment status, the majority of the population were not in current employment at the Wave 3 interview. This reflects the fact that almost 70 percent of the population were over retirement age at Wave 3. There were higher proportions of males in employment (40.3 percent) compared to females (23.2 percent). More females reported

being not employed or inactive, which again reflects the higher proportion of older females in the sample.

Almost 83 percent of males and 77 percent of females reported no individual deprivation. Females reported higher levels of deprivation (one or more factors) compared to males. This is probably related to the higher proportion of females who report living in a one-person household and not in a family in Table 1. In comparison, similar patterns in area level deprivation were observed for both males and females; however, there was no clear linear relationship.

Table 2: Socio-economic characteristics of the baseline SoFIE population aged over 60 years at Wave 3

	All		Males		Females	
	N	%	n	%	n	%
Total	3,460		1,565		1,895	
Housing tenure						
Own home	2,855	82.5	1,305	83.4	1,550	81.8
Not own home	555	16.0	235	15.0	320	16.9
Household income						
Q1 (lowest quintile)	690	19.9	220	14.1	470	24.8
Q2	690	19.9	275	17.6	415	21.9
Q3	695	20.1	320	20.4	375	19.8
Q4	695	20.1	365	23.3	330	17.4
Q5 (highest quintile)	695	20.1	390	24.9	305	16.1
Personal income						
Q1 (lowest quintile)	695	20.1	280	17.9	415	21.9
Q2	690	19.9	265	16.9	425	22.4
Q3	695	20.1	225	14.4	470	24.8
Q4	690	19.9	330	21.1	360	19.0
Q5 (highest quintile)	690	19.9	465	29.7	225	11.9
Highest educational qualification						
Degree or higher	270	7.8	170	10.9	100	5.3
Post-school vocational	1,185	34.2	645	41.2	540	28.5
School	655	18.9	265	16.9	390	20.6
No qualification	1,350	39.0	485	31.0	865	45.6
Labour force status						
Working	1,070	30.9	630	40.3	440	23.2
Not employed, looking for work	10	0.3	5	0.3	5	0.3
Not employed, inactive	2,385	68.9	930	59.4	1,455	76.8

	All		Males		Females	
	N	%	n	%	n	%
NZ Individual Deprivation						
0 factors	2,745	79.3	1,295	82.7	1,450	76.5
1, 2 factors	555	16.0	205	13.1	350	18.5
3+ factors	85	2.5	30	1.9	55	2.9
Area deprivation						
NZDepQ1	675	19.5	335	21.4	340	17.9
NZDepQ2	745	21.5	335	21.4	410	21.6
NZDepQ3	655	18.9	285	18.2	370	19.5
NZDepQ4	755	21.8	335	21.4	420	22.2
NZDepQ5	590	17.1	255	16.3	335	17.7

SECTION 2: DRINKING STATUS

In Waves 3, 5 and 7 participants were asked “In the last 12 months have you had a drink containing alcohol?” This was used to examine trends in drinking status over the study period as well as changes in individual level drinking statuses.

Table 3 presents the cross-sectional patterns of drinking at Waves 3, 5 and 7 and shows the differences in the three age groups (60-64, 65-74 and 75+ years at Wave 3), by gender and ethnicity. Note that, by Wave 7 the age groups will have increased by five years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5 and 64 to 68 at Wave 7). Overall, drinking status remained stable between the waves.

The youngest age group (60-64 years) drank more at all waves compared to the older age groups.

Overall, there was a 2.5 percent decrease in the proportion of drinkers from Wave 3 (76.6 percent) to Wave 7 (74.1 per cent). The decrease in drinking was greatest in the oldest age group (75+ years) for both males and females.

Male participants reported a higher prevalence of drinking than females, and New Zealand European respondents reported a higher prevalence of drinking than did other ethnicities across the study period. Pacific people showed the largest decrease in the prevalence of drinking across all three waves, from 33.3 percent at Wave 3 to 20 percent at Waves 5 and 7.

Figures 1 and 2 show that the decrease in drinking across all three waves of the study is greatest for both male and female respondents in the oldest age group (75+ years).

Table 3: Cross sectional patterns of the prevalence of drinking at Waves 3, 5 and 7, by age, sex, age*sex and ethnicity

	Total w3	Drinkers at w 3		Drinkers at w5		Drinkers at w7	
	N	n	row%	n	row%	n	row%
Overall	3,460	2,650	76.6	2,630	75.8	2,575	74.1
Age at w3*							
60-64	1,105	875	79.2	880	79.6	870	78.4
65-74	1,450	1,115	76.9	1,105	75.7	1,090	74.9
75+	905	660	72.9	645	71.3	615	67.6
Sex							
Male	1,570	1,305	83.1	1,300	82.8	1,290	82.2
Female	1,900	1,350	71.1	1,325	69.7	1,290	67.9
Age-Sex							
Males 60-64	520	445	85.6	450	86.5	450	85.7
Males 65-74	665	555	83.5	555	82.8	555	82.8
Males 75+	380	305	80.3	300	78.9	285	74.0
Females 60-64	585	430	73.5	430	73.5	585	71.8
Females 65-74	785	560	71.3	550	69.6	535	68.2
Females 75+	525	355	67.6	345	65.7	330	62.8
Ethnicity							
NZ/European	3,095	2,455	79.3	2,440	78.8	2,395	77.4
Māori	185	110	59.5	110	59.5	105	56.8
Pacific	75	25	33.3	15	20.0	15	20.0
Other	110	60	54.5	60	54.5	60	54.5

*Note: By Wave 7 the age groups will have increased by five years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5, and 64 to 68 at Wave 7).

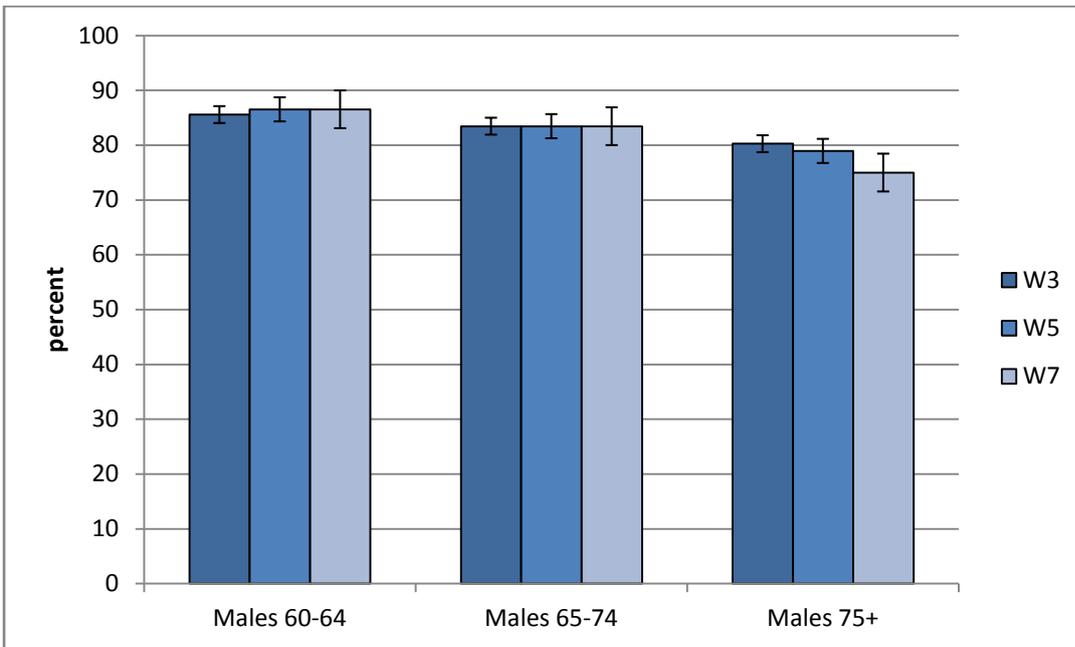


Figure 1: Trends in the (cross-sectional) prevalence rates of drinking by age for males

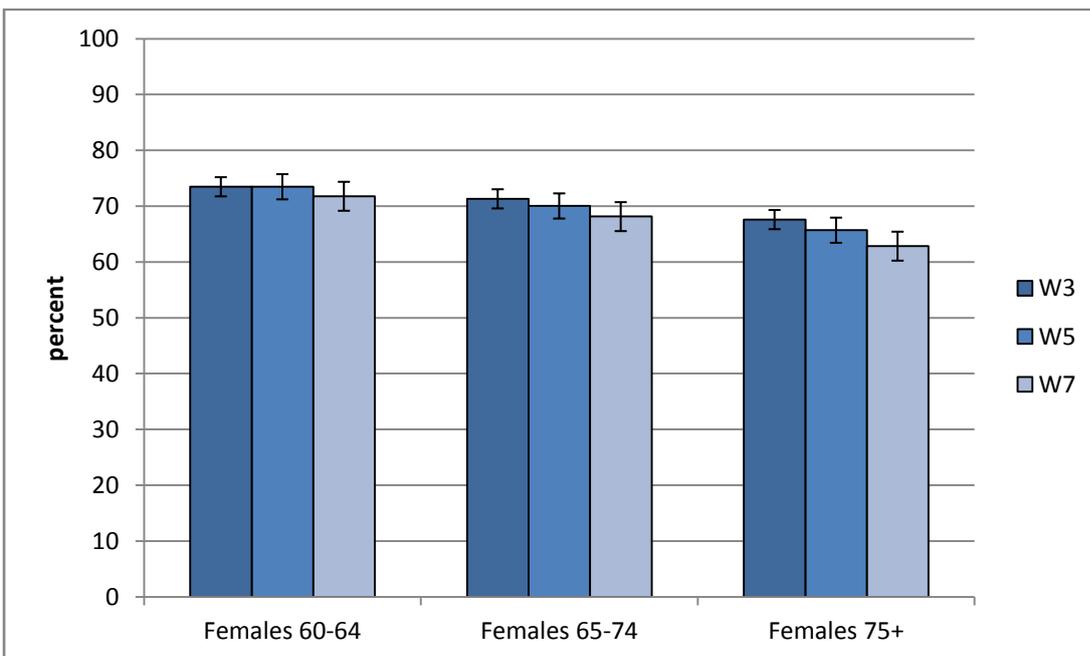


Figure 2: Trends in the (cross-sectional) prevalence rates of drinking by age for females

Table 4 presents the transition probabilities (pooling the transitions from Wave 3 to 5 and Wave 5 to 7) for the number of respondents reporting whether they had had a drink in the last 12 months between the waves. Respondents who had not changed their drinking status between waves are represented on the diagonal in bold and those who changed their drinking status are off the diagonal. Overall, there is stability in individual drinking statuses between the waves, with over 90 percent of drinkers in Wave t reporting they were drinkers

in Wave *t*+2, and 84 percent of non-drinkers in Wave *t* remaining non-drinkers in Wave *t*+2. Only a small percentage (seven percent) stopped drinking between waves. These tables also show that approximately 15 percent of respondents who reported not drinking in Wave *t* had started drinking by Wave *t*+2. However, we do not know if these respondents were drinkers before the start of SoFIE and had abstained for a period of time. These patterns were relatively consistent across the three age groups and for both males and females.

Note: the proportions do not add to 1.00, due to missing data in the alcohol questions. Approximately two percent of responses were missing information about alcohol consumption in Waves 3 and 5, which was reduced to <1% in Wave 7.

Table 4: Transitions in drinking status between Waves, overall, by age group and by sex

Overall				
Have you had alcohol in the last 12 months?				
		Wave <i>t</i> +2		
		Yes	No	Total
Wave <i>t</i>	Yes	0.92	0.07	5,290
	No	0.15	0.84	1,500
	Total	5,190	1655	6,940

Age 60-64				
Have you had alcohol in the last 12 months?				
		Wave <i>t</i> +2		
		Yes	No	Total
Wave <i>t</i>	Yes	0.93	0.05	1,765
	No	0.15	0.82	395
	Total	1,750	435	2,220

Age 65-74				
Have you had alcohol in the last 12 months?				
		Wave <i>t</i> +2		
		Yes	No	Total
Wave <i>t</i>	Yes	0.92	0.07	2,225
	No	0.17	0.83	630
	Total	2,190	685	2,910

Age 75+				
Have you had alcohol in the last 12 months?				
		Wave <i>t</i> +2		
		Yes	No	Total
Wave <i>t</i>	Yes	0.90	0.09	1,300
	No	0.13	0.86	475
	Total	1,250	535	1,810

Males				
Have you had alcohol in the last 12 months?				
		Wave <i>t</i> +2		
		Yes	No	Total
Wave <i>t</i>	Yes	0.94	0.05	2,605
	No	0.16	0.83	465
	Total	2,590	515	3,145

Females				
Have you had alcohol in the last 12 months?				
		Wave <i>t</i> +2		
		Yes	No	Total
Wave <i>t</i>	Yes	0.90	0.09	2,670
	No	0.15	0.83	1,055
	Total	2,620	1,140	3,805

To understand the transitions in drinking status in more detail the changes in the drinking status across Waves 3 to 7 are presented in Table 5. Overall, approximately 15.8 percent of respondents remained non-drinkers during the study period, and this was slightly higher in the oldest age group (75+ years at Wave 3) than in the younger age group (aged 60 to 64 at Wave 3), and higher in females than in males. As seen in Table 4 the majority of the

respondents who were drinkers at Wave 3 remained drinkers at Wave 7. This was much higher for the youngest age group (aged 60 to 64 at Wave 3) than for the oldest age group (75+ years at Wave 3), and higher for males than for females. About 1.3 per cent of the population started drinking between Waves 3 and 7, and this was higher in females (than in males) and in the older age group (than the younger age group). A high percentage of the population stopped drinking between Waves 3 and 7 (5.6 percent). Respondents were more likely to stop drinking as they increased in age. This may be related to an increased occurrence of chronic conditions and advice to reduce drinking.

Table 5: Changes in drinking status between Waves 3 to 7, overall, and by sex and age

	All	Non drinker		Start drinking		Stop drinking		Stay drinkers	
	N	n	%	n	%	n	%	n	%
Overall	3,455	545	15.8	45	1.3	195	5.6	2,300	66.6
Age at w3*									
60-64	1,095	140	12.8	10	0.9	45	4.1	780	71.2
65-74	1,450	225	15.5	20	1.4	80	5.5	970	66.9
75+	910	180	19.8	15	1.6	70	7.7	550	60.4
Sex									
Females	1,900	380	20.0	35	1.8	130	6.8	1,125	59.2
Males	1,575	170	10.8	15	1.0	70	4.4	1,180	74.9
Age-Sex									
Males 60-64	520	45	8.7	5	1.0	15	2.9	410	78.8
Males 65-74	665	70	10.5	5	0.8	25	3.8	505	75.9
Males 75+	385	55	14.3	5	1.3	25	6.5	265	68.8
Females 60-64	575	95	16.5	5	0.9	30	5.2	370	64.3
Females 65-74	785	155	19.7	15	1.9	55	7.0	465	59.2
Females 75+	525	125	23.8	10	1.9	45	8.6	285	54.3

*Note: By Wave 7 the age groups will have increased by five years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5, and 64 to 68 at Wave 7).

Tables 6 and 7 present drinking status by respondent characteristics recorded at the final wave (Wave 7). Table 6 shows that, overall, 74.2 percent indicated that they were drinking at Wave 7. This was higher in males than in females (81.9 percent versus 68.0 percent).

There were higher proportions of drinkers in the youngest age group (60-64 years) than in the oldest age group (75+ years) for both males and females. Widowed males and females had lower prevalence rates of drinking than did married males and females, with widowed females having the lowest. Divorced or separated males and married females had higher prevalence rates of drinking. There were higher prevalence rates of drinking in New Zealand European respondents than in respondents of other ethnicities, and in those living as couples only, than in other living arrangements.

There were high prevalence rates of drinking in both male and female ex-smokers. However, as can be seen in Table 1 there were low prevalence rates of smoking in the older age group (75+ years), with only 10% reporting being current smokers.

There is a linear relationship between self-rated health and drinking, with those who report better health also reporting higher prevalence rates of drinking, and those with fair/poor health reporting lower prevalence rates of drinking. Those with one to two chronic conditions report higher prevalence rates of drinking than those with no chronic conditions. Those with a cancer registration are more likely to drink than the overall surveyed population, and respondents with a cardiovascular condition are less likely to drink than the overall surveyed population.

Table 7 presents drinking status at Wave 7 by socio-economic characteristics of the population. In general there was a greater percentage of drinkers with increased (better) socio-economic status. There were higher proportions of drinkers amongst those who own their own homes, those in the higher income groups i.e. (household and personal income quintile 5), and those with higher educational qualifications (see Table A2 in the Appendix for income quintiles).

There is a linear relationship between deprivation (individual and area) and drinking, with those reporting the least deprivation also reporting higher prevalence rates of drinking, and those reporting the most deprivation reporting lower prevalence rates of drinking.

Table 6: Drinking status at Wave 7 interview, by age, ethnicity, family type, household composition and health measures at Wave 7

	Overall			Males			Females		
	Total	Yes (n)	%	Total	Yes (n)	%	Total	Yes (n)	%
Total	3,475	2,580	74.2	1,575	1,290	81.9	1,890	1,285	68.0
Age									
60-64	1,100	870	79.1	520	450	86.5	580	420	72.4
65-74	1,450	1,090	75.2	665	555	83.5	785	535	68.2
75+	905	615	68.0	380	285	75.0	525	330	62.9
Marital status									
Married	2,050	1,595	77.8	1,130	930	82.3	920	665	72.3
Divorced, separated	310	235	75.8	140	120	85.7	170	115	67.6
Widowed	925	610	65.9	195	155	79.5	730	455	62.3
Never married	165	130	78.8	95	80	84.2	70	50	71.4
Ethnicity									
NZ/European	3,100	2,395	77.3	1,400	1,185	84.6	1,700	1,210	71.2
Māori	190	110	57.9	80	60	75.0	110	50	45.5
Pacific	70	15	21.4	30	10	33.3	40	5	12.5
Other	115	60	52.2	60	35	58.3	55	25	45.5
Family type									
Couple only	1,915	1,515	79.1	1,055	885	83.9	860	630	73.3
Couple with children	150	90	60.0	90	60	66.7	60	30	50.0
Sole parent	100	60	60.0	25	20	80.0	75	40	53.3
Not in a family	1,310	910	69.5	400	320	80.0	910	590	64.8
Household composition									
One family	2,140	1,655	77.3	1,150	955	83.0	990	700	70.7
Two + families	50	15	30.0	25	10	40.0	25	5	20.0
Multiple persons	100	80	80.0	50	40	80.0	50	40	80.0

	Overall			Males			Females		
	Total	Yes (n)	%	Total	Yes (n)	%	Total	Yes (n)	%
One person	1,145	795	69.4	335	270	80.6	810	525	64.8
Health measures									
Smoking status									
Current smoker	280	215	76.8	130	110	84.6	150	105	70.0
Ex-smoker	1,415	1,150	81.3	825	705	85.5	590	445	75.4
Never smoker	1,775	1,210	68.2	615	470	76.4	1,160	740	63.8
Self-rated health									
Excellent	420	350	83.3	195	175	89.7	225	175	77.8
Very good	1,115	885	79.4	510	430	84.3	605	455	75.2
Good	1,180	880	74.6	545	460	84.4	635	420	66.1
Fair/poor	755	465	61.6	320	225	70.3	435	240	55.2
Number of chronic diseases									
0	510	370	72.5	270	215	79.6	240	155	64.6
1 to 2	1,630	1,250	76.7	710	600	84.5	920	650	70.7
3+	1,330	955	71.8	590	470	79.7	740	485	65.5
Cancer	450	365	81.1	240	205	85.4	210	160	76.2
Stroke	350	230	65.7	175	130	74.3	175	100	57.1
Heart disease	925	660	71.4	490	385	78.6	435	275	63.2
Diabetes	445	300	67.4	220	170	77.3	225	130	57.8

*Note: By Wave 7 the age groups will have increased by five years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5, and 64 to 68 at Wave 7).

Table 7: Drinking status at Wave 7 interview, by socio-economic factors at Wave 7

	Overall			Males			Females		
	Total	Yes (n)	%	Total	Yes (n)	%	Total	Yes (n)	%
Total	3,475	2,580	74.2	1,575	1,290	81.9	1,900	1,290	67.9
Housing tenure									
Own home	2,275	1,725	75.8	1,045	860	82.3	1,230	865	70.3
Not own home	465	260	55.9	185	125	67.6	280	135	48.2
Household income									
Q1 (lowest quintile)	695	445	64.0	205	160	78.0	490	285	58.2
Q2	695	515	74.1	280	220	78.6	415	295	71.1
Q3	690	500	72.5	345	270	78.3	345	230	66.7
Q4	695	550	79.1	355	300	84.5	340	250	73.5
Q5 (highest quintile)	705	570	80.9	400	345	86.3	305	225	73.8
Personal income									
Q1 (lowest quintile)	695	475	68.3	315	240	76.2	380	235	61.8
Q2	690	470	68.1	265	205	77.4	425	265	62.4
Q3	695	490	70.5	225	180	80.0	470	310	66.0
Q4	700	530	75.7	310	245	79.0	390	285	73.1
Q5 (highest quintile)	700	610	87.1	460	415	90.2	240	195	81.3
Highest educational qualification									
Degree or higher	280	235	83.9	175	155	88.6	105	80	76.2
Post-school	1,200	970	80.8	650	550	84.6	550	420	76.4
School	655	470	71.8	265	215	81.1	390	255	65.4
No qualification	1,345	900	66.9	485	365	75.3	860	535	62.2
Labour force status									
Working	750	635	84.7	460	410	89.1	290	225	77.6
Not employed, looking for work	15	10	66.7	5	5	100.0	10	5	50.0

	Overall			Males			Females		
	Total	Yes (n)	%	Total	Yes (n)	%	Total	Yes (n)	%
Not employed, inactive	2,715	1,935	71.3	1,110	875	78.8	1,605	1,060	66.0
NZ Individual Deprivation									
0 factors	2,810	2,150	76.5	1,325	1,110	83.8	1,485	1,040	70.0
1, 2 factors	580	390	67.2	210	160	76.2	370	230	62.2
3+ factors	75	30	40.0	35	15	42.9	40	15	37.5
Area deprivation									
NZDepQ1 (least)	685	580	84.7	340	305	89.7	345	275	79.7
NZDepQ2	745	585	78.5	340	285	83.8	405	300	74.1
NZDepQ3	685	505	73.7	290	240	82.8	395	265	67.1
NZDepQ4	775	545	70.3	350	275	78.6	425	270	63.5
NZDepQ5 (most)	575	355	61.7	250	180	72.0	325	175	53.8

*Note: By Wave 7 the age groups will have increased by five years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5, and 64 to 68 at Wave 7).

SUMMARY POINTS ABOUT THE DRINKING STATUS OF THE SURVEYED OLDER PEOPLE

- A higher proportion of males drink than females
- Overall, the drinking status for most older people remained stable over the study period
- More of the youngest age group (60-64 years at baseline – Wave 3) drank at all waves compared to the older age groups (65-74 or 75+ years at baseline – Wave 3)
- A high proportion of New Zealand European respondents drank alcohol
- There was a small decrease (overall 5.6 percent) in the number of drinkers over the entire study period, which was greatest in the oldest age group (75+ years at baseline – Wave 3) for both males and females
- Widowed males and females had lower prevalence rates of drinking than those who were married, with widowed females having the lowest prevalence rates of drinking overall
- Divorced or separated males and married females had high prevalence rates of drinking
- There were high prevalence rates of drinking in both male and female ex-smokers
- There is a linear relationship between self-rated health and drinking, with those who report better health also reporting higher prevalence rates of drinking, and those who report fair/poor health reporting lower prevalence rates of drinking
- Those with one to two chronic health conditions reported higher prevalence rates of drinking compared to those with no chronic conditions
- Those with a cancer registration reported a higher prevalence of drinking than the overall surveyed population, whereas those with a cardiovascular condition reported a lower drinking prevalence than the overall surveyed population
- In general there was a linear relationship between deprivation (individual and area) and drinking, with the least deprived reporting higher prevalence rates of drinking and the most deprived reporting lower prevalence rates of drinking).

SECTION 3: AVERAGE WEEKLY ALCOHOL CONSUMPTION

Respondents who reported that they had had a drink containing alcohol in the last 12 months were asked on how many occasions in the last four weeks they had drunk alcohol (i.e. frequency); and how many drinks containing alcohol they had consumed on a typical occasion when they were drinking. This information was used to calculate the average weekly consumption of alcohol.

Table 8 and Figure 3 present the cross-sectional trends in average weekly alcohol consumption at each wave. Overall, average weekly alcohol consumption was fairly stable across all three waves. The lowest weekly consumption can be seen in the oldest age group (75+ years at baseline – Wave 3). Average consumption in males was more than twice as much as that in females.

Figure 3 shows that, in the youngest age group (60 to 64 years at baseline – Wave 3) the average consumption for males decreases, whereas the average consumption for females in this age group increases over the study period.

Table 8: Cross-sectional patterns of average weekly alcohol consumption at Waves 3, 5 and 7

	Drinker at w 3		Average consumption		Drinker at w 5		Average consumption		Drinker at w 7		Average consumption	
	N	mean	s.d.	N	mean	s.d.	N	mean	s.d.			
Overall	2,645	6.5	11.8	2,615	6.1	8.7	2,570	6.1	8.8			
Age at w3												
60-64	875	6.8	14.7	875	6.5	8.8	870	6.5	9.0			
65-74	1,115	6.6	9.1	1,100	6.4	9.5	1,085	6.2	8.1			
75+	660	5.9	11.4	640	5.2	6.5	610	5.4	9.8			
Sex												
Male	1,300	9.0	14.8	1,300	8.4	10.7	1,285	8.1	10.8			
Female	1,345	4.1	7.2	1,315	3.9	5.2	1,285	4.1	5.5			
Age-Sex												
Males 60-64	440	9.9	19.6	450	9.0	10.5	450	8.5	10.4			
Males 65-74	555	8.9	11.5	550	8.7	12.0	555	8.1	10.4			

	Drinker at w 3	Average consumption		Drinker at w 5	Average consumption		Drinker at w 7	Average consumption	
	N	mean	s.d.	N	mean	s.d.	N	mean	s.d.
Males 75+	305	7.6	11.3	300	7.0	7.7	285	7.7	13.2
Females 60-64	430	3.7	5.1	425	3.9	5.5	420	4.4	6.5
Females 65-74	560	4.2	4.9	550	4.1	5.1	535	4.2	5.1
Females 75+	355	4.3	11.3	340	3.6	4.8	330	3.5	4.7
Ethnicity									
NZ European	2,445	6.6	12.1	2,430	6.2	8.6	2,435	6.1	8.6
Māori	110	5.4	8.1	110	5.2	7.6	110	5.0	7.5
Pacific	25	2.9	4.9	15	2.5	3.8	15	5.0	10.5
Other	60	5.3	8.3	60	6.9	12.0	60	7.5	16.4

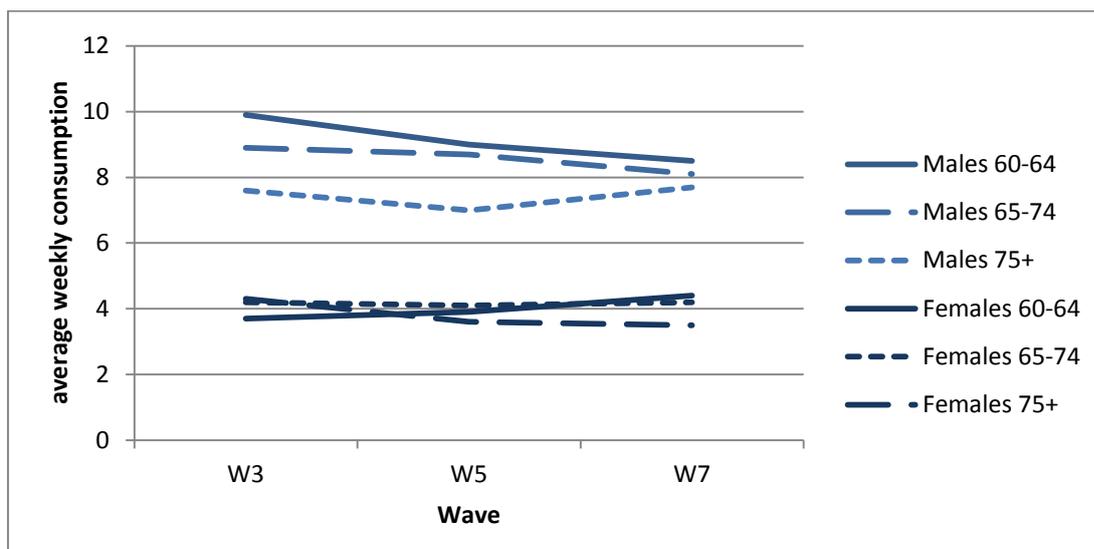


Figure 3: Trends in average weekly alcohol consumption across the Waves, by age and sex

Table 9 presents information on the magnitude of changes in the average weekly amounts of alcohol consumption between Waves 3 and 7. This is grouped into increases (one to two drinks, 3 or more drinks), decreases (one to two drinks, 3 or more drinks), and no change in consumption. The no change group contains the 545 respondents who remained never drinkers across all three waves (see Table 5), but also respondents who were drinking at exactly the same level at Waves 3 and 7. The decrease groups would include the 195 respondents who stopped drinking between Waves 3 and 7, as well as respondents who

remained drinkers but decreased their average weekly amount (i.e. changed from a mean of nine drinks at Wave 3 to a mean of six drinks at Wave 7). The increase groups include the 45 respondents who started drinking between Waves 3 and 7, as well as respondents who were drinkers at both time points but increased their average weekly amount (i.e. from two drinks at Wave 3 to 12 drinks at Wave 7).

Overall, 53 percent of the population indicated no change in their average weekly alcohol consumption. This corresponds to the larger number of respondents who stayed drinkers over the study period (see Table 5).

Although very few older people stopped drinking overall (see Table 4), approximately 25 per cent of the population did decrease their average weekly consumption. Table 9 shows that, overall, a greater proportion of drinkers decreased their average weekly consumption than increased their consumption over the study period. This decrease in average consumption was similar across all three age groups. The decrease was larger for males than for females.

Table 9: Changes in average weekly amounts of alcohol consumption between Waves 3 and 7

	All	Decrease 3 or more		Decrease 1 to 2		No change		Increase 1 to 2		Increase 3 or more	
	Total	n	%	n	%	n	%	n	%	n	%
Overall	3,465	140	4.0	715	20.6	1,840	53.1	485	14.0	120	3.5
Age at w3											
60-64	1,100	45	4.1	210	19.1	570	51.8	165	15.0	45	4.1
65-74	1,455	60	4.1	310	21.3	760	52.2	210	14.4	55	3.8
75+	905	35	3.9	195	21.5	510	56.4	110	12.2	20	2.2
Sex											
Male	1,495	90	6.0	335	22.4	780	52.2	220	14.7	70	4.7
Female	1,805	50	2.8	380	21.1	1,060	58.7	265	14.7	50	2.8
Age-sex											
Males 60-64	520	35	6.7	100	19.2	260	50.0	70	13.5	25	4.8

Males 65-74	665	35	5.3	150	22.6	315	47.4	100	15.0	35	5.3
Males 75+	380	20	5.3	85	22.4	205	53.9	50	13.2	10	2.6
Females 60-64	580	10	1.7	110	19.0	310	53.4	95	16.4	20	3.4
Females 65-74	790	25	3.2	160	20.3	445	56.3	110	13.9	20	2.5
Females 75+	525	15	2.9	110	21.0	305	58.1	60	11.4	10	1.9
Ethnicity											
NZ/European	3,090	125	4.0	655	21.2	1,610	52.1	450	14.6	115	3.7
Māori	190	5	2.6	30	15.8	120	63.2	20	10.5	5	2.6
Pacific	85	5	5.9	10	11.8	50	58.8	5	5.9	5	5.9
Other	120	5	4.2	20	16.7	65	54.2	15	12.5	5	4.2

*Note: By Wave 7 the age groups will have increased by five years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5, and 64 to 68 at Wave 7).

Table 10 presents average weekly alcohol consumption at Wave 7, by age, marital status, ethnicity, family type, household composition and health measures at Wave 7. Consistent with other findings in this report, average consumption in males was double that in females. Also at Wave 7 the average weekly alcohol consumption was higher in the youngest age group (60 to 64 at Wave 3: 64 to 68 at Wave 7). Average weekly alcohol consumption was lowest for widowed, Māori and Pacific respondents, and for sole parents. With regard to health outcomes, average weekly alcohol consumption was higher in respondents who reported currently smoking than in those who had stopped smoking or never smoked. Those who reported their self-rated health as excellent, very good or good had higher average consumption than those who reported their health as fair/poor. Females reporting poor self-rated health had the lowest average consumption. Across the chronic conditions average weekly alcohol consumption was fairly similar across those who had a history of strokes, heart disease or diabetes.

Table 11 presents average weekly alcohol consumption at Wave 7 by socio-economic factors at Wave 7. There was almost no difference in average weekly alcohol consumption between males who owned their own homes and those that did not own their own homes, whereas females who did not own their own homes had lower average weekly consumption than females who did own their own homes. There are generally higher levels of average weekly alcohol consumption with increasing household income, with a clear linear trend for females. There does not appear to be any strong association between average weekly

alcohol consumption and level of income reported, although females in the highest personal income quintiles do have higher average weekly alcohol consumption (see Table A2 in the Appendix for income quintiles). Respondents who have no educational qualifications have lower than average weekly amounts of alcohol consumption, whereas those who have a degree or higher have higher than average weekly alcohol consumption levels, which may be related to the age structure of these groups. There is a clear linear relationship between individual deprivation and average weekly alcohol consumption for both males and females, with those reporting no deprivation having higher average consumption than those reporting the most deprivation (3+ deprivation factors). For area deprivation, a linear relationship exists for females but not for males, with average weekly alcohol consumption decreasing with increases in area deprivation. While males in the most deprived quintile (NZDepQ5) had the highest average weekly alcohol consumption, the next highest level of weekly alcohol consumption was evident in the least deprived area (NZDepQ1).

Table 10: Average weekly amounts of alcohol consumption at Wave 7, by demographic characteristics and health measures at Wave 7

	Overall			Males			Females		
	Drinker at w7	Average consumption		Drinker at w7	Average consumption		Drinker at w7	Average consumption	
	N	Mean	s.d.	N	Mean	s.d.	N	Mean	s.d.
Total	2,570	6.11	8.84	1,285	8.1	10.80	1,285	4.1	5.50
Age at w3*									
60-64	870	6.5	8.98	450	8.5	10.44	420	4.4	6.47
65-74	1,085	6.2	8.09	555	8.1	9.81	535	4.2	5.10
75+	610	5.4	9.82	285	7.7	13.17	330	3.5	4.68
Marital status									
Married	1,590	6.9	9.60	930	8.3	11.23	665	5.0	6.20
Divorced, separated	235	6.1	7.85	120	8.6	9.33	115	3.5	4.73
Widowed	610	3.9	5.80	155	6.5	8.38	455	2.9	4.27
Never married	135	7.1	10.5	80	9.1	12.43	50	3.94	5.28
Ethnicity									
NZ/European	2,390	6.1	8.60	1,180	8.2	10.7	1,205	4.1	5.0

	Overall			Males			Females		
	Drinker at w7	Average consumption		Drinker at w7	Average consumption		Drinker at w7	Average consumption	
	N	Mean	s.d.	N	Mean	s.d.	N	Mean	s.d.
Māori	105	5.0	7.50	60	6.6	8.8	50	3.1	5.0
Pacific	15	5.0	10.5	10	5.5	12.1	.	.	.
Other	60	7.5	16.4	35	7.9	16.2	25	6.8	16.9
Family type									
Couple only	1,515	7.2	9.80	885	8.6	11.5	630	5.1	6.3
Couple with children	90	4.5	7.0	60	5.6	8.1	30	2.4	3.3
Sole parent	60	4.3	7.5	20	7.4	9.7	40	2.9	5.8
Not in a family nucleus	905	4.6	6.8	320	7.4	9.3	585	3.1	4.3
Household composition									
One family	1,655	6.9	9.7	955	8.3	11.3	700	4.9	6.2
Two or more families	15	6.4	6.4	10	9.9	5.9	10	1.2	1.9
Multiple persons	80	5.6	6.8	40	7.9	7.9	40	3.4	4.6
One person	790	4.5	6.8	270	7.2	9.5	520	3.1	4.3
Health measures									
Smoking status									
Current smoker	215	8.1	12.1	110	10.4	13.7	100	5.7	9.5
Ex-smoker	1150	7.2	9.8	705	8.7	11.4	445	4.9	5.9
Never smoker	1205	4.7	6.7	470	6.8	9.0	735	3.3	4.3
Self-rated health									
Excellent	350	6.1	6.1	175	7.3	6.8	175	4.9	5.0
Very good	880	6.3	8.9	430	8.5	10.6	450	4.3	6.4
Good	880	6.5	10.4	460	8.8	13.1	420	4.1	5.2

	Overall			Males			Females		
	Drinker at w7	Average consumption		Drinker at w7	Average consumption		Drinker at w7	Average consumption	
	N	Mean	s.d.	N	Mean	s.d.	N	Mean	s.d.
Fair/poor	460	4.8	6.83	220	6.84	8.35	240	2.95	4.24
Number of chronic diseases									
0	370	6.1	7.3	215	7.8	8.5	155	3.7	4.4
1 to 2	1245	6.1	7.8	600	8.2	9.6	645	4.2	5.0
3+	955	6.1	10.5	470	8.2	13.1	485	4.0	6.3
Cancer	365	6.5	9.1	205	7.6	9.5	155	5.2	8.5
Stroke	230	6.7	15.6	130	8.7	18.8	100	4.1	9.6
Heart disease	660	5.8	8.0	385	7.5	9.4	275	3.3	4.5
Diabetes	300	5.6	9.6	170	8.0	11.9	130	2.5	3.2

*Note: By Wave 7 the age groups will have increased by five years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5, and 64 to 68 at Wave 7).s.d. = standard deviation

Table 11: Average weekly amounts of alcohol consumption at Wave 7, by socio-economic factors at Wave 7

	Overall			Males			Females		
	Drinker at w 7	Average consumption		Drinker at w 7	Average consumption		Drinker at w 7	Average consumption	
	N	Mean	s.d.	N	Mean	s.d.	N	Mean	s.d.
Total	2,570	6.1	8.8	1,285	8.1	10.8	1,285	4.1	5.5
Housing tenure									
Own home	1,720	6.0	7.89	855	7.9	9.5	860	4.2	5.25
Not own home	255	5.3	8.58	125	8.1	10.88	130	2.6	4.23
Household income									
Q1 (lowest quintile)	440	4.7	7.3	160	7.6	10.1	285	3.1	4.3

	Overall			Males			Females		
	Drinker at w 7	Average consumption		Drinker at w 7	Average consumption		Drinker at w 7	Average consumption	
	N	Mean	s.d.	N	Mean	s.d.	N	Mean	s.d.
Q2	515	5.0	7.5	220	7.5	9.6	295	3.2	4.7
Q3	500	6.5	11.9	270	8.2	14.6	230	4.4	7.3
Q4	545	6.6	8.5	295	8.1	10.2	250	4.9	5.4
Q5 (highest quintile)	570	7.4	7.9	345	8.8	8.9	225	5.3	5.5
Personal income									
Q1 (lowest quintile)	475	5.7	7.9	240	7.3	9.7	235	4.0	5.1
Q2	470	5.9	8.9	205	8.2	10.3	265	4.1	7.1
Q3	485	5.5	10.9	180	8.8	16.4	305	3.7	4.8
Q4	530	5.9	7.9	245	8.0	9.8	285	4.0	5.0
Q5 (highest quintile)	610	7.3	8.3	415	8.4	9.2	195	4.9	5.2
Highest educational qualification									
Degree or higher	235	7.3	7.6	155	8.5	8.6	80	5.0	4.6
Post-school vocational	970	6.7	9.9	550	8.3	12.0	420	4.6	5.3
School	465	6.2	8.4	215	8.8	10.6	255	3.9	4.9
No qualification	895	5.1	8.1	365	7.4	10.0	535	3.6	6.0
Labour force status									
Working	635	6.9	8.2	410	8.4	9.2	225	4.2	5.3
Not employed, looking for work
Not employed, inactive	1,925	5.8	9.0	875	8.0	11.6	1,055	4.0	5.5
NZ Individual Deprivation									
0 factors	2,145	6.3	8.9	1,110	8.2	10.7	1,035	4.3	5.7
1, 2 factors	395	5.2	8.4	160	8.1	11.5	230	3.2	4.5

	Overall			Males			Females		
	Drinker at w 7	Average consumption		Drinker at w 7	Average consumption		Drinker at w 7	Average consumption	
	N	Mean	s.d.	N	Mean	s.d.	N	Mean	s.d.
3+ factors	30	4.8	9.6	15	6.9	12.7	15	3.0	5.6
Area deprivation									
NZDepQ1 (least)	580	6.4	7.2	305	8.2	8.4	275	4.4	4.8
NZDepQ2	585	6.1	8.2	285	8.0	9.2	300	4.3	6.7
NZDepQ3	505	5.9	7.8	240	7.8	9.5	265	4.2	5.2
NZDepQ4	540	5.7	6.8	270	7.4	7.6	270	4.0	5.4
NZDepQ5 (most)	355	6.6	14.6	180	10.0	19.5	175	3.1	4.6

s.d. = standard deviation

*Note: By Wave 7 the age groups will have increased by five years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5, and 64 to 68 at Wave 7).

SUMMARY POINTS ABOUT THE AVERAGE WEEKLY ALCOHOL CONSUMPTION OF THE SURVEYED OLDER PEOPLE

- Males had over twice the average weekly alcohol consumption of females
- The lowest average weekly alcohol consumption can be seen in the oldest age group (75+ years at baseline – Wave 3) and the highest average weekly alcohol consumption can be seen in the youngest age group (60-64 years at baseline – Wave 3)
- Overall, 53 percent of respondents had no change in their average weekly alcohol consumption over time
- Approximately 25 percent of respondents decreased their average weekly alcohol consumption, and this was greater for males than for females
- Average weekly alcohol consumption was lowest for widowed, Māori and Pacific respondents, and for sole parents
- Current smokers reported the highest average weekly alcohol consumption
- Respondents who reported their self-rated health as excellent, very good or good had higher average weekly alcohol consumption than those who reported their health as fair/poor
- Females reporting poor self-rated health had the lowest average weekly alcohol consumption
- There was a pattern of increasing average weekly alcohol consumption with increasing household income, with a clear linear trend for females
- There did not appear to be any strong association between average weekly alcohol consumption and levels of personal income reported
- Respondents without educational qualifications had lower average weekly alcohol consumption than those with educational qualifications
- There was a clear linear relationship between individual deprivation and average weekly alcohol consumption for both males and females, with those reporting no deprivation having higher consumption than those reporting the most deprivation (3+ factors)
- For area deprivation, a linear relationship exists for females but not for males, with average weekly alcohol consumption decreasing with increases in area deprivation
- While males in the most deprived quintile (NZDepQ5) had the highest average weekly alcohol consumption, the next highest average weekly alcohol consumption was in the least deprived area (NZDepQ1).

SECTION 4: RISKY DRINKING

Respondents who reported that they had had a drink in the past 12 months were also specifically asked whether they had ever had eight or more (for men), or six or more (for women), standard drinks on one occasion (defined here as risky drinking) and, if so, on how many occasions in the last four weeks.

The frequency of risky drinking in those who reported drinking in the past 12 months was categorised as: never risky; risky one to two times a month; or risky weekly to daily. Due to small numbers of respondents engaging in risky drinking in the older population, the two categories of risky drinking were grouped together into a single measure.

Note that the thresholds used for male and female 'risky' drinking in this report (i.e. eight or more for men and six or more for women) are based on recommendations from 2003 when the SoFIE- Health sub study began, and are therefore higher than current (revised) low-risk drinking advice. ALAC/HPA's current low-risk alcohol drinking advice for adults (including young adults aged 18-24 years) is that, to reduce their long-term health risks:

- women should drink no more than two standard drinks a day and no more than 10 standard drinks a week, and have at least two alcohol-free days every week
- men should drink no more than three standard drinks a day and no more than 15 standard drinks a week, and have at least two alcohol-free days every week

To reduce their risk of injury on a single occasion of drinking, women should drink no more than four and men no more than five standard drinks on any single occasion.

Table 12 presents the cross-sectional patterns (frequency) of risky drinking at Wave 3 only, because the number of older respondents engaging in risky drinking was low (n=225).

Approximately 6.5 percent of the older population engaged in risky drinking. The highest rates of engagement in risky drinking were seen in the youngest age group (60 to 64 at Wave 3: aged 64 to 68 at Wave 7), and particularly in younger males. Note that this group has moved into retirement age by Wave 7.

Table 12: Cross-sectional patterns of risky drinking at Wave 3, by age, sex and ethnicity

	Total at w3	Never drink		Never heavy drink		1-2 times per month		Weekly to daily	
	N	n	%	n	%	n	%	n	%
Overall	3,470	735	21.2	2,420	69.7	130	3.7	95	2.7
Age at w3*									
60-64	1,105	195	17.6	755	68.3	70	6.3	45	4.1
65-74	1,455	310	21.3	1,035	71.1	40	2.7	40	2.7
75+	910	230	25.3	630	69.2	20	2.2	10	1.1
Sex									
Male	1,565	230	14.7	1,125	71.9	90	5.8	80	5.1
Female	1,905	510	26.8	1,300	68.2	35	1.8	15	0.8
Age-sex									
Males 60-64	520	60	11.5	350	67.3	50	9.6	40	7.7
Males 65-74	665	95	14.3	490	73.7	30	4.5	35	5.3
Males 75+	380	70	18.4	285	75.0	10	2.6	5	1.3
Females 60-64	585	135	23.1	405	69.2	20	3.4	5	0.9
Females 65-74	790	215	27.2	545	69.0	10	1.3	5	0.6
Females 75+	530	160	30.2	345	65.1	10	1.9	5	0.9

*Note: By Wave 7 the age groups will have increased by five years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5, and 64 to 68 at Wave 7).

Table 13 presents the transition probabilities of engagement in risky drinking between waves overall only, as the probabilities for males and females were similar. Those who had not changed their status between each wave in relation to engaging in risky drinking are represented on the diagonal in bold. Overall it can be seen that there is little movement over time in respondents' status in relation to engaging in risky drinking.

Almost 83 per cent of never drinking respondents remained never-drinkers. Eighty-eight percent of not risky drinkers remained drinkers (but did not engage in risky drinking). Some never drinking respondents began to drink (but did not engage in risky drinking) (15 percent). However, the probability for this group of beginning to engage in risky drinking over time was extremely small (1 percent).

It is notable that only 34 percent of respondents who reported engaging in risky drinking in one wave continued to engage in risky drinking in the next (two years later). Approximately 57 per cent of respondents who reported engaging in risky drinking at least monthly at time t reduced their drinking to never engaging in risky drinking at time $t+2$.

Table 13: Transitions in risky drinking between Waves overall

Overall		Wave t+2			
		Never drink	Drink not risky	Risky drink at least monthly	Total
Wave t	Never drink	0.829	0.145	0.010	1,520
	Drink not risky	0.071	0.883	0.035	4,870
	Risky drink at least monthly	0.049	0.573	0.341	410
	Total	1,675	4,860	340	6,800

Table 14 presents the frequency of engagement in risky drinking at Wave 7, by age, marital status, ethnicity, family type, household composition and health measures at Wave 7. Consistent with other findings in this report, engagement in risky drinking was higher in males and in the younger age group (60 to 64 at Wave 3: 64 to 68 at Wave 7). A higher percentage of females never drank. Engagement in risky drinking at least monthly was higher in those who were never married, sole parents or lived in households with multiple persons. Almost 13 per cent of Māori respondents engaged in risky drinking at Wave 7; however, it must be noted that there are small numbers in this group and this finding may reflect the younger age distribution of the Māori population. Almost 38 percent of those who report their health to be fair/poor never drank; this same group has the lowest level of engagement in risky drinking. Approximately 12% of current smokers were engaging in risky drinking at least monthly, which is more than twice the number in the ex-smoker group and four times that in the never-smoker group.

Compared to the overall surveyed population, those with a cancer registration had higher levels of drinking (but did not engage in risky drinking). A high proportion of those with cardiovascular conditions at Wave 7 were never drinkers at Wave 7.

With regard to the association between demographic characteristics and levels of engagement in risky drinking, it is possible that using lower thresholds for a definition of risky drinking (i.e. in line with current recommendations) may in fact change the patterns observed, as there would be an increased number of respondents seen to be engaging in risky drinking in the sample.

Table 14: Frequency of risky drinking, by Wave 7 demographic characteristics and health outcomes

	Overall	Never drink		Drink not risky		Risky drink at least monthly	
	N	n	%	n	%	n	%
Total	3,460	880	25.4	2,420	69.9	160	4.6
Sex							
Male	1,560	275	17.6	1,170	75.0	115	7.4
Female	1,895	605	31.9	1,250	66.0	40	2.1
Age at w3*							
60-64	1,105	230	20.8	790	71.5	85	7.9
65-74	1,450	360	24.8	1,030	71.0	60	4.1

	Overall	Never drink		Drink not risky		Risky drink at least monthly	
	N	n	%	n	%	n	%
75+	905	290	32.0	600	66.3	15	1.7
Age-sex							
Males 60-64	520	70	13.5	385	74.0	65	12.5
Males 65-74	665	110	16.5	510	76.7	45	6.8
Males 75+	380	95	25.0	275	72.4	10	2.6
Females 60-64	585	160	27.3	405	69.2	20	3.4
Females 65-74	785	250	31.8	520	66.2	15	1.9
Females 75+	525	195	37.1	325	61.9	5	1.0
Marital status							
Married	2,050	455	22.2	1,495	72.9	100	4.9
Divorced, separated	310	75	24.2	215	69.4	20	6.5
Widowed	925	315	34.1	585	63.2	25	2.7
Never married	170	35	20.6	120	70.6	15	8.8
Ethnicity							
NZ/European	3,080	695	22.6	2,260	73.4	125	4.1
Māori	190	80	42.1	85	44.7	25	13.2
Pacific	75	55	73.3	15	20.0	5	6.7
Other	115	55	47.8	50	43.5	10	8.7
Family type							
Couple only	1,910	395	20.7	1,415	74.1	100	5.2
Couple with children	160	60	37.5	90	56.3	10	6.3
Sole parent	95	35	36.8	50	52.6	10	10.5
Not in a family nucleus	1,300	395	30.4	860	66.2	45	3.5
Household composition							
One family	2,135	480	22.5	1,545	72.4	110	5.2

	Overall	Never drink		Drink not risky		Risky drink at least monthly	
	N	n	%	n	%	n	%
Two or more families	45	30	66.7	15	33.3	0	0.0
Multiple persons	100	20	20.0	70	70.0	10	10.0
One person	1,140	345	30.3	760	66.7	35	3.1
Health measures							
Self-rated health							
Excellent	420	70	16.7	335	79.8	15	3.6
Very good	1,105	230	20.8	825	74.7	50	4.5
Good	1,185	300	25.3	810	68.4	75	6.3
Fair/poor	760	290	38.2	445	58.6	25	3.3
Smoking status							
Current smoker	285	65	22.8	185	64.9	35	12.3
Ex-smoker	1,410	260	18.4	1,075	76.2	75	5.3
Never smoker	1,770	560	31.6	1,160	65.5	50	2.8
Number of chronic diseases							
0	515	140	27.2	350	68.0	25	4.9
1 to 2	1,620	375	23.1	1,170	72.2	75	4.6
3+	1,325	370	27.9	895	67.5	60	4.5
Cancer	445	85	19.1	340	76.4	20	4.5
Stroke	355	120	33.8	220	62.0	15	4.2
Heart disease	930	265	28.5	625	67.2	40	4.3
Diabetes	440	145	33.0	285	64.8	10	2.3

*Note: By Wave 7 the age groups will have increased by five years (e.g. age 60 to 64 at Wave 3 will increase to age 62 to 66 at Wave 5, and 64 to 68 at Wave 7).

Table 15 presents the frequency of engagement in risky drinking at Wave 7, by socio-economic characteristics. Note those aged 60 to 64 at Wave 3 are 64 to 68 at Wave 7). There does not appear to be any association between socio-economic factors and engagement in risky drinking. However, engagement in risky drinking was higher in respondents who reported higher levels of personal and household income compared to those on lower incomes. Those who were not employed but looking for work had higher engagement in risky drinking than those who were employed, or unemployed and not looking for work. Those with the lowest levels of deprivation (both individual and area) had the highest proportion of drinkers overall, but these were primarily respondents who did not engage in risky drinking.

Table 15: Frequency of risky drinking, by Wave 7 socio-economic characteristics

	Overall	Never drink		Drink not risky		Risky drink at least monthly	
	N	n	%	n	%	n	%
Total	3,455	880	25.5	2,420	70.0	155	4.5
Housing tenure							
Own home	1,040	185	17.8	775	74.5	80	7.7
Not own home	185	60	32.4	110	59.5	15	8.1
Household income							
Q1 (lowest quintile)	690	250	36.2	420	60.9	20	2.9
Q2	685	175	25.5	480	70.1	30	4.4
Q3	690	190	27.5	470	68.1	30	4.3
Q4	685	140	20.4	510	74.5	35	5.1
Q5 (highest quintile)	690	125	18.1	530	76.8	35	5.1
Personal income							
Q1 (lowest quintile)	695	220	31.7	445	64.0	30	4.3
Q2	690	220	31.9	440	63.8	30	4.3
Q3	690	205	29.7	465	67.4	20	2.9
Q4	690	160	23.2	495	71.7	35	5.1
Q5 (highest quintile)	695	85	12.2	565	81.3	45	6.5

	Overall	Never drink		Drink not risky		Risky drink at least monthly	
	N	n	%	n	%	n	%
Highest educational qualification							
Degree or higher	280	45	16.1	225	80.4	10	3.6
Post-school vocational	1,195	230	19.2	905	75.7	60	5.0
School	645	180	27.9	440	68.2	25	3.9
No qualification	1,335	435	32.6	840	62.9	60	4.5
Labour force status							
Working	750	115	15.3	575	76.7	60	8.0
Not employed, looking for work	20	5	25.0	10	50.0	5	25.0
Not employed, not looking for work	2,695	770	28.6	1,830	67.9	95	3.5
NZ Individual Deprivation							
0 factors	2,800	655	23.4	2,020	72.1	125	4.5
1, 2 factors	580	190	32.8	365	62.9	25	4.3
3+ factors	80	45	56.3	25	31.3	10	12.5
Area deprivation							
NZDepQ1 (least deprived)	685	105	15.3	560	81.8	20	2.9
NZDepQ2	740	160	21.6	545	73.6	35	4.7
NZDepQ3	680	175	25.7	475	69.9	30	4.4
NZDepQ4	770	225	29.2	505	65.6	40	5.2
NZDepQ5 (most deprived)	565	215	38.1	320	56.6	30	5.3

SUMMARY POINTS ABOUT THE PATTERNS OF RISKY DRINKING OF THE SURVEYED OLDER PEOPLE

- Results suggest that, overall, there was a low proportion of respondents engaging in risky alcohol use
- The highest levels of engagement in risky drinking in this sample were seen in the youngest age group (60-64 years) and in males
- Almost 83 per cent of older respondents remained never-drinkers
- A higher percentage of never drinkers were female respondents than male respondents
- Approximately 57 per cent of respondents who reported engaging in risky drinking (at least monthly) reduced their drinking over time to abstain from engaging in risky drinking
- Engaging in risky drinking at least monthly was higher in those respondents who were never married, sole parents or who lived in households with multiple persons
- Almost 38 per cent of those who reported their health to be fair/poor never drank; this group also had the lowest level of engagement in risky drinking
- Approximately 12 per cent of current smokers were engaging in risky drinking at least monthly
- Compared to the overall surveyed population, those with a cancer registration had higher prevalence rates of drinking but did not engage in risky drinking
- Engaging in risky drinking was higher in respondents with higher levels of personal and household income compared to those on lower incomes
- Those who were unemployed (not employed but looking for work) engaged in more risky drinking than those who were employed or unemployed and not looking for work
- Those with the lowest levels of deprivation (both individual and area) had the highest proportion of drinkers overall, but these respondents did not normally engage in risky drinking.

MAIN FINDINGS

This report describes data collected from a longitudinal survey (SoFIE and SoFIE-Health) to examine the changes in drinking consumption of older New Zealanders. The older people have been grouped into three age groups: 60-64, 65-74 and 75+ years. The report describes how drinking patterns have changed in the older people surveyed over three different waves (representing a 7-year time frame). Key factors that are believed to influence drinking patterns and consumption have been examined and include family type, socio-economic status, education and health outcomes.

DRINKING STATUS

- A higher proportion of males consume alcohol than females
- Overall, the drinking status for most older people remained stable over the study period
- More of the youngest age group (60-64 years at baseline – Wave 3) drank at all Waves compared to the older age groups (65-74 or 75+ years at baseline – Wave 3)
- A high proportion of New Zealand European respondents drank alcohol
- There was a small decrease (overall 5.6 percent) in the number of drinkers over the entire study period, which was greatest in the oldest age group (75+ years at baseline – Wave 3) for both males and females
- Widowed males and females had lower prevalence rates of drinking than those who were married, with widowed females having the lowest prevalence rates of drinking overall
- Divorced or separated males and married females had high prevalence rates of drinking
- There were high prevalence rates of drinking in both male and female ex-smokers
- There is a linear relationship between self-rated health and drinking, with those who report better health also reporting higher prevalence rates of drinking, and those who report fair/poor health reporting lower rates of drinking
- Those with one to two chronic health conditions reported higher prevalence rates of drinking compared to those with no chronic conditions
- Those with a cancer registration drank more than the overall surveyed population, whereas those with a cardiovascular condition drank less than the overall surveyed population
- In general there was a linear relationship between deprivation (individual and area) and drinking, with the least deprived reporting higher prevalence rates of drinking and the most deprived reporting lower prevalence rates of drinking.

AVERAGE WEEKLY ALCOHOL CONSUMPTION

- Males had over twice the average weekly alcohol consumption of females
- The lowest average weekly alcohol consumption can be seen in the oldest age group (75+ years at baseline – Wave 3) and the highest average weekly alcohol consumption can be seen in the youngest age group (60-64 years at baseline – Wave 3)
- Overall, 53 percent of respondents had no change in their average weekly alcohol consumption over time
- Approximately 25 per cent of respondents decreased their average weekly alcohol consumption, and this was greater for males than for females
- Average weekly alcohol consumption was lowest for widowed, Māori and Pacific respondents, and for sole parents
- Current smokers reported the highest average weekly alcohol consumption
- Respondents who reported their self-rated health as excellent, very good or good had higher average weekly alcohol consumption than those who reported their health as fair/poor
- Females reporting poor self-rated health had the lowest average weekly alcohol consumption
- There was a pattern of increasing average weekly alcohol consumption with increasing household income, with a clear linear trend for females
- There did not appear to be any strong associations between average weekly alcohol consumption and levels of personal income reported
- Respondents without educational qualifications had lower average weekly consumption than those with educational qualifications
- There was a clear linear relationship between individual deprivation and average weekly alcohol consumption for both males and females, with those reporting no individual deprivation having higher consumption than those reporting the most deprivation (3+ deprivation factors)
- For area deprivation, a linear relationship exists for females but not for males, with average weekly alcohol consumption decreasing with increases in area deprivation
- While males in the most deprived quintile (NZDepQ5) had the highest average weekly alcohol consumption, the next highest average weekly alcohol consumption was in the least deprived area (NZDepQ1).

RISKY DRINKING

- Results suggest that overall there was a low proportion of respondents engaging in risky alcohol use
- The highest levels of engagement in risky drinking in this sample were seen in the youngest age group (60-64 years) and in males
- Almost 83 per cent of older respondents remained never-drinkers

- A higher percentage of never drinkers were female respondents than male respondents
- Approximately 57 per cent of respondents who reported engaging in risky drinking (at least monthly) reduced their drinking over time to abstain from engaging in risky drinking
- Engaging in risky drinking at least monthly was higher in those respondents who were never married, sole parents or who lived in households with multiple persons
- Almost 38 per cent of those who reported their health to be fair/poor never drank; this group also had the lowest level of engagement in risky drinking
- Approximately 12 per cent of current smokers were engaging in risky drinking at least monthly
- Compared to the overall surveyed population, those with a cancer registration had higher prevalence rates of drinking but did not engage in risky drinking
- Engaging in risky drinking was greater in respondents with higher levels of personal and household income compared to those on lower incomes
- Those who were unemployed (not employed but looking for work) engaged in more risky drinking than those who were employed or unemployed and not looking for work
- Those with the lowest levels of deprivation (both individual and area) had the highest proportion of drinkers overall, but these respondents did not normally engage in risky drinking.

CAVEATS TO THE RESULTS

The results in this report were not weighted to the New Zealand population and relate only to the SoFIE survey balanced panel sample. The numbers presented in the tables are rounded due to Statistics New Zealand confidentiality protocols; therefore, the numbers in different tables may not be the same.

As discussed above, the definition for risky drinking was developed in consultation with ALAC in 2003 and was based on a level of eight or more (for men), or six or more (for women), standard drinks on one occasion. ALAC/HPA's current low-risk alcohol drinking advice for adults (including young adults aged 18-24 years) is that, to reduce their long-term health risks:

- women should drink no more than two standard drinks a day and no more than 10 standard drinks a week, and have at least two alcohol-free days every week
- men should drink no more than three standard drinks a day and no more than 15 standard drinks a week, and have at least two alcohol-free days every week.

To reduce their risk of injury on a single drinking occasion women should drink no more than four and men no more than five standard drinks on any single occasion.

The SoFIE survey was designed to interview adults about income, families and employment over time. Interviews were conducted in people's homes using computer-assisted interviewing. Therefore, respondents may have been interviewed together or with other household/family members present, so reported drinking behaviours may be underestimated. Although all interviewers were trained by Statistics NZ they were not trained specifically in health and alcohol related interviewing.

CONCLUSIONS

The results from this investigation have shown that three-quarters of the older people (60-75+ years of age) in the SoFIE survey reported drinking. However, only a small proportion of the respondents engaged in risky drinking. The findings indicate that there was a small and slow decline in the prevalence rates of drinking, with males drinking significantly more than females and also more likely to reduce their drinking. The findings also suggest that only a small proportion of the respondents engaged in risky drinking.

The results from this investigation depict a complex image of alcohol consumption in older New Zealanders and highlight the dynamic influence of SES and living arrangements on alcohol consumption. Overall, older people who were in good health (self-perceived) and were financially comfortable were drinking regularly, with some engaging in risky drinking. On the other hand, these findings also suggest there are older people with significant chronic health problems (e.g. cancer, diabetes, asthma) who are drinking more, and more often (note that this investigation cannot determine a causal relationship between alcohol consumption and chronic health conditions or cancer).² Additionally influencing alcohol consumption patterns in older New Zealanders is their living arrangements and their marital status, with divorced or separated older people being more likely to have reported engaging in risky drinking. The populations at risk of engaging in risky drinking behaviour identified in this investigation are:

- Male New Zealand Europeans leaving the workforce (including those looking for employment or entering retirement), particularly those between 60 and 64 years of age
- Older New Zealanders with financial resources
- Current or ex-smokers
- Drinkers with chronic health conditions
- Older New Zealanders who are separated or divorced, or who live in a multiple occupancy household.

² These findings were not the same for those with a chronic cardiovascular condition.

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APPENDIX

Table A 1: Wave 1 characteristics of the full and the balanced panel SoFIE samples (all ages)

	Full Panel		Balanced Panel			Attrition Panel		
	N	col%	N	col%	row%	N	col%	row%
All	29,795		18,780			10,995		
Age at Wave 1								
0-17	8,865	29.8	4,930	26.3	55.6	3,930	35.7	44.3
18-24	2,550	8.6	1,105	5.9	43.3	1,445	13.1	56.7
25-44	8,270	27.8	5,610	29.9	67.8	2,655	24.1	32.1
45-64	6,660	22.4	5,105	27.2	76.7	1,550	14.1	23.3
65+	3,450	11.6	2,030	10.8	58.8	1,415	12.9	41.0
Ethnicity								
NZ/European	19,970	67	14,250	75.9	71.4	5,725	52.1	28.7
Māori	5,205	17.5	2,450	13.0	47.1	2,755	25.1	52.9
Other	4,595	15.4	2,085	11.1	45.4	2,510	22.8	54.6
Highest education at Wave 1								
Degree or higher	2,875	9.6	2,010	10.7	69.9	865	7.9	30.1
Post-school qualification	7,125	23.9	4,980	26.5	69.9	2,150	19.6	30.2
School qualification	6,190	20.8	3,920	20.9	63.3	2,270	20.6	36.7
No qualification	6,055	20.3	3,610	19.2	59.6	2,445	22.2	40.4
Standard family type at Wave 1								
Couple only	6,430	21.6	4,555	24.3	70.8	1,870	17	29.1

	Full Panel		Balanced Panel			Attrition Panel		
	N	col%	N	col%	row%	N	col%	row%
Couple with children	14,540	48.8	9,645	51.4	66.3	4,895	44.5	33.7
Sole parent family	4,335	14.5	2,100	11.2	48.4	2,235	20.3	51.6
Not in a family	4,480	15	2,485	13.2	55.5	1,995	18.1	44.5
Geographic region at Wave 1								
Auckland	8,540	28.7	4,595	24.5	53.8	3,950	35.9	46.3
Waikato	2,750	9.2	1,695	9	61.6	1,055	9.6	38.4
Wellington	3,665	12.3	2,470	13.2	67.4	1,195	10.9	32.6
Rest of North Island	6,795	22.8	4,315	23	63.5	2,480	22.6	36.5
Canterbury	4,250	14.3	3,000	16	70.6	1,250	11.4	29.4
Rest of South Island	3,790	12.7	2,710	14.4	71.5	1,080	9.8	28.5
Urban Area at Wave 1								
Main urban	22,170	74.4	13,655	72.7	61.6	8,510	77.4	38.4
Other	7,620	25.6	5,130	27.3	67.3	2,490	22.6	32.7
Household income at Wave 1 (full panel)								
Q1 (low)	5,960	20	2,790	14.9	46.8	3,170	28.8	53.2
Q2	5,955	20	3,415	18.2	57.3	2,535	23.1	42.6
Q3	5,955	20	3,885	20.7	65.2	2,070	18.8	34.8
Q4	5,960	20	4,240	22.6	71.1	1,720	15.6	28.9
Q5 (high)	5,960	20	4,450	23.7	74.7	1,505	13.7	25.3

Table A 2: Household and personal income quintile cut points at Wave 3 and Wave 7, based on the population aged 60-75+ at Wave 3.

Household income Wave 3			
Quintile	low	to	18,693
Quintile	18,693	to	26,552
Quintile	26,552	to	39,779
Quintile	39,779	to	68,108
Quintile	68,108	to	high
Household income Wave 7			
Quintile	Low	to	21,447
Quintile	21,447	to	30,462
Quintile	30,462	to	43,022
Quintile	43,022	to	71,324
Quintile	71,324	to	high
Personal income Wave 3			
Quintile	Low	to	12,035
Quintile	12,035	to	15,431
Quintile	15,431	to	20,134
Quintile	20,134	to	35,894
Quintile	35,894	to	high
Personal income Wave 7			
Quintile	Low	to	14,730
Quintile	14,730	to	18,460
Quintile	18,460	to	23,269
Quintile	23,269	to	38,400
Quintile	38,400	to	high

