

Alcohol and older adults in New Zealand

A literature review

Ian Hodges
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October 2014



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EXECUTIVE SUMMARY

The Health Promotion Agency (HPA) and the Accident Compensation Corporation of New Zealand (ACC) funded and commissioned this literature review to:

- gain a fuller understanding of the impact of alcohol on the growing number of older adults in New Zealand
- identify knowledge gaps and future research
- inform future policy and practice interventions to reduce alcohol-related harm among older adults.

The review brings together literature and data on alcohol and older adults from a variety of New Zealand sources. Findings from selected overseas studies are also included. Sources include review articles (some systematic), epidemiological studies, national and local population surveys, in-depth qualitative studies, published guidelines, health education resources and websites of health and social service organisations.

Main themes

Topics covered in the review include:

- the size, composition, living circumstances and wellbeing of New Zealand's older adult population
- older adults' alcohol consumption patterns and rates of hazardous and harmful drinking
- factors influencing older adults' patterns of alcohol use
- the links between alcohol, ageing and health
- interventions for preventing or reducing hazardous and harmful drinking by older adults.

The review also discusses gaps in the existing New Zealand literature and suggests topics for future research.

A summary of the report's main findings is presented below. Boxes highlighting the report's key points are also provided in the main text of the report. A glossary of terms is at the back of the report. Readers requiring detailed information on topics should consult the full text of the report.

Older adults in New Zealand

The older adult population is diverse, covering nearly a 40-year age span.

Currently there are about 600,000 adults aged 65 and over living in New Zealand. In a little more than 10 years' time there will be close to a million. This is an important trend that has implications for other topics covered in this report, including the delivery of health promotion and alcohol treatment services for older adults.

While most older adults are New Zealand European, at least 5% are Māori, 2% are Pacific people and 4% are Asian. In future, the last three ethnic groups will make up an increasingly larger share of the older population. By 2026, the number of Māori and Pacific adults aged 65+

is projected to almost triple. There is expected to be an almost five-fold increase in the number of Asian adults aged 65+.

There are more women than men in the older adult population. This is especially evident in the 85+ age group, where there are almost twice as many women as men.

About 6% of older adults live in residential care facilities such as rest homes, continuing care hospitals or disability units. The remaining 94% live in private households.

Drinking patterns of older adults

Latest available data show most New Zealand adults aged 65+ drink alcohol. Even in the oldest age groups a considerable number, particularly men, drink alcohol. The 2012/13 New Zealand Health Survey found 82% of 55–64 year-olds, 79% of 65–74 year-olds and 66% of 75+ year-olds had an alcohol drink in the previous 12 months. In all age groups, men were more likely to drink than women.

Older adults who use alcohol tend to drink more frequently than adults in the younger age groups. This is especially the case for older men. A sizeable proportion of older adults drink daily, almost daily or four or more times per week. However, the amounts older adults drink per typical drinking occasion are less compared with younger adults. This is part of a wider pattern of older adults generally cutting down their alcohol consumption, or even stopping drinking completely, as they move into their sixties and seventies. Older New Zealand adults are most likely to drink at home.

Other research shows older New Zealand Europeans are more likely to be drinkers than older Māori and older Pacific adults. When older Māori and Pacific adults do drink, they tend to drink less frequently than New Zealand Europeans but drink larger amounts on each drinking occasion.

Hazardous and harmful drinking among older adults

Surveys indicate the majority of older adult New Zealanders do not drink in a hazardous or harmful way. The likelihood of their doing so decreases with age. Hazardous and harmful drinking is more common in older men than older women.

Hazardous drinking (also called 'risky' drinking) is defined as a pattern of alcohol consumption that put drinkers *at risk* of either short- or long-term harm. Harmful drinking is defined as alcohol use that has *already led* to some kind of physical, psychological or social harm. This includes drinking enough to feel drunk (intoxication), experiencing difficulties or problems in life, or having clinically diagnosed alcohol use disorders (abuse or dependency).

The 2012/13 New Zealand Health Survey used the 10-item Alcohol Use Disorders Identification Test (AUDIT) alcohol screening tool to estimate how many adults were drinking in a hazardous/harmful way, using scores of 8 or more as the cut-off point.¹ On this basis it found the following rates and estimated national numbers of older adults drinking hazardously or harmfully:

- 9% of all 55–64 year-olds (11% of drinkers in the age group) – an estimated 45,000

¹ AUDIT is an internationally-recognised tool, originally developed by the World Health Organization, that asks people 10 questions about their alcohol consumption and related negative consequences. The maximum possible score is 40. A score of 8 or more is commonly used to identify hazardous / harmful drinking.

- 5% of all 65–74 year-olds (7% of drinkers) – 18,300
- 2% of all 75+ year-olds (3% of drinkers) – 5,200.

While the proportions of hazardous/harmful drinkers in the 65+ age groups seem relatively small at present, there are concerns that in future the proportions of older adults drinking hazardously/harmfully may rise, as more people from the 'baby boomer' generation, with its comparatively liberal attitudes to alcohol use, move into the 65+ population group.

On top of this, there is also much uncertainty in the literature about how to properly define and measure unsafe drinking in older adults. Some investigators contend older people's greater vulnerability to the physical effects of alcohol, combined with their greater risk of chronic medical conditions and use of medicines incompatible with alcohol, means that the thresholds for defining hazardous/harmful drinking in older adults should be lower.

In the United States, a recent analysis of national health survey data measured older adults' alcohol use in the context of their co-existing medical conditions, functional status, medication use and other health risks. On this basis it concluded that 53 percent of drinkers aged 65 and over were using alcohol hazardously or harmfully.

Factors influencing the drinking of older adults

The factors influencing older adults' drinking patterns are complex. They include cohort lifestyles, gender, life-course factors, personal history of alcohol consumption, social patterns, physiology, cultural heritage, health conditions, and drinking norms.

Factors that may be influential in older adults cutting down their drinking include:

- less involvement in social activities
- more involvement in hobbies or interests that don't involve drinking
- fewer opportunities to drink
- pressure from others to cut down
- the body no longer tolerating alcohol
- reduced disposable income
- development of health problems including problems made worse by drinking
- starting on medicines not compatible with alcohol.

Factors that may be influential in older adults increasing their drinking include:

- greater involvement in alcohol-based social activity
- having more leisure time
- fewer family responsibilities
- having more money
- more relaxed social attitudes to alcohol
- as a response to bereavement or loneliness
- to relieve or mask chronic pain
- to counter insomnia, distress or anxiety.

Troubled older drinkers

The literature indicates that a small proportion of older adults will have been drinking harmfully for much of their adult lives, and continue to do so – so-called 'early-onset' problem drinkers.

Others have generally used alcohol at fairly mild or moderate levels when younger, but, as they get into their sixties, seventies or even their eighties, start to drink much more heavily than before. These people are sometimes referred to as 'late-onset' problem drinkers.

Studies in Britain and North America have looked closely at the life situations of these late-onset problem drinkers. They show that often the start of their heavy drinking is connected to major life changes or challenges such as bereavement, caring for a sick partner or parent, living with chronic pain or other distressing conditions that take people to their limits physically or emotionally.

Little systematic research has been done in New Zealand addressing the needs of older adults with problematic alcohol use. However, impressions from local experts working in the health, addiction and aged-care sectors point to the existence of a significant hidden group of isolated older adult problem drinkers in the community, many of whom are women. It is believed a number of these people are not getting help for their problems or even ready to admit that something is seriously awry in their life.

Alcohol and the health of older adults

The links between drinking and health in older age are complex, with much still to be learned about what constitutes safe alcohol use for older adults. The picture is complicated by the impact of the ageing process itself, as well as the presence of chronic health problems, disabilities and use of prescription medicines.

Increased sensitivity to alcohol

Age-related physical changes mean that older adults become more sensitive to the effects of alcohol and therefore reach higher blood alcohol concentrations with any given amount of alcohol. As a result, alcohol's acute effects can come on more suddenly and take longer to wear off. Thinking skills and memory, coordination and mobility may be affected more than expected, as may emotions and mood.

Cause of some health conditions

A range of health conditions are associated with alcohol consumption in older adults. They include long-term conditions such as liver disease, pancreatitis, cancer, stroke and high blood pressure. The risks of getting these conditions appear to be related to the cumulative effects of alcohol use across the lifespan, in combination with the effects of specific patterns of drinking (such as repeated episodes of binge-drinking). However, the links between alcohol and various health conditions appear to be complex.

Link with injuries

Alcohol use can increase the risk of injury from falls, especially among older adults who drink heavily, or who drink while on certain medications. High alcohol consumption/alcohol abuse may also be associated with reduced bone density, making bones more brittle and likely to fracture.

Impact on existing health conditions

Alcohol can aggravate or complicate health conditions common in older adults such as liver problems, infections, sleep disorders, diabetes, dementia and mental health disorders. It can also mask warning signs of conditions such as angina and increase the risk of being misdiagnosed with conditions such as dementia.

Interaction with medicines

Alcohol may also interact with many types of medicines, reducing their effectiveness or exaggerating their negative side-effects. Chronic organ damage related to drinking can also alter the body's response to medicines. Surveys suggest some older New Zealanders continue to drink regularly despite taking contraindicated medicines.

Interventions to reduce hazardous and harmful drinking by older adults

Interventions described in the literature aimed directly at preventing or reducing hazardous or harmful drinking by older adults include:

- health promotion and health education messages, including safe drinking advice
- alcohol screening and brief intervention
- in-service training for health and social service professionals
- specialist alcohol treatment services.

This list excludes interventions that may *indirectly* influence older adults' alcohol use. Examples include liquor licensing laws, programmes promoting healthy ageing, and services reducing isolation and loneliness in older adults.

Health promotion and health education messages

Internationally, agencies and groups in various jurisdictions have issued information pamphlets, leaflets, booklets or bulletins highlighting the risks of alcohol use for older adults. Many are available on the internet. New Zealand examples include the booklet *Alcohol and Older People: Information for Older People, Family, Friends and Carers*, prepared by the Alcohol Advisory Council of New Zealand (ALAC) in conjunction with Age Concern New Zealand and ACC.

In the main, these materials are targeted at older adults plus their family members or carers. Common themes include:

- the ageing body's lower tolerance to alcohol and greater vulnerability to alcohol's effects
- alcohol's interactions with other physical and mental health conditions
- alcohol's interactions with prescribed and over-the-counter medications, and what to do about this
- guidelines on safe drinking limits
- alternative strategies if alcohol is being used to counter pain, insomnia, loneliness, anxiety, etc.
- advice on what to do if someone needs help to do with their own or someone else's drinking.

There seems to be little research internationally evaluating the uptake, acceptability or impact of these materials.

Some reports note that it is the basic right of all people to be properly informed about how the ageing process can affect the metabolism of alcohol in their bodies. This information should be

integral to broader messages encouraging people to think about reducing their alcohol consumption as they get older.

Safe drinking advice

Currently, national agencies in many countries issue safe drinking guidelines. These indicate the maximum number of standard drinks or units of alcohol considered appropriate for adults to consume over set periods (eg, per day, per week, or per drinking occasion). In most cases, different limits are specified for men and women, reflecting the fact that generally women metabolise alcohol more slowly than men and therefore their safe limits should be set lower.

Health agencies in at least two countries (USA and Italy) have issued safe drinking guidelines recommending maximum standard drink limits specifically for older adults. The guidelines are intended to reflect older adults' generally reduced physiological capacity to process alcohol and their greater susceptibility to alcohol-related harm at relatively low levels of consumption.

In Italy, older adults are recommended to drink no more than one alcoholic beverage daily. In the United States, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) currently recommends that adults over age 65 'who are healthy and do not take medications' should not have more than three drinks on a given day and seven drinks in a week.

Reports call for similar guidelines to be developed in other jurisdictions. However, there is debate about the benefits and practicality of defining safe drinking limits for older adults. Opponents argue it is not possible to define a 'one size fits all' recommendation because of the older population's enormous variety of medical and lifestyle situations. Some question if the guidelines actually result in people limiting their drinking. There are concerns, too, that guidelines might encourage some older adults to 'drink up' to the specified limit of standard drinks.

In New Zealand, the HPA's low-risk alcohol drinking advice for adults is currently for adults of all ages.² It does, however, acknowledge that even when drinking within the low-risk limits, a range of factors can affect the level of risk, including drinking too quickly, body type or genetic makeup, gender, existing health problems, and age. HPA also advises people not to drink alcohol if they have a condition that could be made worse by drinking alcohol, or are taking medication that interacts with alcohol.

Alcohol screening and brief intervention

Studies suggest many older adults who are drinking hazardously or harmfully, including some with serious alcohol use disorders, are 'hidden' in the community, are not seeking help, and are not being adequately identified or engaged by health and social services. Factors contributing to this may include:

- social attitudes condoning problematic alcohol use by older adults, or denying it exists
- concerns by older adults that they will be stigmatised or labelled as a problem drinker or 'alcoholic'
- sensitivities and difficulties health professionals associate with raising the topic of alcohol with older patients.

² Advice is also provided for parents of children and young people under 18 years old.

A key strategy that aims to address these issues is alcohol screening and brief interventions (SBIs) for older adults. SBIs involve GPs or other frontline professionals gathering information from people about their drinking history and, if necessary, giving them brief advice encouraging them to change their drinking.

It is unclear to what extent New Zealand older adults are routinely screened for alcohol problems in primary care and other frontline services. One obstacle to greater coverage may be uncertainty about appropriate screening tools for older adults. Some of the more commonly-used, and internationally-recognised, screening tools, such as AUDIT and CAGE, may not be comprehensive enough to identify the full extent of the alcohol-related problems and risks experienced by many older adults, especially if they have ongoing medical conditions or disabilities, or are using a range of prescription and over-the-counter medicines.

Responding to these concerns, a more sophisticated alcohol screening tool has been devised – the Alcohol-Related Problems Survey (ARPS). This is a self-administered screening tool with questions not just on alcohol consumption but also existing health conditions, use of medications, and physical and mental functioning. In Australia, researchers have adapted the ARPS tool to cater for Australasian standard drink sizes. Renamed the A-ARPS, it has been formally tested with a group of Australian men and women aged 55–89 and found to work reliably and to successfully identify those at risk of experiencing alcohol-related harm.

In-service training workshops for health and social service professionals

Workshops and other education initiatives aim to increase professionals' knowledge and skills related to identifying and responding to older adults who may be drinking hazardously or harmfully.

In the past, ALAC and HPA have funded workshops on alcohol and older people for providers of health and social services. These covered practical skills such as how to raise the issue of problem drinking with an older adult, how to conduct a brief intervention, and how to make contact with specialist addiction services. Matua Raki, the training agency for New Zealand's addiction workforce, has recently run workshops on older adult treatment issues for practitioners in the alcohol and drug sector.

Specialist alcohol treatment services

There seems to be growing recognition that more specialist alcohol and drug treatment services for older adult problem drinkers will be needed in future as the population ages.

Research suggests that ideally these services should be age appropriate and address the needs of older clients across all areas of life: physical, nutritional, cognitive, medical, psychological, social, and cultural. This includes taking account of the special challenges older adults face related to bereavement, retirement, loss of independence, and physical and cognitive impairments.

Treatment services for older adults are also likely to need to offer more community outreach options, including home-based counselling and support, and transport assistance. Counselling sessions may need to be timed or paced differently, with shorter sessions, more repetition and more follow-up or booster sessions. Individual, family or group counselling may form just part of a wider programme of interventions involving health services, aged-care support services, home support, family, church and service clubs.

There are a number of overseas reports and other literature, particularly from North America, but also from Britain and Australia, describing specialised alcohol and other drug treatment services designed specifically for older adults and their families or carers.

In London, age-specific older person services focus on providing one-to-one counselling and support in people's own homes, or in primary care settings if people prefer not to be visited at home. Harm reduction and abstinence approaches are both offered. People are linked to other support services they may need. The services also include support and advice for older adults affected by the drinking of others, as well as education on alcohol issues and the ways drinking can affect people as they get older.

There is debate internationally about how necessary it is to offer age-specific treatment services for older adults. Supporters of age-specific services contend that some older adults feel more comfortable discussing problems with same-age peers than participating in mixed-aged groups. Mixed-age groups may also result in some vulnerable older people coming into conflict with younger service users.

Compared with mainstream all-age treatment services, age-specific older adult services in Britain are reported to have:

- smaller caseloads
- lengthier and more comprehensive assessment processes
- a slower-paced and more extended period of treatment
- the option of home visits
- a high level of multi-agency working and case management
- family and peer involvement
- a focus on age-specific issues.

Some age-specific specialist alcohol and drug services for older adults have been started recently in parts of New Zealand (eg, Whanganui, Auckland, Christchurch).

Knowledge gaps and future research

Given the projected increases in the number of older adults in the New Zealand population, and the special issues that surround drinking in older age, it is important in future that adults aged 65+ are routinely included in national and regional alcohol consumption surveys. Where practical, sufficient numbers of older adults should be included so that separate results can be reported for older adults aged 75+, and older adults aged 85+. Ideally, sufficient numbers of older adults should also be included to enable reliable analysis by both gender and ethnicity.

One potential future research challenge is to develop reliable estimates of how many older adults are likely to be drinking unsafely, taking into account their greater sensitivity to alcohol, existing health conditions, use of medicines and other risk factors. This may mean that survey cut-off scores for defining hazardous and harmful drinking in older adults have to be set lower than for other adults. Designers of new surveys might also need to consider using different screening tools for defining hazardous and harmful drinking by older adults, such as tools that include questions about health, disability, and medication use.

There is also scope to further analyse existing national health survey data, to better identify how many older New Zealand adults drink alcohol, and in what ways, when they have chronic health or disability conditions, or are taking prescription and other medication.

At least four longitudinal cohort studies are ongoing in New Zealand at the moment. All of them have potential to yield data showing how peoples' drinking patterns change as they age.

Qualitative social studies are also valuable for gathering rich contextual data on the complex personal and social factors influencing older people's drinking, how and why they change their drinking habits as they age, and their viewpoints and beliefs about the connections between alcohol, ageing and health. Hardly any of these kinds of studies have been conducted with older New Zealanders in the last decade.

These types of research may also be useful for indicating how many people are aware that sensitivity to alcohol decreases in old age, that alcohol exacerbates certain health conditions, or that many types of medicines are incompatible with drinking. As well, it could be used to explore how practical it might be from a health promotion perspective to stipulate age-specific safe drinking guidelines for older adults.

Currently there seems to be little solid New Zealand data on what kinds of alcohol screening and brief interventions work best with older adults. This includes in general practice settings as well as other frontline health, social service and aged-care settings. Evaluation research might be helpful for testing better ways for health professionals and others to identify and respond to older adults' hazardous and harmful alcohol use.

More local research may also be needed to clarify the best ways to provide specialist alcohol treatment services for older adult problem drinkers. This includes for those who first develop alcohol use disorders later in life. Overseas studies point to a number of special service elements that could be offered as part of older adult addiction treatment services, such as home-based counselling or transport assistance. However, there appears to be a lack of in-depth New Zealand research looking at the importance of these elements from the point of view of older adults and treatment staff. As the demand from older adults for alcohol treatment services is expected to rise, research is likely to play an important part in helping to define which treatment approaches are acceptable and effective for this group.

Addressing these and other knowledge gaps will help to inform future primary care, addiction treatment and aged-care service needs as well as health promotion and workforce training initiatives focusing on alcohol and older New Zealanders.

1 INTRODUCTION

This review draws together existing New Zealand information on alcohol and older adults from a variety of sources, supplemented by selected overseas studies. It explores older adults' drinking patterns and influences shaping these patterns. It also looks at possible interventions to help prevent or reduce hazardous or harmful drinking by older adults.

The review traverses a range of data, issues and themes and is intended as a stimulus for further discussion and research. It was funded and commissioned by HPA and ACC to:

- gain a fuller understanding of the impact of alcohol on the growing number of older adults in New Zealand
- identify knowledge gaps and future research
- inform future policy and practice interventions to reduce alcohol-related harm among older adults.

RESEARCH QUESTIONS

The initial direction of the review was guided by two research questions:

1. What practices contribute to alcohol-related harm among older adults? What are the contextual factors that support these practices?
2. What interventions specific to older adults could be used in New Zealand to reduce alcohol-related harm, including injuries from falls, among older adults?

Topics identified by HPA for possible inclusion in the review were:

- drinking behaviour
- attitudes to alcohol
- differences in cultural context
- social and peer influences
- social isolation
- identity and role transition changes
- reasons for early- and late-onset heavy drinking
- help-seeking behaviour
- health service response (including screening, brief interventions and treatment)
- injury-prevention links.

THE LITERATURE SEARCH

The review began in mid-February 2014 and included a four-week search for New Zealand material published since 1995 covering any aspect of older adults' use of alcohol.

Various methods were used to trace journal articles, books, newsletters, factsheets and other documents or media with potential relevance for the topic. Electronic health and social science citation databases were searched by applying combinations of key words and subject headings such as *older*, *elder*, *senior*, *aged*, *alcohol*, *alcohol drinking*, *substance use*, and *treatment*. Databases used included PubMed, Scopus, PsycINFO, EMBASE, ProQuest, Index New Zealand, Australasian Medical Index, Newztext Plus, Cochrane Collaboration, Voyager (University of Auckland library), Auckland City libraries, WorldCat and Google Scholar. Web pages addressing older adults' alcohol and other drug issues and related themes were also accessed, as were web pages of government and non-government organisations whose work included a focus on older adults' health and wellbeing, alcohol consumption or addiction services. Broader contextual information on the demographic characteristics and life circumstances of older adults was obtained from different sources including the Statistics New Zealand website. Additional New Zealand material was found by scanning the text and reference lists of titles already retrieved.

The search process revealed just over 200 New Zealand titles potentially relevant to the review.

To supplement the New Zealand literature, a limited search was conducted of overseas literature. This concentrated on review articles, books, reports and key journal articles published since 2000.

Again, a range of electronic citation databases was searched using key words and subject headings similar to those used for the New Zealand studies. Web pages were also searched for reports and other documentation not referenced in electronic databases. Reports and other material were identified from reference lists of literature already retrieved. Over 300 overseas journal articles and other titles were collected during this process.

ENVIRONMENTAL SCAN

New Zealand literature was scanned for pertinent information by reading each document or relevant parts of it. Abstracts and executive summaries of overseas literature were also scanned. Those that helped contextualise or extend the New Zealand research were read in more depth.

Notes were taken while reading both the New Zealand and overseas material. A range of statistical data was also extracted from different sources. These notes and data were used to develop a preliminary structure for the literature review report, including a list of topics the report could cover.

A brief environmental scan report was prepared for HPA and ACC outlining the potential list of topics for inclusion in the final literature review report. Topics were then prioritised in consultation with HPA at the end of March 2014.

PREPARING THE REPORT

Most of the literature review report was written over a five-week period in April and May 2014. The aim was to present an accessible narrative review of existing New Zealand information, supplemented by reference to selected overseas studies.

STRUCTURE OF THE REPORT

Chapter 2 presents the latest available statistics on New Zealand's older adult population, setting the context for the rest of the report. It indicates the size and composition of the current population and future projections up to 2061. Information is also provided on the health status, living situations, incomes and social connectedness of older adults.

Chapter 3 summarises recent survey data on the alcohol consumption patterns of older New Zealanders. This has been extracted from a range of national and regional population surveys.

Chapter 4 looks at the prevalence of hazardous and harmful drinking in the older adult population. Again, this is based on data from a range of national and regional surveys. The chapter also discusses issues related to defining hazardous and harmful drinking for older adults.

Chapter 5 looks at what the literature indicates about the many factors influencing older adults' patterns of alcohol use. In particular, it looks at factors that may contribute to older adults cutting down or stopping their drinking. It also looks at factors that may lead some to increase their consumption, including drinking in ways that result in contact with alcohol treatment or other specialist services.

Chapter 6 summarises findings from New Zealand and overseas literature on the health consequences that some older adults experience as a result of using alcohol. It outlines the physiological changes related to ageing that can increase older adults' vulnerability to the effects of alcohol, as well as the potential interactions that can occur between alcohol and prescription or over-the-counter medicines: key issues for older adults.

Chapter 7 examines different interventions described in the literature for preventing or reducing hazardous or harmful drinking by older adults. This includes health promotion and health education interventions, screening and brief interventions by frontline health and social service practitioners, and treatment services provided by specialist alcohol and drug services.

Chapter 8 concludes the report by discussing gaps and limitations in the existing New Zealand literature on alcohol and older adults. It also suggests topics for future research.

2 OLDER ADULTS IN NEW ZEALAND

This chapter gives a quick rundown on New Zealand's older adults. It shows how many there are in the population, their living circumstances and their general state of health. It also shows how quickly the older adult population is growing – an important trend that has implications for other topics in the report.

Key points:

- In a little more than 10 years from now, close to a million New Zealanders will be aged 65 and over (there are about 600,000 at the moment)
- Older adult women will continue to outnumber older adult men in the years ahead. Currently in the 85+ age group, there are nearly twice as many women as men
- In future, Māori, Pacific and Asian adults will make up a much larger proportion of the older population
- At the 2013 Census, 84% of adults aged 65+ were New Zealand European, 5% were Māori, 4% were Asian and 2% were Pacific people. One quarter of older adults were born overseas
- At the 2013 Census, 39% of men and 25% of women aged 65–74 were in part-time or full-time employment
- Eighty-two percent of adults aged 65–74 rate their own health as good or excellent, but 18% rate their health as only fair or poor. Ninety-two percent have visited a GP in the past 12 months
- Thirty-nine percent of adults aged 65–74 have ever been diagnosed with arthritis, 17% with depression/anxiety/bipolar disease, 15% with ischaemic heart disease, 14% with diabetes, and 5% with stroke
- Twenty-seven percent of adults aged 65–74 say they have chronic pain; 5% say they have a high level of psychological stress
- Forty-four percent of adults aged 65–74 are on medication for high blood pressure; 34% are on medication for high blood cholesterol
- By age 85+, only 24% of adults have a legal spouse or other partner. Nearly half (47%) are widowed
- About one in 20 older adults live in residential care facilities such as rest homes, continuing care hospitals and disability units

THE DIVERSITY OF OLDER ADULTS

At the outset, it is important to acknowledge the diversity of older New Zealanders' social, cultural, economic and personal circumstances. Studies of older people's lifestyles, work, family, home and health – and their drinking patterns, too – emphasise the variability of the ageing experience. While a common stereotype is that old age is associated with social withdrawal, decline and loss, 'one fundamental concept of diversity in later life that cannot be emphasised

enough is that old age is not all negative! There is capacity for positive change and adaptation throughout the lifespan' (Gee & Davey, 2010, p. 244).

The rest of this chapter presents data reflecting this diversity. It covers dimensions such as the gender and ethnic mix of the older adult population, their incomes, living arrangements, partnership status, health and wellbeing. As later chapters of the report will show, all these dimensions are relevant for helping to gain a fuller understanding of the place of alcohol in the lives of older adults.

DEFINING OLDER ADULTS

In New Zealand, older adults are typically defined as people aged 65 years and over. However, in this chapter, and elsewhere in the report, to help reflect the diversity of the ageing experience, where possible data are reported separately for the following four age groups:

- 'pre-retirement': 50–64 years old
- 'young-old': 65–74 years old
- 'older-old': 75–84 years old
- 'old-old': 85+ years old.

The pre-retirement 50–64 age group is included as a point of comparison, to help assess population-level changes that may be occurring in conjunction with transitions from working age or late middle age to older age. It also means the large 'baby boomer' cohort born between 1946 and 1965 is covered in the data. The oldest 'baby boomers' are now about to turn 70, while the youngest are just turning 50.

SIZE OF THE OLDER ADULT POPULATION – NOW AND IN FUTURE

Latest 2013 Census data show there are 607,032 adults aged 65+ living in New Zealand. This represents 14% of the total population and is an increase of more than 100,000 compared with the 2006 Census.³

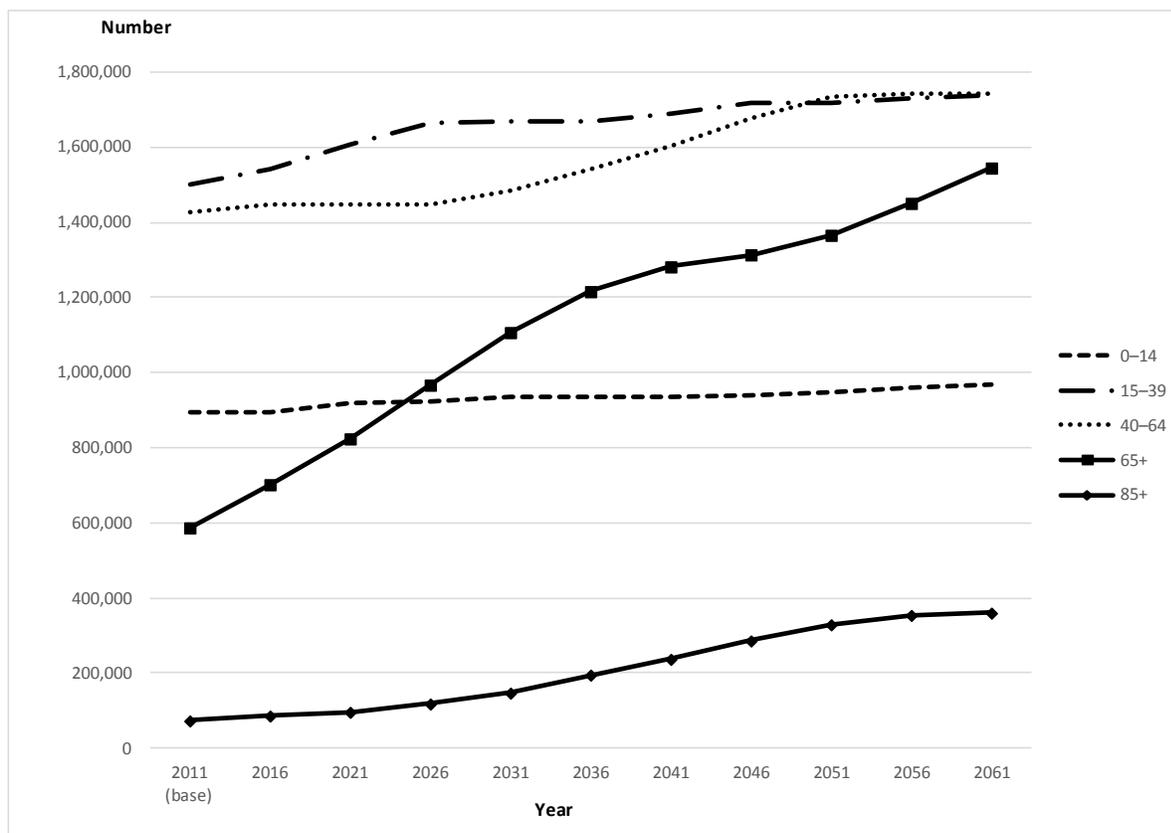
Of these adults:

- 346,134 are aged 65–74
- 187,584 are aged 75–84
- 73,317 are aged 85+.

In addition, there are a further 793,334 people in the pre-retirement group aged 50–64 (Statistics New Zealand, 2014b).

The size of the older adult population is projected to increase substantially in the 50 years from 2011 to 2061. The number of people aged 65+ will more than double (2.6 times); and the number of 'old-old' aged 85+ will increase by a factor of nearly five (4.9) (figure 2.1). This means 26% of the total NZ population will be aged 65+ by 2061 and 6% will be 85+.

³ The total population in 2013 was 4,242,048. The 2011 Census was postponed for two years because of the Canterbury earthquake on 22 February 2011.

Figure 2.1: Projections for New Zealand population, by age group, 2011–2061

Source: Statistics New Zealand national population projections

Notes: Data in appendix table 2.1

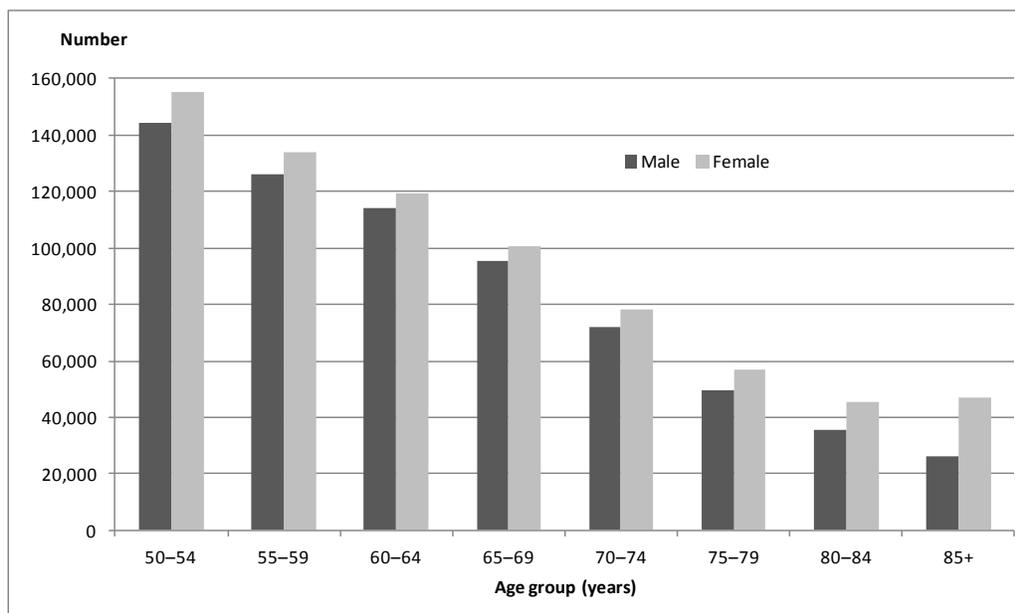
Median (50th percentile) projections used.

Part of the projected increase in the number of older adults is due to the ‘baby boom’ cohort. This cohort is particularly large in New Zealand because of high fertility rates that continued from the end of World War II until the early 1970s. Older members of this cohort are now in the ‘young-old’ group aged 65–74, and most others are in the ‘pre-retirement’ group aged 50–64.

GENDER

In all the older adult age groups, women outnumber men. This is particularly the case for the ‘old-old’ group aged 85+. Here there are nearly twice (1.8 times) as many women as men (figure 2.2).

This gender imbalance in the older age groups is mainly due to New Zealand women having a longer life expectancy than males. In 2011, the average life expectancy for females at birth was 83.0 years and for males it was 79.3 (Statistics New Zealand, 2014a).

Figure 2.2: Gender of older New Zealand adults aged 50+, by age group, 2013

Source: Statistics New Zealand 2013 Census data

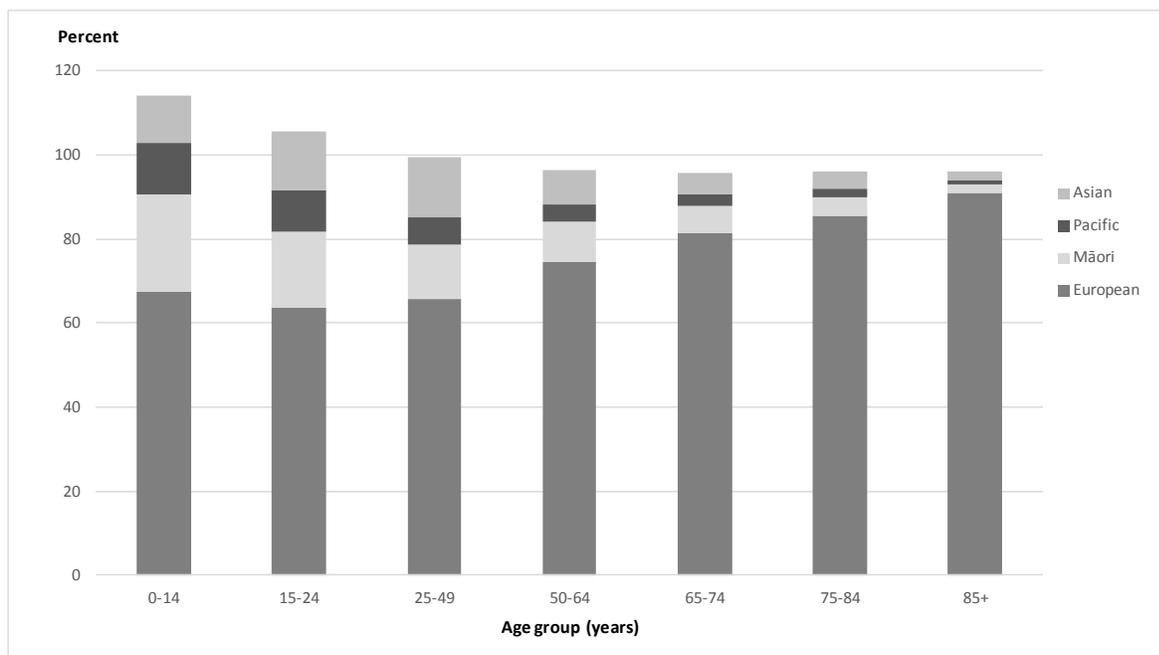
Notes: Data in appendix table 2.2

Data are for the usually-resident population.

ETHNIC GROUP AND BIRTHPLACE

Currently, most older adults self-identify as 'New Zealand Europeans'. At the 2013 Census, 84% of adults aged 65+ were New Zealand European, 5% were Māori, 4% were Asian and 2% were Pacific people.

In the older adult age groups, the proportion of New Zealand Europeans increases with age, from 75% in the 50-64 age group to 91% in the 85+ group (figure 2.3 next page).

Figure 2.3: New Zealanders in the four largest ethnic groups, by age group, 2013

Source: Statistics New Zealand 2013 Census data

Notes: Data in appendix tables 2.3a and 2.3b

Data are for the usually-resident population

Percentages do not sum to 100% because a) the chart excludes other ethnic groups and people who did not state their ethnic group and

b) people were able to identify themselves as belonging to more than one ethnic group.

Ethnic group population projections

In future, larger numbers of older adults will be from non-European ethnic groups.

Statistics New Zealand projections using the 2006 population as a base suggest that, by 2026, the number of Māori and Pacific adults aged 65+ will almost triple (2.7 times). The number of Asian adults aged 65+ will increase even more – by a factor of 4.7.

Over the same 20-year period the number of European/Other adults aged 65+ will increase 1.7 times (appendix table 2.4).

Birthplace

Sixty-eight percent of adults aged 65+ living in New Zealand at the time of the 2013 Census were born here. Just over a quarter (26%) were born overseas (Statistics New Zealand, 2014c).⁴ Overseas birthplaces were:

- the UK or Ireland (13%)
- Asia (4%)
- Europe (excluding the UK and Ireland – 3%)
- Pacific Islands (3%)

⁴ Birthplaces of 6% of adults aged 65+ were unable to be identified.

- Australia (1%)
- Middle East and Africa (1%)
- North America (1%)
- other countries (less than 1%).

Life expectancy

Life expectancy in New Zealand varies markedly between different ethnic groups. For example, in 2011 the average life expectancy at birth for Māori males was 72.8 years compared with 79.3 for non-Māori males. The average Māori female life expectancy was 76.5 compared with 83.7 for non-Māori females (Statistics New Zealand, 2014a).

Similarly, in 2006 the average life expectancy at birth for Pacific males was 71.3 compared with 78.0 for all New Zealand males. The life expectancy of Pacific females was 76.1 compared with 82.2 for all New Zealand females (Ministry of Health, 2012a).

WORK AND INCOME

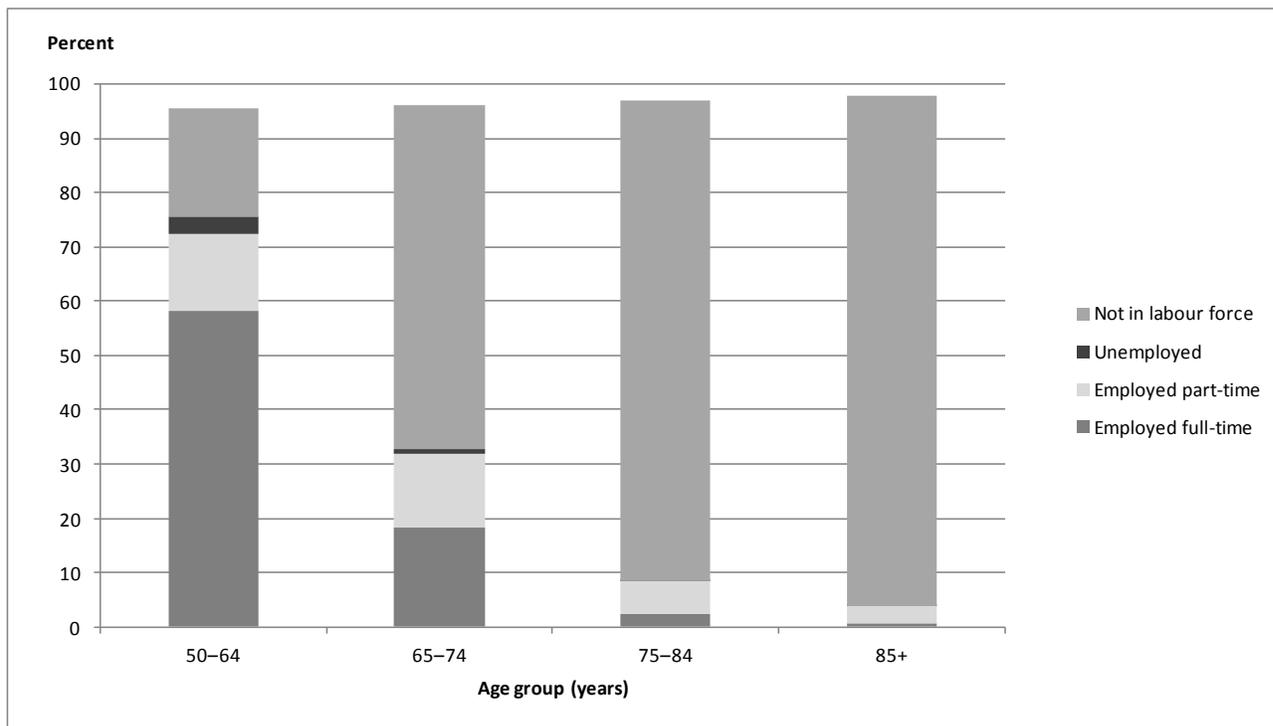
Work and labour force status

Reflecting the age when older New Zealanders are entitled to receive national superannuation payments (age 65), the 2013 Census shows a marked reduction in the proportion of people who are employed at ages 65–74 (32%), compared with the proportion employed at ages 50–64 (73%) (figure 2.4).

Men are more likely than women to be employed when aged 65–74 (39% versus 25%). The same is true in the ‘older-old’ group aged 75–84 (12% of men versus 5% of women) (appendix table 2.5b).

The proportion of employed people who are working part-time, compared with full-time, increases with age (figure 2.4 next page).

Figure 2.4: Work and labour force status for older adults, by age group, week ending 3 March 2013



Source: Statistics New Zealand 2013 Census data

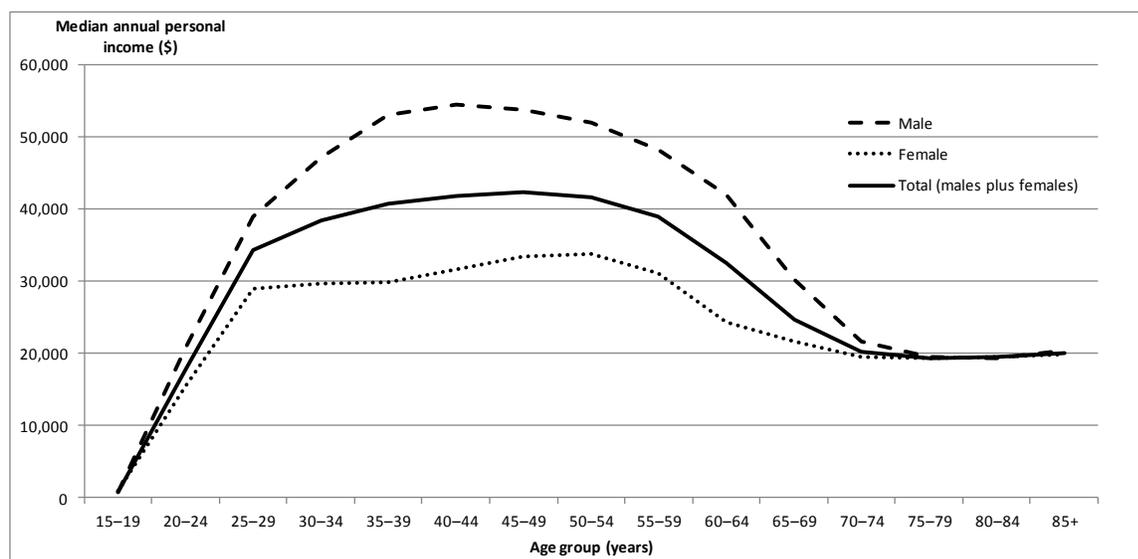
Notes: Data in appendix tables 2.5a and 2.5b

Percentages do not sum to 100% because the chart excludes people whose work/labour force status could not be identified

'Not in labour force' means a person is not employed and is not actively looking for work.

Personal income

At the time of the 2013 Census, the median annual personal income for people aged 65+ was \$20,900. Males in this age group had a slightly higher median income (\$22,900) than females (\$19,900).

Figure 2.5: Median annual personal income, by age group and gender, 2013

Source: Statistics New Zealand 2013 Census data

Notes: Data in appendix table 2.6

50% of people have incomes above the median income and 50% have incomes below this figure.

Median incomes peak in the middle age groups, gradually decline from the 60–64 age group to the 70–74 age group, then stabilise around \$20,000 for the age groups 75+. The large disparity between male and female median incomes in the middle age groups disappears with increasing age (figure 2.5 above).

HOME, FAMILY AND FRIENDS

Almost all older New Zealanders live in private households rather than in residential care facilities such as rest homes, continuing care hospitals, and disability units. In 2006, 464,800 (94%) of adults aged 65+ lived in private households, and 29,500 (6%) lived in residential care facilities (Statistics New Zealand, 2014d).

In 2013, the following proportions of older adults owned or partly owned their own homes (Statistics New Zealand, 2014b):

- 68% of adults aged 50–64
- 73% of adults aged 65–74
- 71% of adults aged 75–84
- 58% of adults aged 85+.

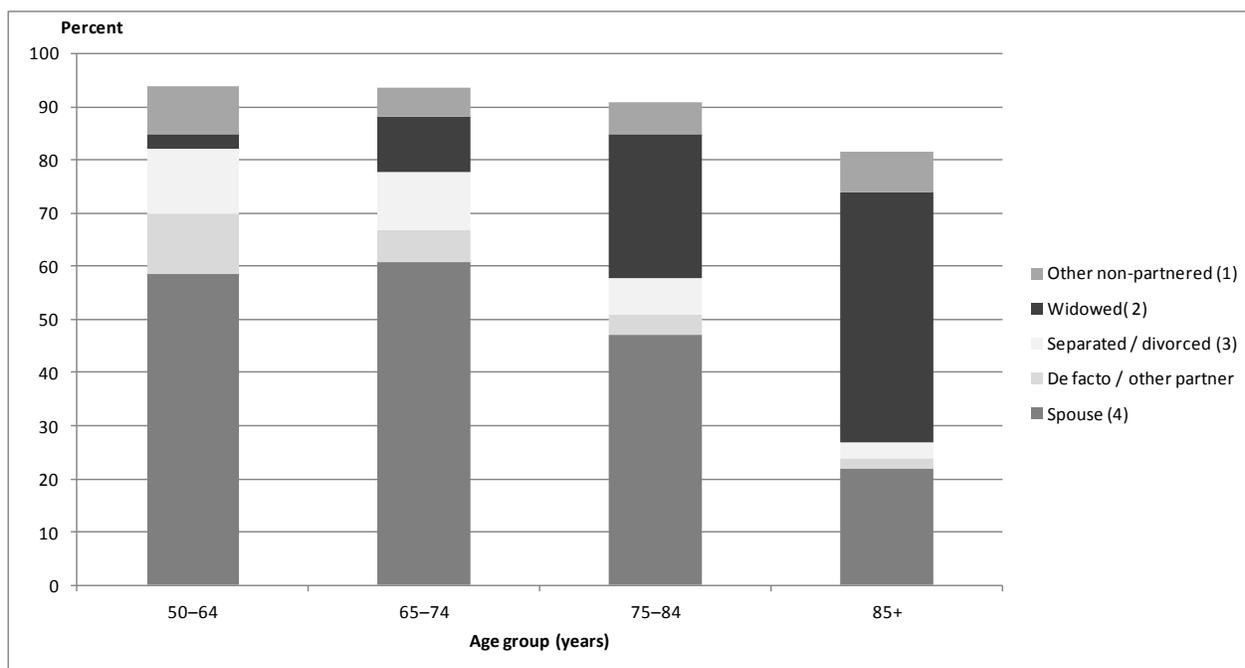
This shows a high level of home ownership for older adults in the pre-retirement, young-old and older-old age groups, but a reduction in home ownership for the old-old age group 85+.

Spouse or partner

According to the 2013 Census, most 50–64 year-olds (70%) currently have a legal spouse or other partner. Twelve percent are separated or divorced, 3% are widowed, and 9% do not have a partner for other reasons (eg, never married).

By the age of 85+, only 24% of adults have a legal spouse or other partner. Three percent are separated or divorced, and nearly half (47%) are widowed. Eight percent do not have a partner for other reasons (figure 2.6).

Figure 2.6: Current relationship status for older adults, by age group, 2013



Source: Statistics New Zealand 2013 Census data

Notes: Data in appendix tables 2.7a and 2.7b

Data refer to current/most recent relationship

Percentages do not sum to 100% because the chart excludes people who did not specify their current relationship status

(1) Not partnered, but not widowed, separated or divorced from legal spouse

(2) From death of a legal spouse

(3) From a legal spouse

(4) Legally married or in civil union.

Older women are much more likely to be non-partnered than older men. For example, in the 85+ age group, 68% of women do not have a spouse or other partner, compared with 40% of men. This is mainly because more women in this age group (58%) are widowed than men (28%) (Appendix table 2.7b).

Living arrangements

At the 2006 Census, nearly half (48%) of adults aged 65+ were living in households as a 'couple without children'. Thirty percent were living in a one-person household (ie, they were living alone). Seven percent were living in a 'two-parent family' household, 5% in a one-parent family and 3% in a 'multi-person' household (van der Pas, 2009).

Men aged 65+ were more likely than women to live in a 'couple without children' household (64% compared with 42%). Women in this age group were more likely than men to live in a one-

person household (37% compared with 19%). Women were also more likely than men to live in a one-parent family (6% compared with 3%) (van der Pas, 2009).

Contact with family and friends

Statistics New Zealand's General Social Survey shows the majority of adults aged 65+ have regular contact with their families and friends. In the year ended March 2013, 89% of people in this age group said in the past four weeks they had face-to-face contact with family members who did not live with them; and 95% had non-face-to-face contact in this period. Most (81%) said they thought this amount of contact was about right, although 18% said it was not enough (Statistics New Zealand, 2014e).

In the same survey, 91% of adults aged 65+ had face-to-face contact in the previous four weeks with friends who did not live with them; and 88% had non-face-to-face contact. Eighty-six percent of this age group felt satisfied with this much contact, although 14% said it was not enough (Statistics New Zealand, 2014e).

The majority (80%) of 65+ year-olds said they never felt lonely, 10% said they felt lonely 'a little of the time' and 8% did so 'some of the time' (Statistics New Zealand, 2014e).

An earlier national study also found a relatively high level of social contact for older adults in the 65–84 age group who were living independently or semi-independently (Koopman-Boyden & van der Pas, 2009). In 2007, 41% of the surveyed adults had daily contact with people in their social network and 38% had contact several times a week. Fourteen percent had social contact weekly, 4% had contact less frequently and only 3% had no contact at all.⁵ The vast majority of 65–84 year-olds (96%) were satisfied with their family contacts and 98% were satisfied with their contacts with other people.

WELLBEING, HEALTH AND DISABILITY

Life satisfaction

In the year ended March 2013, the national General Social Survey found a high proportion of older New Zealand adults were satisfied with their lives overall. Eighty-five percent of adults aged 55–64, 91% of adults aged 65–74, and 90% of adults aged 75+ were satisfied or very satisfied with their lives.

Only 8% of adults aged 55–64, 5% of adults aged 65–74 and 4% of adults aged 75+ were dissatisfied or very dissatisfied (Statistics New Zealand, 2014e).

Self-rated health status

Results from the same General Social Survey showed that self-rated health status tends to decline with older age. Eighty-four percent of 55–64 year-olds, 82% of 65–74 year-olds, and 69% of 75+ year-olds rated their own health as being good to excellent.

However, 16% of 55–64 year-olds, 18% of 65–74 year-olds, and 31% of 75+ year-olds rated their own health as being only fair or poor (Statistics New Zealand, 2014e).

⁵ The survey questions excluded social contact with a spouse.

Self-rated health status was slightly better overall in the 2012/13 New Zealand Health Survey. Eighty-seven percent of adults aged 55–64, 89% of adults aged 65–74, and 85% of adults aged 75 and over reported having excellent, very good or good health. The remainder had fair or poor self-rated health (Ministry of Health, 2013b).

Other health indicators

Other health indicators for older adults selected from the 2012/13 New Zealand Health Survey are shown below in table 2.1.⁶

Table 2.1: New Zealand Health Survey health indicators, by age group, 2012/13

Health indicator	Age group (years)		
	55–64	65–74	75+
Chronic pain	26%	27%	34%
Arthritis*	26%	39%	51%
Depression, anxiety, bipolar disease*	20%	17%	12%
Psychological distress (high level)	6%	5%	5%
Daily smoking	13%	8%	4%
Obese	37%	39%	27%
Medicated for high blood pressure	29%	44%	53%
Medicated for high blood cholesterol	20%	34%	33%
Ischaemic heart disease*	7%	15%	22%
Stroke*	2%	5%	10%
Diabetes*	10%	14%	15%
Physically active (follow guidelines)	53%	48%	38%
Self-rated health status 'excellent' or 'very good'	58%	59%	49%
Self-rated health status 'good'	29%	30%	36%
Self-rated health status 'fair' or 'poor'	13%	11%	15%
Visited GP in past 12 months	86%	92%	96%

Source: Ministry of Health (2013b)

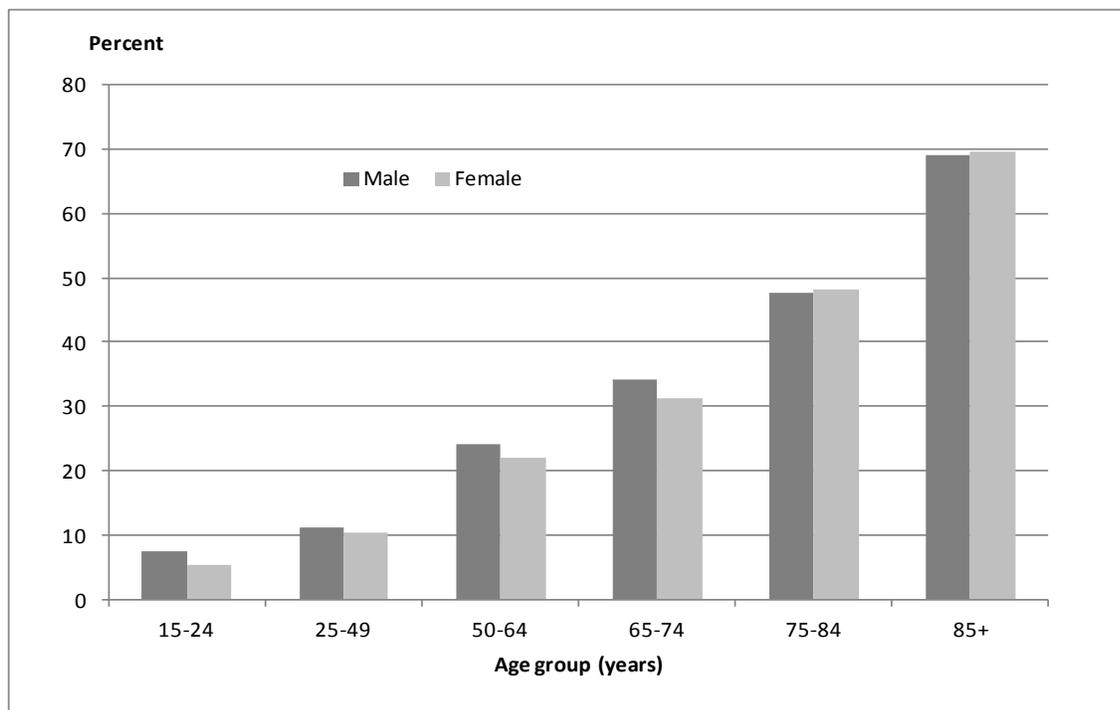
Note: *ever diagnosed.

⁶ See the next chapter for alcohol-related information from the New Zealand Health Survey.

Disability

The 2006 New Zealand Disability Survey asked people if they had any long-term difficulty with different types of everyday activity.⁷ As figure 2.7 shows, the prevalence of disability increases with age for both males and females. By the age of 85+, the majority of older adults have at least one disability.

Figure 2.7: Disability among adults living in households, by age group, 2006



Source: Statistics New Zealand 2006 Household Disability Survey

Notes: Data in appendix table 2.8

Percent is percentage of all adults living in households.

For older adults aged 65+ living in households, the most common types of disability are, in order of frequency:

- mobility
- agility
- hearing
- remembering
- seeing.

Less common are learning, psychiatric/psychological, speaking, intellectual and other disabilities (Office for Disability Issues & Statistics New Zealand, 2010, 2013). Close to 100% of older adults aged 65+ living in residential facilities have at least one type of disability (Statistics New Zealand, 2014a).

⁷ Initial data from the 2013 New Zealand Disability Survey have been published very recently. This shows that 59% of older adults aged 65+ (living in households as well as in residential facilities) are disabled. Forty-six percent have a mobility disability, 28% have an agility disability, 6% have a psychiatric/psychological disability and 10% have a remembering disability (Statistics New Zealand, 2014f).

3 DRINKING PATTERNS OF OLDER ADULTS

This chapter summarises what is known about the drinking patterns of older New Zealanders. Drawing on data and subsequent analysis from a number of national and regional population surveys, it indicates how many older adults drink alcohol, how often they drink and how much, and where they drink. It also shows how these drinking patterns vary by gender and ethnic group.

OVERVIEW OF NEW ZEALAND SURVEYS

Most of the data for this chapter and the next (chapter 4) come from recent surveys. Some of the surveys cover only older adults, while others cover the whole adult population including older adults.⁸ The surveys covered in this review are:

- large national surveys including:
 - the New Zealand Health Surveys (Ministry of Health, 1999, 2004, 2008, 2013b, 2013d)
 - the longitudinal Survey of Family, Income and Employment (SoFIE) undertaken by Statistics New Zealand (Jatrana, Carter, McKenzie, & Wilson, 2011; McKenzie, Carter, & Filoche, 2014)
 - the Health, Work and Retirement Study undertaken by Massey University (Towers et al., 2011)
 - the Attitudes and Behaviour towards Alcohol Study (ABAS) previously undertaken by ALAC and from 2013 by HPA (Research New Zealand, 2013a, 2013b, 2013c)
 - Gender, Alcohol and Culture: an International Study (GENACIS) (Meiklejohn, 2010; Meiklejohn, Connor, & Kypri, 2012a, 2012b)
 - Te Rau Hinengaro: The New Zealand Mental Health Survey (Oakley Browne, Wells, & Scott, 2006; Wells, Baxter, & Schaff, 2007)
 - a meta-analysis of five New Zealand surveys (some national, others local, Bramley, Broad, Harris, Reid, & Jackson, 2003)
- regional and local surveys including:
 - the Auckland Diabetes Heart and Health Study (Sundborn et al., 2009)
 - an Auckland general practice survey (Paton-Simpson, McCormick, Powell, Adams, & Bunbury, 2000)
 - surveys of Christchurch rest home residents and community-dwelling older adults (Khan, 1998; Khan, Wilkinson, Sellman, & Graham, 2001; Khan, Davis, Wilkinson, Sellman, & Graham, 2002; Khan, Wilkinson, & Keeling, 2006)

⁸ Surveys that included older adults but did not report data separately for older age groups have not been used.

- a survey of older adults living in Mosgiel (Busby, Campbell, Borrie, & Spears, 1988).⁹

Three New Zealand surveys covering adults aged 50–64 have also been used (see appendix table 3.2). These provide indicative data not available elsewhere, such as data for older Māori and older Pacific people. The three surveys are:

- Te Ao Waipiro: Māori National Alcohol Survey (Moewaka Barnes, McPherson, & Bhatta, 2003)
- Pacific Drugs and Alcohol Survey (Huakau et al., 2005; Pacific Research and Development Services, & SHORE/Whariki, Massey University 2004)
- Alcohol and Drug Use Survey (Ministry of Health, 2009a, 2009b).¹⁰

INTERPRETING THE SURVEY RESULTS

Readers should be careful when comparing the results of the surveys reported here. Different studies may use different research methods, survey questions and age-categories. Survey results are also subject to random sampling errors, meaning that differences reported here may not be statistically significant.¹¹

Readers should also note that alcohol consumption surveys rely on participants accurately remembering their drinking behaviour and answering questions honestly. Some reports suggest older adults, particularly those with alcohol-related problems, may provide less accurate information than younger adults because of a greater likelihood of memory difficulties and feelings of stigma/shame about risky or harmful drinking (Addiction Research Foundation et al., c. 1993; Busby et al., 1988; Heuberger, 2009; McInnis-Dittrich, 2005). However, Herzog (1998) found no evidence this was likely to be the case. New Zealand population-based alcohol consumption surveys have been found to match up well with separately collected information about the country's available supply of alcohol (Casswell, Huckle, & Pledger, 2002).

⁹ Appendix table 3.1 gives more detail on these surveys including the methodologies they used and who they surveyed. Surveys that included older adults but did not report data separately for older age groups have not been used.

¹⁰ Appendix table 3.2 outlines the main features of these three studies. It also lists examples of other New Zealand alcohol surveys that cover younger and middle-aged adults but not adults aged 65 and over.

¹¹ See appendix tables 3.1 and 3.2 and the original studies for more details on methods and sampling errors.

OLDER ADULTS WHO DRINK ALCOHOL

This section looks at survey data indicating how many older adults use alcohol. Typically people are classified as alcohol drinkers if they report consuming one or more alcohol drinks in the previous 12 months.

Key points:

- Most New Zealanders aged 65+ drink at least some alcohol
- With increasing age, the percentage of older men and women who drink decreases. In 2012/13, around 82% of 55–64 year-olds, 79% of 65–74 year-olds and 66% of people aged 75+ were alcohol drinkers
- Older men are more likely to be drinkers than older women
- A sizeable minority of older adults report never drinking alcohol. This includes lifetime abstainers as well as people who used to drink alcohol but have stopped

New Zealand Health Surveys and SoFIE

Results for the latest New Zealand Health Survey (2012/13) show that 82% of 55–64 year-olds, 79% of 65–74 year-olds and 66% of 75+ year-olds had an alcohol drink in the previous 12 months. This compares with an average of 80% for all adults aged 15+ (Ministry of Health, 2013b).

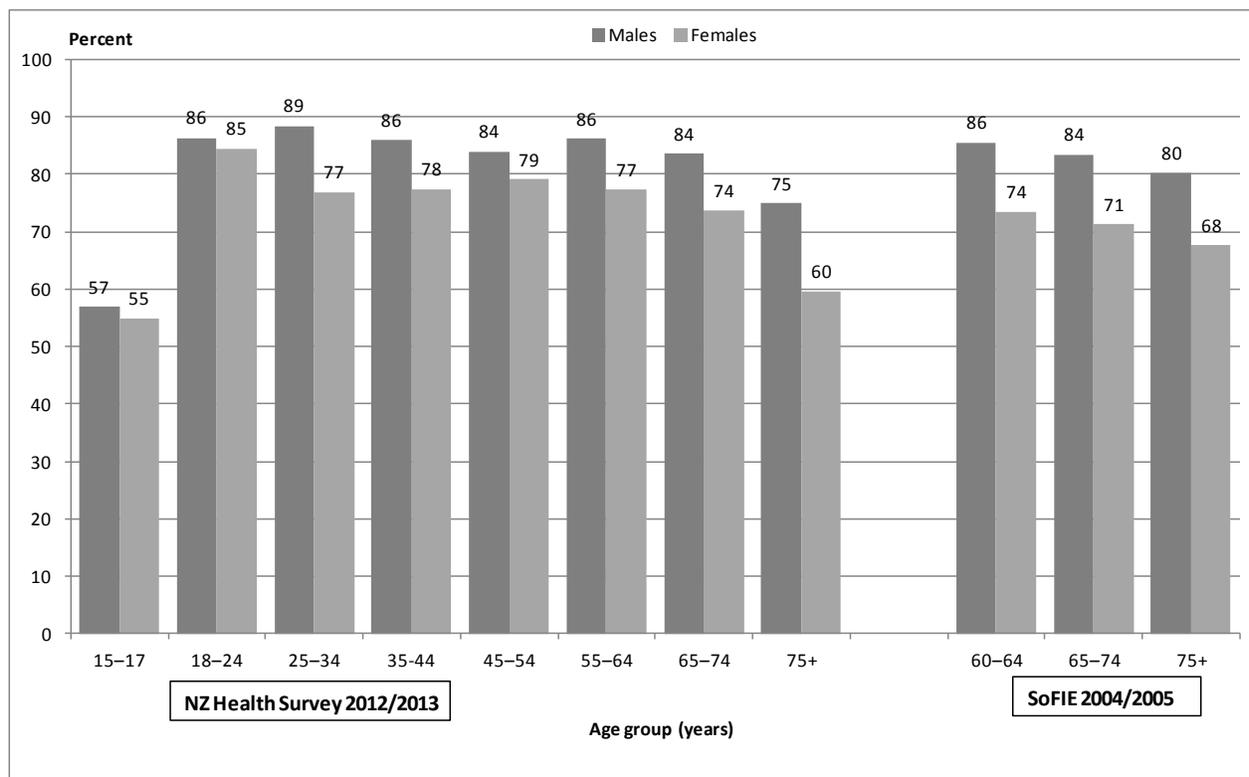
Similarly, the third wave of the Survey of Family, Income and Employment (SoFIE), conducted in 2004/05, found that 78% of 60–64 year-olds, 75% of 65–74 year-olds and 68% of 75+ year-olds had an alcohol drink in the previous 12 months (McKenzie et al., 2014).¹²

Looking at the results by gender, both SoFIE (wave 3 in 2004/05) and the 2012/13 New Zealand Health Survey found that, in all the older adult age groups, men were more likely to drink than women. With increasing age, the percentage of men and women drinkers decreased (figure 3.1 next page).

Analysis of an earlier New Zealand Health Survey (2002/03) looked more closely to see how many older adults were *non-drinkers* (had not consumed alcohol in the previous 12 months). For men the figures were: 12% of 50–64 year-olds; 21% of 65–74 year-olds; 24% of 75–84 year-olds; and 25% of 85+ year-olds. Overall, this was an age-standardised average of 27% for men aged 65+. For women the figures were: 20% of 50–64 year-olds, 34% of 65–74 year-olds, 37% of 75–84 year-olds, and 44% of 85+ year-olds – overall an age-standardised average of 41% for women aged 65+ (Ministry of Health, 2006).

¹² Results for the seventh wave of SoFIE in 2008/09 found: 79% of 64–68 year-olds, 75% of 69–78 year-olds and 68% of 79+ year-olds had consumed alcohol in the previous 12 months.

Figure 3.1: Percentage of New Zealand adults who had an alcoholic drink in previous 12 months, New Zealand Health Survey 2012/13, and SoFIE wave 3 (2004/05), by age and gender



Source: Chart by authors from data in Ministry of Health (2013b) and McKenzie et al. (2014)

New Zealand Mental Health Survey

The 2003/04 Te Rau Hinengaro: The New Zealand Mental Health Survey found 67% of adults aged 65+ consumed alcohol in the previous 12 months. This compared with 81% of 45–64 year-olds, 82% of 25–44 year-olds and 79% of 16–24 year-olds (Wells et al., 2007).

Attitudes and Behaviour towards Alcohol Survey (ABAS)

Combined results for the 2009–11 Attitudes and Behaviour towards Alcohol Surveys found 76% of adults aged 45–64 identified themselves as drinkers, as did 73% of adults aged 65+ (Research New Zealand, 2013a).

GENACIS

In the 2007 New Zealand arm of the Gender, Alcohol and Culture: an International Study (GENACIS), 90% of adults aged 45–54, 88% of adults aged 55–64 and 83% of adults aged 65–70 were current drinkers (had consumed alcohol in the previous 12 months).¹³ Similar percentages of men (89%) and women (90%) aged 45–54 were current drinkers. Eighty-seven percent of men and 89% of women aged 55–64 were current drinkers, as were 85% of men and 81% of women aged 65–70 (Meiklejohn, 2010).

¹³ Note that this was a postal survey with a relatively low response rate (49.5%).

A further 5% of 45–54 year-olds, 7% of 55–64 year-olds and 7% of 65–70 year-olds had been drinkers in the past, but had not consumed alcohol in the previous 12 months. Eleven percent of 65–70 year-olds had been abstainers all their lives, compared with 5% of 45–54 year-olds and 5% of 55–64 year-olds (Meiklejohn, 2010).¹⁴

Mosgiel survey

A survey of 774 Mosgiel (Otago) residents aged 70+ found 83% of older men and 64% of older women were drinkers (ie, they had drunk alcohol in the previous year) (Busby et al., 1988). The proportion of drinkers decreased with age for both males and females, but the decrease started earlier for females and reached a much lower level than for males by the age of 85+ (table 3.1).

Table 3.1: Percentage of drinkers, Mosgiel survey, by gender and age

	Males	Females
70–74	86%	78%
75–79	84%	67%
80–84	80%	46%
85+	68%	37%
Total (aged 70+)	83%	64%

Source: Table by authors, calculated from data in Busby et al. (1988)

Christchurch community-dwellers

In a survey of 141 adults aged 65+ living in Christchurch, 83% had consumed alcohol in the previous 12 months. Nearly all (96%) had consumed alcohol at some stage in their life. The average (mean) age of first alcohol use was 19 years old (Khan et al., 2002).

Christchurch rest home residents

In an earlier survey of 175 Christchurch *rest home* residents aged 65+, although only 14% had never had an alcoholic drink, half (50%) had not consumed any alcohol in the previous 12 months. This may have been due to a lack of access to alcohol in rest homes (Khan et al., 2001).

DRINKING STATUS AND ETHNICITY

This section looks at how many older adult Māori, Pacific and NZ Europeans use alcohol. This is based on surveys covering adults over the age of 65 that have reported data separately for

Key points:

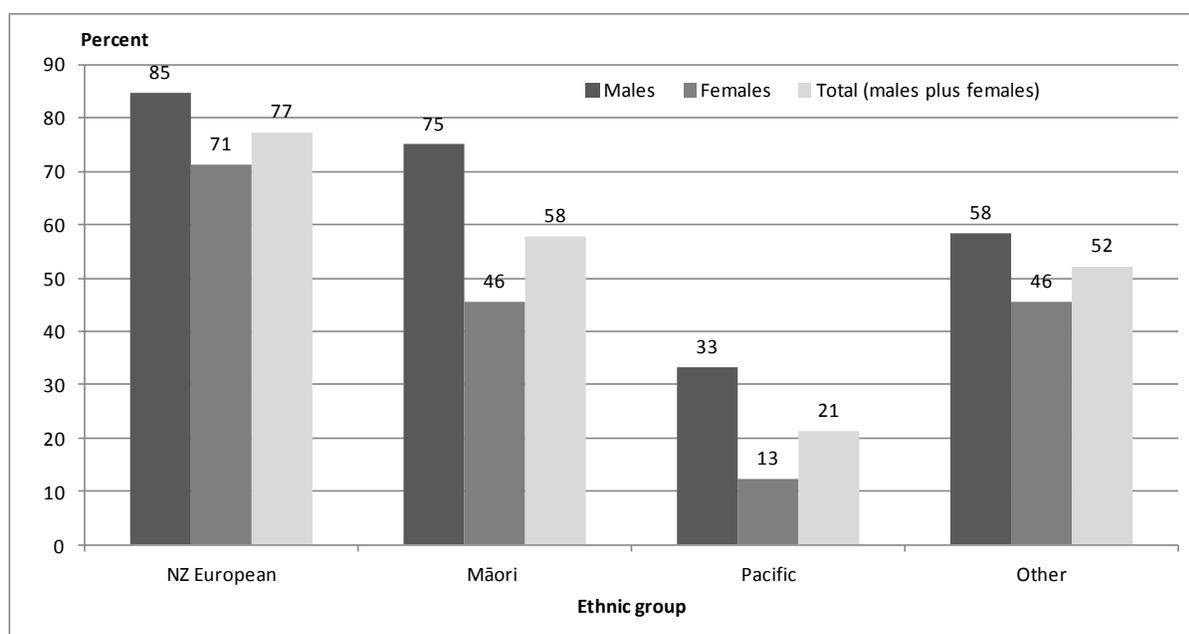
- Older New Zealand Europeans are more likely to be drinkers than older Māori and older Pacific adults
- Only about one in five older Pacific people drink alcohol, compared with four in five older New Zealand Europeans
- Older Māori men are more likely than older Māori women to drink alcohol
- Similarly, older Pacific men are more likely than older Pacific women to drink alcohol

different ethnic groups.¹⁵ No survey information appears to be available on the drinking patterns of older Asian adults.¹⁶

Survey of Family, Income and Employment (SoFIE)

SoFIE found, in 2008/09, New Zealand European older adults aged 64+ were more likely to be drinkers (77%) than Māori (58%), Pacific (21%) and 'Other' ethnic groups (52%). Among Māori and Pacific, older adult men were much more likely to be drinkers than older adult women (figure 3.2) (McKenzie et al., 2014).

Figure 3.2: Percentage of older adults aged 64+ who had an alcoholic drink in the previous 12 months, SoFIE wave 7 (2008/09), by ethnic group and gender



Source: Chart by authors from data in McKenzie et al. (2014)

Auckland Diabetes Heart and Health Study

The 2002/03 Auckland Diabetes Heart and Health Study compared drinking patterns of older Pacific adults with patterns for older New Zealand European adults. Pacific adults were significantly more likely to be non-drinkers than Europeans in all of the four age groups examined (table 3.2) (Sundborn et al., 2009).

¹⁵ Further information for younger Māori and Pacific adults aged 50–65 is available in appendix table 3.3.

¹⁶ In general, Asian adults have low rates of alcohol drinking compared with other New Zealand adults. For example, the 2007/08 Alcohol and Drug Use Survey found the following age-adjusted prevalence rates of alcohol consumption in the previous year for adults aged 16–64: 65% of Asian males (compared with 88% of all New Zealand males); and 45% of Asian females (compared with 83% of all New Zealand females) (Ministry of Health, 2009b).

Table 3.2: Percentage of Pacific and European adults who were non-drinkers, Auckland Diabetes Heart and Health Study, 2002/03, by age

Age group (years)	Pacific	European
Under 45	47%	7%
45–54	44%	3%
55–64	62%	9%
65+	70%	5%

Source: Sundborn et al. (2009: 49, Table 1)

Note: Numbers have been rounded.

Meta-analysis of five New Zealand studies

Māori and non-Māori drinking rates were compared in an analysis that aggregated the results for the following five New Zealand studies (Bramley et al., 2003):

- 1997 New Zealand Health Survey/National Nutrition Survey
- 1999 Sleep Survey
- 1992 Fletcher Challenge/University of Auckland Survey
- 1998–99 New Zealand Blood Donors Health Study
- 1988–90 Workforce Diabetes Survey.

Combined results for the five surveys showed that Māori men aged 50–74 were more likely (21%) than non-Māori men (11%) to be *non-drinkers*. The same was true for Māori women (34%) compared with non-Māori women (17%).

CHANGES IN DRINKING STATUS

This section looks at survey data tracing changes within the last decade or so in the proportions of older adults who report using alcohol. This is useful for seeing if the proportion of older adults who drink alcohol may be increasing, staying the same or decreasing.

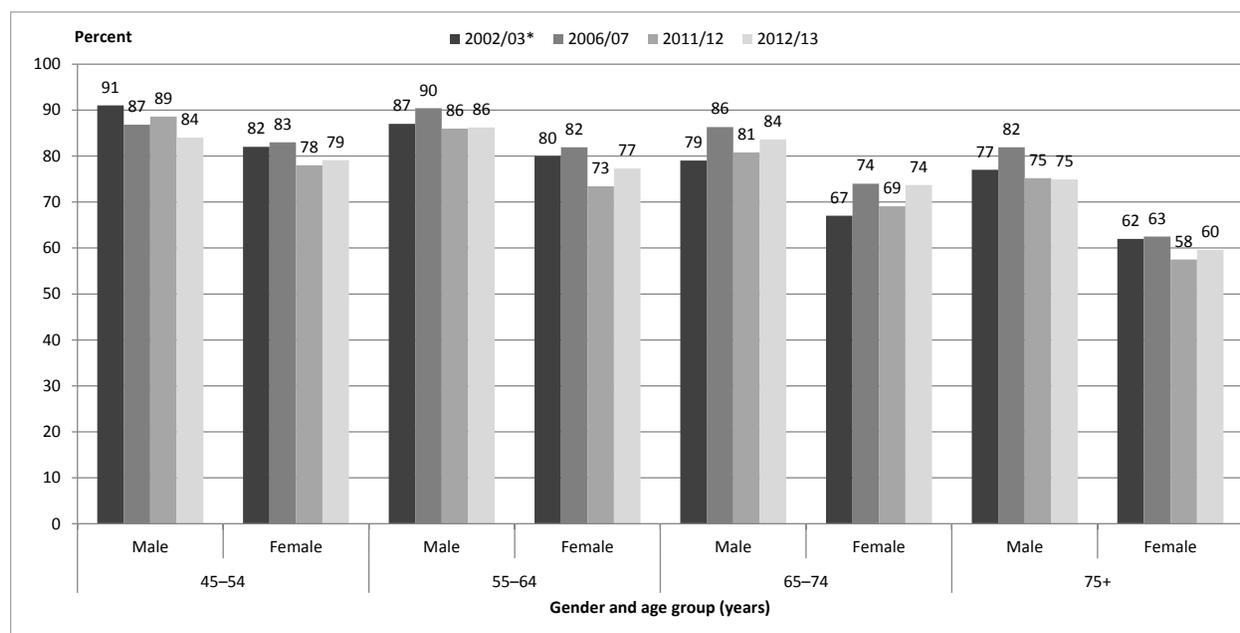
Key points:

- In the 10 years from 2002/03 to 2012/13, there were only small fluctuations in the proportion of older adults who drank alcohol. There were no clear or obvious major trends
- A longitudinal study following the same group of older adults for several years found more people in the group stopped drinking than started drinking. Older men were less likely than older women to stop drinking

New Zealand Health Surveys

Four consecutive New Zealand Health Surveys, conducted over 10 years from 2002/03 to 2012/13, identify only small fluctuations in the percentages of male and female drinkers in the different older age groups (figure 3.3).¹⁷

Figure 3.3: Changes in percentages of older New Zealand adults who had an alcoholic drink in previous 12 months, New Zealand Health Surveys 2002/03–2012/13, by gender and age



Source: Chart by authors from data in Ministry of Health (2004, 2008, 2013b, 2013d)

Note: *Figures estimated from reported chart data (numerical data not reported in text or elsewhere).

Changes for individuals

The national longitudinal Survey of Family, Income and Employment (SoFIE) (McKenzie et al., 2014) followed the same individual older adults and their alcohol-drinking patterns over three of its measurement times ('waves') as follows:

Wave 3 – 2004/05 – individuals were aged 60+

Wave 5 – 2006/07 – individuals were aged 62+

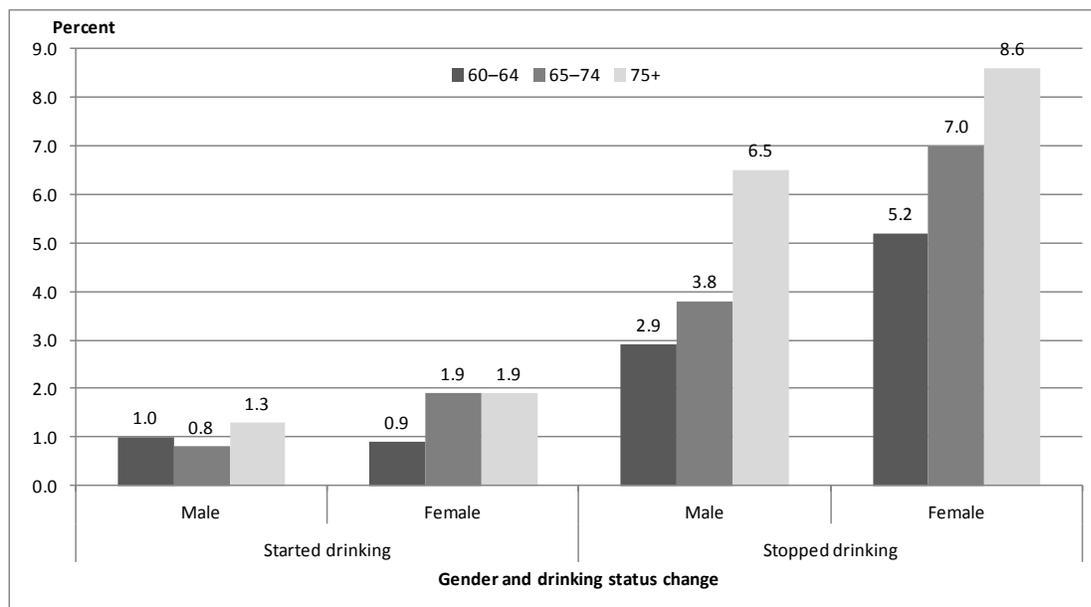
Wave 7 – 2008/09 – individuals were aged 64+.¹⁸

Figure 3.4 (next page) examines the changes in drinking status between the measurements in the third (2004/05) study wave of SoFIE and the seventh wave *four* years later. This shows that, over the period, stopping drinking was more common than starting. Stopping drinking was also more frequent with increasing age. Men were less likely to stop drinking than women in all three age groups. However, women were perhaps slightly more likely to start drinking than men in the two oldest age groups.

¹⁷ These fluctuations may be due to random sampling errors, rather than any particular trends in the prevalence of drinking.

¹⁸ Information on other topics was gathered during various other study waves.

Figure 3.4: Percentage of older adults in SoFIE starting or stopping drinking between study waves 3 and 7 (2004/05–2008/09), by gender and age (at wave 3)



Source: Chart by authors from data in McKenzie et al. (2014)

Note: Drinking status means having or not having an alcoholic drink in the previous 12 months

Age groups on the chart refer to ages at wave 3 (the first measurement period in 2004/05). At wave 7 (2008/09), age groups were 64–68, 69–78, and 79+.

DRINKING FREQUENCY

This section looks at how many times (occasions) older adults consume one or more alcohol drinks in a particular period, such as per day, per week or per month. This gives an idea of how frequently alcohol is used in people's lives.

Key points:

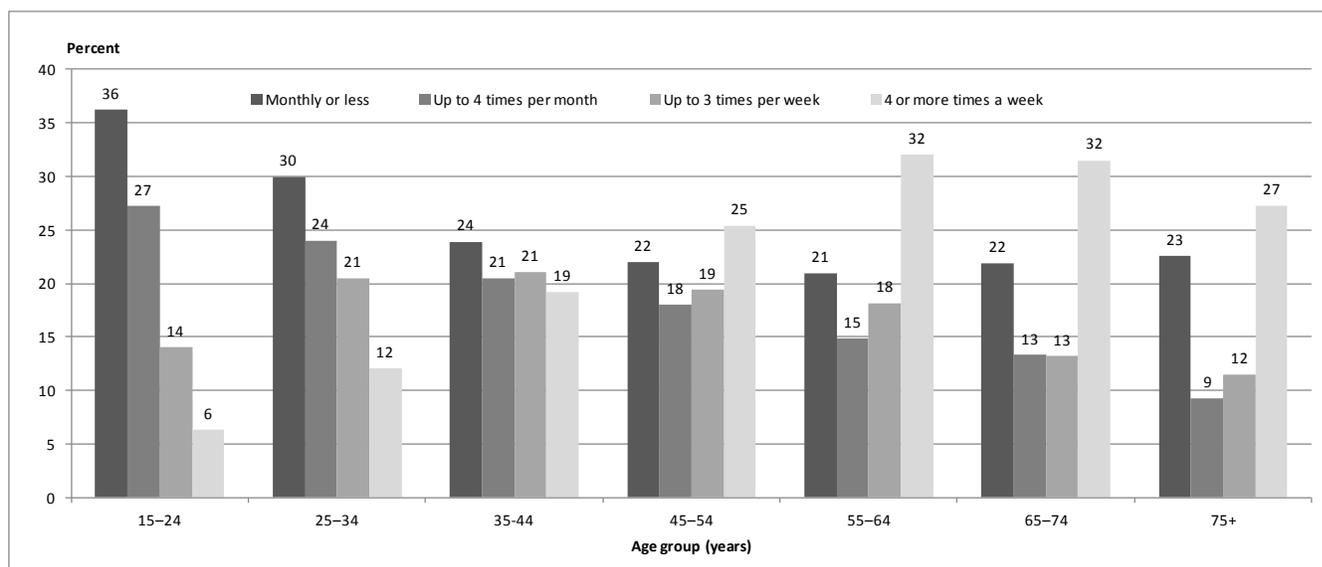
- Older New Zealand adults, especially older men, tend to drink more frequently than younger adults. A sizeable proportion of older men report drinking daily, almost daily, or four or more times per week
- A sizeable number of older women report drinking monthly or less. This is matched by a roughly similar number of older women who report drinking four or more times per week
- Older Māori and older Pacific adults tend to drink less frequently than older NZ Europeans

New Zealand Health Survey

The 2006/07 New Zealand Health Survey examined how often adults aged 15+ consumed alcohol drinks (Ministry of Health, 2008). For adults in older age groups, the most common frequency of drinking was four or more times a week. Nearly a third (32%) of 55–64 year-olds and 65–74 year-olds drank this often, as did more than a quarter of adults aged 75 and over (27%).

The next most common pattern in the older age groups was to drink only once a month or less (figure 3.5).

Figure 3.5: Percentage of New Zealand adults who drank at different frequencies, New Zealand Health Survey 2006/07, by age

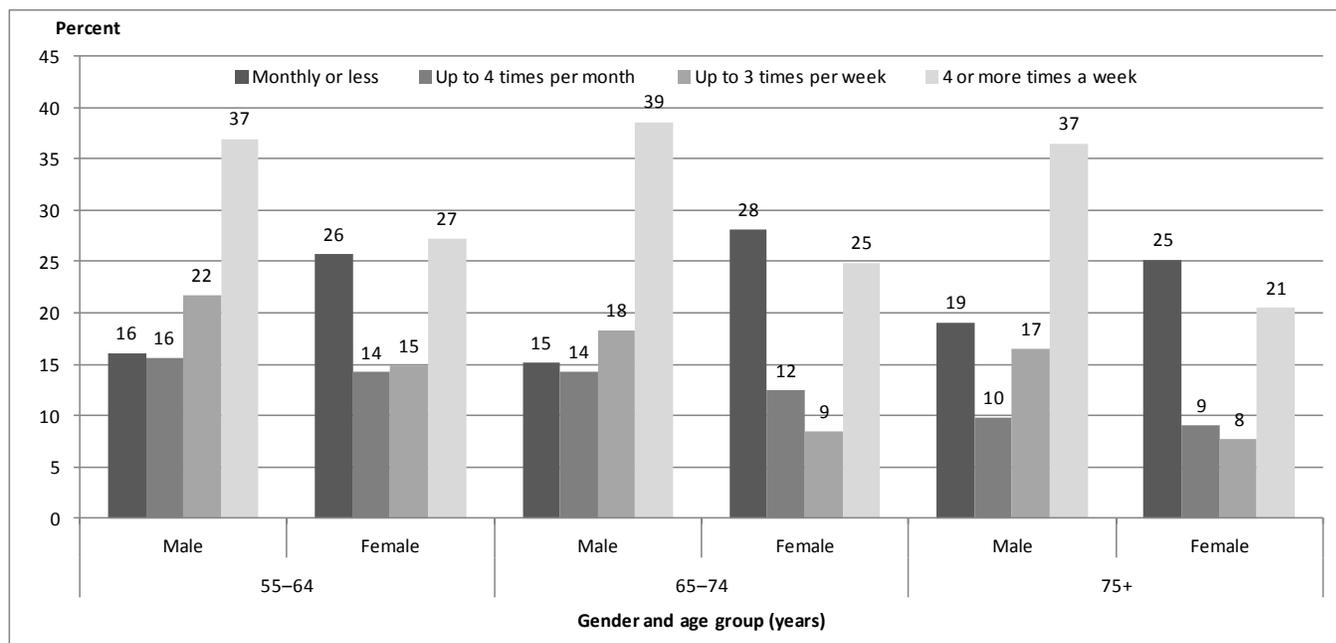


Source: Chart by authors from data tables for the Ministry of Health (2008)

Note: Percentages are of the total population in each age group. The chart excludes non-drinkers.

In the same New Zealand Health Survey, frequency-of-drinking patterns were not the same for men and women in the older age groups. By far the most common pattern for older men aged 55–64, 65–74 and 75+ was to drink four times or more weekly. By contrast, older women aged 65–74 and 75+ were most likely to drink once a month or less, followed by four or more times weekly. However, women in the 55–64 year age group were slightly more likely to drink at least four times a week than once a month or less (figure 3.6 next page).

Figure 3.6: Percentage of older New Zealand adults who drank at different frequencies, New Zealand Health Survey 2006/07, by age and gender



Source: Chart by authors from data tables for the Ministry of Health (2008)

Note: Percentages are of the total population in each age group. The chart excludes non-drinkers.

Attitudes and Behaviour towards Alcohol Survey (ABAS)

Consistent with these findings, combined results for the 2009–11 Attitudes and Behaviour towards Alcohol Surveys showed that older adults aged 65+ were the most likely of all adult age groups to have drunk alcohol on 30 or more days in the previous four weeks/30 days, that is, daily (figure 3.7 next page) (Research New Zealand, 2013a).

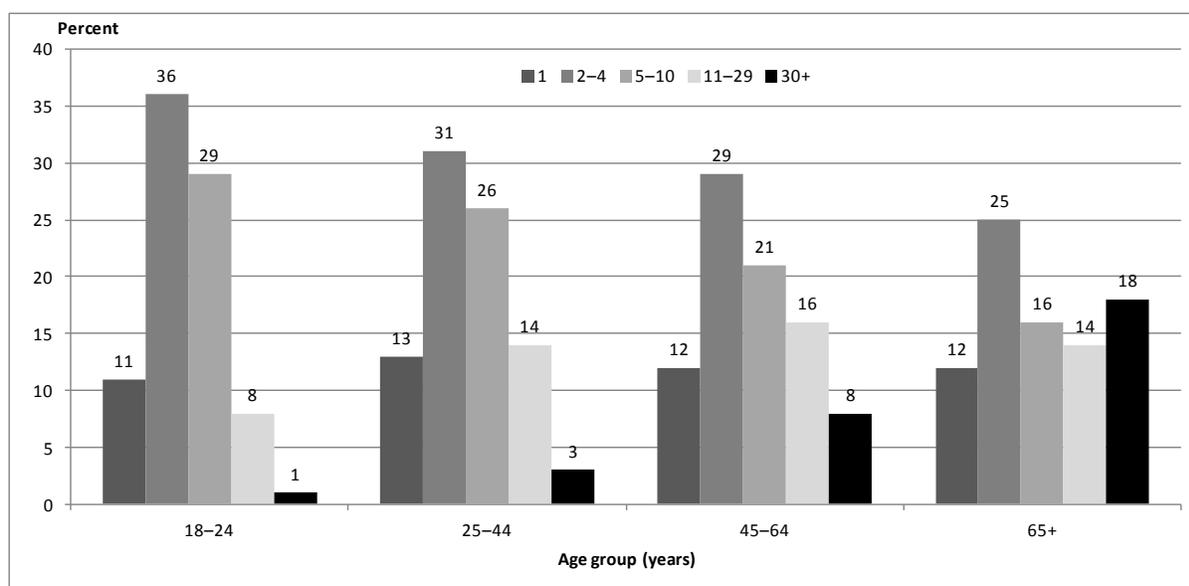
Meta-analysis of five New Zealand studies

The meta-analysis by Bramley et al. (2003) combined results from five different surveys. It showed that Māori men aged 50–74 drank just over half as often as non-Māori men (an average of 79 days compared with 145 days per year). Results were similar for Māori women aged 50–74, who, on average, drank 39 times each year compared with 106 times for non-Māori women.

Christchurch community-dwellers

In the survey of 141 adults aged 65+ living in Christchurch, 27% drank alcohol monthly or less often, 11% drank alcohol 2–4 times each month and 37% drank alcohol four or more times per week (Khan et al., 2002).

Figure 3.7: Percentage of New Zealand adults who drank in the previous four weeks/30 days, Attitudes and Behaviour towards Alcohol Surveys 2009–2011, by drinking frequency (number of days) and age



Source: Chart by authors from data in Research New Zealand (2013a)

Note: Percentages are of the total population in each age group. The chart excludes non-drinkers.

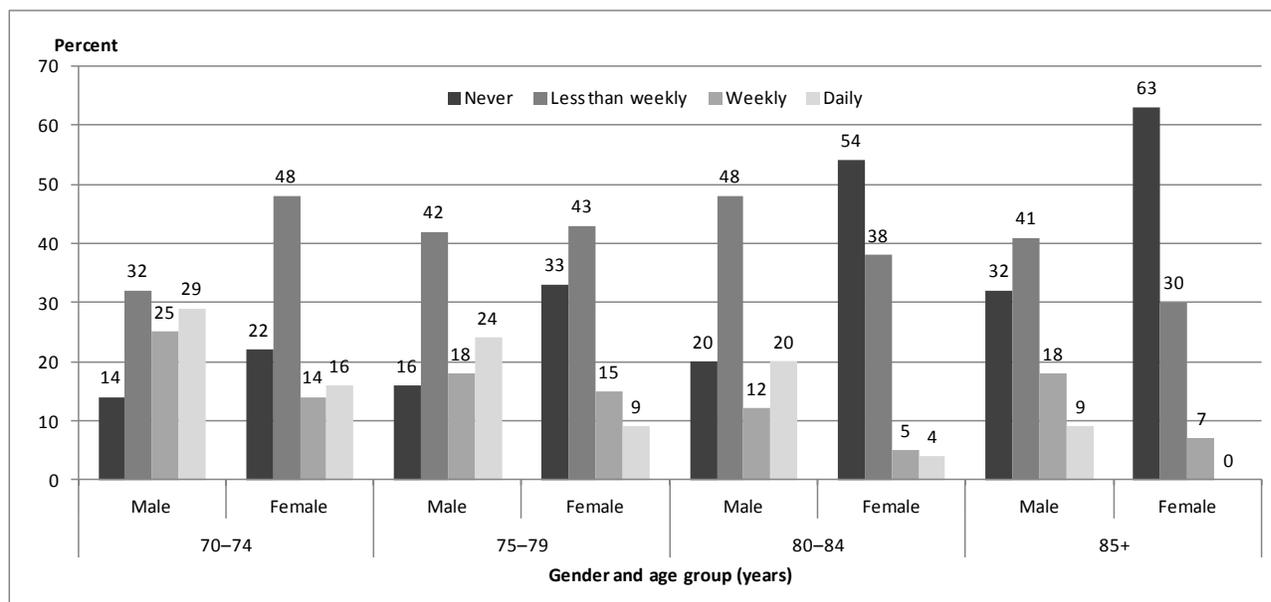
Mosgiel survey

The survey of 774 adults aged 70+ living in Mosgiel found men tended to drink more frequently than women (Busby et al., 1988).¹⁹ Thirty-nine percent of men and 43% of women drank less than weekly; 20% of men and 12% of women drank weekly; and 24% of men and 10% of women drank daily. Figure 3.8 (next page) shows the patterns of drinking frequency among men and women by more specific age groups. While there were some fluctuations, the overall pattern was a decrease in drinking frequency with increasing age, for both men and women.

GENACIS

In the 2007 GENACIS survey, adults aged 65–70 and their partners were more likely to both be abstainers (10%) than adults in younger age groups (5% of 55–64 year-olds and 3% of 45–54 year-olds). Adults aged 65–70 were also less likely than younger adults to drink with the same frequency as their intimate partners. For example, 35% of adults aged 65–70 and their partners drank at the same frequency as one another, compared with 46% of 55–64 year-olds and 54% of 45–54 year-olds (Meiklejohn, 2010).

¹⁹ Virtually all the participants were 'Caucasian', with just a few Chinese adults.

Figure 3.8: Frequency of drinking by older Mosgiel adults by gender and age, c. 1988

Source: Chart by authors from data in Busby et al. (1988)

AMOUNT OF ALCOHOL CONSUMED

This section looks at how many individual alcohol drinks older adults report consuming in any given time period, such as per drinking occasion/session, per day, per week or per month. This is useful as another indicator of how big a part alcohol plays in people's lives.²⁰

Key points:

- In general, older adults drink smaller amounts of alcohol per drinking occasion than younger adults, and the amounts they consume per occasion decrease with age
- Older men tend to drink larger amounts per drinking occasion than older women
- Although they drink alcohol less frequently than older NZ Europeans, when they do drink, older Māori and older Pacific adults tend to consume more alcohol than NZ Europeans

Before looking at the alcohol consumption data from relevant NZ surveys, it is useful to briefly outline some of the methods used in surveys to estimate people's alcohol consumption.

²⁰ Note that information about frequently drinking large amounts of alcohol ('binge-drinking') is discussed in more detail in the next chapter.

Measuring the amount

The amount of pure alcohol/ethanol (the active ingredient) in an alcoholic drink depends on the concentration of alcohol in the particular type of drink, and the volume of the drinking container (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001).²¹

In order to calculate how much alcohol older adults (and others) consume, surveys often ask people how many drinks they have, what type of drink and what type of container they are drinking from, and sometimes how often they drink.

To better measure the amount of alcohol consumed, the concept of a 'standard drink' has been developed. In New Zealand, one standard drink contains 10g, or 12.7ml, of pure alcohol/ethanol (Babor et al., 2001; Health Promotion Agency, 2014).²² This is equivalent to one 330ml can of ordinary-strength beer (4% alcohol) or one 100ml glass of table wine (12.5% alcohol) (Health Promotion Agency, 2014). In many surveys, pictorial images of standard drinks are given to survey participants so they can work out how much they drink. Some surveys report the amount of alcohol people consume as the number of standard drinks, whereas others use weights or volumes of pure alcohol/ethanol.

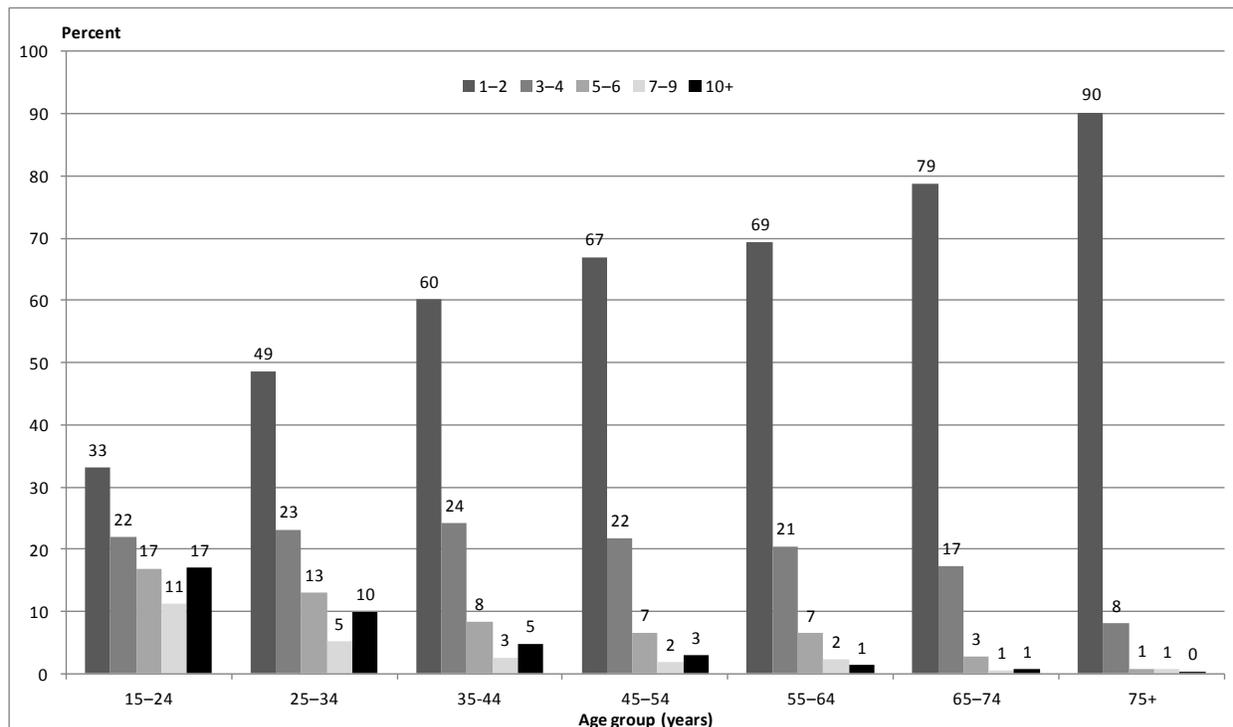
New Zealand Health Survey

The 2006/07 New Zealand Health Survey asked adults aged 15+ who used alcohol how many drinks they had on a typical drinking day (Ministry of Health, 2008). In general, the number of drinks per typical drinking day decreased with age. However, adults in all age groups most commonly had just one or two drinks. The proportion having this amount increased with age. By the age of 75+, 90% of adults who were drinkers had just one or two drinks on a typical drinking day, and most other adults in this age group (8%) had 3–4 drinks (figure 3.9 next page).

²¹ The amount (g) of pure alcohol in a container = volume of container (litres) x strength of drink (% alcohol) x 0.789 (conversion factor).

²² The amount of pure alcohol in a standard drink varies between countries. For example, the UK has a lower amount (8g) than New Zealand; Canada (13.6g), the US (14g) and Japan (19.75g) have higher amounts (Babor et al., 2001).

Figure 3.9: Percentage of New Zealand adults who drank different numbers of drinks on a typical drinking day, New Zealand Health Survey 2006/07, by age

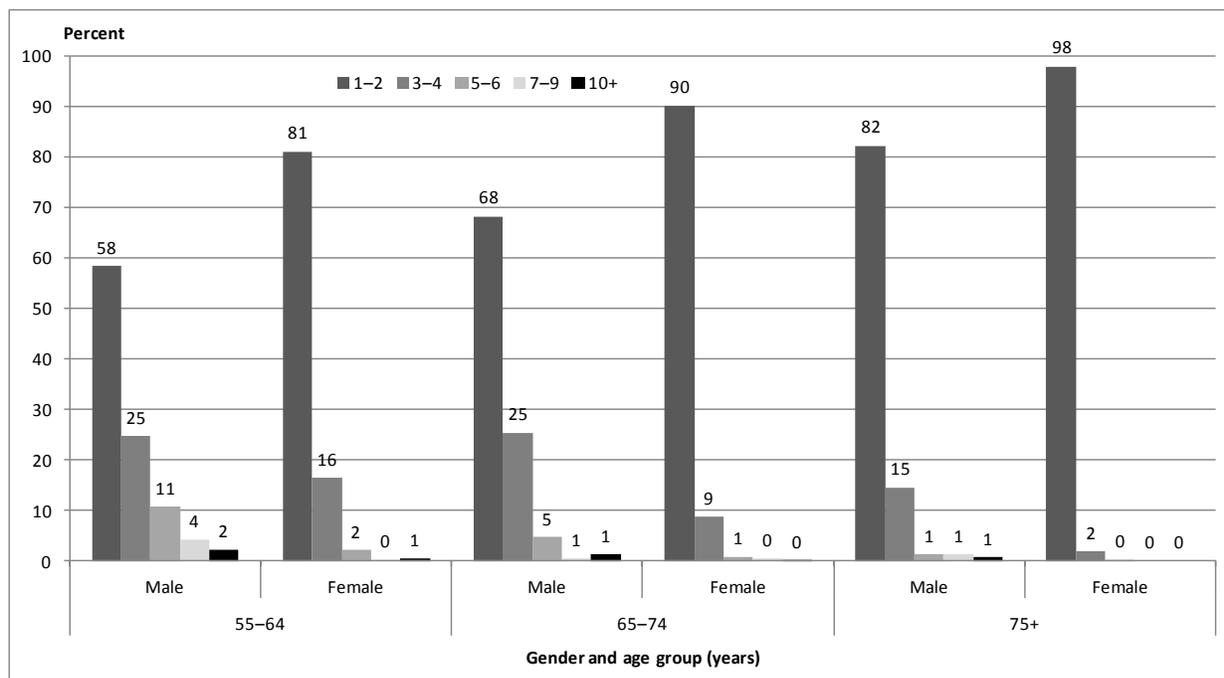


Source: Chart by authors from data tables for the Ministry of Health (2008)

Note: Percentages are of adult *drinkers* in each age group.

The same survey found older men were more likely than older women to have more than just one or two drinks on a typical drinking day (figure 3.10 next page) (Ministry of Health, 2008).

Figure 3.10: Percentage of older New Zealand adults who drank different numbers of drinks on a typical drinking day, New Zealand Health Survey 2006/07, by age and gender



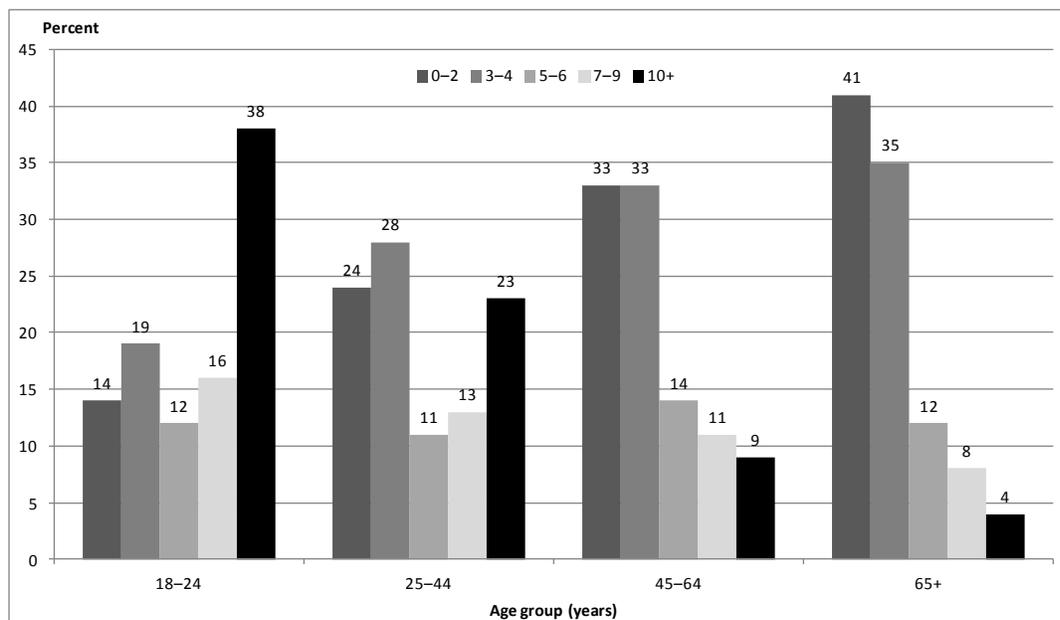
Source: Chart by authors from data tables for the Ministry of Health (2008)

Note: Percentages are of adult *drinkers* in each age group.

Attitudes and Behaviour towards Alcohol Survey (ABAS)

The 2009–11 Attitudes and Behaviour towards Alcohol Surveys asked older participants how many drinks they consumed the last time they had been drinking (Research New Zealand, 2013a). Most older adults aged 65+ reported consuming either up to two (41%) or four (35%) drinks. This was a lower amount than for younger adults, particularly those aged 18–24 (figure 3.11 next page).

Figure 3.11: Percentage of older New Zealand adults who drank different numbers of drinks on their last drinking occasion, Attitudes and Behaviour towards Alcohol Surveys 2009–2011, by age



Source: Chart by authors from data in Research New Zealand (2013a)

Survey of Family, Income and Employment (SoFIE)

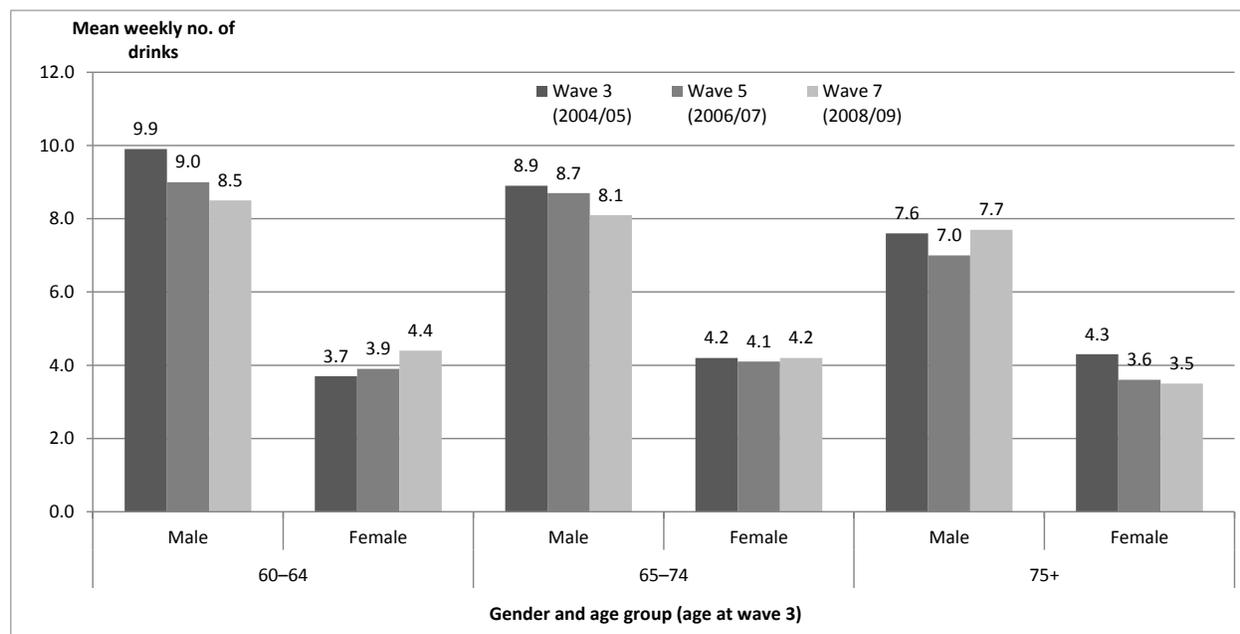
SoFIE asked older adults how often they consumed alcohol in the previous four weeks and how many drinks they consumed on a typical drinking occasion (McKenzie et al., 2014). From this the average (mean) weekly number of alcohol drinks was calculated.

In 2008/09 (wave 7 of the survey), when the survey participants were aged 64+, the average weekly consumption was 6.1 drinks.

Similar to the other surveys described above, older men had a higher consumption (8.1 drinks per week) than older women (4.1). Adults aged 64–68 had a slightly higher average weekly consumption (6.5 drinks) compared with adults aged 69–78 (6.2 drinks) and adults aged 79+ (5.4 drinks).

SoFIE also traced changes in the average (mean) weekly number of drinks consumed by individuals over the three waves of the survey (figure 3.12 next page). Overall there was a small reduction in the mean weekly number of drinks consumed by the survey group over the four years of the study – 6.5 drinks at wave 3 in 2004/05 compared with 6.1 drinks at wave 7 in 2008/09. Older men reduced the average amount they consumed slightly more than older women (McKenzie et al., 2014).

Figure 3.12: Changes in the mean weekly number of drinks consumed by older New Zealand adults, SoFIE waves 3, 5 and 7, by gender and age (at wave 3)



Source: Chart by authors from data in McKenzie et al. (2014)

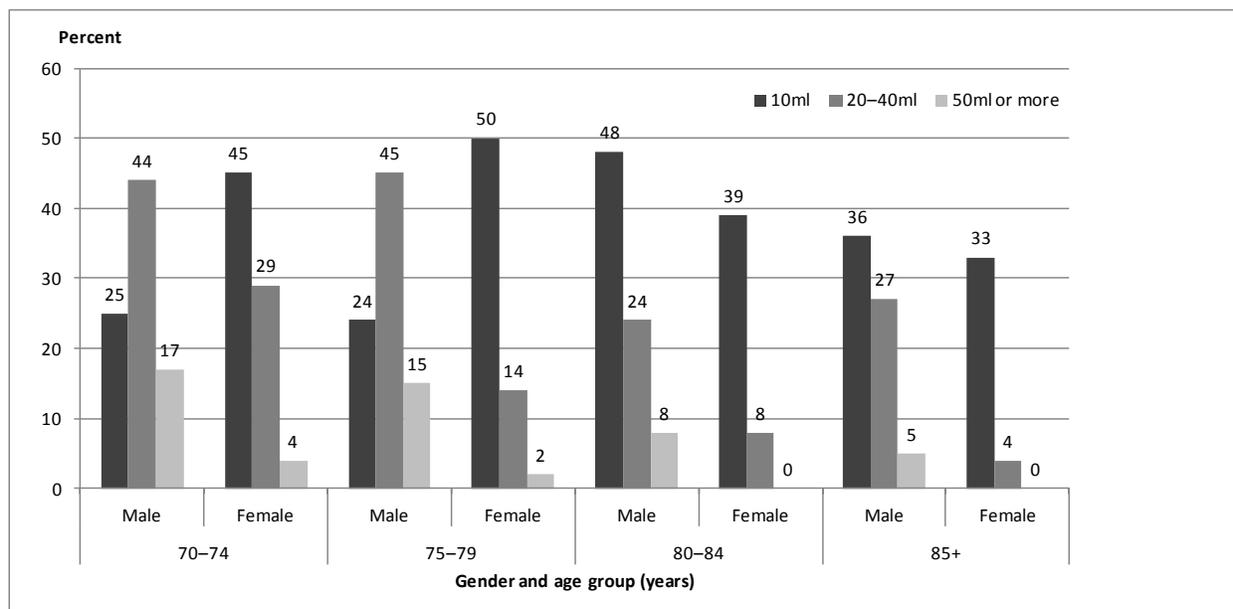
Mosgiel survey

The 1988 survey of older adults living in Mosgiel found that men tended to drink larger amounts of alcohol than women. Twenty-nine percent of the men and 44% of the women aged 70+ drank only about 10ml of alcohol on the days when they were drinking (slightly less than one standard drink). Forty percent of the men and only 18% of the women drank 20–40ml each day (about two or three standard drinks). Only 14 percent of the men and 2% of the women drank 50ml or more (about 4+ drinks).²³ Although there were some fluctuations, the general trend for both men and women was to drink smaller amounts of alcohol with increasing age (figure 3.13 next page) (Busby et al., 1988).

Sixty percent of the Mosgiel men and 30% of the women aged 70+ said they had cut back the amount of alcohol they drank, compared with when they were 40–50 years old. Thirty-one percent of men and 56% of women said they drank the same amount; and 7% of men and 11% of women said they drank more now compared with when they were younger (Busby et al., 1988).

²³ The rest of the sample were non-drinkers.

Figure 3.13: Amount of (pure) alcohol consumed by older Mosgiel adults each day when they were drinking, c. 1988, by gender and age



Source: Chart by authors from data in Busby et al. (1988)

Christchurch community-dwellers

In the survey of 141 adults aged 65+ living in Christchurch, 71% consumed one or two standard drinks on a typical drinking day. Nine percent consumed three or four drinks; and 3.5% consumed more than four (Khan et al., 2002).

Meta-analysis of five New Zealand studies

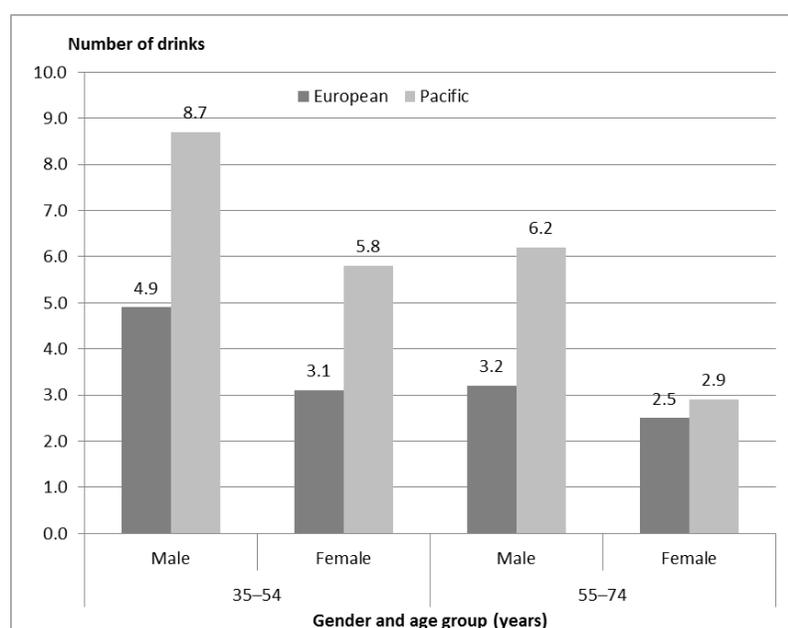
The meta-analysis by Bramley et al. (2003), combining the results of five surveys, reported how much alcohol was consumed by drinkers on a typical occasion. Māori men aged 50–74 drank an average of 48g per occasion (nearly five standard drinks). Non-Māori men in the same age group drank just over half as much (28g or nearly three standard drinks). Likewise, Māori women aged 50–74 consumed 35g (3½ standard drinks) compared with 18g (nearly two standard drinks) for non-Māori women.

However, as older Māori drank less often than non-Māori, daily amounts of alcohol consumed by Māori and non-Māori were very similar when averaged out. Māori men aged 50–74 consumed an average of 14g of pure alcohol per day compared with 15g for non-Māori men of the same age. Māori women in the same age group consumed slightly less alcohol daily on average than non-Māori women (6.5g compared with 7.1g).

Auckland Diabetes Heart and Health Study

In the 2002/03 Auckland Diabetes Heart and Health Study, older Pacific adults aged 55–74 consumed more drinks per average occasion than European adults of the same age. Pacific men in this age group usually drank about twice as many drinks per sitting as European men (6.2 drinks compared with 3.2). Older Pacific women drank only slightly more on average (2.9 drinks) than European women per occasion (2.5 drinks). In this age group, both Pacific and European males consumed more drinks per occasion than their female counterparts (figure 3.14). For males aged 55–74, the average number of drinks per occasion for different Pacific ethnic groups were: Samoan – 6.5; Cook Island – 8.3; Tongan – 3.8; Niuean – 9.0 (Sundborn et al., 2009).²⁴

Figure 3.14: Average number of drinks per occasion for European and Pacific adults, Auckland Diabetes Heart and Health Study, 2002/03, by age and gender



Source: Chart by authors from data in Sundborn et al. (2009)

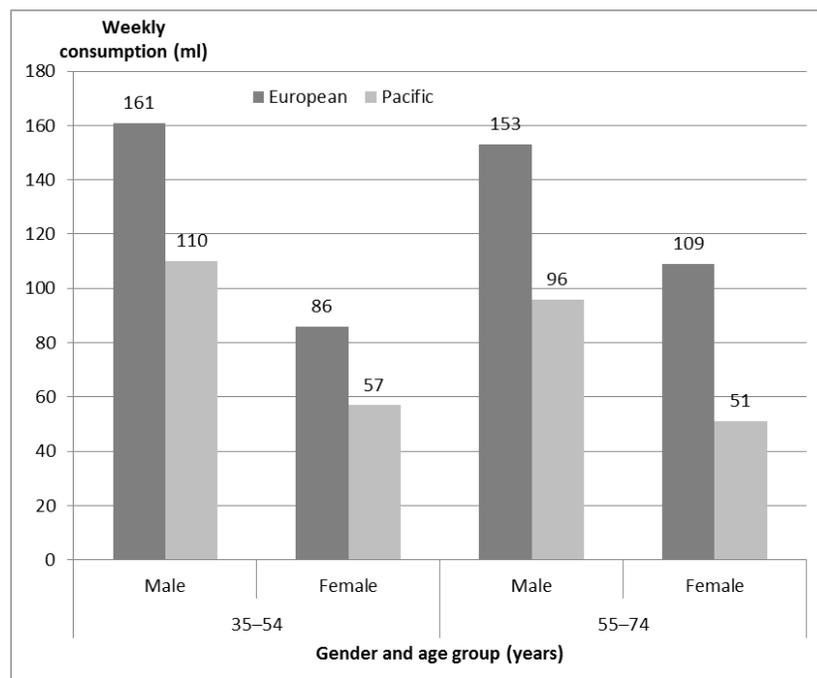
In contrast, older Pacific adults aged 55–74 drank *less* alcohol *per week* than Europeans of the same age. This was true for both older men and women. Older men drank more per week than older women in both ethnic groups (figure 3.15 next page) (Sundborn et al., 2009).

For males aged 55–74, the amount of alcohol consumed per week for different Pacific ethnic groups was: Samoan – 61ml; Cook Island – 45ml; Tongan – 82ml; Niuean – 284ml (Sundborn et al., 2009).²⁵

²⁴ There were insufficient numbers of females in the different ethnic groups for analysis.

²⁵ There were insufficient numbers of females in the different ethnic groups for analysis.

Figure 3.15: Average alcohol consumption per week for European and Pacific adults, Auckland Diabetes Heart and Health Study, 2002/03, by age and gender



Source: Chart by authors from data in Sundborn et al. (2009)

TYPES OF DRINK

Attitudes and Behaviour towards Alcohol Survey (ABAS)

The 2009–11 Attitudes and Behaviour towards Alcohol Surveys asked participants what types of drink they consumed the last time they were drinking (Research New Zealand, 2013a). Older adults aged 65+ had consumed:

- wine (including sparkling) – 59%
- ordinary-strength beer – 18%
- full-strength spirits (mixed or straight) – 10%
- low-alcohol beer – 4%
- ready-to-drink beverages (RTDs) – 3%
- low-alcohol spirits (mixed or straight) – 2%
- port or sherry – 2%
- extra-strength beer – 1%
- liqueurs – 1%.

Compared with younger adults, 65+ year-olds were more likely to have wine, port or sherry, and less likely to have beer, spirits or RTDs.

Mosgiel survey

The survey of 774 Mosgiel residents aged 70+ asked additional in-depth questions to a sub-sample of 173 selected from the four drinking groups (non-drinkers and those who drank less

than weekly, weekly, or daily) (Busby et al., 1988). This part of the survey found that 47% of women drinkers most commonly drank fortified wine (such as port and sherry), whereas men most commonly drank spirits (45%). The next most commonly consumed drinks for women were spirits (30%), wine (17%) and beer (6%). For men, the next most commonly consumed drinks were beer (34%), fortified wine (15%) and wine (6%).

DRINKING LOCATION AND EVENTS

This section looks at where older adults tend to drink alcohol and the events or activities associated with alcohol use. This provides a further indication of the ways alcohol is fitted into the lives of older people.

Key points:

- Older adults mainly drink at home, often in conjunction with meals
- Compared with younger adults, older adults are less likely to drink in public venues such as pubs, bars or nightclubs, but are more likely to drink in sports clubs

Survey data indicating the different places or circumstances in which New Zealand older adults drink are comparatively rare. There appear to be only two useful surveys, one of which is quite old.

Attitudes and Behaviour towards Alcohol Survey (ABAS)

The 2009–11 Attitudes and Behaviour towards Alcohol Surveys asked participants where they had been drinking, and what type of event it was, last time they had been drinking (Research New Zealand, 2013a).

Two-thirds of adults aged 65+ (67%) were at home the last time they had an alcohol drink, 7% were at a family member/relative's house and 7% were at a friend's house. The next most common venues were: a café or restaurant (6%); a pub or bar (5%); a sports club (5%); or a dance- or night-club (1%).²⁶ Compared with younger adults, adults aged 65+ were more likely to have been drinking at home or a sports club; and they were less likely to have been drinking at a friend's house, a pub or bar, a dance- or night-club, at work, or when they were 'out and about'.

In the same survey, almost half of adults aged 65+ (49%) drank alcohol with dinner or lunch on their previous drinking occasion. For 4% it had been at a barbeque. For 10% it had been at someone's birthday, and for another 10% it was at another type of party or celebration. Two percent had been participating in 'after-work drinks'. However, for 22%, there was no particularly special occasion.²⁷ Compared with younger adults, 65+ year-olds were more likely to drink with dinner or lunch and less likely to drink at a barbeque, at someone's birthday, at another type of party or celebration, or after work (Research New Zealand, 2013a).

²⁶ Five percent had drunk alcohol at 'other' locations.

²⁷ Four percent had drunk alcohol at another (unspecified) type of event.

Mosgiel survey

In the smaller follow-up part of the 1988 Mosgiel survey of adults aged 70+ (173 participants), the majority of drinkers (62% of women and 69% of men) most commonly drank at home. Only 3% of women most commonly drank in clubs, and none most commonly drank in hotels. Higher proportions of men drank most commonly either in clubs (15%) or hotels (5%) (Busby et al., 1988).

Most reported drinking in association with special occasions (95%) or just to be sociable (77%). Just over two-thirds (68%) said they drank before meals and 43% drank with meals (Busby et al., 1988).

ADDITIONAL DATA FROM SURVEYS OF ADULTS AGED 50-65

Appendix table 3.3 presents results from three selected national surveys of older adults aged 50–65. This gives extra information on the drinking patterns of New Zealanders, including Māori and Pacific people, who are about to move into the older adults age groups. The three selected surveys were:

- 2007/08 Alcohol and Drug Use Survey (Ministry of Health, 2009a, 2009b)
- Te Ao Waipiro 2000: Māori National Alcohol Survey (Moewaka Barnes et al., 2003)
- 2002/03 Pacific Drugs and Alcohol Survey (PDACS) (Huakau et al., 2005; Pacific Research and Development Services & SHORE/Whariki, Massey University, 2004).

4 HAZARDOUS AND HARMFUL DRINKING AMONG OLDER ADULTS

This chapter summarises what surveys indicate about the *hazardous* and *harmful* drinking patterns of older adult New Zealanders.

It begins by defining what is meant by hazardous and harmful drinking. Next it looks at some of the different alcohol screening tools used for measuring whether people may be drinking in these ways.

The chapter then presents results from various New Zealand surveys. First it covers surveys that have looked only at *hazardous* drinking.

Next it covers surveys that have looked only at *harmful* drinking. Surveys of alcohol abuse and dependence are included here, as abuse and dependence can be regarded as particular forms of harmful drinking.

Finally, results are presented from surveys that have estimated rates of *both hazardous and harmful drinking* in the population. These surveys use the full version of the Alcohol Use Disorders Identification Test (AUDIT) screening tool. Arguably, these surveys provide a more complete picture of levels of unsafe drinking in the population, compared with surveys that look only at hazardous drinking or only at harmful drinking.

Structuring the chapter in this way is intended to help the reader steer a path through the different New Zealand surveys, as some surveys use different definitions of hazardous and harmful drinking.

Most of the data presented here are sourced from the same New Zealand surveys as the previous chapter (see appendix table 3.1 for details of each survey). Again, care should be used when interpreting the data.²⁸

DEFINING HAZARDOUS AND HARMFUL DRINKING

There are no standard, universally accepted definitions of hazardous or harmful drinking. However, the following descriptions reflect what the literature indicates are the more commonly understood meanings of the terms (Berks & McCormick, 2008).

Hazardous drinking

In general, the term *hazardous* drinking (also described as 'risky' drinking) refers to styles of alcohol consumption that put drinkers *at risk* of either short- or long-term harm. This can relate to their frequency of alcohol use and/or the amounts of alcohol they consume.

Harmful drinking

By contrast, *harmful* drinking usually refers to styles of alcohol use that *have already led to some kind of harm*, in terms of a person becoming intoxicated, physically dependent on alcohol,

²⁸ Different studies may use different research methods, survey questions and age-categories. Survey results are also subject to random sampling errors, meaning that differences reported here may not be statistically significant. Alcohol consumption surveys rely on participants accurately remembering their drinking behaviour and answering questions honestly.

or experiencing physical, psychological, social or other problems as a result of their drinking. Harmful drinking includes situations where people are medically diagnosed as having alcohol use disorders, alcohol dependence, alcohol abuse, or what is sometimes called ‘alcoholism’.²⁹

SCREENING TOOLS

Population surveys often use a set of standard alcohol screening questions to help work out if people are drinking hazardously or harmfully. The following is a brief outline of some of the more common screening tools used in recent New Zealand surveys.

Key points:

- Some alcohol screening and assessment tools may be more suitable for use with older adults than others
- New Zealand population surveys typically use versions of the internationally-recognised Alcohol Use Disorders Identification Test (AUDIT) screening tool for measuring hazardous and harmful drinking by older adults
- The full version of AUDIT consists of 10 questions that aim to identify people with hazardous or harmful drinking practices. Generally, an AUDIT score of 8 or above is considered to indicate hazardous or harmful drinking
- However, studies note that the AUDIT tool may be inappropriate for older adults because it does not take account of their greater vulnerability to the physical effects of alcohol, higher prevalence of chronic health conditions, and more frequent use of medicines incompatible with alcohol
- the Alcohol-Related Problems Survey (ARPS), developed in the USA, is an alcohol screening tool for older adults that includes an assessment of people’s health conditions, medication use and functional limitations, as well as their drinking patterns

A number of standard screening tools are used to assess if people are drinking hazardously/harmfully or if they have alcohol dependence or abuse problems. Some of these tools may be more appropriate than others for use with older adults (Berks & McCormick, 2008).

New Zealand surveys examining levels of hazardous and harmful drinking among the older adult population often use either the internationally-recognised AUDIT tool or DSM-IV criteria for screening/assessment purposes. These two tools are described in more detail below.

Other available screening tools include (Addiction Research Foundation et al., c. 1993; Beresford, 1995; Berks & McCormick, 2008; Khan, 1998):

- CAGE – see appendix table 4.1 for the list of CAGE questions
- the Michigan Alcohol Screening Test (MAST) and its variations such as MAST-G, which is designed for older people – see appendix table 4.2 for a list of MAST-G questions
- Cyr-Wartman

²⁹ The term ‘alcoholism’ appears to be used less often now in New Zealand than previously.

- the Alcohol-Related Problems Survey (ARPS) and its variations.

The Alcohol-Related Problems Survey (ARPS) is discussed in more detail later in this report (chapter 7). It is different from other screening tools in that it is specifically aimed at older adults and takes into account their health conditions, medication use and functional limitations, as well as their drinking patterns, when assessing hazardous and harmful alcohol use. In the United States, a recent analysis of national health survey data based on ARPS criteria concluded that 53% of drinkers aged 65 and over were using alcohol hazardously or harmfully (Wilson, Knowles, Huang, & Fink, 2013). To date, the ARPS criteria have not been applied to any published New Zealand surveys of older adults.

Alcohol Use Disorders Identification Test (the AUDIT)

Versions of the Alcohol Use Disorders Identification Test (the AUDIT) have been used in a number of New Zealand population surveys.

The AUDIT was developed by the World Health Organization in the late 1980s as ‘a simple method of screening for excessive drinking and to assist in brief assessment’ (Babor et al., 2001, p. 2). It is still commonly used by alcohol workers and researchers. The full version of the AUDIT consists of 10 questions that aim to identify people with hazardous/risky or harmful drinking practices. Questions cover the amount and frequency of alcohol consumption (to identify hazardous/risky drinking), as well as dependence symptoms and possible negative consequences of drinking heavily (ie, harmful drinking).

The AUDIT has various uses, including screening/assessing people in primary health care situations for further intervention (Babor et al., 2001). It is also used in general population surveys to estimate the prevalence of alcohol-related problems in different groups. AUDIT is designed either to be administered by an interviewer, such as a health professional, or to be self-completed.

Table 4.1 (next page) lists the 10 AUDIT questions and how they are scored (using a scale of 0–4 for each question). The scores for all questions are added together to get an overall AUDIT score (maximum total score of 40).

Generally, a score of eight or above is considered to indicate hazardous or harmful drinking (Babor et al., 2001). However, appropriate cut-off/threshold scores are not universally agreed, and may vary for different population groups. For example, a lower threshold is quite often applied to women because they are more sensitive than men to the effects of alcohol.

According to Babor et al. (2001), questions 1–3 concern ‘hazardous’ drinking, questions 4–6 concern alcohol dependence symptoms and questions 7–10 concern ‘harmful’ alcohol use.

There are also several shorter versions of the AUDIT for more rapid screening purposes:

AUDIT-C – uses the first three questions of the AUDIT (on frequency and amount of alcohol consumption) to identify possibly hazardous drinkers. The maximum possible score is 12. The original team who validated this tool found a score of 3+ identified 90% of patients with active alcohol abuse or dependence and 98% of patients with heavy drinking (although specificity was low with a 40% false-positive rate) (Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998). However, other researchers have advocated threshold scores of 5+ for

general populations aged 18+. Other researchers have suggested a lower threshold score for women (3+) than men (4+) (Towers et al., 2011).

AUDIT-3 – uses just the third question ('how often do you have six or more drinks on one occasion?') and aims to identify binge-drinkers who may have problematic drinking. The maximum possible score is 4. Threshold scores used for this test can be 1 or 2 (Towers et al., 2011).³⁰

Table 4.1: Alcohol Use Disorders Identification Test (the AUDIT) (self-report version)

Questions	Answers and related scores				
	0	1	2	3	4
1. How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more
3. How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
8. How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
9. Have you or someone else been injured because of your drinking?	No		Yes, but not in the last year		Yes, during the last year
10. Has a relative, friend, doctor, or health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, during the last year

Source: Adapted from Babor et al. (2001)

DSM-IV

The Diagnostic and Statistical Manual of Mental Disorders version IV (DSM-IV) is used in the diagnosis of harmful drinking and classifies a person as having *alcohol abuse* if they have one

³⁰ AUDIT-5 – uses just the fifth question ('how often during the last year have you failed to do what was normally expected of you because of drinking?'). Again, the maximum possible score is 4.

or more of the following symptoms (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2013):

- recurrent alcohol use resulting in a failure to meet major role obligations at work, school or home
- recurrent alcohol use in situations in which it is physically hazardous (such as driving or operating machinery)
- continued alcohol use despite having persistent or recurrent social or interpersonal problems relating to this use.

DSM-IV classifies people as having *alcohol dependence* if they meet three or more of the following criteria (Beresford, 1995, p. 9; NIAAA, 2013):

- have significantly increased tolerance to alcohol
- experience characteristic withdrawal symptoms, relieved by alcohol consumption
- drink larger amounts, or for longer, than intended
- are unable to cut down, stop or control alcohol use
- spend a lot of time obtaining, using and recovering from the effects of alcohol
- give up important social, work or recreational activities because of drinking
- continue alcohol use despite physical or psychological problems.³¹

Suitability of existing screening tools for older adults

Babor et al. (2001, p. 12) state that the AUDIT has been validated for a number of population groups, including in different countries and a variety of patient types. However, they note that 'the effect of age has not been systematically analyzed as a possible influence on the AUDIT, but one study found low sensitivity but high specificity in patients above age 65'.³²

Moreover, Anderson and Scafato (2010, p. 37) suggest that '... it is certainly possible that lower cut-offs than eight for the AUDIT and three for AUDIT-C might be more efficient in the 60 and over age-group'.

It has been suggested that alcohol screening tests that measure just the frequency and amount of alcohol consumption (eg, AUDIT-C and AUDIT-3) may be inappropriate for older adults because a) they do not take into account the cumulative effects of alcohol consumption over a lifetime, b) older people may not report their alcohol consumption very accurately, c) older adults have different patterns of alcohol use compared with younger people, and d) asking questions about the qualitative *effects* of alcohol consumption may be a better method of identifying older problem drinkers (McInnis-Dittrich, 2005). Others agree that older adults 'may not be able to report consumption accurately' (eg, Khan, 1998, p. 53).

In addition, because of the importance of health problems, disabilities and alcohol's interaction with prescribed and over-the-counter medications among older adults (rather than legal,

³¹ The new DSM-5 classification system, published in 2013, combines 'alcohol dependence' and 'alcohol abuse' disorders into just one category called 'alcohol use disorder'. This is diagnosed from 11 symptom-related questions and has sub-categories 'mild', 'moderate' and 'severe' (NIAAA, 2014).

³² 'Sensitivity' refers to the degree to which a screening tool identifies true cases – so a low level of sensitivity means that a relatively large proportion of true cases are missed. 'Specificity' refers to the degree to which a screening tool identifies true non-cases – so a high specificity means a relatively low proportion of people are falsely identified as having a condition when they do not have it.

financial or employment issues more common in younger adults), the suitability of existing screening tools has been questioned (eg, Berks & McCormick, 2008; Khan, 1998; McInnis-Dittrich, 2005). Khan (1998) suggests assessment tools such as AUDIT could ask additional questions relating to lack of self-care, poor nutrition, isolation, falls, accidents and physical illness.

Berks & McCormick (2008, p. 1090) conclude that the full version of AUDIT is a useful screening tool for identifying hazardous and harmful drinking in older adults, while CAGE is valuable 'when screening for dependence'. However, they also suggest that alternative tools, such as ARPS, once they have been thoroughly tested, may turn out to be more appropriate for use with older adults in future (see chapter 7).

PREVALENCE OF HAZARDOUS DRINKING

This section summarises data from New Zealand surveys on the prevalence of *hazardous* (or 'risky') drinking among older adults. (The next section looks at survey data on *harmful* drinking.)

Key points:

- A small proportion of older adults report regularly drinking hazardously ('riskily'), where hazardous drinking is defined as drinking six or more alcohol drinks on one occasion
- Older men are more likely than older women to drink hazardous amounts of alcohol on a single drinking occasion
- Older Māori are more likely to drink hazardous amounts of alcohol on a single drinking occasion than older Pacific and older NZ Europeans
- When hazardous drinking is defined on the basis of a low threshold AUDIT-C score of 3+ (measured by how many drinks people consume and how often), one NZ study calculates that up to 69% of men and 44% of women aged 55–70 may be drinking hazardously

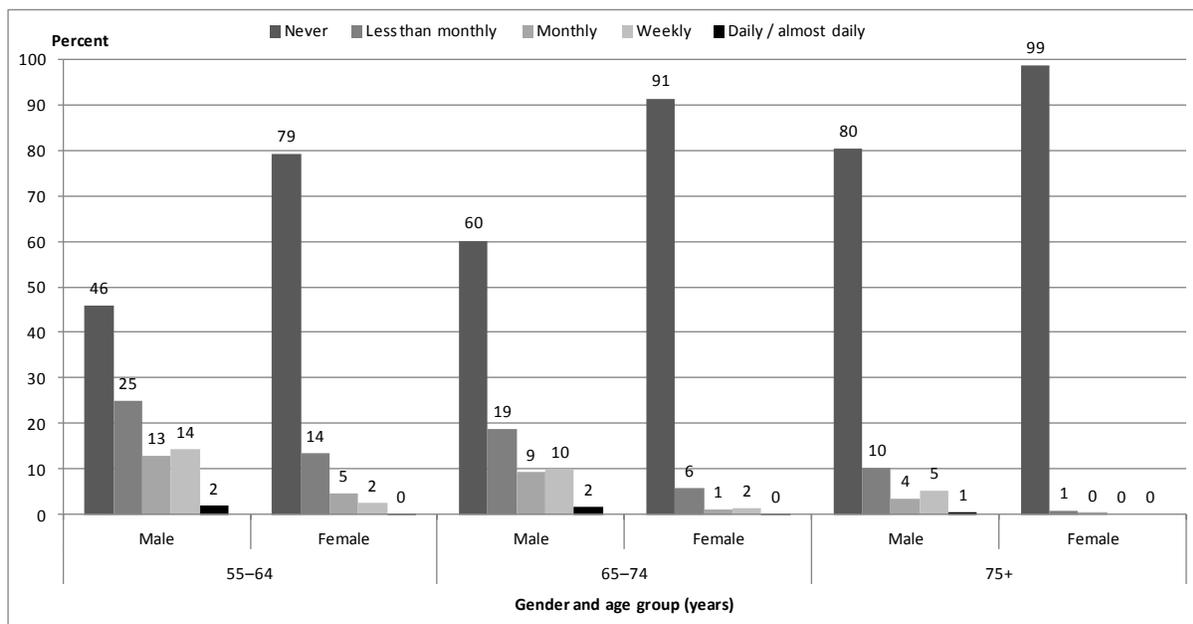
Surveys covered in this section focus on particular patterns of alcohol consumption defined as hazardous, such as high levels of per occasion alcohol use (sometimes referred to as 'binge-drinking') or high numbers of alcohol drinks consumed per week.

Data are presented first from the 2006/07 NZ Health Survey.

New Zealand Health Survey

The 2006/07 Health Survey asked participants how often they drank six or more alcohol drinks on one occasion. Apart from males aged 55–64, the majority of older adults said they never did this. By the age of 75+, virtually all women (99%) reported they never had six or more drinks a day. At the same age, 80% of men said they never drank this way; however, a small percentage said they did so weekly (5%) or monthly (4%) (figure 4.1 next page).

Figure 4.1: Percentage of older New Zealand adults who drank six or more drinks on one occasion, New Zealand Health Survey 2006/07, by frequency, age and gender



Source: Chart by authors from data tables for the Ministry of Health (2008)

Survey of Family, Income and Employment (SoFIE)

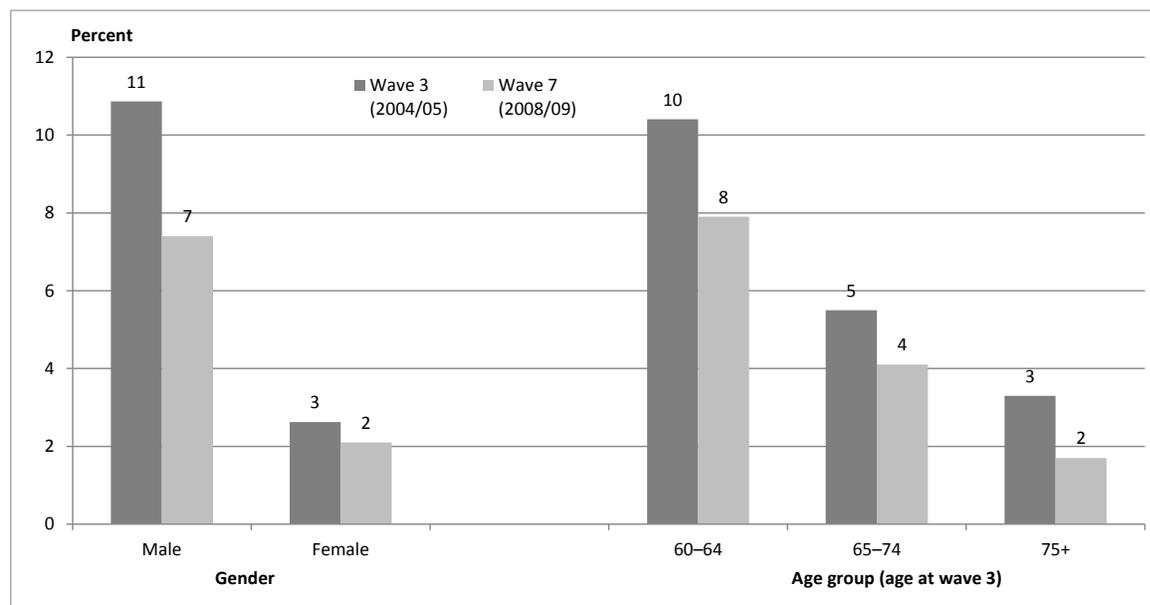
SoFIE asked older male drinkers how often in the previous four weeks they had consumed eight or more drinks on one occasion. Older female drinkers were asked how often they had six or more drinks. Those who consumed these amounts at least once in the previous four weeks were considered to have been drinking in a risky way (McKenzie et al., 2014).

At wave 7 of the study in 2008/09, 5% of the study participants aged 64+ had consumed risky amounts at least once in the previous four weeks.³³ Drinking riskily was more common among men than women, and older age groups were less likely to drink riskily than younger ones. Also at wave 7, Māori aged 64+ were more likely (13%) to drink riskily than Pacific (7%), NZ European (4%) or adults from other ethnic groups (9%).

Over the four-year period from wave 3 to wave 7 of the study, the percentages of risky drinkers in all three older adult age groups decreased (figure 4.2 next page).

³³ In wave 3 of the study four years earlier, about 6% of older adults aged 60+ drank riskily.

Figure 4.2: Percentage of older adults in SoFIE drinking riskily, waves 3 and 7, by gender and age (at wave 3)



Source: Chart by authors from data tables in McKenzie et al. (2014)

Notes: Drinking riskily was defined as being more than eight drinks for men, or six drinks for women, on one occasion at least once in the previous four weeks.

GENACIS

In the 2007 GENACIS survey, men were classified as having a high average alcohol consumption if they drank a daily average of more than 30g of alcohol (three standard drinks) on days when they were drinking. For women the amount was 20g of alcohol (two standard drinks). (This was a lower threshold than the one used for defining hazardous drinking in the New Zealand Health Surveys.) Nineteen percent of 45–54 year-olds, 15% of 55–64 year-olds and 26% of 65–70 year-olds reported drinking these amounts (Meiklejohn et al., 2012a).

The 2007 GENACIS survey also defined ‘binge-drinking’ as consuming more than four drinks on a single drinking occasion at least monthly (Meiklejohn, 2010). Older adults were less likely to binge-drink than younger adults. Twenty percent of adults aged 45–54, 9% of adults aged 55–64 and 11% of adults aged 65–70 drank in this way.

As was the case for other studies, older men were more likely to binge-drink than older women. In the 45–54 age group, 29% of men and 12% of women were classified as binge-drinking. This was also the case for 14% of men and 4% of women aged 55–64, as well as for 17% of men and 4% of women aged 65–70 (Meiklejohn, 2010).

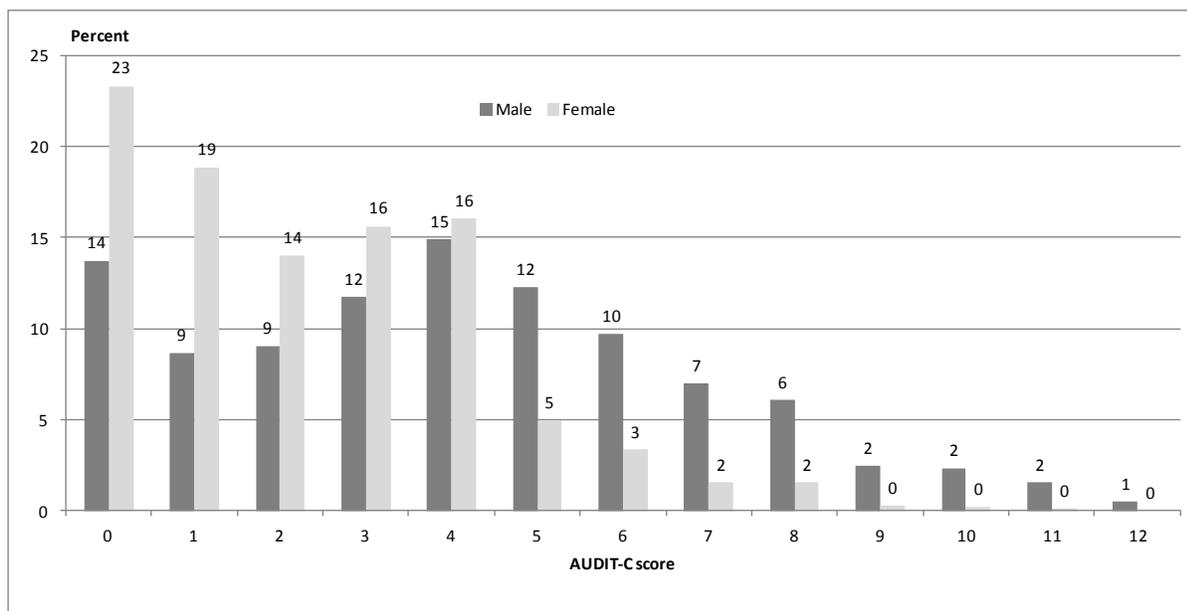
Health, Work and Retirement Study

Towers et al. (2011) compared short-version AUDIT (AUDIT-C and AUDIT-3) tests for 55–70 year-olds in the 2006 Health, Work and Retirement Study. As discussed above, AUDIT-C uses the first three questions of the full AUDIT questionnaire in order to identify hazardous drinking (ie, how often and how many drinks people consume). Scores for each of the three questions are combined to get an overall AUDIT-C score (the maximum score is 12).

The average (mean) AUDIT-C score for all survey participants was 3.19–4.07 for males and 2.32 for females. Mean AUDIT-C scores were higher for 55–59 year-olds (3.31) and 60–64 year-olds (3.34) compared with 65–70 year-olds (2.86). Mean AUDIT-C scores were also higher for New Zealand Europeans (3.35) and Māori (3.03) than for Pacific (1.56) and Asian (1.61) people (Towers et al., 2011).

Using the lower threshold AUDIT-C score of 3+, 69% of men and 44% of women were classified as hazardous drinkers. However, using a higher threshold score of 4+ meant a smaller 57% of males and 28% of females were defined as hazardous drinkers. Even lower proportions were identified as hazardous drinkers when a threshold score of 5+ was used: 42% of men and only 12% of women (figure 4.3).

Figure 4.3: Percentage of adults aged 55–70 in the 2006 Health, Work and Retirement Study with different AUDIT-C scores, by gender



Source: Chart by authors from data in Towers et al. (2011)

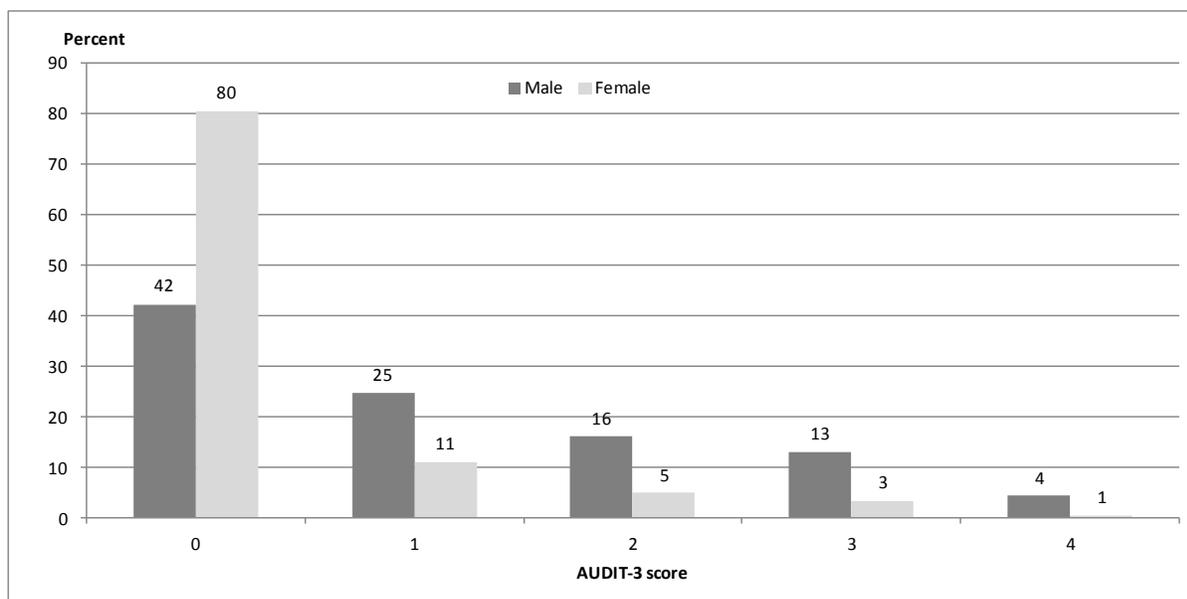
Note: Percentages based on *weighted* numbers of participants (eg, to account for the relatively high proportion of Māori in the original sample).

The Health, Work and Retirement Study also used AUDIT-3, which uses the third question of the full version of the AUDIT to identify binge-drinkers. The question asks 'How often do you have six or more drinks on one occasion?'. The mean AUDIT-3 score for all survey participants was 0.63: 1.01 for males and 0.27 for females. Mean AUDIT-C scores were higher for 55–59 year-olds (0.71) and 60–64 year-olds (0.67) compared with 65–70 year-olds (0.47). Mean

AUDIT-C scores were also higher for New Zealand Europeans (0.64), Māori (0.85) and Pacific (0.51) people compared with Asian (0.20) people (Towers et al., 2011).

Using the lower threshold AUDIT-3 score of 1+, 52% of men and 16% of women aged 55–70 were classified as binge-drinkers. However, using a higher threshold score of 2+ meant a lower percentage of males (30%) and females (7%) were defined as binge-drinking (figure 4.4).

Figure 4.4: Percentage of adults aged 55–70 in the 2006 Health, Work and Retirement Study with different AUDIT-3 scores, by gender



Source: Chart by authors from data in Towers et al. (2011)

Note: Percentages based on *weighted* numbers of participants (eg, to account for the relatively high proportion of Māori in the original sample).

Towers et al. (2011, p. 216) conclude that ‘Clear and comparable threshold scores which are appropriate for particular populations such as older people, on standardised measures such as the AUDIT, will enable both monitoring of use and identification of sub-populations at risk to be reported with confidence’.

PREVALENCE OF HARMFUL DRINKING

This section summarises data from New Zealand surveys on the prevalence of harmful drinking among older adults. (Data from surveys that have measured both hazardous *and* harmful drinking in a single population are covered in the next section.)

Surveys covered in this section examine particular patterns of alcohol consumption defined as harmful. This includes drinking enough to feel drunk (intoxication), experiencing difficulties or problems in life related to alcohol, or having clinically diagnosed alcohol use disorders (abuse or dependency).

Data are presented first from the 2009–11 Attitudes and Behaviour towards Alcohol Survey (ABAS).

Attitudes and Behaviour towards Alcohol Survey (ABAS)

Key points:

- Two percent of adults aged 65+ report getting drunk the last time they had been drinking. This compares with 28% of 18–24 year-olds
- Compared with younger adults, older adults report experiencing fewer alcohol-related harms or troubles, such as losing a job or getting into fights
- Using DSM-IV criteria, the New Zealand Mental Health Survey found less than 0.1% of adults aged 65+ had alcohol abuse and less than 0.1% were alcohol dependent in the previous 12 months

The 2009–11 ABAS found older adults aged 65+ were very unlikely to get drunk the last time they had been drinking (only 2%), and if they did so, it was not planned. This contrasts with the following percentages of younger adults getting drunk: 28% of 18–24 year-olds; 16% of 25–44 year-olds; and 6% of 45–64 year-olds (Research New Zealand, 2013a).

GENACIS

The 2007 GENACIS survey asked participants if, in the previous 12 months, they had experienced ‘harms’ or ‘troubles’ because of their drinking. Older adults were less likely than younger adults to experience ‘harm’ or ‘trouble’ (see table 4.2) (Meiklejohn et al., 2012a).

Table 4.2: Alcohol-related ‘harms’ and ‘troubles’ experienced by New Zealand adults in the previous 12 months, GENACIS survey, 2007, by age

Age group (years)	Any harms to do with: <ul style="list-style-type: none"> • work, studies, or employment • housework, home chores • marriage, intimate relationships • other family relationships • friendships, social life • physical health • finances 	Any troubles to do with: <ul style="list-style-type: none"> • unlawful drinking and driving • illness stopping work, or regular activities for week or more • losing a job (or nearly doing so) • being annoyed by people criticising your drinking • spouse or other person you live with threatening to leave • losing a friendship • being in a fight while drinking
18–24	59%	42%
25–34	44%	17%
35–44	37%	12%
45–54	33%	12%
55–64	21%	5%
65–70	11%	3%

Source: Meiklejohn et al. (2012a, p. 32, from Table 1)

Note: Percentages have been rounded.

New Zealand Mental Health Survey

Using DSM-IV criteria, Te Rau Hinengaro: The New Zealand Mental Health Survey, conducted in 2003–04, found that less than 0.1% of adults aged 65+ had alcohol abuse and less than 0.1% were alcohol dependent in the previous 12 months.

The lifetime prevalence was 4.0% for alcohol abuse and 0.7% for alcohol dependence (Oakley Browne et al., 2006; Wells et al., 2007).

Christchurch community residents

In the survey of 141 adults aged 65+ living in the Christchurch community, only two adults (1.4%) were identified as having alcohol dependence in the past 12 months according to DSM-IV criteria. However, when asked about the heaviest drinking period in their life, a quarter (25%) were classified by DSM-IV criteria as having had alcohol dependence at some time during their life (Khan et al., 2002).

Christchurch rest home residents

Khan (1998) states that alcohol problems among older people in institutions such as hospitals, clinics, accident and emergency departments, psychiatric outreach programmes, and nursing homes are more prevalent than in the general community eg, ranging from 8% to 58%.

A survey of 175 Christchurch rest home residents aged 65+ used DSM-IV criteria to assess the prevalence of alcohol problems. Results showed that 36 adults (21%) had alcohol dependence sometime in their life. Men (37%) were more likely than women (12%) to have had alcohol dependence. However, only one person (0.5%) had alcohol dependence in the previous 12 months (Khan, 1998; Khan et al., 2001).

HAZARDOUS/HARMFUL DRINKING – SURVEYS USING FULL (10-ITEM) AUDIT

As outlined at the start of this chapter, the full AUDIT screening tool has 10 questions that relate to both hazardous *and* harmful drinking. Scores for each of these questions are summed and reported as a combined score (the maximum score is 40).

This section summarises results from New Zealand surveys that use combined/composite AUDIT scores to assess the drinking practices of older adults.

Key points:

- Surveys using the full 10-question AUDIT screening tool (with a threshold score of 8+) indicate most older adult New Zealanders do not drink in a hazardous or harmful way. About 4% of adults aged 65+ are estimated to drink hazardously or harmfully
- The likelihood of drinking hazardously or harmfully decreases with age. In 2012/13, 9% of 55–64 year-olds were drinking hazardously or harmfully, compared with 5% of 65–74 year-olds and 2% of 75+ year-olds
- Older men are around four times more likely than older women to drink hazardously or harmfully

The first survey covered is the 2012/13 NZ Health Survey.

New Zealand Health Survey

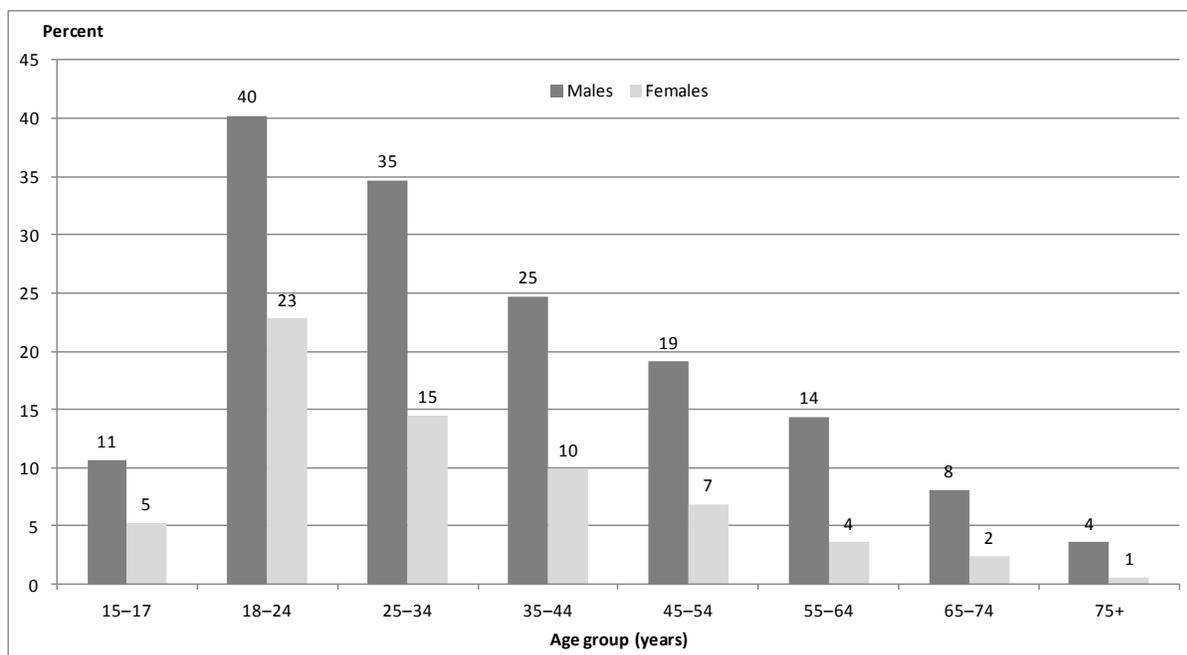
The 2012/13 Health Survey used the 10-item AUDIT tool to estimate how many adults drank in a hazardous/harmful way (Ministry of Health, 2013b). AUDIT scores of 8 and above were used to indicate hazardous or harmful drinking for both males and females.³⁴

The prevalence of hazardous/harmful drinking was highest among the age group 18–24 (32%), but decreased with age steadily after that. The following proportions and estimated national numbers of older adults were drinking potentially hazardously or harmfully:

- 13% of all 45–54 year-olds (16% of drinkers in the age group) – estimated number 79,200
- 9% of all 55–64 year-olds (11% of drinkers) – 45,000
- 5% of all 65–74 year-olds (7% of drinkers) – 18,300
- 2% of all 75+ year-olds (3% of drinkers) – 5,200.

As figure 4.5 shows, there were large differences in hazardous/harmful drinking rates for older (as well as younger) men and women. For example, men aged 65+ were around four times as likely as women of this age to have AUDIT scores of 8 or more (Ministry of Health, 2013b).

Figure 4.5: Percentage of adults in the 2012/13 New Zealand Health Survey with AUDIT scores of 8 and above, by gender and age

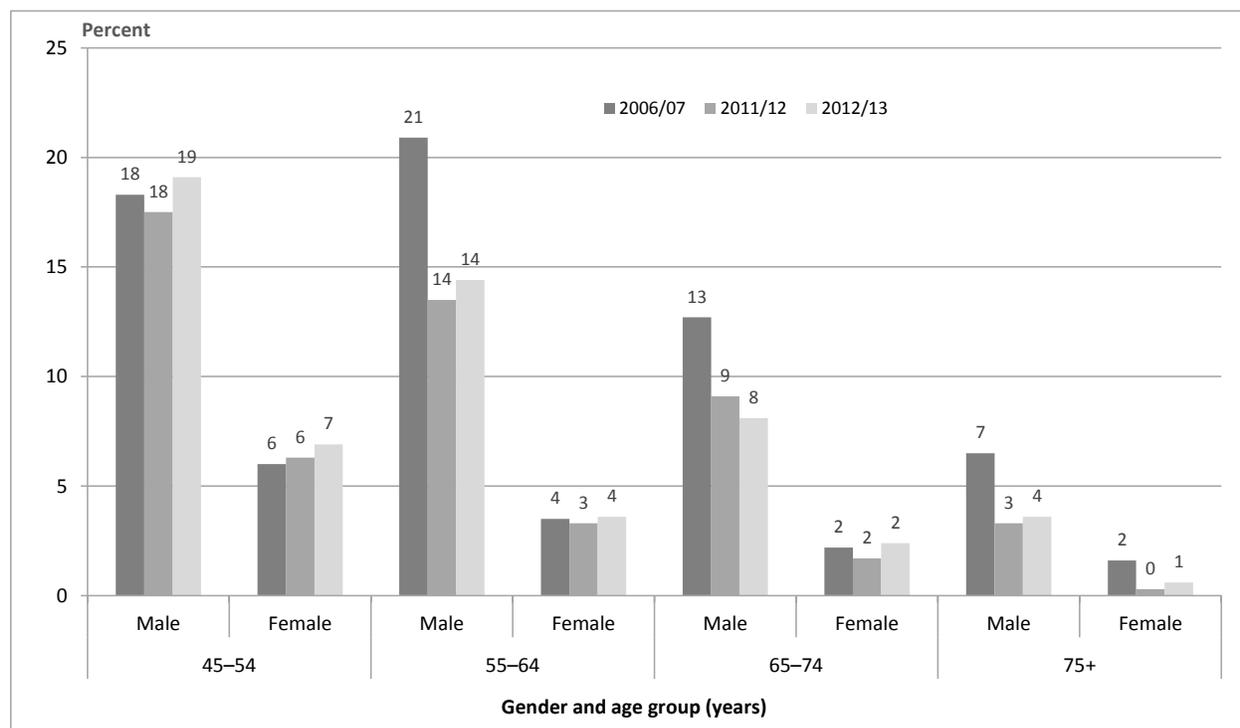


Source: Chart by authors from data in Ministry of Health (2013b)

³⁴ The appropriateness of using the same AUDIT score to define hazardous drinking for all age groups and both genders could be questioned (eg, Towers et al., 2011).

Overall, the proportions of older adults aged 55+ who had AUDIT scores of 8 or higher in the 2006/07, 2011/12 and 2012/13 New Zealand Health Surveys decreased slightly over the six-year period. Hazardous/harmful drinking decreased particularly among older men (figure 4.6).

Figure 4.6: Percentage of older New Zealand adults with AUDIT scores of 8 and above, New Zealand Health Surveys 2006/07, 2011/12 and 2012/13, by gender and age



Source: Chart by authors from data in Ministry of Health (2008, 2013b, 2013d)

New Zealand Mental Health Survey

In 2003/04, Te Rau Hinengaro: The New Zealand Mental Health Survey found 4% of all adults aged 65+ (7% of drinkers in that age group) had AUDIT scores of 8 or more, indicating hazardous or harmful drinking. This was a lower proportion than in younger age groups – 13% of all 45–64 year-olds, 23% of all 25–44 year-olds and 38% of all 16–24 year-olds had AUDIT scores of 8 or more (Wells et al., 2007).

Overall, adults aged 60–69 made up 4% of hazardous or harmful drinkers in the survey, and 70+ year-olds comprised just 2% of this group (Sellman, Connor, Wells, & Joyce, 2011).

Auckland general practice patients

A study in 1995/96 analysed 15,670 AUDIT questionnaires that had been completed by Auckland general practice patients aged 16 and over. Combined results for all ages showed a 10% rate of 'risky drinking' (AUDIT scores 8–12) and a 6% rate of 'problematic or dependent' drinking (AUDIT scores 13 and above) (Paton-Simpson et al., 2000).

Older adults were less likely to have 'risky' or 'problematic or dependent' AUDIT scores. By the age of 50–65, approximately 8% of patients had 'risky' drinking and another 2% had 'problematic or dependent' drinking. For patients aged 66 and over, these figures were approximately 3% and 1% respectively (Paton-Simpson et al., 2000).³⁵

Christchurch community-dwellers

In the survey of 141 adults aged 65+ living in Christchurch, 10% had AUDIT scores of 8 or above, indicating they had hazardous or harmful drinking patterns over the previous 12 months. Males in this age group were much more likely than females to be hazardous/harmful drinkers (21% versus 1%). The authors of the study suggested this might be a slight overestimation of the prevalence of hazardous/harmful drinking in the group as a follow-up study of non-responders found they had a somewhat lower average AUDIT score (Khan et al., 2002).

Christchurch rest home residents

In an earlier survey of 175 Christchurch rest home residents aged 65+, only 5% were identified by AUDIT as having hazardous drinking patterns in the previous year (using a threshold score of 8+) (Khan, 1998; Khan et al., 2001).

ADDITIONAL DATA FROM SURVEYS OF ADULTS AGED 50-65

Appendix table 4.3 provides additional data for adults aged 50–65 extracted from three selected national surveys. It includes data on a range of hazardous and harmful drinking practices not covered fully in surveys of adults aged 65 and over.

³⁵ These figures are estimated from chart data because they are not reported elsewhere.

5 FACTORS INFLUENCING THE DRINKING OF OLDER ADULTS

This chapter looks at what the literature says about factors influencing the drinking patterns of older adults. In particular, it examines factors thought to be important for shaping changes that adults make to their drinking as they get older. This includes changes associated with drinking less alcohol, as well as changes associated with drinking more. Because there is only limited New Zealand research on these questions, much of the material comes from overseas studies, supplemented where possible by local research.

At the outset it is important to emphasise that the determinants of both an individual's and a whole population's drinking patterns are complex and difficult to untangle. Like most aspects of human behaviour, individual choices around alcohol use (or non-use) can be constrained or reinforced by a constellation of intersecting influences: biological, cultural, social, economic, political, psychological and so on.

The complexity of the many factors shaping older adults' drinking is illustrated in qualitative studies that have explored the meanings and experiences that older adults link to alcohol. For example, interviews with older adults in Brighton and Hove, in south England, show how social relationships, lifestyle, income, life events such as bereavement, and health factors all may have a hand in influencing behaviour related to alcohol for some people (Ward, Barnes, & Gahagan, 2008, 2011).

In a Finnish study of older adult drinkers aged 60–75, a mixture of past and present social and personal influences was found to underlie people's current drinking styles. These included earlier alcohol-related life experiences in youth and middle age, as well as more recent determinants such as the effects of drinking on the ageing body (Haarni & Hautamäki, 2010).

Other studies observe that drinking by older adults is a complex phenomenon shaped by factors such as cohort lifestyles, gender, life course, personal history of alcohol consumption, social patterns, physiology, cultural heritage, health conditions, drinking norms and moral principles (Immonen, Valvanne, & Pitkala, 2011).

WHY OLDER ADULTS DRINK

A useful starting point for exploring these many influences is to look at the reasons older adults themselves give for using alcohol.

Key points:

- Older adults say they drink alcohol to be social, enhance social situations or special occasions, gain social confidence, and help relax or unwind
- Many also link drinking with eating, including drinking before, during or after meals
- Other reasons older adults give for drinking include helping them feel better or happier
- Some also say they drink to cope with personal situations, such as when they feel under pressure, want to forget problems, are bored, have nothing to do, or feel lonely

In Khan et al.'s (2006) survey of Christchurch adults aged 65+, current alcohol users were asked to indicate reasons why they drank. The most popular reasons, selected by more than two-thirds of respondents, related to using alcohol for enhancing social situations or special occasions, and to relax or unwind. Seventy-six percent indicated they used alcohol 'just to be social', 74% indicated they used alcohol during 'holidays and special occasions' and 68% indicated alcohol 'helps me relax'. More than half also linked drinking with eating, including drinking before, during or after meals. Nineteen percent said drinking gave them more confidence in social and interpersonal situations.

These reasons are not unusual and tend to be found in most studies looking at why older people say they drink (Haarni & Hautamäki, 2010; Immonen et al., 2011; Ward et al., 2008). As noted in a New Zealand review of the sociocultural influences underlying drinking and the use of alcohol, "... sociability is the primary reason people give when asked why they drink ... alcohol is mostly used to enhance social interaction and to help people relax" (Cagney & Cossar, 2006, p. 49). The review also notes that attitudes and practices linking alcohol use with sociability, sharing and reciprocity are 'near-universal constants' found worldwide.

This widespread attitude that drinking alcohol is, or can be, part of being social has a long history in New Zealand, probably dating back at least to the time when alcohol was first introduced by British and European settlers (Phillips, 1987; Belich, 1996). It is probable that many of today's older adults, when they were children or teenagers, were exposed to similar ideas and behaviours about alcohol and sociability that helped shape their own attitudes and practices later in life (Haarni & Hautamäki, 2010).

Other reasons for drinking given by older adults in the Khan et al. (2006) study referred more to personal rather than social benefits. Over half of respondents (59%) indicated one of their reasons for drinking was because it 'sometimes helps me feel better'. Thirty-six percent indicated it 'makes me happier'. A smaller group of respondents indicated one of the reasons they drank was to cope with personal situations, such as when they felt under pressure or wanting to forget problems. Other reasons included feeling bored and having nothing to do, or feeling lonely.

An earlier New Zealand study of adults aged 70 and over living in Mosgiel found that older men were more likely than older women to report drinking 'to help cope with personal situations' (Busby et al., 1988, p. 304).

A detailed qualitative study of older Wellington women found that the 'medicinal' use of alcohol was a well-accepted practice (Routledge, 1988). Overseas studies have made similar findings, especially in the 'old-old' age group, including a Finnish study where 47% of community-dwelling adults aged 91 and over reported using alcohol 'for medicinal purposes' (Immonen et al., 2011).

The same Finnish study also found about 5% of both men and women aged 65 and over reported drinking to relieve loneliness. Four percent of men and 2% of women indicated they drank because of a 'meaningless life'.

Overseas qualitative studies highlight how the meaning of drinking for older adults can change according to the different situations they are in, who they are with, and what they are doing (Haarni & Hautamäki, 2010). More broadly, older adults' drinking 'is affected both by their personal circumstances and biographies and by social and economic circumstances' (Ward et al., 2008, p. 51).

REASONS OLDER ADULTS REDUCE THEIR ALCOHOL CONSUMPTION

As chapter 3 shows, there are reasonable data showing that as middle-aged New Zealand adults mature into their sixties and seventies, in general they tend to reduce their levels of alcohol consumption.³⁶ Although they may increase the number of occasions in a week when they have a drink, overall they tend to report drinking only small amounts on these occasions.

This change is reflected in a recent national survey of attitudes and behaviours towards alcohol, where adults aged 65+ were the most likely group to strongly disagree that 'it's OK to get drunk, as long as it's not every day' and to strongly disagree that 'drunkenness is acceptable in some situations' (Research New Zealand, 2013c).

Key points:

- Many older adults cut down their drinking as they mature into their sixties and seventies. Some of the reasons they give for this include:
 - less social activity (eg, retirement)
 - less disposable income
 - death of spouse/friends who were drinking companions
 - new hobbies that don't involve drinking
 - less physical tolerance/enjoyment of alcohol
 - pressure from family/health professionals
- One of the most common reasons New Zealand adults aged 65+ give for cutting back their drinking relates to health issues, including being diagnosed with a health condition

This raises the question of what might be some of the factors underlying why many older adults decrease their alcohol consumption or in other ways moderate their drinking as they age. Based on the different information sources read for this review, the following is a list of just some of the possible influences that could contribute to older adults (including New Zealanders) drinking less:

- less involvement in social activity (Busby et al., 1988)
- retirement, meaning fewer opportunities to drink with work colleagues (Busby et al., 1988)
- pressure from family, friends or others to cut down (Moos, Schutte, Brennan & Moos, 2010b)
- public drinking places being less welcoming to older people (Ward et al., 2008)

³⁶ This is also the predominant finding in overseas studies of older adults' drinking patterns. A United States study followed a nationally representative sample of adults aged 51-61 for 15 years, tracing changes in their drinking patterns and looking at possible influencing factors (Platt et al., 2010). Over the duration of the study, the reported mean number of alcohol beverages consumed daily per person declined from 0.60 at baseline to 0.36 at year 15. The drinking patterns of individuals traced across the full study period were categorised as follows: sporadic drinkers (30.0%), abstainers (28.8%), steady drinkers (20.7%), decreasing drinkers (18.4%), and increasing drinkers (2.2%).

- body not being able to tolerate as much alcohol as it used to (Haarni & Hautamäki, 2010; Busby et al., 1988)
- becoming part of a group or network that drinks mildly or not at all (Moos et al., 2010b)
- reduced income, making drinking and socialising less affordable (Busby et al., 1988; Khan et al., 2006; Moos et al., 2010b)
- death of a spouse, partner or friend who was also a drinking companion (Ward et al., 2008)
- development of health problems, including problems made worse by drinking (Busby et al., 1988; Moos, Brennan, Schutte, & Moos, 2010a; Haarni & Hautamäki, 2010; Ward et al., 2008)
- starting on medicines that should not be used with alcohol (Busby et al., 1988; Moos et al., 2010a; Ward et al., 2008)
- development of a physical disability, making it harder to socialise outside the home (Ward et al., 2008)
- concerns about falling and getting injured while affected by alcohol (Kina Trust, 2011)
- involvement in new hobbies or projects that don't involve drinking (Ward et al., 2008)
- taking a more active grand-parenting role (Kina Trust, 2011).

It is beyond the scope of the present report to look in detail at evidence relating to all the different factors that could be influencing older adults to reduce their alcohol consumption. However, two factors that have been identified as perhaps especially important are briefly discussed below. They are health concerns, and the body no longer tolerating alcohol very well.

Health concerns

When older drinkers are asked why they have reduced their drinking, one of the most common reasons they give relates to health worries or concerns.

In the 2011 Attitudes and Behaviour towards Alcohol Survey, the most common reason New Zealand adults aged 65+ gave for cutting back their drinking in the last 12 months related to health issues, including being diagnosed with a health condition (Research New Zealand, 2013a).

In the Christchurch study by Khan et al. (2006) of adults aged 65+, the most frequent reason older adults in the group gave for cutting down their alcohol consumption in the past year related to personal health concerns, including advice from a doctor or worries about the effects of alcohol.

In the earlier study of Mosgiel adults aged 70+ (Busby et al., 1988), the second most common reason older men gave for drinking less than when they were aged 40–50 was a deterioration in health (the most common reason was 'less social activity').

Similarly, a detailed qualitative study of older Wellington women found that ill health was one of the reasons some had stopped or cut down their drinking (Routledge, 1988). One woman described how she and her husband normally shared an early evening drink together, but once her husband became ill he was advised not to drink, so he stopped. However, he still prepared a drink for her as part of their daily evening ritual.

In the SoFIE study of older adult New Zealanders aged 64+ in 2008/09, men and women who rated their health as 'fair' or 'poor' were less likely to report drinking alcohol in the past year (McKenzie et al., 2014). They also had fewer drinks per week than those who rated their health as 'good', 'very good' or 'excellent'. People with a cardiovascular condition were less likely to use alcohol in the past year. Women with diabetes had fewer drinks per week than women overall.

The importance of health concerns or changes in health status as a factor influencing older adults to reduce their drinking has been looked at in more detail in overseas studies.

In a large, 20-year follow-up study of Californian older adults aged 55–65 recruited from general outpatient health facilities, changes in participants' reported drinking patterns were compared with changes in their medical conditions and depressive symptoms, current medication use, acute health stressors, and reliance on alcohol to reduce pain (Moos et al., 2010a).

Over the 20-year period, as the group matured from age 55–65 to age 75–85 years, the number of medical conditions they had increased, as did the number of acute health events. In addition, the proportion taking one or more medications rose from 64% to 95%. There was also a small but statistically significant increase in people reporting depressive symptoms.

After controlling for demographic factors, baseline alcohol consumption and history of heavy drinking, the study found that older adults who experienced more medical conditions and depressive symptoms, used more medications, and had more acute health events over the period were also more likely to have stopped drinking altogether. As well, older adults who encountered more acute health events were also more likely to begin drinking less frequently and in lower amounts.

These findings are consistent with other population studies linking age-related increases in health problems to reductions both in overall levels of alcohol consumption and in drinking problems. Explanations given for this include health problems disrupting people's usual patterns of eating and socialising, or increasing the negative physical or psychological effects of alcohol. It is also noted that significant ill health can be a catalyst for individuals 'to confront their mortality' (Moos et al., 2010a, p. 40).

Reduced tolerance or enjoyment of alcohol

In the study of drinking among Christchurch adults aged 65+, one of the reasons people gave for cutting down or stopping drinking over the past 12 months included 'no longer liking alcohol' (Khan et al., 2006). Similarly, in the 2011 Attitudes and Behaviour towards Alcohol Survey, the second most common reason adults aged 65+ gave for cutting back their drinking in the last 12 months was that they did not enjoy it anymore or as much (Research New Zealand, 2013a).

In the Mosgiel study of adults aged 70+, reasons people gave for taking less alcohol compared with when they were middle-aged included 'less tolerance of alcohol' and 'lost interest in alcohol' (Busby et al., 1988).

It seems probable that, at least for some of these people, this was an indication that drinking was no longer a positive experience for them.

In a Finnish study of older adult drinkers aged 60–75, one of the most common reasons people gave for cutting down their drinking was to avoid unpleasant effects caused by physically being unable to tolerate alcohol as much as when they were younger (Haarni & Hautamäki, 2010).

The medical literature shows that, as adults get older, physical changes connected to ageing make them more vulnerable to both the acute and longer-term effects of alcohol (see chapter 6 for more details). The physical changes include a decline in vital capacity (eg, lung function, circulation, muscle and nerve function). The speed and magnitude of these changes are partly shaped by genetics and partly by features of a person's physical and social environment, lifestyle and nutrition (Alcohol and Ageing Working Group, 2006). Changes in metabolism and body composition linked to this include a decrease in body water and reduced ability of the stomach, liver and other organs to metabolise alcohol. As a result, the body is less able to process and excrete alcohol efficiently. Higher blood alcohol concentrations are therefore reached with smaller quantities of alcohol (Anderson & Scafato, 2010).

REASONS OLDER ADULTS INCREASE THEIR ALCOHOL CONSUMPTION

Key points:

- Some older adults start to drink more heavily as they mature into their sixties and seventies. Reasons given in the literature for this include:
 - more social activity (eg, retirement)
 - more disposable income
 - encouragement from spouse/friends/others
 - fewer family responsibilities
 - changes in living circumstances (eg, move to retirement village)
 - response to bereavement, loneliness/isolation, relationship problems, anxiety/depression, insomnia
 - relief of chronic pain
- Overseas studies show adults aged 65+ who drink at risky or hazardous levels are more likely than non-risky drinkers to indicate they drink to relieve anxiety, to relieve depression, to relieve loneliness, or because of a 'meaningless life'

A proportion of older adults increase their levels of alcohol consumption as they mature into their sixties and beyond. In some cases, this involves drinking hazardously or harmfully. Based on the different literature examined for this review, the following is a list of just some of the possible influences that could lead older New Zealand adults to drink more:

- more social activity (Busby et al., 1988)
- encouragement from friends (Khan et al., 2006; Ward et al., 2008)

- retirement, with more leisure time for drinking (Busby et al., 1988; Ward et al., 2008)
- fewer responsibilities for children or family (Ward et al., 2008)
- more money (Busby et al., 1988; Ward et al., 2008)
- changes in general social attitudes to women drinking (Haarni & Hautamäki, 2010; Busby et al., 1988)
- moving to a retirement complex where there is more social activity based around alcohol (Kina Trust, 2011)
- increases in the opening hours of alcohol outlets (Haarni & Hautamäki, 2010; Ward et al., 2008)
- alcohol becoming more affordable (Ward et al., 2008)
- change in family circumstances (Busby et al., 1988)
- as a response to bereavement or loneliness (Khan et al., 2006; Ward et al., 2008)
- to relieve or mask pain (Alcohol Concern Wales, 2011; Immonen et al., 2011)
- to counter insomnia (Immonen et al., 2011)
- as a response to increasing isolation, stress, anxiety or depression (Busby et al., 1988; Haarni & Hautamäki, 2010; Moos et al., 2010b).

In the study of drinking among Christchurch adults aged 65+, Khan et al. (2006) found a small proportion of people who reported increasing their drinking in the past 12 months. The reasons they gave for this included encouragement from friends, loneliness, as an alternative to smoking, or for the enjoyment of drinking alcohol.

In the longitudinal SoFIE study of older adult New Zealanders aged 64+ in 2008/09, although the study did not detail factors associated with people who increased their drinking as they got older, it did show that people who consumed higher numbers of drinks per week were also more likely to have higher personal incomes and be better educated (McKenzie et al., 2014). Current smokers and ex-smokers also consumed more drinks per week than non-smokers. In addition, current smokers were more likely to drink riskily at least once in the past month.

In the 2006 Health, Work and Retirement Study of adults aged 55–70, those in the highest income group had the highest average AUDIT-C score for detecting potentially hazardous drinking, as did those whose living standards were rated as ‘good’ (Towers et al., 2011). Those whose living standards were rated as in ‘hardship’ and those in the lowest income group had the lowest average AUDIT-C score, meaning their drinking patterns were potentially less hazardous.

United States studies following large cohorts of older adults for a decade or more have found that a proportion of older adults continue to consume alcohol at the same or similar levels to when they were in their forties or fifties (Platt, Sloan, & Costanzo, 2010). For some, this includes drinking hazardously or harmfully, or in ways that could be defined as alcohol dependent.

As well, a smaller but not insignificant proportion of older adults markedly increase their drinking compared with when they were in late middle age (Platt et al., 2010). Again, for some of these people this includes drinking hazardously or dependently.

In a Californian study (Moos et al., 2010b) that followed a large group of older adults over a 20-year period as they matured to ages 75–85, the people who were found to be drinking hazardously or reporting alcohol problems at the 10-year and 20-year follow-ups were also those who, at the start of the study, were more likely to:

- be consuming more alcohol
- have more friends who approved of drinking
- rely on substances for tension reduction
- have more financial resources.

In addition, reporting having drinking problems by age 50 (ie, before the study started) was linked to a higher likelihood of subsequent late-life hazardous alcohol consumption and drinking problems.

By contrast, reporting efforts to try to cut down on drinking and joining Alcoholics Anonymous by age 50 were associated with a lower likelihood of subsequent hazardous consumption and drinking problems in older age.

Religious involvement was found to be ‘modestly protective’ against hazardous alcohol consumption and drinking problems. The study authors suggest this could be because religious involvement often includes contact with people who disapprove of heavy drinking. Religious involvement could also provide guidance on effective strategies to cope with distress.

The authors conclude that ‘high levels of alcohol consumption in late-middle-age are an important indicator of subsequent risk of problematic alcohol use’ (Moos et al., 2010b, p. 18). They further note that “... one of the most consistent predictors was social network members’ approval of drinking. Family members and friends who consume more alcohol and espouse heavy drinking norms promote drinking among individuals at all stages of the life span ... our findings suggest that high-risk older adults who wish to reduce their alcohol consumption should embed themselves in a social network composed of low- or non-drinking peers” (Moos et al., 2010b).

These findings to some extent parallel results from a British study of almost 15,000 primary care patients aged 75 and over. The study found that the older adults who drank were also more likely to have a ‘fairly active and sociable lifestyle’ compared with non-drinkers (Hajat, Haines, Bulpitt, & Fletcher, 2004, p. 170).

Relying on substances for tension reduction

In the same Californian study described above (Moos et al., 2010b), another factor found to be important in predicting late-life hazardous drinking and alcohol problems was whether participants at baseline relied on the use of substances for tension reduction. This was measured by questions about smoking, use of tranquillisers, and use of alcohol to reduce tension.

This finding is consistent with other studies showing that drinking to relieve or cope with anxiety and depression seems to be a major contributor to the development and maintenance of

hazardous drinking and alcohol-related problems, both in the general population and in older adults specifically.

Other large-scale US population studies confirm that starting smoking is usually associated with people increasing their alcohol consumption, while quitting smoking is associated with people reducing their alcohol consumption (Moore et al., 2005, p. 461).

A Finnish survey of adults aged 65+ found respondents who reported drinking at risky or hazardous levels were more likely than non-risky drinkers to indicate they drank to relieve anxiety, to relieve depression, to relieve loneliness, or because of a 'meaningless life' (Immonen et al., 2011).

The connection between use of substances like cigarettes for tension reduction and hazardous drinking appears relevant for New Zealand older adults, too. As noted earlier, in the SoFIE study of adults aged 64+, current smokers and ex-smokers consumed more drinks per week than non-smokers, and current smokers were more likely to drink riskily at least once in the past month (McKenzie et al., 2014). The 2012/13 Health Survey shows that 8% of older New Zealand adults aged 64–74 are daily smokers (see table 2.1, chapter 2).³⁷

The 'stress-coping theory' suggests that alcohol is used, at least by some people, to help them avoid facing problems they are finding hard to deal with or resolve, or to mask negative emotions such as distress, pain, anxiety or depression. The theory further suggests that the more a person relies on alcohol to help them handle difficulties and challenges in their life, the more likely they are to drink hazardously and develop alcohol-related problems (Moos et al., 2010b; Sacco, Bucholz, & Harrington, 2014).

A New Zealand review of cultural influences shaping drinking attitudes and behaviour found that societies that were most successful in preventing alcohol abuse and minimising alcohol-related harms tended to be those that were 'free of the belief that alcohol can solve problems' (Cagney & Cossar, 2006, p. 9).

Alcohol and pain

Another factor thought to be important for influencing why some older adults increase their drinking as they age is the use of alcohol to counter physical pain.

In the same Californian cohort study described earlier, at the 20-year follow-up, when participants were aged 75–85, 22% reported using alcohol to manage pain (Moos et al., 2010a). Further analysis showed that older adults who used alcohol to reduce pain tended to increase their frequency of alcohol consumption over the 20-year study period, as well as drink in heavier amounts. They also experienced more drinking problems. These findings were evident for both men and women and seemed to hold regardless of whether or not people also used medicines for pain.

A Welsh study found some older adults saw alcohol use as a positive pain management choice (Alcohol Concern Wales, 2011).

³⁷ The 2007/08 Alcohol and Drug Use Survey found that 18% of men and 13% of women aged 55–64 who were drinkers also used tobacco at least once in the previous year (Ministry of Health, 2009b).

Results from the 2012/13 New Zealand Health Survey show that 27% of adults aged 65–74 report experiencing chronic pain lasting six months or more, with the proportion increasing with age (see table 2.1, chapter 2). In the 75+ age group, the rate was 34%.

Earlier health survey data showed that over half a million New Zealanders live with some form of chronic pain, including more than 75,000 men and women aged 65+ (Dominick, Blyth, & Nicholas, 2011). Of all adults reporting ‘severe or very severe’ recent pain, one-quarter (25%) did not use any form of medical or other type of treatment for it. The analysis did not examine the alcohol use of people with chronic pain.

In the SoFIE study of older adult New Zealanders aged 64+ in 2008/09, the number of drinks men and women had per week did not vary according to the number of chronic diseases they had (McKenzie et al., 2014). However, the study did not examine people’s drinking in relation to their experience of chronic pain or pain-related conditions such as arthritis.

INFLUENCES ON EARLY- AND LATE-ONSET DRINKING PROBLEMS

Another way of exploring possible influences shaping hazardous or harmful drinking by older adults is to look at the experiences of older adult drinkers who come to the attention of specialist alcohol treatment services.

Key points:

- Older adult problem drinkers tend to be classified as either ‘early-onset’ problem drinkers or ‘late-onset’ problem drinkers
- Early-onset problem drinkers are older adults who have been drinking heavily for a good deal of their adult lives. Many are experiencing the cumulative health and social effects of a lifetime of continuous or intermittent heavy alcohol use
- Late-onset problem drinkers are older adults who have largely used alcohol mildly or moderately during their middle adult years. However, as they move into their fifties, sixties or seventies their drinking begins to escalate, to the point where they are drinking quite hazardously or harmfully
- Studies suggest that for both early- and late-onset older adult problem drinkers, their alcohol use is commonly a response to stressors
- Influences highlighted as important in the development of late-onset problem drinking include:
 - bereavement (death of spouse or other close person) or loss of relationships
 - loss of health or vitality
 - living with depression
 - living with chronic pain
 - retirement or redundancy
 - altered financial circumstances
 - social isolation

Not all older adults in a community who use alcohol hazardously or harmfully are likely to be seen by alcohol treatment services. However, those who are seen, and the accounts they give about the reasons for their excessive drinking, can be a useful source of insight into possible underlying influences. Information on this can be found in literature written by addiction counsellors, social workers and others who work closely with older adult problem drinkers. A key theme in this literature is that older adult problem drinkers tend to fall into one of two groups: 'early-onset' problem drinkers or 'late-onset' problem drinkers.

New Zealand research

Research in Canterbury, based on consultation with health, social services and aged-care workers, defined two distinct groups of older-adult problem drinkers. The first was a group of 'alcohol-dependent and socially disadvantaged, transient drinkers' who had 'somehow survived the harmful health impacts of long-term, heavy alcohol use'. Many of these older adults were said to be 'very unwell, suffering the health effects of organ damage, including Korsakoff's Syndrome, and alcohol-related dementia' (Wylie, 2010, p. 24).

The second group was described as being often much more hidden in the community: older adults with more recently developed negative drinking patterns, many of whom were isolated and drinking at home.

Within this second group, the research defined two distinct sub-categories. The first was older adults who had always consumed some alcohol during their adult years but had increased their drinking to quite hazardous levels later in life in response to various negative life events.

The second sub-category was a slightly different form of late-onset problem drinker, defined as 'relatively heavy drinkers for whom alcohol has always been a significant part of their often-successful lifestyle, and who have not reduced their alcohol intake as they have aged' (Wylie, 2010, p. 24). Although the heavy drinking of those in the latter category may not have increased recently or been provoked by any single, identifiable life event, nonetheless these people were starting to experience a range of negative health effects as a result of continuing to drink while getting increasingly frail or having memory problems, or as a result of using medicines not compatible with alcohol.

Similar categories are defined in another New Zealand report that consulted alcohol treatment and aged-care workers in Auckland, Whangarei and Napier (Kina Trust, 2011). The report describes three groups of older adult problem drinkers: early-onset problem drinkers whose heavy and/or addictive alcohol use has been a lifetime pattern; late-onset problem drinkers whose drinking escalates in older age, often as a result of loss; and older adults whose drinking patterns have not been adjusted down to safer levels given their increasing vulnerability to the effects of alcohol, whether through ageing, the presence of chronic health conditions, or use of contraindicated medicines.

Participants in the Canterbury study described a range of influences that in their experience underlie the drinking problems of older adults they encountered in their work, but especially the late-onset problem drinkers (Wylie, 2010):

- life changes, grief and losses
- retirement and the accompanying loss of status and structure to the day
- death of a spouse or other close person
- social isolation

- living with depression
- living with chronic pain.

Overseas literature

Overseas reports make a similar distinction between early- and late-onset older adult problem drinkers. They indicate that the early-onset group comprises about two-thirds of older adult problem drinkers, with the late-onset group making up about one-third (Beresford, 1995; Colleran & Jay, 2002; Center for Substance Abuse Treatment, 1998; Dar, 2006; McInnis-Dittrich, 2005; Wadd, Lapworth, Sullivan, Forrester, & Galvani, 2011).

Early-onset problem drinkers are older adults who have been drinking heavily (either periodically or continuously) for a good deal of their adult lives, usually since their youth or their twenties and thirties. Although they have survived through to older age, many are experiencing the cumulative health and social effects of a lifetime of continuous or intermittent heavy alcohol use.

Late-onset problem drinkers are older adults who have largely used alcohol mildly or moderately during their middle adult years. However, as they have moved into their forties, fifties or sixties (or even their seventies and beyond) their drinking has begun to escalate, to the point where they are drinking in some cases at quite hazardous or harmful levels. The category also includes previous lifetime non-drinkers (abstainers) who start drinking harmfully when they are older (Fox & Wilson, 2011).

Some studies refer to the early-onset group as 'chronic drinkers' and to the late-onset group as 'situational drinkers' (Paech & Weston, 2009).

Men tend to make up the largest share of the early-onset group, whereas women tend to be over-represented in the late-onset group (Center for Substance Abuse Treatment, 1998).

In terms of socio-economic status, people in the early-onset group are usually more socially disadvantaged (certainly at least by the time they reach older age), whereas those in the late-onset group tend to come from more advantaged backgrounds and be better educated and in some cases are quite well-off.

Those in the early-onset group are more likely to have a family history of alcohol problems and to have encountered major social or legal problems linked to their drinking. As well, they are more likely to have alcohol-related chronic health conditions such as liver cirrhosis, pancreatitis or alcohol-induced dementia.

By contrast, adults in the late-onset group tend to have less of a history of social or legal repercussions linked to their drinking and fewer alcohol-related health complaints. They also tend to have a more supportive social network and better relationships with family members (Paech & Weston, 2009).

Both groups have their fair share of age-related medical problems, including conditions such as hypertension or diabetes that can be worsened by alcohol, although the late-onset group tend to be healthier physically and psychologically than the early-onset group.

In both groups, too, drinking is commonly a response to stressors. As one expert committee puts it, alcohol use is perceived by both early-onset and late-onset problem-drinkers ‘as a palliative, self-medicating measure in response to hurts, losses, and affective changes rather than as a socialising agent’ (Center for Substance Abuse Treatment, 1998, p. 20).

Some writers with extensive experience of counselling older problem drinkers even suggest that it is this element – using alcohol to meet ‘fundamental needs’ such as to ease pain or to solve problems – that is pivotal to distinguishing the ‘normal drinker’ from the ‘problem drinker’ (Fox & Wilson, 2011, p. 31).

The literature further suggests that people in the early-onset group are likely to have used alcohol as a personal coping mechanism in the face of various psychosocial or medical problems throughout much of their adult lives. For a proportion, their alcohol use is interwoven with mental health conditions such as depression and bipolar disorder.

People in the late-onset group are also likely to be using drinking as a personal coping mechanism. However, in contrast to the early-onset group, this type of ‘reactive’ alcohol use has begun (or at least come to the attention of services) in late middle age or early old age, usually as a response to recent life events or stressors, such as major health changes or the death of a spouse.

Based on their counselling experience, Fox and Wilson (2011, p. 37) summarise the range of situations or circumstances that older adult clients often refer to when discussing factors contributing to their drinking, including problem drinking:

- childhood relationship with parents, siblings and other family members
- effects of childhood abuse
- factors within their education
- wishing as a young person to emulate role models, part of whose persona involves conspicuous drinking
- the influence of factors within their culture and/or ethnicity
- drinking as part of the culture of their work or working environment
- drinking to ease pressure at work
- current abusive relationships or abuse experienced in adulthood
- difficult relationships, breakdown of relationships or loss of relationships
- drinking as a response to illness
- retirement or redundancy
- bereavement
- social or existential isolation
- the prospect of dying.

Fox and Wilson (2011) note that these influences can be divided into three categories based on chronology: ‘early experiences or experiences that occurred in an earlier phase of life’; ‘experience that is currently influencing the client’s relationship with alcohol’; and ‘future concerns or fears’ (Fox & Wilson, 2011, p. 38).

In a recent English report, some older adults whose alcohol problems had developed in recent years were invited to describe the circumstances in which their drinking had first started to escalate (Wadd et al., 2011). Situations they described included being a full-time carer for a

spouse with a very disabling medical condition, and being a full-time carer for a mother with Alzheimer's disease.

In a Finnish qualitative study of older adults, a small number of participants engaged in what the authors referred to as 'crisis drinking', where 'a negative event or situation sparked the urge to drink and the previously controlled use [of alcohol] became uncontrolled' (Haarni & Hautamäki, 2010, p. 250). One participant described how she felt so anxious and distressed by her husband's terminal illness and six-month stay in hospital that she started drinking heavily to help her feel better and to get to sleep at night. Other situations found to precipitate 'crisis drinking' included anxiety, sadness or distress surrounding the end of a relationship, becoming widowed, relationship problems, and loneliness.

A qualitative study in Brighton and Hove, in the south of England, found 'losses' related to relationships, work, health, disability, housing and moving to a different area could all have an impact on older adults' drinking practices. Bereavement was noted to be an especially challenging loss that could make some people feel very low and where drinking could be used as a way of coping, although for some people bereavement resulted in them drinking less. The study noted that how people responded to changes in their life 'very much varied according to individual biographies and circumstances' (Ward et al., 2008, p. 38).

Other reviews of risk factors for alcohol or other substance use problems in older adults also highlight the impact of losses. These may include bereavement, especially death of a spouse or other close person, but also other life events perceived as losses such as divorce or separation, a lower standard of living, loss of job through retirement or redundancy, loss of health, loss of cognitive functions, loss of mobility, or loss of physical or sexual vitality or vigour (Health Canada, 2002).

One experienced treatment specialist concludes that 'in elderly people the ageing process itself can be a causative factor' for alcohol problems (Dar, 2006, p. 174). He lists the following life changes associated with alcohol misuse in older adults:

Emotional and social problems

- Bereavement
- Loss of friends and social status
- Loss of occupation
- Impaired ability to function
- Family conflict
- Reduced self-esteem.

Medical problems

- Physical disabilities
- Chronic pain
- Insomnia
- Sensory deficits
- Reduced mobility
- Cognitive impairment.

Practical problems

- Impaired self-care
- Reduced coping skills

- Altered financial circumstances
- Dislocation from previous accommodation.

While the above distinctions and observations may be helpful, it is important not to get too hung up on labels and categories when talking about older adults experiencing alcohol problems. As many people who work with older adults with alcohol problems observe, 'perhaps the most striking thing about this client group is their sheer variety' and how they 'come from a wide range of social, educational and professional backgrounds' (Fox & Wilson, 2011, p. 19).

6 ALCOHOL AND THE HEALTH OF OLDER ADULTS

This chapter looks at the different ways the health of older adults can be affected by alcohol.

First it describes how, due to the ageing process, older adults become increasingly sensitive to the physical effects of alcohol. It then summarises what the research says about various health conditions often experienced by older adults that can be linked to alcohol use. Two particular health events are singled out for further discussion: falls and cardiovascular disease.

The chapter ends by looking at how alcohol can interact with people's existing health conditions, and with prescription and non-prescription medications.

Key points:

- The links between drinking and health in older age are complex, with much still to be learned about what constitutes safe alcohol use for older adults
- Age-related physiological changes mean older adults become increasingly more sensitive to the effects of alcohol as they move into their sixties and seventies
- A range of medical conditions is linked to alcohol consumption by older adults, including liver disease, pancreatitis, cancer, injuries, stroke and high blood pressure
- Alcohol can aggravate or complicate existing health conditions common in older adults such as liver problems, infections, sleep disorders, diabetes, dementia and mental health disorders
- Alcohol can also mask warning signs of conditions such as angina and increase the risk of being misdiagnosed with conditions such as dementia
- Alcohol can interact with many types of medicines, reducing their effectiveness or exaggerating their negative side-effects. Chronic organ damage related to drinking can also alter the body's response to medicines
- Alcohol use can increase the risk of injury from falls, especially among older adults who drink heavily, or who drink while on certain medications. High alcohol consumption/alcohol abuse may also be associated with reduced bone density, making bones more brittle and likely to fracture
- In older adults, low- or even moderate-level alcohol use is associated with a lower prevalence of some medical conditions (eg, ischaemic heart disease) compared with no alcohol use. But there is debate about the reasons for these associations and overall the negative effects of alcohol may outweigh the positive effects

OLDER ADULTS HAVE AN INCREASED SENSITIVITY TO ALCOHOL

The immediate physical effects people experience after drinking alcohol are determined in large part by the levels of alcohol in their bloodstream. Blood alcohol concentrations (BACs) can vary

from person to person depending on a number of factors including (Health Promotion Agency, 2014):

- the concentration of alcohol in what they are drinking
- how quickly they drink and how often
- their body type and weight
- their liver's ability to break down alcohol
- whether or not they have food in their stomach.

Age-related physical changes mean that older adults become more sensitive to the effects of alcohol and therefore reach higher blood alcohol concentrations with any given amount of alcohol. As a result, alcohol's acute effects can come on more suddenly and take longer to wear off. Thinking skills and memory, coordination and mobility may be affected more than expected, as may emotions and mood (Fox & Wilson, 2011). The age-related changes include a lower lean body mass and water to fat ratio (alcohol is soluble in water); a reduced blood flow to the liver; and reduced levels of the gastric enzyme alcohol dehydrogenase (ADH), which breaks down alcohol in the digestive system (Addiction Research Foundation, c.1995; Age Concern Wales, 2011; Anderson & Scafato, 2010; Atkinson, 1984; Busby et al., 1988; Health Promotion Agency, 2014; Heuberger, 2009; Kalant, 1998; Khan, 1998; McInnis-Dittrich, 2005; Ministry of Health, 2011; Ministry of Health, 2013c; Rankine, Gregory, Tonks, & Thompson-Evans, 2013).

Khan (1998) cites a study by Hartford and Samorajski (1982), which estimated that, compared with a 20-year-old, the same alcohol dose results in a 20% higher BAC for a 60-year-old, and a 50% higher BAC for a 90-year-old.

As in the younger age groups, it is thought that older women are more sensitive to some of the effects of alcohol than older men. This is due to factors such as lower body water, lower body weight, and lower levels of gastric enzymes (Addiction Research Foundation, c. 1995, 1998; Collieran & Jay, 2002).

HEALTH CONDITIONS ASSOCIATED WITH ALCOHOL USE

Direct psychoactive effects of alcohol include intoxication, hangover, acute poisoning, alcohol dependence and alcohol abuse (Health Promotion Agency, 2014; WHO Expert Committee on Problems Relating to Alcohol, 2007).

A large body of literature also identifies a range of other specific health or medical conditions linked to alcohol consumption in older adults (see examples in table 6.1 next page). These conditions are mostly chronic (long-term) conditions, possibly arising from the cumulative effects of alcohol use across the lifespan in combination with the effects of specific patterns of drinking (such as repeated episodes of binge-drinking) (Anderson & Scafato, 2010; Connor, Kydd, Shield, & Rehm, 2013; Holahan, Schutte, Brennan, Holahan, & Moos, 2014; Law Commission, 2009). As Khan (1998, p. 23) notes, 'the range of medical consequences of alcohol abuse is both immense and complex. Alcohol affects almost every organ system in the body either directly or indirectly'.

Table 6.1: Health conditions associated with alcohol consumption in older adults

Health conditions	Examples of literature
Liver damage – alcoholic liver disease, cirrhosis	Age Concern Wales (2011), Gambert and Katsoyannis (1995), Health Canada (2002), Khan (1998), McInnis-Dittrich (2005), Ministry of Health (2013c), Wylie (2010)
Gastro-intestinal inflammation/problems – oesophagitis, gastritis, aggravation of peptic ulcers, pancreatitis	Anderson and Scafato (2010), Gambert and Katsoyannis (1995), Khan (1998), Ministry of Health (2013c), Wadd et al. (2011)
Cancer – of mouth, pharynx, larynx, oesophagus, liver, colon, rectum, breast	Anderson and Scafato (2010), Health Canada (2002), Health Promotion Agency (2014), National Health and Medical Research Council (2009), Ministry of Health (2013c), Wadd et al. (2011)
Stroke	Finlayson and Hurt (1998), Health Canada (2002), Khan (1998), McInnis-Dittrich (2005), Ministry of Health (2013c), Wadd et al. (2011), Wylie (2010)
Cardiomyopathy	Gambert and Katsoyannis (1995), Khan (1998), McInnis-Dittrich (2005), Ministry of Health (2013c)
High blood pressure	Finlayson and Hurt (1998), McInnis-Dittrich (2005), Ministry of Health (2013c)
Temperature regulation (hypothermia, heat stroke)	Age Concern Wales (2011), Finlayson and Hurt (1998), Raby (1999)
Malnutrition/vitamin deficiencies	Age Concern Wales (2011), Finlayson and Hurt (1998), Gambert and Katsoyannis (1995), Health Canada (2002), Health Promotion Agency (2014), Raby (1999), McInnis-Dittrich (2005), Wylie (2010)
Dehydration	Age Concern Wales (2011)
Self-neglect	Age Concern Wales (2011)
Falls – fractures, head and other injuries	Age Concern Wales (2011), Alcohol and Ageing Working Group (2006), Gambert and Katsoyannis (1995), Health Canada (2002), Khan (1998), National Health and Medical Research Council (2009), Raby (1999), Wadd et al. (2011)
Fire-related injuries	Finlayson and Hurt (1998), Raby (1999)
Traffic crashes	Health Promotion Agency (2014), Ministry of Health (2013c), National Health and Medical Research Council (2009)

Table continued on next page

Table 6.1 (continued)

Health conditions	Examples of literature
Psychiatric illness	Health Canada (2002), Khan (1998)
Dementia	Health Canada (2002), Alcohol and Ageing Working Group (2006), Khan (1998), Wadd et al. (2011), Wylie (2010)
Cognitive impairment	Gambert and Katsoyannis (1995), Alcohol and Ageing Working Group (2006)
Memory problems	Age Concern Wales (2011), Health Canada (2002)
Frontal lobe damage	McInnis-Dittrich (2005)
Anxiety/depression	Age Concern Wales (2011), Alcohol and Ageing Working Group (2006), Health Canada (2002), Raby (1999), McInnis-Dittrich (2005)
Suicide	Health Canada (2002), Ministry of Health (2013c), Wadd et al. (2011), Wylie (2010)
Decreased psychomotor function	Gambert and Katsoyannis (1995)
Wernicke-Korsakoff syndrome, Korsakoff's psychosis	Gambert and Katsoyannis (1995), Health Promotion Agency (2014), Wylie (2010)
Cerebellar degeneration (affects coordination)	Gambert and Katsoyannis (1995)
Polyneuropathy – neural effects such as weakness, pain	Gambert and Katsoyannis (1995)
Sleep disruption	Age Concern Wales (2011), Aldrich (1998), Gambert and Katsoyannis (1995), Alcohol and Ageing Working Group (2006), Raby (1999), Wadd et al. (2011)
Kidney damage/conditions	Age Concern Wales (2011), McInnis-Dittrich (2005)
Incontinence	Age Concern Wales (2011), Royal College of Psychiatrists (2011), Wadd et al. (2011)
Sexual dysfunction	Health Canada (2002), Ministry of Health (2013c)
Impaired immunity/infections	Anderson and Scafato (2010), Finlayson and Hurt (1998), Gambert and Katsoyannis (1995), Khan (1998)
Blood disorders such as anaemia, suppression of blood-clotting	Gambert and Katsoyannis (1995)
Hormonal effects from compromised endocrine system	Gambert and Katsoyannis (1995)

Source: Table by authors

Methodological issues

While there is little doubt that alcohol causes certain health conditions in older adults, such as liver cirrhosis, alcohol's connection to other health conditions is less well understood.

One reason for this is that study designs do not always allow clear conclusions to be reached about causality. Often studies only observe *associations* or *correlations* between certain patterns of alcohol consumption and a particular health condition. These apparent relationships may exist because:

- alcohol consumption causes the health condition
- the health condition causes a change in alcohol consumption
- both of the above apply – there is a *two-way* causal pathway
- alcohol consumption and the health condition are both caused by one or more (perhaps unknown and unmeasured) *confounding* factors.

Another consideration when researching the association between drinking and health conditions is that healthier older adults tend to drink more than older adults with poorer overall health status. As such, drinking, at least at certain levels, may be an indicator of better health, although not necessarily a cause of it. As Anderson and Scafato (2010, p. 6) observe:

Many surveys have suggested that light drinking older people (up to 20g alcohol per day) experience a better quality of life than non-drinking or heavy-drinking counterparts. However, it is unknown the extent to which this is due to other factors, including drinking patterns, and it may simply mean that lighter drinkers are healthier, wealthier and better socially integrated people than non-drinkers or heavy drinkers.

Further complicating the picture, the risk of getting some health conditions may increase only among heavy alcohol users. Light or moderate drinking may actually decrease the risk of getting these conditions compared with not drinking at all (eg, cardiovascular disease, stroke, osteoporosis, cognitive impairment/dementia, diabetes) (Anderson & Scafato, 2010; Health Promotion Agency, 2014; Ministry of Health, 2013c; National Health and Medical Research Council, 2009).³⁸

RESEARCH ON SPECIFIC HEALTH CONDITIONS

In Reid, Boutros, O'Connor, Cadariu and Concato's (2002) systematic review of 84 studies examining the relationship between alcohol and various types of health conditions among older adults, 17 studies (20%) showed increased risks of harm, and eight studies (10%) showed decreased risks. However, the remaining 70% found no association between alcohol and the health outcomes being studied.

It is not possible here to review all of the available research on the links between alcohol and the health conditions listed above. However, there is space to examine what the research indicates about the links between alcohol and two examples of health events relevant to older adults: falls and cardiovascular disease. This helps to show how research on the links between alcohol use and certain health conditions can sometimes be complicated or unclear.

³⁸ This results in a so-called 'J-shaped curve', when alcohol consumption is plotted on a chart against the incidence or prevalence of a particular health condition.

Example 1: Alcohol and falls

Many professionals who treat older adults for alcohol problems consider falls or fall-related injuries to be a common complication of alcohol use disorders (eg, Addiction Research Foundation et al., c. 1993; Kina Trust, 2011; Wylie, 2010). Recurrent falls are also considered to be an indicator that an older person may have a hidden alcohol problem, and may need to be screened (eg, Alcohol Advisory Council of New Zealand, 2008; Royal College of Psychiatrists, 2011; Wadd et al., 2011). A study by Mulinga (1999) found 50% of hospital admissions over a four-year period for alcohol-dependent adults aged 60+ were due to falls with or without head injury.³⁹

However, evidence-based reviews suggest the data are less convincing for alcohol being a notable risk factor for falls in the more general older adult population. While a few studies have shown a significant increased risk of falls among older adults who drink at least some alcohol, others have shown a decreased risk, and most studies have not shown any significant relationship.

In Finlayson and Hurt's (1998) review of the medical consequences of alcohol use in the elderly, at least one study was found showing that dizziness and a combination of physical activity was associated with falls, but daily alcohol use was actually 'weakly protective' against falls (O'Loughlin, Robitaille, Boivin, & Suissa, 1993, cited by Finlayson & Hurt, 1998). The reviewers conclude that the 'literature regarding the relationship between drinking and falls among the elderly is mixed' (Finlayson & Hurt, 1998, p. 193).

Furthermore, while the Framingham study showed a significant relationship between alcohol and hip fractures among people aged under 65, there was only a very small (not significant) effect for adults aged 65+ (Felson, Zhang, Hannan, Kannel, & Kiel, 1988, cited by Finlayson & Hurt, 1998).

An evidence-based review by Research New Zealand on alcohol and injuries found similarly mixed results (Alliston, 2012). Looking at several systematic reviews on alcohol and falls among older adults, alcohol was not usually 'identified as one of the major risk factors for falls among the elderly, or the evidence-base did not use comparable studies that allowed a clear estimation of the risk' (Alliston, 2012, p. 47).

The same review found that, in a systematic study covering 20 individual studies, 11 studies showed that alcohol and falls were associated in older adults (although results of only five of these were statistically significant). One of the 20 studies showed a significant negative effect of alcohol and falls (ie, they were found not to be associated); two reported a protective effect (that was not statistically significant); and a further six studies showed 'possible' associations. Another review suggested that the degree to which alcohol is consumed *regularly* may affect the association between alcohol and falls (Alliston, 2012).

A Dutch study followed 1,365 community-dwelling adults aged 65+ for three years, tracking how many people had falls and fractures and identifying risk factors for falls. The study concluded that alcohol use was one important risk factor for recurrent falling (two or more falls in six months). Older adults drinking 18 or more alcohol drinks a week had a 23% higher risk of recurrent falls than older adults drinking fewer than 18 drinks a week (Pluijm et al., 2006).

³⁹ The study did not compare these figures with those for adults in the same age group who were *not* alcohol dependent.

Reid et al. (2002) systematically reviewed 26 studies on the association between falls, fall injuries and alcohol in older adults. The majority of these studies (21) found no association. Four studies found an increased risk of falls with daily or more frequent rates of alcohol consumption, and one study found that daily drinkers had a *lower* risk of falls compared with non-drinkers.

The Australian National Health and Medical Research Council (2009, p. 89) states that 'alcohol and medication, either alone, or in combination, can increase falls-related injury risk', although it is important to note the statement does not refer specifically to older adults.

In a New Zealand study, Campbell and Robertson (2006, p. 61) reviewed epidemiological evidence on falls among older adults and listed the following risk factors:

- muscle weakness
- history of falls
- gait deficit
- balance deficit
- use assistive device
- visual deficit
- arthritis
- impaired activities of daily living
- depression
- cognitive impairment
- psychotropic medication use
- age > 80 years.

Alcohol was not mentioned.

To further complicate matters, research evidence is also mixed for the effects of alcohol on bone density/osteoporosis among older adults. Bone density affects the risk of fracture if a fall occurs. On balance, it seems that high alcohol consumption/alcohol abuse is associated with reduced bone density, but low to moderate alcohol consumption may be associated with improved bone density among older females (Alcohol and Ageing Working Group, 2006).⁴⁰

Example 2: Alcohol and cardiovascular disease

The well-publicised 'protective effect' of low- to moderate-level alcohol consumption on overall health risk has been attributed especially to a reduction in cardiovascular disease in certain groups of people, including older adults (Alcohol and Ageing Working Group, 2006; National Health and Medical Research Council, 2009; Wilson et al., 2011). However, New Zealand authorities emphasise that the relationship between alcohol and cardiovascular disease is complex, controversial and not well understood (Health Promotion Agency, 2014; Ministry of Health, 2013c). The Health Promotion Agency (2014, p. 20) concludes:

In summary, low to moderate alcohol use (one or two drinks per day) can reduce the risk of coronary artery disease ... and the risk of ischaemic stroke. ... However higher alcohol use increases the risk of coronary artery disease and ischaemic stroke. In addition, any alcohol increases the risk of hemorrhagic stroke ... Both single episodes of heavy alcohol use and chronic heavy use can also increase the risk of hypertension, developing irregular

⁴⁰ A recent New Zealand review on preventing and treating hip fractures does not mention alcohol (Osteoporosis New Zealand, 2012).

heartbeats and suffering sudden death from a cardiac cause. The benefit of alcohol in reducing heart disease is primarily for those at risk of heart disease – particularly older people and those with a family history of heart disease.

A case-control study in 1992 of non-Māori, non-Pacific Aucklanders aged 35–74 years looked at the risk of consuming alcohol for fatal and non-fatal ‘coronary events’ (myocardial infarctions – ‘heart attacks’). For men who reported drinking regularly (more than once a month), the annual incidence of coronary events was half that of men who did not drink regularly. For women who drank regularly, the risk of coronary events was about a third of that for non-drinkers, although low to moderate levels of drinking reduced the risk more than heavier drinking (Wells, Broad, & Jackson, 2004).

Another study that estimated levels of alcohol-related mortality in New Zealand found that alcohol was likely to have caused 3% of deaths for 0–14 year-olds and 20% of deaths for 15–34 year-olds in 1987. However, because of alcohol’s protective effect against coronary artery disease, it reduced overall mortality among adults aged 65+ by 3% (Scragg, 1995).

More recent New Zealand studies have made estimates (and revised estimates) of alcohol’s contribution to deaths among 0–79 year-olds (Connor, Broad, Jackson, Horn, & Rehm, 2005; Connor et al., 2013). In 2007, it was estimated that, for older Māori males aged 60+, 14 deaths were prevented because alcohol reduced the risk of ischaemic heart disease (21 deaths were caused by alcohol increasing the risk of other health conditions). However, for Māori females in the same age group, it was estimated that nine of 21 alcohol-related deaths had been caused by alcohol-related ischaemic heart disease. For non-Māori males aged 60+, it was estimated that 132 deaths had been prevented because of an alcohol-related reduction in ischaemic heart disease (269 deaths were estimated to be caused by alcohol for other health conditions). For non-Māori females in the same age group, 22 deaths were estimated to have been prevented by an alcohol-related reduction in ischaemic heart disease (104 deaths were estimated to be caused by alcohol for other health conditions) (Connor et al., 2013).

Gambert and Katsoyannis (1995) state that studies of moderate drinkers have shown reduced coronary artery disease. However, they also point out that alcohol at higher doses is toxic to the myocardium (heart muscle). At low doses, alcohol may reduce blood pressure, but cause high blood pressure when consumed in greater quantities.

Finlayson and Hurt (1998) reviewed several studies looking at the relationship between cardiovascular risk and alcohol. Light to moderate drinking was found to reduce cardiovascular risk, particularly light drinking among older adults. However, heavy alcohol use increased the risk. As Finlayson and Hurt (1998) note, smoking, which tends to be associated with alcohol consumption, but also affects the cardiovascular system, may also play a confounding role in some of these studies.

INTERACTION OF ALCOHOL WITH EXISTING HEALTH CONDITIONS

Alcohol can also aggravate or complicate certain health conditions that older adults already have (and older adults tend to have more health conditions than younger people). The conditions include liver problems, infections, sleep disorders, diabetes, impaired cognitive function, dementia and mental health disorders (Finlayson, 1995; Health Promotion Agency, 2014; Ministry of Health, 2013c).

In addition, alcohol can mask warning signs of other diseases such as angina and increase the risk of being misdiagnosed with conditions such as dementia, anxiety or depression, as physicians tend to under-diagnose alcohol problems (Addiction Research Foundation, 1998; Erber, 2010; Finlayson, 1995; Khan, 1998; McInnis-Dittrich, 2005; Ministry of Health, 2011; Raby, 1999).

INTERACTIONS BETWEEN ALCOHOL AND MEDICATIONS

As indicated in chapter 2, a high proportion of older New Zealand adults have chronic diseases or pain and are taking medications for these conditions. Many of these medications can interact with alcohol (Addiction Research Foundation, 1998; Alcohol and Ageing Working Group, 2006; Health Canada, 2002; Ministry of Health, 2013c; Rankine et al., 2013; Wadd et al., 2011).

There are several ways alcohol can interact with medications including (Addiction Research Foundation, 1998; Alcohol and Ageing Working Group, 2006; McInnis-Dittrich, 2005):

- reducing the effectiveness of medication, making medical problems worse
- exaggerating the effects of certain medications, meaning normal medication doses can become toxic
- causing organ damage (eg, liver), so altering the body's responses to medication.

On top of this, as discussed earlier, age-related physiological changes mean that older adults are more sensitive to the effects of both alcohol and medications.

Examples of specific types of medication that can interact with alcohol include (Addiction Research Foundation et al., c. 1993; Addiction Research Foundation, 1998; Alcohol Concern Wales, 2011; Alcohol and Ageing Working Group, 2006; Health Promotion Agency, 2014; Heuberger, 2009; Finlayson, 1995; Korrapati & Vestal, 1995; Pringle, Ahern, Heller, Gold, & Brown, 2005; Moore, Whiteman, & Ward, 2007; Raby, 1999):

- antihistamines (for allergies), benzodiazepines and sedatives (for anxiety, insomnia), antidepressants (for depression), barbiturates (for epilepsy), opioid analgesics (for pain), muscle relaxants (for anaesthesia), antipsychotics (for psychoses), and some anti-nausea, antihypertensive and gastro-intestinal medications – alcohol can increase the sedative effects, cause impaired coordination, mental confusion, and rapid intoxication, increase the risk of falls, or in extreme cases cause breathing difficulties or loss of consciousness
- non-steroidal anti-inflammatories (for pain and inflammation) – alcohol can increase gastric irritation, may result in bleeding, and can cause liver damage
- some antibiotics (for infections) – alcohol can interfere with the antibiotic effects
- nitroglycerine products (angina) – alcohol can cause dizziness, fainting, or possible unconsciousness
- some diabetes medications and anti-fungal medications – alcohol can cause a serious Antabuse®-like reaction
- methotrexate (for arthritis or cancer) – alcohol can cause increased risk of liver damage
- warfarin (for reducing blood clots) – alcohol can increase the risk of bleeding

- paracetamol (for pain or fever) – alcohol may increase the risk of liver damage in situations of paracetamol overdose.

Alcohol may also have interactions with over-the-counter/non-prescribed medication (which older adults commonly use) or other substances/drugs used recreationally (Alcohol and Ageing Working Group, 2006; Health Promotion Agency, 2014; Wadd et al., 2011). Other studies have noted that, although alcohol ‘theoretically interacts’ with certain types of prescribed medicines, there is a lack of concrete evidence indicating the true size of the problem in older adults (Anderson & Scafato, 2010; Khan, 1998). Some have called for further study of the clinical importance of these interactions (Hallgren, Höberg, & Andréasson, 2009).

How many older adults are using alcohol with medications?

Only one New Zealand study was identified showing how many older adults take medications as well as drink alcohol.^{41,42} The Mosgiel survey of adults aged 70+ found that just over a quarter of women who drank daily (26%) and 15% of men who drank daily were also taking psychotropic drugs (Busby et al., 1988). (Psychotropic drugs act on the central nervous system and brain – they include antidepressants and tranquillisers, many of which are not recommended to be taken with alcohol.) The highest use of psychotropic drugs was among non-drinkers – a finding that was statistically significant for men but not women.

A few of the survey sample consumed alcohol as a ‘nightcap’ before bed. Of the 28 women who did so, six also took hypnotic sleeping medication, as did five of the 25 men who drank alcohol as a nightcap.

Overseas studies suggest that a sizeable minority of community-dwelling older adults who drink may use medicines that have negative interactions with alcohol (Anderson & Scafato, 2010). The risks may be higher in problem drinkers:

- A US survey of elderly people in retirement communities found 38% were using both alcohol and high-risk medications (Adams 1995, cited by Khan, 1998).
- Another US study of older adults aged 65+ on low to moderate incomes and receiving state-funded prescription benefits found 19% who had been prescribed alcohol-interactive medicines, most commonly non-steroidal anti-inflammatory drugs, prescription antihistamines, and anti-hypertensive drugs, were also using alcohol. Six percent of people prescribed one or more alcohol-interactive drugs were classified as heavy drinkers (consuming more than 30 drinks per month) and adults with physical health conditions were less likely to use alcohol with alcohol-interactive medications than people without physical health conditions (the same was not true for adults with mental health problems) (Pringle et al., 2005).
- A US study of community-dwelling older adults showed that, while 43% did not drink alcohol, a quarter were at risk of alcohol-drug interactions. The highest risk was from the combined use of alcohol and over-the-counter pain-relief medications (Forster, Follow, & Stoller, 1993).

⁴¹ Unpublished data from recent NZ Health Surveys may be able to be used to conduct a more up-to-date analysis for older adults.

⁴² The 2007/08 Alcohol and Drug Use Survey found that 6% of men and 9% of women aged 55–64 who were drinkers used alcohol at the same time as painkillers, sedatives or antidepressants at least once in the previous year (Ministry of Health, 2009b).

- In a 20-year-long Californian cohort study of older adults, use of medications was linked to a higher likelihood of non-use of alcohol, although statistically the relationship was not a strong one (Moos et al., 2010a).

Awareness of interaction between alcohol and medications

The overseas literature suggests many older people who take prescription and over-the-counter medicines are unaware that using alcohol with them increases the risk of harmful effects. Possible contributing factors to this include pharmacy practices, absence of or inadequate medicine-container warning labels (eg, size of the label or font size), and people's levels of health literacy and language skills (Pringle et al., 2005).

On the other hand, it seems some older adults are well aware they should not be drinking alcohol with their medication, so they modify how they take their medication (rather than modify their drinking). According to some reports, if some older people know they are going to drink alcohol at a forthcoming social event, a few days in advance they will double up their medication and then stop taking it until the event is over (Alcohol and Ageing Working Group, 2006).

7 INTERVENTIONS TO REDUCE HAZARDOUS AND HARMFUL DRINKING BY OLDER ADULTS

This chapter looks at interventions aimed *primarily* at assisting older adults to prevent or reduce their hazardous or harmful drinking, or to treat alcohol problems such as addiction. The word intervention is interpreted broadly, referring to any action that has the explicit goal of positively changing how older adults are using alcohol.

The chapter is in three main parts. The first looks at population-level health promotion and health education interventions. The second covers interventions provided by primary care and other frontline health and social service providers. The third looks at aspects of the design and delivery of interventions provided by specialised alcohol and drug treatment services.

The focus of the three sections can also be summarised as 1) primary prevention (preventing problems occurring), 2) secondary prevention (early detection and management of problems) and 3) tertiary prevention (support, care and treatment) (Paton & Kirkwood, 2004).

POPULATION-WIDE INTERVENTIONS NOT COVERED HERE

As indicated, the focus here is interventions that have the primary goal of preventing or reducing the numbers of older adults drinking hazardingly or harmfully.

Under this definition, policy initiatives that may have residual downstream effects on the drinking patterns of the entire population including older adults, such as taxation, income or welfare benefit policies, or changes to liquor licensing laws, are excluded from consideration. Similarly, all-age population-focused health promotion strategies, rules relating to alcohol advertising and sponsorship, alcohol warning labels, standard drink labelling and so on are also excluded.

Likewise, strategies and services aimed at, for example, promoting healthy or positive ageing, debunking myths about the ageing process, improving the management of chronic pain, helping to reduce isolation and loneliness in older adults, or promoting physical exercise and better nutrition are excluded. Although these strategies and services may well assist some older adults to cope better with distressing life events and therefore perhaps prevent them from drinking hazardingly in future, this is not their *primary* goal.⁴³

It is important to emphasise that excluding these kinds of interventions is not to suggest they have an insignificant impact on older adults' physical and mental wellbeing. Across the country, a number of government and non-government organisations provide supports and interventions for older adults, such as bereavement counselling, home visiting services, phone friendship services, Tai Chi and yoga classes, and so on. These kinds of broader interventions will almost certainly be having a positive impact on the lives of some older adults and indirectly helping to address certain risk factors for hazardous or harmful drinking (Ward et al., 2008, 2011).

Looking even more widely, it is important not to overlook the major contribution that society as a whole can make to addressing the alcohol-related problems experienced by older adults by

⁴³ Some reviews highlight the need for messages about safe alcohol use to be included in broader strategies to promote healthy ageing (Anderson & Scafato, 2010, p. 44).

making communities more inclusive; and by people, families and whānau better supporting one another (Adams, 2008; Ministry of Health, 2012b).

HEALTH PROMOTION AND HEALTH EDUCATION

In relation to older adults and alcohol, two types of health promotion and health education interventions are most commonly mentioned in the literature. These are the development and dissemination of health education materials and the promotion of safe drinking guidelines.

Key points:

- Some reports note it is the basic right of all people to be properly informed about how the ageing process can affect the metabolism of alcohol in their bodies
- National health agencies in at least two countries have issued safe drinking guidelines recommending maximum standard drink limits specifically for older adults. Some authors call for similar guidelines to be developed in other jurisdictions
- However, there is debate about the benefits and practicality of defining safe drinking limits for older adults. Opponents argue it is not possible to define a 'one size fits all' recommendation because of the enormous variety of medical and lifestyle situations of older adults

Health education materials

Internationally, agencies and groups in various jurisdictions have issued information pamphlets, leaflets, booklets or bulletins highlighting the risks of alcohol use for older adults. Many are available on the internet. New Zealand examples include the booklet *Alcohol and Older People: Information for Older People, Family, Friends and Carers*, prepared by ALAC in conjunction with Age Concern New Zealand and ACC (Alcohol Advisory Council of New Zealand, 2008).

In the main, these materials are targeted at older adults plus their family members or carers. Common themes include:

- the ageing body's lower tolerance to alcohol and greater vulnerability to alcohol's effects
- alcohol's interactions with other physical and mental health conditions
- alcohol's interactions with prescribed and over-the-counter medications, and what to do about this
- guidelines on safe drinking limits
- alternative strategies if alcohol is being used to counter pain, insomnia, loneliness, anxiety, etc
- advice on what to do if someone needs help to do with their own or someone else's drinking.

There seems to be little research internationally evaluating the uptake, acceptability or impact of these materials (Anderson & Scafato, 2010).

In New Zealand, as part of two larger consultation exercises, groups of carers and health professionals were asked to comment briefly about their use of the ALAC booklet (Kina Trust, 2011; Wylie, 2010). This was not intended as a formal evaluation of the booklet, just a chance to get a few quick impressions. People commented that the booklet was easy to read. It was also seen as a useful starting point for looking at the issue and challenging people to think about making changes to their drinking. However, some people felt the booklet was light on detail and needed more warnings about medication interactions with alcohol.

A Scottish expert committee notes that it is a basic right of all middle-aged and older adults to be properly informed about how the ageing process can affect the metabolism of alcohol in their bodies. It concludes that this information should be integral to broader messages encouraging people to think about reducing their alcohol consumption as they get older (Alcohol and Ageing Working Group, 2006).

Safe drinking guidelines for older adults

Currently, national agencies in many countries issue safe drinking guidelines. These indicate the maximum number of standard drinks or units of alcohol considered appropriate for adults to consume over set periods (eg, per day, per week, or per drinking occasion, and so on). In most cases, different limits are specified for men and women, reflecting the fact that generally women metabolise alcohol more slowly than men and therefore their safe limits should be set lower.

Some guidelines, such as New Zealand's, also include advice that there are no known safe levels of alcohol use at any stage of pregnancy. Advice is also given on when not to drink (see below).

To date, at least two national health agencies, Italy's National Institute of Research on Food and Nutrition and the USA's NIAAA, have issued specific safe drinking guidelines describing maximum standard drink limits for older adults. The guidelines are intended to reflect older adults' generally reduced physiological capacity to process alcohol and their greater susceptibility to alcohol-related harm at relatively low levels of consumption.

In Italy, older adults are recommended to drink no more than one alcoholic beverage daily.⁴⁴ In the United States, the NIAAA currently recommends that adults over age 65 'who are healthy and do not take medications' should not have more than three drinks on a given day and seven drinks in a week.^{45, 46}

There is some debate in the literature about the benefits and practicality of defining safe drinking limits for older adults. Authorities in some countries are in favour, others are not.

The report of the previously mentioned Scottish expert group ends with one major recommendation: that it is time to acknowledge there should be age-based sensible drinking limits (Alcohol and Ageing Working Group, 2006).

In England, as well, an expert committee of psychiatrists concludes: 'Sensible limits for alcohol consumption by older people need to be reexamined' (Royal College of Psychiatrists, 2011, p. 35). To support this conclusion, the committee refers to new evidence at the time from the US

⁴⁴ www.beviresponsabile.it

⁴⁵ www.niaaa.nih.gov/alcohol-health/special-populations-co-occurring-disorders/older-adults

⁴⁶ Previously the NIAAA recommended older adults have no more than one standard drink a day, seven standard drinks a week and no more than two drinks at any one time (Dar, 2006).

National Institutes of Health suggesting that 'at-risk' or hazardous drinking in older adults equates to anything above 1.5 units of alcohol on any one day, or more than 11 units per week for both men and women. Consuming more than three units of alcohol per day and 11 per week for older men and women is linked to alcohol-related problems.

Other reports are more cautious about stipulating fixed levels of safe drinking for older adults. They argue it is not possible to define a 'one size fits all' recommendation for this age group, given that older adults usually have a greater variety of medical and lifestyle histories compared with younger people (Heuberger, 2009). Some question if the guidelines actually result in people limiting their drinking. There are concerns, too, that guidelines might encourage some older adults to 'drink up' to the specified limit of standard drinks (Hallgren et al., 2009).

Given these concerns, authorities in some countries appear to have decided against issuing standard drink guidelines based on age. The Australian Guidelines to Reduce Health Risks from Drinking Alcohol provides no specific standard drink limits for older adults. However, an appendix to the guidelines includes a section 'People who should be aware that they have an increased risk', in which specific advice and data relevant to older adults are presented. Separate advice is also provided for people using prescription medicines and people with important health conditions (National Health and Medical Research Council, 2009).

In the current New Zealand low-risk alcohol drinking advice issued by the HPA, older adults are not explicitly mentioned. However, people are advised not to drink when on medication that interacts with alcohol, if they have a condition made worse by drinking alcohol, or if they feel unwell, depressed, tired or cold.⁴⁷

Other health promotion and education initiatives targeting older adults

In principle, a range of other alcohol health promotion and education interventions could be developed specifically targeting older adults. They might include:

- host responsibility programmes and other similar initiatives aimed at altering drinking practices and alcohol promotions in environments and settings frequented by older adults (eg, retirement villages, rest homes)
- local community-based alcohol action programmes, where people of all ages in a town or neighbourhood work together to address the determinants of problem drinking in older adults
- intensive, multimedia social marketing campaigns that alert the general public to the risks of drinking in older age, including the physiological changes that occur with ageing, and to encourage all people to think about the merits of cutting down their drinking as they grow older (in the context of other messages about the importance of maintaining social support networks in older age, including suggestions on how to do this).

However, currently the literature appears to describe few, if any, actual examples of these kinds of interventions.

⁴⁷ <http://www.alcohol.org.nz/alcohol-you/your-drinking-okay/low-risk-alcohol-drinking-advice>

INTERVENTIONS DELIVERED IN HEALTH CARE SETTINGS

This section looks at interventions delivered by primary care (eg, general practitioners) and other frontline health and social services for older adults who are drinking hazardously or harmfully. These interventions figure strongly in the overseas research on alcohol and older adults. (Interventions provided by specialist alcohol and drug treatment services are discussed later in the chapter.)

Key points:

- Studies suggest many older adults who are drinking hazardously or harmfully, including some with serious alcohol use disorders, are ‘hidden’ in the community, are not seeking help, and are not being adequately identified or engaged by health and social services
- Factors contributing to this may include:
 - social attitudes condoning problematic alcohol use by older adults, or denying it exists
 - concerns by older adults that they will be stigmatised or labelled as a problem drinker or ‘alcoholic’
 - sensitivities and difficulties health professionals associate with raising the topic of alcohol with older patients
- In North America, various types of alcohol screening and brief interventions specifically for older adults have been developed and evaluated
- Screening and brief interventions (SBIs) involve gathering information from a person about their drinking history and, if necessary, giving them brief advice encouraging them to change their drinking
- It is unclear to what extent New Zealand older adults are routinely screened for alcohol problems in primary care and other frontline services
- One obstacle to greater inclusion of older adults in brief intervention initiatives may be uncertainty about appropriate screening tools for older adults
- Some of the more commonly used screening tools, such as AUDIT and CAGE, may not be comprehensive enough to identify the full extent of the alcohol-related problems and risks experienced by older adults, especially if they have ongoing medical conditions, or disabilities, or are using a range of prescription and over-the-counter medicines

Barriers to health services engaging with older adult drinkers

Over the last 40 years, internationally there has been a growth in research interest in the drinking problems of older adults. In part this has been motivated by concerns that many older adults who are drinking hazardously, or experiencing drinking problems, are 'hidden' in the community, do not seek help, and are not being adequately identified or engaged by health and social services (Khan et al., 2002). As a result, these older adults are believed to be missing out on advice, support or treatment that could assist with reducing their drinking, as well as perhaps improving their general health and quality of their relationships with others.

A number of overseas studies have looked at reasons why some older adults who are drinking hazardously or harmfully do not come to the attention of services (Alcohol Concern Wales, 2011). One is the inability of older adults themselves to recognise or admit they are using alcohol inappropriately. This can be reinforced by their family members or carers, or by the wider networks they associate with, including other drinkers.

Broader societal attitudes, too, can implicitly condone, overlook or minimise the significance of older adults' drinking. This includes the idea that older adults are 'entitled to some small pleasures in life' and should be allowed their 'wee tippie'. Contradictory information about the health benefits of small amounts of alcohol may contribute to this. As well, many older adults resist seeking advice or treatment through fear of the social stigma of being labelled a problem drinker or 'alcoholic'.

Studies also identify other factors that can prevent older adults from receiving adequate advice and treatment related to their drinking, even if they are in contact with health services (Jackson, 2013). For one thing, some health professionals may be unwilling to discuss alcohol issues with their older patients, either because they feel inadequately trained for it, or because they worry it may offend or upset patients.

Another factor appears to be that detecting and assessing hazardous drinking and alcohol-related problems in older adults are often more complex than in younger people. Alcohol issues are more likely to be overlaid at presentation by a range of other physical or psychological health conditions (eg, diabetes, depression or anxiety, cognitive impairment), some of which may be serious. Patients can also be using multiple prescription and over-the-counter medicines ('polypharmacy'), so further complicating the picture.⁴⁸ These diagnostic challenges make some practitioners reluctant to look more closely at an older adult's drinking status, especially in the context of a busy clinic or heavy client caseload.

A study in England found health professionals were often unwilling or unable to discuss alcohol issues with older adults for the following reasons (Wadd et al., 2011, p. 14):

- lack of awareness that alcohol misuse is a potentially important problem for older adults
- reluctance to ask embarrassing questions of older adults
- the attitude that older adults are too old to change their behaviour
- lack of confidence in skills to take action
- the belief that it is wrong to 'deprive' older adults of their 'last pleasure in life'
- inability to identify signs and symptoms of alcohol problems in older adults.

⁴⁸ See also chapter 6 for further discussion of these issues.

Analysis of the 2006/07 New Zealand Health Survey found that 6% of men and 1% of women aged 65–74 had been talked to about alcohol in primary care consultations in the last 12 months. For men and women aged 75 and over, the rate was less than 1% (Foulds, Wells, Lacey, Adamson, & Mulder, 2012).

Screening and brief intervention for older adults

Various overseas reports look at different ways primary care and other frontline health and social services can contribute to the early identification, assessment and treatment of older adults who are drinking hazardously or experiencing alcohol-related problems. One of the most frequently described approaches is the use of screening and brief interventions.

Screening and brief interventions (SBIs) include gathering information from a person about their drinking history and, if necessary, giving them brief advice encouraging them to change their drinking (Maynard & Paton, 2012). A brief intervention might be part of a single consultation session or involve several follow-up sessions. Often a scientifically validated, pen-and-paper type screening tool, such as the AUDIT or CAGE, is used to get a better idea of a person's drinking patterns and problems. In a few cases, people may be referred to specialist addiction services. Normally, though, most people identified as drinking hazardously will be given advice and encouragement to drink within safe limits.

The Ministry of Health's Mental Health and Addiction Service Development Plan for 2012–17 notes that priority actions for primary care and other health services include recognising and responding early to alcohol and other drug issues among older adults, and providing advice and brief interventions to address emerging issues (Ministry of Health, 2012b). Other Ministry of Health guidelines call for service providers in both primary and secondary care settings to regularly screen older people for use of substances, to enable early diagnosis and response (Ministry of Health, 2011).

Screening and brief intervention in primary care

In New Zealand in recent years, there has been an ongoing effort to encourage general practitioners (GPs) and other primary care providers to increase their use of alcohol SBIs with adult patients of all ages. In this way it is hoped to eventually identify and offer advice to a substantial proportion of people in the community drinking hazardously and harmfully, many of whom may not recognise that their drinking is unsafe or, if they do, may not be ready to seek help.

There are several useful New Zealand studies examining issues related to the delivery of SBIs and other alcohol and drug screening techniques to *all-age populations* in primary care settings or elsewhere (eg, Gifford, Paton, Cvitanovic, McMenemy, & Newton, 2012; Foulds et al., 2012; Matua Raki, 2012; Maynard & Paton, 2012; Moriarty, Stubbe, & Bradford, 2009; Moriarty et al., 2012; Mules et al., 2012; O'Brien, Leonard, & Deering, 2012; Paton-Simpson et al., 2000; Sheridan et al., 2008; Sheridan, Stewart, Smart, & McCormick, 2012).

None of these studies look in any detail at older adults specifically. However, they are helpful in pointing to issues likely to be relevant for any future New Zealand initiatives aimed at getting more primary health practitioners to initiate SBIs with older adults.

A common theme is that implementing alcohol SBIs may be difficult in many general practice settings because of time pressures, sensitivities around discussing alcohol issues with patients, concerns about harming the practitioner-patient relationship, and the need to also address the original reason the patient came to the clinic (Maynard & Paton, 2012; Moriarty et al., 2012). User-pays services may also discourage patient attendance for screening (Mules et al., 2012).

Recognising these issues, there is an emphasis now on adapting SBI-type interventions to suit the different situations in which they will be used. This includes taking proper account of the professional orientations and work culture of the people expected to deliver SBIs, and ensuring clinic administration systems and facilities are properly set up to support SBI work (Maynard & Paton, 2012).

There are indications that New Zealand GP clinics taking a wellness approach, and having dedicated nurse time set aside for health screening, are in a good position to fully implement SBI-type programmes. It also seems to be helpful if clinics have previous experience of implementing brief interventions for other health behaviours, such as smoking.

Another key ingredient is ongoing, committed and credible clinical leadership, as well as having adequate time and resources for project implementation and management. Having good IT systems and the right software tools is important, too, as is proper hands-on, skills-based training for the staff involved (Gifford et al., 2012; Maynard & Paton, 2012).

However, some New Zealand studies have found that delivering SBIs can be challenging for primary health practitioners because of the emotions and sensitivities around alcohol issues. For some it requires a significant change in mindset (Gifford et al., 2012).

One recent study concludes that to get GP practice-based alcohol brief intervention firmly established in New Zealand, it may be necessary to use high-profile social marketing strategies to highlight the health effects of alcohol misuse, encourage people to approach their doctor, and give GPs more confidence to raise alcohol issues with patients. Funding models may also have to be altered to make brief intervention more viable for doctors and patients (Mules et al., 2012). Foulds et al. (2012) call for further research to understand how successful strategies for detecting harmful and hazardous drinking in primary care can be identified and transferred successfully to other countries.

Alcohol screening tools for older adults

One New Zealand study reviews the applicability of the alcohol screening tools available for use with older adult patients seen in general practice and other health care settings (Berks & McCormick, 2008).

Internationally, there are concerns that some of the more widely used tools, such as AUDIT and CAGE, may not be comprehensive enough to identify the full extent of the alcohol-related problems and risks experienced by many older adults, especially if they have difficult-to-treat medical conditions, or functional impairments, or are using a range of prescription and over-the-counter medicines.

Responding to these concerns, a more sophisticated alcohol screening tool has been devised, the Alcohol-Related Problems Survey (ARPS). This is an 18-question, 60-item, self-administered screen with questions not just on alcohol consumption patterns but also existing health conditions, use of medications, and physical and mental functioning. There is also a

computerised version, the Computerized Alcohol-Related Problems Survey, as well as a cut-down version, the Short ARPS or shARPS (Fink, Elliott, Tsai, & Beck, 2005; Moore, Beck, Babor, Hays, & Reuben, 2002).

One potential drawback of the ARPS is that, although it can be completed using pen and paper, its results have to be processed by computer. Another is perhaps the time it takes to complete (10 minutes approximately). However, there is support in the literature for its use with older adults in primary care settings. The New Zealand review by Berks and McCormick (2008) concludes that the ARPS tool and its variants appear to be better for screening older adults, and may be used more in future as computer-based screening tools become more popular in health care settings.

In Australia, treatment researchers have adapted the ARPS tool to cater for Australasian standard drink sizes (the original version of the tool used US standard drinks). Renamed the A-ARPS, it has also been updated to reflect differences in the brand names of medicines in Australia. Administered using a laptop or tablet computer, the A-ARPS has been formally tested with a group of Australian men and women aged between 55 and 89 and has been found to work reliably and to successfully identify those at risk of experiencing alcohol-related harm (Bright, Fink, Beck, Gabriel, & Singh, 2013).

A recent United States study applies ARPS criteria to data from a nationwide health survey of adults aged 65+ (Wilson et al., 2013). The health survey collected information on people's self-reported medical diagnoses, medications, symptoms, functional status and alcohol consumption. Applying the ARPS criteria, the authors conclude that 53% of US drinkers aged 65+ were using alcohol either hazardously or harmfully. Many of these people were consuming alcohol within NIAAA recommended safe drinking limits, but were still classified by ARPS as drinking hazardously or harmfully because of the medications they were taking (eg, anti-hypertensives), co-existing health conditions (eg, recent depression/anxiety symptoms) or functional limitations (eg, difficulties dressing/bathing).

Other settings for screening and brief intervention

New Zealand and overseas studies identify various other potential settings for conducting routine alcohol screening and brief interventions. These include community pharmacies, hospital emergency departments, inpatient hospital departments and workplaces.

Community pharmacies

Because many older adults are taking prescription medicines, most will have regular contact with a community pharmacy. The 2002/03 New Zealand Health Survey found 87% of adults aged 15+ had been to a pharmacy or chemist for a health product or health information in the previous 12 months (Ministry of Health, 2004).

A New Zealand study notes that alcohol screening and brief intervention is not a role that has been taken up by community pharmacists (Sheridan et al., 2008). A postal survey of pharmacists found respondents were in general positively disposed to the idea of screening customers for alcohol problems, although many were concerned they lacked the confidence and skills to do it. In the past, pharmacists have offered screening and brief interventions in other areas such as osteoporosis, smoking cessation and chlamydia screening.

A feasibility survey of 2,384 pharmacy customers aged 18 and over from 43 New Zealand pharmacies found 30% of the sample met criteria for risky drinking (Sheridan et al., 2012). Three-fifths of risky drinkers indicated they would be comfortable about being asked about their drinking by a community pharmacist and 64% were comfortable with being provided with advice.

The study authors note that one option in future might be for community pharmacists to do targeted screening of customers, perhaps based in part on the products or services customers requested. For example, smokers or customers purchasing hangover cures might be one group to focus on. The study did not report any specific conclusions for older adults, although many in the survey were 55 and over.

Hospital emergency departments

Overseas studies suggest older emergency department attenders have higher rates of alcohol use disorder than older adults generally (O'Connell, Chin, Cunningham, & Lawlor, 2003). There appear to be no recent New Zealand or overseas studies reporting outcomes from the use of alcohol brief interventions in emergency department settings specifically with older adult patients. Screening emergency department patients for alcohol misuse does not seem to be occurring routinely in New Zealand (Hosking et al., 2007).

One New Zealand study examines whether an education and teaching module for hospital emergency department doctors and nurses results in all-age adult patients being asked more questions about alcohol use and related problems (O'Brien et al., 2012). Following delivery of the module, the number of questions asked by staff dropped rather than increased. The study concluded that rates of routine screening for alcohol-related morbidity and death were low, and were certainly not improved by the module. Various professional, institutional and attitudinal barriers to effective screening in the emergency department context were identified. The solution proposed was that an advanced practice nurse, nurse specialist or other similarly qualified person be employed as an alcohol worker in hospital emergency departments. Their role would be to assist with practice development, awareness of alcohol issues, and acquisition of new skills. The study pointed to previous research showing nurse specialists in emergency departments can successfully identify and refer older adults with complex medical, physical and social needs.

A recent New Zealand review of international injury research noted promising signs that alcohol brief interventions in emergency departments could contribute to reductions in alcohol-related injury (Alliston, 2012). Although people may not change the quantities they drink as a result of the intervention, they may change where they drink and whether they drink or drive, so their injury risk is lowered. Most of the studies in emergency departments involved young adults or all-adult-age groups. The applicability of the findings for older adults is not clear. As well, in some studies the brief interventions were delivered by the researchers running the study, so the practicality of emergency department staff taking responsibility for delivering brief interventions was not established.

General hospital inpatient settings

Older adults are more likely than younger adults to require inpatient hospital treatment. Overseas studies have found that a relatively high proportion of older hospital inpatients have a recent history of hazardous drinking or alcohol use disorder (O'Connell et al., 2003).

One New Zealand study looked at how frequently medical and nursing staff in general medical wards carried out routine alcohol assessments on their patients (Pulford et al., 2007). Staff attitudes to assessment were also surveyed. The study found 78% of all-age patients were asked about their alcohol consumption, but the usefulness and accuracy of the information was generally low. Staff were generally supportive of the idea of doing alcohol assessments. The study concluded that hospital medical and nursing staff should be provided with better alcohol assessment tools (eg, AUDIT, CAGE or the Short Michigan Alcohol Screening Test [SMAST]) and other supportive resources for screening, and be properly trained in their use. It is suggested these changes might offer a foundation in future for medical and nursing staff to conduct brief interventions with patients. The authors note that there is no existing national standard or guideline for hospital-based alcohol assessment.

Workplaces

The workplace is seen as an appropriate setting to offer alcohol screening and brief intervention for hazardous drinking (Paton & Kirkwood, 2004). Workplace-based education and brief interventions programmes could be one way of engaging with a proportion of the older adult population before they retire, to deliver age-appropriate safe drinking advice.

In the US, reports describe workplace pilot initiatives where alcohol screening using AUDIT-C and brief intervention is a routine part of staff recruitment processes and Employee Assistant Programmes (Goplerud & McPherson, 2010). In Europe, workplace-based programmes are recognised to have 'some limited impact' on reducing alcohol-related harm and may be beneficial when implemented as part of pre-retirement education packages (Anderson & Scafato, 2010, p. 34).

Other settings

New Zealand literature also suggests that brief interventions for alcohol consumption can, in principle, be delivered by a range of people including social workers, probation officers, cultural workers, community workers, counsellors, and psychologists. Recent guidelines issued by Matua Raki (2012), although not specifically covering interventions for older adults, summarise generic skills and knowledge likely to be relevant. It includes guidelines for appropriately engaging with Māori and Pacific people. It also emphasises the crucial need for brief intervention practitioners to be supported at the governance and management levels of their organisation.

Based on a literature review and discussion with expert practitioners and older drinkers, an English study suggests that health and social care workers likely to have contact with older adults should (Wadd et al., 2011, p. 26):

- know what life changes and physical signs/symptoms are associated with problem alcohol use in older people
- have a basic understanding of which medical conditions and medications may lead to adverse reactions with alcohol
- be able to screen and discuss alcohol use with older people tactfully and sensitively
- be able to collect and interpret information on alcohol use (frequency and quantity), drinking consequences and everyday functioning
- be able to deliver brief advice tailored to meet the needs of the individual

- develop links with alcohol services and know when and where to refer older people who require specialist treatment.

Outcome studies of alcohol screening and brief intervention for older adults

There appear to be no New Zealand studies evaluating the outcomes of SBIs specifically with older adult patients. The only New Zealand randomised controlled trials appear to be for computer-based interventions with university students (Kypri et al., 2004; Kypri et al., 2005; Kypri, Langley, Saunders, Cashell-Smith, & Herbison, 2008).

Recent New Zealand reports describe outcomes from general-practice-based brief intervention demonstration projects directed at all adult patients (eg, Gifford et al., 2012), but no findings are discussed for older adults as a separate group.

The overseas literature includes a small number of clinical outcomes studies of older-person-specific brief interventions or brief advice for alcohol or substance misuse (eg, Fleming, Manwell, Barry, Adams, & Stauffacher, 1999; Gordon et al., 2003; Oslin et al., 2006; Schonfeld et al., 2010).

There seems to be a range of interpretations in the literature about the overall findings of these studies. Some reviews conclude that 'identification and screening instruments work just as well for older as opposed to younger adult populations, and that outcomes of brief interventions do not differ between older and middle-aged populations' (Anderson & Scafato, 2010, p. 37).

Other reviews consider the outcomes for brief interventions delivered to older adults in primary care settings to be 'mixed' and to provide 'unclear directions for future practice and research' (Kuerbis & Sacco, 2013, p. 32).

Based on the findings of their 20-year follow-up study of older adults, Moos et al. (2010a) suggest that universal alcohol screening may not be needed and is probably not cost-effective for older adults. Instead, they propose it may be better to target high-risk individuals, such as those who use alcohol to reduce pain.

It is beyond the scope of this report to review all the overseas clinical studies in detail. However, two examples from the United States (Wisconsin and Florida) are briefly highlighted below to give a flavour of how older-person-specific brief interventions might be delivered, and the kinds of outcomes that could be achieved.

Wisconsin, USA

A frequently cited study is the randomised controlled trial by Fleming et al. (1999). This measured outcomes of alcohol brief interventions delivered to adults aged 65 and over attending 24 primary care clinics in Wisconsin.

At the start of the trial, patients in both the control and intervention groups consumed an average of 16–17 drinks per week. Three months after the brief intervention sessions were finished, average weekly alcohol use fell 40% in the intervention group but only 6% in the control group. These statistically significant improvements were maintained right through to 12-

month follow-up. In addition, the proportion of older adults in the intervention group who drank excessively fell by 52%. Levels of binge-drinking in the group fell by 47%.

Further statistical analysis confirmed that the physician brief interventions were the main influencing factor leading to the reductions in hazardous alcohol use. Other factors such as smoking, exercise, or use of sedatives or pain medications were not important influences on the changes.

Florida, USA

Elsewhere in USA, the Florida BRITE project – a state-funded, older-adult-specific screening and brief intervention programme – was piloted in 2003 (Schonfeld et al., 2010). Florida is a popular retirement place for older adults and at the time of the pilot study 23% of the state population was aged 60 and over.

The pilot study sourced older adults who might be having problems with alcohol or other substance use, through community outreach (eg, presentations at health fairs, retirement communities and senior housing sites) and via community agency referrals (eg, social workers). Screening interviews included questions on alcohol, prescription and over-the-counter medicines, illicit drugs, depression and suicide risk. Brief intervention sessions were delivered by trained counsellors. Each patient had between one and five face-to-face sessions with their counsellor. Sessions were often held in the older adult's home.

Central to the sessions was the use of motivational interviewing to encourage older adults to set future goals to improve their quality of life and health habits. The sessions also aimed to raise awareness of risky drinking practices and unsafe medication use. Follow-up screening was also offered. There was no charge to the patient for the services. Costs were paid by the Florida Department of Children and Families. If during screening patients were identified to have major substance abuse and related problems, counsellors could elect to deliver brief treatment themselves or refer the patient to other medical, mental health or addiction services.

The majority of the nearly 3,500 people who were screened during the initial pilot project were white, female and living alone. Their average age was 75. Almost 70% were current drinkers and 18% consumed more than three drinks a day. Twenty-six percent had prescription medication problems including issues with pain, sleeping or anxiety medicines. Twenty-two percent had moderate and 8% had serious depression scores when screened. During screening 14% reported they had recently contemplated suicide.

Outcomes of the pilot project were not evaluated in a randomised controlled trial. However, the limited outcome data available suggested depression and alcohol severity scores decreased in at least some of the patients who completed the brief intervention sessions. Levels of medication misuse also seemed to improve. The project subsequently gained funding to expand delivery into other Florida districts, as well as into new treatment settings such as hospitals, trauma centres, health clinics and aged-care services.

Active case-finding and community outreach

The Florida BRITE project is just one of a number of initiatives for older adults that have been developed in different parts of North America in the last two decades with a focus on community outreach or active case-finding techniques. Rather than relying on older adults, their families or carers to make contact with health or other services, these initiatives use various strategies to

actively search for and engage with older adults 'hidden' in the community who may be at risk of problems related to alcohol, substance use or mental health.

There is not enough room here to detail all the different programmes that have been developed along these lines, but two examples from the literature illustrate some of the common features, including the focus on early intervention and home-based assessment.

Gatekeeper (Spokane, USA)

The Gatekeeper programme, first developed in 1978 by staff at Elder Services in Spokane in the state of Washington, is a system of proactive case-finding across the local community that aims to identify adults aged 60+ experiencing signs or symptoms of distress, including alcohol and other substance abuse problems, mental illness, emotional or behavioural problems, suicide risk, poor health, social isolation, and abuse or neglect.

A key feature of the approach is its use of non-traditional referral sources. Employees and others working in the community who are in direct contact with older adults routinely as part of their job (postal service workers, meter readers, police, bank tellers, television installers, restaurant workers, telecommunications company workers, ambulance officers) are recruited and trained to be 'gatekeepers'. When a gatekeeper comes across a person who they think may be requiring assistance, they phone in and make a referral to the local community response network of mental health and other health and social service personnel. A member of the response network then contacts the older adult to arrange a comprehensive home assessment. Based on the findings of the assessment, an individualised treatment plan is created to address the older adult's needs. The plan includes input from the older adult as well as perhaps family members, friends or neighbours. Depending on the plan, the older adult may then access a variety of services including counselling, home support, meal services, house repairs, home pharmacy services, legal assistance, respite care and health care.

The original Spokane Gatekeeper programme has been the inspiration for a number of more recent mental health-based initiatives in different parts of the US, including Colorado and Kansas. Many of these use 'senior outreach' approaches to identify and engage with otherwise 'invisible' socially isolated older adults experiencing significant distress (Bartsch, Rodgers, & Strong, 2013).

Lifespan's Geriatric Addictions Program (Greater Rochester, USA)

Another often-mentioned US substance misuse outreach programme for older adults is the Geriatric Addictions Program (GAP) run by Lifespan in Greater Rochester, New York.⁴⁹ Funded by government and the private sector, Lifespan provides a range of education, health and social support services to older adults and their caregivers. Developed in 2001, GAP aims to respond to the increasing number of community-dwelling older adults at risk for alcohol and prescription-drug-use problems. The focus of the programme is the delivery of assessment, education and treatment interventions in the client's home, with the aim of preventing at-risk alcohol or medication use from progressing to more serious levels of abuse or addiction resulting in medical crises and/or hospital admissions. GAP also works with older adults with different forms of dementia to try to prevent their alcohol and medication use from causing further difficulties with mental functioning.

⁴⁹ <http://www.lifespan-roch.org/substance-abuse.htm>

PROFESSIONAL EDUCATION AND TRAINING

Another intervention mentioned in the literature is education and in-service training for health professionals and others who work with older adults. In general, this education and training aims to increase people's knowledge and skills related to identifying and responding appropriately to older adults who may be drinking hazardously or harmfully. The goal may be to give people skills so they can raise the issue of alcohol sensitively in discussions with older adults, offer advice or undertake brief interventions, or provide other forms of alcohol counselling.

Key points:

- Training sessions for health professionals and others working with older adults aims to give them skills so they can:
 - raise the issue of alcohol sensitively in discussions with older adults
 - offer advice or undertake brief interventions
 - make contact with specialist addiction services
- Identified training needs for mental health and addiction staff working with older adults include dealing with death, dying, loss and grief; psychopharmacology; and dementia and delirium

In New Zealand, ALAC and HPA have in the past funded Kina Trust to run workshops on alcohol and older people for providers of health and social services. The workshops discussed practical skills such as how to raise the issue of problematic drinking with an older adult, how to conduct a brief intervention, and how to make contact with specialist addiction services.⁵⁰

Matua Raki, the training agency for New Zealand's addiction workforce, is currently offering workshops on older adult treatment issues for practitioners in the alcohol and drug sector (Matua Raki, personal communication, 23 April 2014).

In a survey of the training needs of New Zealand mental health and addiction workers, those working with older adults requested training in issues related to dealing with death, dying, loss and grief; psychopharmacology; and dementia and delirium (Te Pou, 2011).

SPECIALIST ALCOHOL TREATMENT SERVICES

This section looks at interventions provided to older adults by specialist alcohol and drug treatment services. In New Zealand this includes a range of publicly funded treatment services, as well as services run by charitable, church and private sector organisations. These services contribute to the reduction of alcohol-related harm by assisting people to cut down their drinking or abstain from alcohol, while at the same time addressing factors in the person's life situation and relationships that may be contributing to their alcohol problems.

⁵⁰ http://www.pha.org.nz/documents/Flier_and_reg_form_April_2012_final.pdf

There is a small amount of New Zealand research and other literature specifically examining issues related to the provision of specialist alcohol treatment and addiction services for older adults. However, to date there appear to be no New Zealand evaluations or clinical studies of alcohol treatment services specifically for older adults.

Key points:

- More specialist alcohol treatment services for older adult problem drinkers seem likely to be needed in future as the New Zealand population ages
- Research suggests alcohol treatment services should be age appropriate and address the needs of older clients across all areas of life: physical, nutritional, cognitive, medical, psychological, social and cultural
- This includes taking account of the special age-related challenges older adults face such as bereavement, retirement, loss of independence, and physical and cognitive impairments
- Services for older adults are also likely to need to offer more community outreach options, including home-based counselling and support, and transport assistance
- Counselling sessions may need to be paced more slowly than for other age groups, with shorter sessions, more repetition and more follow-up or booster sessions
- Individual, family or group counselling may form just part of a wider programme of interventions involving health services, aged-care support services, home support, family, church and service clubs
- There are a number of overseas examples, particularly from North America, but also from Britain and Australia, of alcohol and other drug treatment services designed specifically for older adults and their families or carers. A few services of this type have started recently in parts of New Zealand
- There is debate internationally about how necessary it is to offer age-specific treatment services for older adults. Supporters of age-specific services contend that some older adults feel more comfortable discussing problems with same-age peers than participating in mixed-aged groups. Mixed-age groups may also result in some vulnerable older people coming into conflict with younger service users

Guidelines on addiction services for older adults

At a national level, recent guideline documents describe principles and requirements for the provision of publicly funded alcohol treatment and addiction services for older adults. The documents are based on consultation with expert groups and stakeholders and therefore reflect some of the latest thinking from a New Zealand perspective.

The Ministry of Health's Mental Health and Addiction Service Development Plan for 2012–2017 notes the significant changes that have taken place over the last 20 years in the organisation and delivery of mental health and addiction services in New Zealand. They include: the shift from institutions to a greater focus on the delivery of support and treatment in local hospitals, the community and people's homes; significantly greater government spending on mental health and addiction services; growth in access to specialist services; development of culturally

specific services; increased involvement of services users, their families and whānau in service planning and delivery; and growth of a strong non-government organisation (NGO) sector providing a range of support and clinical services that play a significant part in addressing people's mental health and addiction issues (Ministry of Health, 2012b).

Looking to the future, the plan emphasises the importance of existing services paying greater attention to early intervention and strengthening integration between primary and specialist services.

Looking specifically at older adults, the plan acknowledges that with the projected rapid increase in the size of the older adult population, addressing the mental health and addiction needs of older adults will become increasingly important (Ministry of Health, 2012b). It identifies the overarching goal of expanding older adults' access to mental health and addiction services, as part of supporting older adults to make a positive contribution in the home and community of their choice. It notes that mental health and addiction issues in older adults can be complicated by social isolation and by physical and cognitive conditions related to ageing, meaning that mental health and addiction issues can get overlooked. The plan also observes that, within the mental health and addiction sector across the country, there is "considerable variability in the degree of focus on the needs of older adults" (Ministry of Health, 2012b, p. 54).

Priority actions the plan specifies for DHB and NGO mental health and addiction services include:

- promoting wellness planning (enhancing older people's ability to manage their own wellness)
- proactively engaging families and whānau (to reduce their family member's social isolation)
- enhancing integration within primary care and health of older people services (to better address the complex interrelationships between addiction needs and general health needs)
- ensuring addiction services are responsive to the needs of older people.

For enhancing integration across primary care and health of older people services, this includes DHB and NGO addiction services providing consultation and liaison services to primary care, general health and aged residential care services (eg, one-off assessments, telephone advice).

For ensuring addiction services are responsive to the needs of older people, this includes addiction services working closely with mental health services for older people. It also includes addiction services having staff with specific knowledge and skills in working with older people and their families and whānau. As well, where need dictates, addiction services will offer groups or programmes that are specifically tailored to the needs of older people (Ministry of Health, 2012b).

Another Ministry of Health report specifying guidelines for DHBs providing mental health and addiction services for older people reiterates several of the themes highlighted above (Ministry of Health, 2011). It also makes more specific observations about alcohol treatment services. The report was developed in consultation with mental health, addiction, disability, dementia and health of older people representatives. It, too, acknowledges that the number of older adults experiencing mental health problems or addiction is set to rise, adding that the 'baby boom' generation 'already has a higher rate of mental disorders than the current generation of older people' (Ministry of Health, 2011, p. 8).

The report observes that alcohol and other drug disorders (including alcohol-related dementia) will likely become more prevalent among older adults as the 'baby boomers' enter old age and as a result more people can be expected to seek treatment.

The report also notes the overlap between substance use disorders and mental health disorders, with research suggesting 20% of older adult outpatient mental health service users and 37% of older adult inpatient mental health service users have a substance use disorder.

Problematic substance use in older adults is recognised to include problem drinking as well as prescription and illicit drug problems. These problems may be exacerbated by social isolation and/or physical and/or cognitive decline, or the impact of unemployment or relationship breakdown. Substance use can also mask the development of dementia (Ministry of Health, 2011).

A number of issues relating to existing primary and secondary services are identified including: barriers preventing people from accessing primary and secondary services; fragmentation and variability in specialist service provision across DHBs; confusing referral processes resulting in multiple referrals and duplicate specialist assessments; and significant workforce needs. The report also refers to background literature confirming that:

- there is under-diagnosis and under-treatment of conditions in older people, which imposes a considerable cost on health services as well as individuals and their families
- outcomes for older people are improved when defined needs are matched to service delivery in age-appropriate environments
- services are enhanced by integration and collaborative practices, such as joint assessments and care planning and shared clinical pathways
- the viability of services is enhanced by developing workforce capacity and capability.

Strategies identified for addressing these issues include:

- raising awareness of problems associated with mental health, addiction and dementia in older people
- minimising barriers to accessing services by streamlining referral and triage processes
- implementing an integrated system of care and support
- focusing on initiatives to recruit, retain and train the workforce to better meet the needs of older people with mental health and addiction problems.

Key recommendations in the report include: services will be based on need, not age; providers will use recognised tools for assessing mental health and addiction problems; training programmes for staff will incorporate cultural competencies appropriate to the population being served; workforce contracts will include cultural competencies enabling the workforce to respond better to the mental health and addiction needs of older Māori and older Pacific people.

In relation to properly assessing older adults' needs and enabling them to access an appropriate range of services, the guidelines highlight the pivotal role of community-based multidisciplinary

specialist teams. The teams are expected to maintain collaborative working relationships with primary health and other government, non-government, private and voluntary organisations to make it easier for older adults to access other needed services (Ministry of Health, 2011).

The guidelines also emphasise the diverse range of interventions and services that older adults may require in order to address their multi-layered and sometimes complex needs, such as when alcohol and/or mental health issues are 'blurred' by physical health conditions. Access may be needed to specialist psychological interventions, acute inpatient services, education and social services, peer support services, home-based support, day programmes, respite care, or social activities, or even in some cases referral to hospital-level services, residential care, dedicated dementia units or palliative care.

Other NZ consultation-based reports

Two recent New Zealand studies consulted with health and social service providers in different parts of the country to gather ideas on how existing alcohol treatment services could better meet the needs of older adult problem drinkers. One was a study in Canterbury that included interviews with addiction treatment staff, counsellors, nurses, community workers, rest home managers and volunteers working in the aged-care, health and social sectors (Wylie, 2010). The other was a study in Auckland, Whangarei and Napier that interviewed a range of service providers including alcohol treatment and aged-care workers, plus a small number of older adults (Kina Trust, 2011).

The following are some of the key impressions and suggestions to come out of the two studies:

- There is a need for age-appropriate alcohol treatment services for older adults that adequately cater for the diverse needs of older adults.
- These diverse needs may relate to physical or sensory disabilities, ongoing medical conditions, transport issues, and difficulties with independent living.
- Alcohol treatment services for older adults should be holistic and multidimensional, addressing the needs of the person across all areas of life: physical, nutritional, cognitive, medical, psychological, social and cultural.
- Lack of age-appropriate alcohol treatment services in many areas of New Zealand restricts the capacity of frontline health and social service providers to refer older adults for specialised alcohol treatment.
- Compared with younger adults, treatment staff may need to spend more time engaging and building rapport with older adults and their family or whānau, and in developing treatment goals and strategies.
- Because of age-related factors, some older adults will prefer treatment sessions to be shorter and less intense.
- Mixed-age rather than same-age treatment settings may be appropriate for some older adults.
- The design and layout of treatment facilities need to cater for older adults with differing abilities (eg, mobility, sensory).
- Alcohol treatment service staff should have more training on working with older adults.

- Alcohol treatment staff need better knowledge of medical and functional problems commonly experienced by older adults, with dementia being one important area where extra skills are required.
- Treatment services for older adults should offer community outreach options, including home-based counselling and support, and transport assistance.
- Stigma can be a significant issue for older adults with alcohol problems.
- Counselling is likely to need to focus on life-stage issues (grief, loneliness, and family relationships).
- Counselling may be less accepted and valued by the 'older-old' people.
- Counselling typically will be just part of a wider programme of interventions involving health services, aged-care support services, home support, family, church and service clubs.
- Dealing closely with the older adult's GP is likely to be a central part of the treatment process.
- During detoxification, older adults generally require more medical oversight as withdrawal can be intense and there is greater risk of complications from other medical conditions.
- Older adults, their family and health workers can underestimate the intensity and severity of detoxification.
- There may be barriers to accessing hospital-based detoxification services for some continually relapsing older adults.
- Formalised care protocols and treatment pathways should be developed for the different levels of alcohol problems experienced by older adults.
- Local professional networks should be set up focusing on services for older adults with alcohol problems and their families and carers.
- Professional development and in-service training for health and social service staff working closely with older people should include more information on recognising and responding to alcohol problems.
- Systems need to be put in place to enable home-based support workers to report concerns about alcohol-related harm.

Several of these themes are reiterated in a New Zealand best practice guide for conducting talking therapies with older adults experiencing mental health or addiction issues (Te Pou, 2010). The guide emphasises how the structure and content of talking therapies may need to be adapted to take account of the special challenges that older adults face related to bereavement, retirement, loss of independence, and physical and cognitive impairments. It notes that counselling sessions may need to be timed or paced differently, with shorter sessions, more repetition and more follow-up or booster sessions. It also considers involvement of the older adult's family/whānau or other support people as essential, especially if they have a carer role.

In relation to the above, it is important to note that at least two publicly funded, age-specific specialist alcohol and drug services for older adults have been started recently in New Zealand: one at Whanganui Hospital (a part-time nurse/counsellor) and the other based in Henderson, Auckland (a small '65+' team in the local Community Alcohol and Drug Service). Feedback from

staff at the Auckland service confirmed that working with older adults often requires more time and involves addressing a number of health and social issues including grief, loneliness and family relationships (Kina Trust, 2011).⁵¹

Overseas literature on specialist alcohol treatment services for older adults

There is a large amount of overseas literature looking at how alcohol and other drug treatment services can better respond to the needs of older adults. It is beyond the scope of this report to review all this literature in depth. However, a major Canadian report has been influential and draws together much of the 'best practice' thinking in the area (Health Canada, 2002). The report is based on a review of literature and consultation with key experts. Some of the main treatment principles it emphasises include that:

- it is important to take a client-centred approach that is unhurried, non-confrontational, non-threatening, tolerant of people's living conditions, respectful of people's dignity, and confident that older adults are valuable to society
- the goals of treatment should be individualised, set by the older adult and focus not just on substance use but also ageing, health and other quality of life issues
- the duration and frequency of treatment sessions should be guided by client need, be flexible and adaptable, and where necessary taking a slower approach and allowing more time to develop empathy and engagement
- in general, older adults appear to respond better to harm reduction approaches rather than abstinence approaches, with relapse seen as part of the process of recovery
- a comprehensive continuum of services should be in place, ideally arranged in conjunction with a multidisciplinary team, with referrals available to services such as psychologists, psychiatrists, dual diagnosis specialists, nutritionists and spiritual care specialists
- collaboration and communication between professionals and agencies are a critical part of service delivery
- services should include access to physicians who are knowledgeable about alcohol and other substance use issues in older adults, including interactions between alcohol, prescribed medications and ongoing medical conditions
- the transport needs of older adults should be anticipated and met, especially where outreach services are not available
- options for home care and in-home services should be available
- outreach can be central to getting a better appreciation of the person's home environment

⁵¹ Odyssey House in Christchurch is now offering a SixtyFive ALIVE programme for people aged 65 and over concerned about their use of alcohol and other drugs, including prescribed medication. For details go to: <http://www.odysseychch.org.nz/images/documents/Brochures/65alive.pdf>

- treatment providers should be trained in both substance use and gerontology issues
- where an older adult has a support network of family, caregivers and/or friends, then if appropriate (and where confidentiality issues allow) these people should be involved in the treatment process
- services should respect and appreciate social and cultural differences, including the way different cultures view older adults
- counselling should target areas beyond substance use including depression, loneliness, suicidal thinking, anxiety and abuse. Other issues may include losses relating to health, mobility, independence, hearing or sight, or loved ones. New coping strategies need to be developed to address these issues
- interventions should include opportunities for exercise, social activities and connection to the community. If a person's existing social networks are based on problematic alcohol or other substance use, then a challenge is to help the person develop new social contacts away from alcohol and other substances
- overcoming isolation is central to many people's recovery, so access to community supports such as social groups, church involvement or outreach visits is very important.

Wadd et al. (2011, p. 28), from an English perspective, make the following suggestions for how mainstream alcohol and other drug treatment services could cater better for older adults:

- have a good knowledge of age-associated stressors, precipitating factors and risk factors for relapse
- be aware of some of the risks associated with problem alcohol use in old age such as falls, elder abuse and suicide
- understand the distinction between early- and late-onset drinkers and the implications for treatment
- be aware of ageist attitudes and myths that surround alcohol misuse and become skilled at challenging them
- be skilled in establishing a rapport with older people and carrying out a comprehensive assessment not only of alcohol use but also of activities of daily living
- have an understanding of the latest research on what treatment approaches work best with older drinkers
- be able to deliver age-appropriate, person-centred treatment that tackles the client's day-to-day health, social and living needs as well as the alcohol problem
- be able to involve family, caregivers and friends in treatment where appropriate
- be prepared to deliver treatment at the older person's home
- be prepared to facilitate and oversee a package of support as required
- know how to refer to specialist older people's alcohol services where they exist

- develop good collaboration and communication with colleagues that work with older people in frontline health and social care services
- ensure that premises are accessible, safe and culturally appropriate for older people
- ensure that older people are represented on service user groups.

Overseas examples of specialised alcohol treatment services for older adults

There are a number of overseas examples, particularly from North America, of specialised alcohol and other drug treatment services designed specifically for older adults and their families or carers. Three examples of these are briefly discussed here to illustrate the types of approaches used.

Foundation66 Older Persons Alcohol Service (London, England)

Foundation66 is a large charitable organisation providing alcohol and drug treatment services to people of all ages in the London area. As part of its work, the Foundation runs specific services for people over 60 who either are experiencing drinking problems or want more information about alcohol and their health.⁵² The services are based in different parts of the city including Kensington and Chelsea, Hammersmith and Fulham, and Westminster. The main focus of the services is providing one-to-one counselling and support in people's own homes, or in primary care settings if people prefer not to be visited at home. Harm reduction and abstinence approaches are both offered. People are linked to other support services they may need. The services also include support and advice for older adults affected by the drinking of others, as well as education on alcohol issues and the ways drinking can affect people as they get older.

Community Outreach for People with Addictions (Toronto, Canada)

Community Outreach for People with Addictions (COPA) is a non-profit community organisation providing specialised addiction outreach services for people aged 55 and over. The service's trained outreach workers visit older adults wherever they are living, including in their own home, retirement complexes and long-term care facilities. They also make contact with older adults who are homeless or in other ways marginalised or isolated. Engagement with the client's family members and other social networks, plus caregivers and/or other health and social service providers, is another part of the outreach worker role.⁵³

Referrals to the service come from a variety of sources including community care services, hospitals, victim support services, the courts, GPs, nurses, supported housing managers, taxis, police, and probation services (Health Canada, 2002). Core principles of the service include that treatment should be supportive and non-confrontational, and address negative emotional states such as depression, loneliness, and overcoming losses. A central goal is to give people skills to help them rebuild an effective social support network.

Treatment sessions for individuals and groups are run by outreach workers. The sessions cover topics such as substance use, mental health, bereavement, financial planning, effective communication, sexual health and problem gambling. Sessions are run in long-term care homes, hostels, drop-in-centres, hospitals, and supportive or community housing complexes. The

⁵² <http://www.foundation66.org.uk/pages/older-persons-alcohol-services.html>

⁵³ <http://www.copacommunity.ca/>

service also offers family therapy sessions, clinician-facilitated support groups and aftercare follow-up contact with clients.

Older Wiser Lifestyles (OWL) programme (Mornington Peninsula, Australia)

The Older Wiser Lifestyles programme is one of Australia's first alcohol and other drug screening, brief intervention and intensive individual counselling services specifically targeting adults aged 60+ (Hunter, 2011). The programme operates mainly as an outreach service, with staff visiting clients on a one-to-one basis in their own home. Referrals come from a variety of sources including local hospitals and GPs, as well as self-referrals. The service advertises in local media and also has close links with the district's:

- cognitive, dementia and memory services
- home and community care services
- aged mental health services
- falls services
- local hostels, retirement villages and nursing homes.

A focus of the programme is educating health practitioners to ask patients about alcohol and other drugs. Education services are also freely provided to other groups in the community, including as part of broader health promotion initiatives targeting older adults.

Staff at the OWL programme have also taken the lead in modifying the North American-designed Alcohol-Related Problems Survey (ARPS) screening tool to accommodate Australian standard drink sizes and prescription medication types. The modified screening tool is called A-ARPS, the Australian Alcohol-Related Problems Survey, and was launched in August 2011 (see the earlier section 'Alcohol screening tools for older adults' in this chapter).

Future of specialised alcohol and drug treatment services for older adults

There is debate internationally about how necessary it is to offer age-specific treatment services for older adults. In the United States, some 20% of public and private treatment centres offer specialised services for older adults, but in the United Kingdom the proportion is probably less than 1% (Wadd et al., 2011).

Compared with many mainstream services, the few United Kingdom age-specific services that do exist are reported to have:

- smaller caseloads
- lengthier and more comprehensive assessment processes
- a slower-paced and more extended period of treatment
- the option of home visits
- a high level of multi-agency working and case management
- family and peer involvement
- a focus on age-specific issues.

Supporters of age-specific services contend that some older adults feel more comfortable discussing problems with same-age peers than participating in mixed-age groups. Mixed-age groups may also result in some vulnerable older people coming into conflict with younger service users (Wadd et al., 2011).

Clinical outcomes studies of older adult treatment services

Overseas, more than a dozen clinical studies have been published since 1980 examining outcomes from different types of age-specific alcohol and other drug treatment interventions for older adults. It is outside the scope of the present report to look at each of these studies individually, but a recent review by Kuerbis and Sacco (2013) provides a useful summary of the studies and discusses their implications.

All of the studies appear to have been conducted in North America, with several recruiting participants from military service veteran populations. The review notes that many of the more intensive treatments had a focus on abstinence rather than harm reduction approaches. The most commonly studied form of treatment was outpatient treatment. The review concluded that, while available evidence is limited, age-specific treatments 'may work better' with older adults than mixed-age treatments. Features of the age-specific treatments highlighted included the 'emphasis on building relationships and support, less confrontation, and an older-adult-only environment' (Kuerbis & Sacco, 2013, p. 32).

A recent English review found evidence suggesting that older adults were more compliant with alcohol treatment than younger adults, and just as likely to benefit from treatment. In particular, late-onset problem drinkers appear to be especially likely to benefit (Wadd et al., 2011). The review also noted that the great heterogeneity of the older adult group means it is important that alcohol treatment is tailored to individual needs.

8 KNOWLEDGE GAPS AND FUTURE RESEARCH

Key points:

- Given the projected increasing size of the older adult population, and the special issues that surround drinking in older age, it will be important in future that adults aged 65+ are routinely included in national and regional alcohol consumption surveys. Where practical, sufficient numbers of older adults should be included so that results can be reported separately for older adults aged 75+ and older adults aged 85+, as well as by gender and for different ethnic groups
- Population survey cut-off scores for defining hazardous and harmful drinking in older adults may need to be set lower than for other adults, to take account of their greater sensitivity to alcohol, higher rates of chronic health problems, medication use and functional limitations
- Designers of new surveys could also consider using different screening tools for defining hazardous and harmful drinking by older adults, such as tools that include questions about health, disability, and medication use
- There is scope to further analyse existing national health survey data, to see how many older New Zealand adults drink alcohol when they have chronic health or disability conditions, or take prescription drugs or other medications incompatible with alcohol
- Qualitative social studies are valuable for gathering rich contextual data on the personal and social factors influencing older people's drinking, how and why they change their drinking habits as they age, and their viewpoints and beliefs about the connections between alcohol, ageing and health. Hardly any of these kinds of studies have been conducted with older New Zealanders in the last decade
- At least four longitudinal cohort studies are ongoing in New Zealand at the moment. All of them have potential to yield data showing how older adults' drinking patterns change over time
- Evaluation research could be helpful for testing better ways for frontline health professionals and others to identify and respond to older adults' hazardous and harmful alcohol use
- As the demand for alcohol treatment services for older adults is expected to rise in future, research is likely to play an important part in helping to define which treatment approaches are acceptable and effective for this group

This review has brought together information about alcohol and older adults from across a range of New Zealand and overseas sources. These include review articles (some systematic), epidemiological studies, national and local population surveys, in-depth qualitative studies, published guidelines, health education resources and websites of health and social service organisations.

To conclude the report, the discussion below highlights some gaps in the existing New Zealand survey data and research literature. It also suggests some areas for future research.

SURVEYING THE DRINKING PATTERNS OF OLDER ADULTS

In the last 20 years, a number of national and regional surveys have collected data on the drinking patterns of New Zealanders aged 65+. Usually this has been part of a larger study of the whole adult population. Other national alcohol surveys have been conducted, but these have only covered adults up to the ages of 64 or 65.

Given the projected increases in the number of older adults in the New Zealand population, and the special issues that surround drinking in older age, it will be important in future that adults aged 65+ are routinely included in national and regional alcohol consumption surveys.

Where practical, sufficient numbers of older adults should be included so that separate results can be reported for older adults aged 75+, and older adults aged 85+. Ideally, sufficient numbers should also be included to enable reliable analysis by both gender and ethnicity.

To date, there have been few alcohol surveys focusing on older Māori, Pacific or Asian adults aged 65+. The proportions of these groups in the older population are set to rise steeply in coming years, and it will be important to compare their different drinking patterns and associated factors with New Zealand Europeans of the same age.

Alcohol surveys should also recognise the diversity of older adults by, where possible, collecting information on factors such as their living circumstances, work status, income, and personal health status, use of prescription drugs and disabilities.

MEASURING HAZARDOUS AND HARMFUL DRINKING AMONG OLDER ADULTS

In surveys that aim to document levels of hazardous or harmful drinking among older adults, sufficient sample numbers should be included for the 65–74, 75–84 and 85+ age groups to allow separate analysis and reporting for these groups, including analysis by gender.

Future general surveys of older adults' hazardous or harmful alcohol use should also consider including sufficient sample numbers to allow separate analysis for different ethnic groups. It may also be useful to consider conducting separate, ethnic-group-specific surveys of older adults. To date, there have been few surveys investigating hazardous and harmful drinking among older Māori and older Pacific adults. Only one known recent survey includes older Asian adults (Towers et al., 2011).

SURVEY SCREENING TOOLS

There is debate in the alcohol research literature about the most valid ways to define and measure hazardous and harmful drinking in older adults. Some researchers conclude that older adults' greater sensitivity to alcohol, and their higher rates of chronic health problems, medication use and functional limitations mean that screening-tool thresholds or survey cut-off

scores for defining hazardous and harmful drinking in older adults should be set lower than for other adults.

On this basis, for example, it may be inappropriate in surveys using the full (10-item) AUDIT screening tool to adopt 8+ as the threshold/cut-off score for hazardous and harmful drinking among older adults of both genders. Instead, a lower cut-off score may be more appropriate, especially perhaps for older women.

In principle, assuming there are sufficient sample numbers, it may be possible to re-analyse existing data from national surveys (eg, the latest 2012/13 New Zealand Health Survey) to measure harmful and hazardous drinking among older adults based on lower AUDIT threshold scores.

Designers of new alcohol surveys could also consider using lower thresholds to define hazardous and harmful drinking in older adults. Alternatively, they could use different screening tools for defining hazardous and harmful drinking by older adults, such as tools that include questions about health, disability, medication use and personal history of alcohol-related problems (eg, to distinguish early- and late-onset harmful drinking).

FACTORS INFLUENCING THE DRINKING OF OLDER ADULTS

Qualitative studies

Only a handful of New Zealand qualitative social studies have looked in detail at the place of alcohol in the lives of older adults. Such studies are valuable for gathering rich contextual data on the complex personal and social factors influencing older people's drinking, how and why people change their drinking habits as they age, and their viewpoints and beliefs about the connections between alcohol, ageing and health.

Hardly any of these kinds of studies have been conducted in the last decade. While there has been one published qualitative study of older women and alcohol (Routledge, 1988), there has been none specifically of older men. There have also been few, if any, detailed New Zealand social studies examining the alcohol-related beliefs and practices of older Māori (Herbert, 2013), older Pacific or older Asian adults.

Longitudinal studies

Only one published longitudinal quantitative study has looked at changing drinking patterns in a single cohort of older adults over time (SoFIE, McKenzie et al., 2014). So far, this study has not reported, in a longitudinal way, the effects on alcohol use of changes in life circumstances such as retirement, becoming widowed, onset of health problems, reduction in income, and so on. Further analysis of the existing SoFIE survey data along these lines may be possible if there are sufficient numbers in the survey sample.

Three other longitudinal studies are currently examining alcohol consumption (and other issues) among older New Zealand adults. These are likely to publish results in the short to medium term. The studies are:

- the New Zealand Longitudinal Study of Ageing (formerly Health, Work and Retirement Longitudinal Study; and before that the Health, Work and Retirement Study [HWRS]) – in

the 2006 HWRS, adults were aged 55–70; additional participants aged 50–85 joined later (Dulin et al., 2011; Massey University, 2014; Stevenson et al., [in preparation] cited by Herbert, 2013)

- Lakes/Bay of Plenty District Health Board area's Life and Living in Advanced Age: A Cohort Study in New Zealand (LiLACS NZ) – at the study's baseline in 2010, Māori participants were aged 80–90 and non-Māori were aged 85 (Faculty of Medicine and Health Sciences, c. 2012; Hayman et al., 2012; Kerse, Dyll, Hayman, Kepa, & Moyes, n.d.)
- the Canterbury Health, Ageing and Life Course (CHALICE) study – a longitudinal study of 1,000 Canterbury adults aged 49–51 from 2010, including a database of the determinants of health and a biobank (Schluter et al., 2013).

A further two longitudinal studies are collecting alcohol-related data that, in the longer term, can be expected to provide detailed information on older adults' current and lifetime drinking patterns. These are:

- the Dunedin Multidisciplinary Health and Development Study – participants have been followed since birth in 1972/73 (Dunedin Multidisciplinary Health and Development Research Unit, 2014)
- the Christchurch Health and Development Study – participants have been followed since birth in mid-1977 (University of Otago, 2014).

ALCOHOL AND THE HEALTH OF OLDER ADULTS

Numerous overseas studies report statistical associations between alcohol use and the development of various health conditions. Many also advise that alcohol should not be taken with particular types of medication, or if people have certain medical conditions. However, in many cases, at least judging by the literature consulted for this report, the possible causal connections between alcohol and the various harmful effects described do not seem to be always fully explained or understood. This is perhaps understandable given the difficulties of designing research studies that categorically show alcohol causes certain health outcomes in people. Indeed, one special difficulty in research design is that healthier older adults on the whole tend to drink more alcohol than those who are frail or have health problems (Anderson, Scafato, & Galluzzo, 2012).

There has been little published New Zealand research examining how many older New Zealand adults drink alcohol when they have existing health or disability conditions, or are taking prescription and other medications. One way of studying these issues in future could be by further analysing existing data from the 2012/13 New Zealand Health Survey. The survey collected information about older adults' use of alcohol (using the full 10-item version of the AUDIT), as well as information about their health conditions and medication use.

Qualitative research studies may also be appropriate for exploring in more depth the contexts in which some older adults drink alcohol when they have existing health/disability conditions, or are taking contraindicated medications.

Similarly, there is scope to investigate how much older (and younger) New Zealanders currently know about the age-related changes that can alter their sensitivity to alcohol in later life. This same research could also examine what older adults know or think about safe drinking guidelines, or other alcohol-related advice or recommendations issued by health authorities.

SCREENING AND BRIEF INTERVENTION

Currently there seems to be little New Zealand data showing what kinds of alcohol screening and brief interventions work best with older adults. As well, there seem to be no New Zealand evaluations of screening and brief intervention initiatives that specifically examine outcomes relating to older adults. This includes in general practice settings as well as other frontline health, social service and aged-care settings. In future, such evaluations might be helpful as part of testing and promoting better ways for frontline health professionals and others to identify and respond to older adults' hazardous and harmful alcohol use.

SPECIALIST ALCOHOL TREATMENT SERVICES

More local research may also be needed to clarify the best ways to provide specialist alcohol treatment services for older adult problem drinkers. This includes adults who first develop alcohol use disorders later in life.

A number of national policies and guidelines have been issued related to improving the delivery of specialist alcohol treatment services for older adults. However, this review has found no published evaluations of New Zealand-based alcohol treatment services focusing specifically on the 65+ age group.

Overseas studies point to a number of special service elements that could be offered as part of older adult addiction treatment services, such as home-based counselling or transport assistance. However, there appears to be a lack of in-depth New Zealand research looking at the importance of these elements from the point of view of older adults and treatment staff. As the demand for alcohol treatment services for older adults is expected to rise in future, this type of research is likely to play an important part in helping to define which treatment approaches are acceptable and effective for this group.

APPENDIX TABLES

Appendix table 2.1: Projections for New Zealand population, by age group, 2011–2061

Year	Age group (years)					Total
	0–14	15–39	40–64	65+	85+	
2011 (base)	894,000	1,499,000	1,425,000	587,000	73,000	4,405,000
2016	896,000	1,540,000	1,448,000	702,000	86,000	4,586,000
2021	918,000	1,609,000	1,447,000	824,000	96,000	4,798,000
2026	922,000	1,666,000	1,449,000	967,000	118,000	5,004,000
2031	935,000	1,669,000	1,484,000	1,107,000	147,000	5,195,000
2036	936,000	1,669,000	1,541,000	1,216,000	195,000	5,362,000
2041	935,000	1,690,000	1,605,000	1,282,000	237,000	5,511,000
2046	938,000	1,718,000	1,675,000	1,314,000	286,000	5,646,000
2051	948,000	1,718,000	1,734,000	1,366,000	329,000	5,767,000
2056	959,000	1,731,000	1,741,000	1,451,000	354,000	5,882,000
2061	967,000	1,740,000	1,743,000	1,545,000	360,000	5,995,000
Change 2011-2061*	1.1	1.2	1.2	2.6	4.9	1.4

Source: Statistics New Zealand national population projections

Notes: Median (50th percentile) projections used

Projections based on estimated 2011 population

*Calculated by dividing number of people projected for 2061 by number for 2011.

Figures do not necessarily sum to the totals because they are rounded to the nearest 1,000.

Appendix table 2.2: Number of New Zealanders by age group and gender, 2013

Age group (years)	Male	Female	Total
0–4	149,295	142,746	292,041
5–9	146,202	140,556	286,758
10–14	146,673	140,157	286,830
15–19	150,912	144,846	295,758
20–24	145,593	145,095	290,688
25–29	124,956	133,176	258,135
30–34	121,899	134,652	256,554
35–39	126,363	141,156	267,519
40–44	144,078	161,676	305,754
45–49	144,336	157,302	301,635
50–54	144,576	155,421	299,994
55–59	126,258	133,926	260,187
60–64	114,000	119,163	233,163
65–69	95,553	100,464	196,020
70–74	72,012	78,105	150,114
75–79	49,542	57,012	106,557
80–84	35,583	45,444	81,027
85+	26,184	47,133	73,314
<i>Total people, 65+</i>	<i>278,877</i>	<i>328,158</i>	<i>607,032</i>
Total people, New Zealand	2,064,018	2,178,030	4,242,048

Source: Statistics NZ 2013 Census data

Notes: Data are for the usually-resident population

Figures do not necessarily sum to the totals because they are rounded to multiples of 3.

Appendix table 2.3a: Ethnic group of New Zealanders, by age group, 2013 (numbers)

Age group (years)	European	Māori	Pacific	Asian	Middle Eastern/Latin American/African	New Zealander	Other ethnic group (not elsewhere classified)	Not elsewhere included	Total
0–14	583,149	202,317	105,516	97,203	11,982	12,342	381	43,734	865,632
15–24	372,672	107,001	56,841	83,094	8,064	6,165	288	38,073	586,446
25–49	913,701	179,892	88,641	198,009	20,514	24,069	792	80,382	1,389,591
50–64	591,366	77,208	30,990	66,096	4,848	15,696	228	40,758	793,344
65–74	281,433	22,191	9,411	18,213	1,020	5,634	66	16,278	346,134
75–84	160,416	8,505	3,750	7,701	411	1,677	24	8,220	187,584
85+	66,654	1,491	783	1,398	123	393	9	3,207	73,317
<i>Total people, 65+</i>	<i>508,503</i>	<i>32,187</i>	<i>13,944</i>	<i>27,312</i>	<i>1,554</i>	<i>7,704</i>	<i>99</i>	<i>27,705</i>	<i>607,035</i>
Total people, New Zealand	2,969,391	598,605	295,932	471,714	46,962	65,976	1,788	230,652	4,242,048

Source: Statistics NZ 2013 Census data

Notes: Data are for the usually-resident population

Figures do not necessarily sum to the totals because a) they are rounded to multiples of 3 and b) people were able to identify themselves as belonging to more than one ethnic group.

Appendix table 2.3b: Ethnic group of New Zealanders, by age group, 2013 (percentages)

Age group (years)	European	Māori	Pacific	Asian	Middle Eastern/Latin American/ African	New Zealander	Other ethnic group (not elsewhere classified)	Not elsewhere included	Total
0–14	67	23	12	11	1	1	0	5	100
15–24	64	18	10	14	1	1	0	6	100
25–49	66	13	6	14	1	2	0	6	100
50–64	75	10	4	8	1	2	0	5	100
65–74	81	6	3	5	0	2	0	5	100
75–84	86	5	2	4	0	1	0	4	100
85+	91	2	1	2	0	1	0	4	100
<i>Total people, 65+</i>	<i>84</i>	<i>5</i>	<i>2</i>	<i>4</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>5</i>	<i>100</i>
Total people, New Zealand	70	14	7	11	1	2	0	5	100

Source: Statistics NZ 2013 Census data

Notes: Data are for the usually-resident population

Figures do not necessarily sum to the totals because a) they are rounded to multiples of 3 and b) people were able to identify themselves as belonging to more than one ethnic group.

Appendix table 2.4: Projections for New Zealand population, by age group and ethnic group, 2006–2026

Age group (years)	Ethnic group			
	European / Other	Māori	Pacific	Asian
	2006			
0–14	645,300	215,300	110,300	83,600
15–39	1,040,700	245,500	120,200	193,800
40–64	1,064,200	137,800	59,600	108,200
65+	463,200	25,700	11,500	18,800
Total	3,213,300	624,300	301,600	404,400
	2011			
0–14	640,400	230,700	126,100	100,300
15–39	1,029,000	254,500	133,300	235,100
40–64	1,122,300	156,900	70,900	136,700
65+	520,500	32,100	14,700	29,100
Total	3,312,200	674,200	345,000	501,100
	2016			
0–14	635,400	246,000	141,400	124,000
15–39	1,017,600	264,200	148,100	267,400
40–64	1,120,200	170,400	80,500	160,800
65+	607,000	41,900	18,900	44,000
Total	3,380,200	722,600	388,800	596,100
	2021			
0–14	629,400	259,900	155,900	149,000
15–39	1,024,900	275,700	164,400	290,100
40–64	1,089,500	178,000	89,200	191,300
65+	687,400	53,700	24,300	63,600
Total	3,431,100	767,300	433,700	694,100
	2026			
0–14	610,900	258,200	164,700	164,400
15–39	1,035,800	302,700	188,600	303,500
40–64	1,047,000	180,700	97,000	235,000
65+	778,100	69,100	30,900	88,300
Total	3,471,700	810,700	481,200	791,200
	Change 2006–2026*			
0–14	0.9	1.2	1.5	2.0
15–39	1.0	1.2	1.6	1.6
40–64	1.0	1.3	1.6	2.2
65+	1.7	2.7	2.7	4.7
Total	1.1	1.3	1.6	2.0

Source: Statistics NZ NZ.Stat tables

Notes: Medium (series 6) projections used

Projections based on 2006 population

*Calculated by dividing number of people projected for 2026 by number for 2006.

Figures do not necessarily sum to the totals because they are rounded to the nearest 1000.

Appendix table 2.5a: Work and labour force status of New Zealand adults aged 15+, by age group and gender, 2013 (numbers)

Gender and age	Employed full-time	Employed part-time	Total people employed	Unemployed	Total people in labour force	Not in labour force	Work and labour force status unidentifiable	Total people
Males								
15–24	97,668	44,709	142,377	29,331	171,705	107,571	17,232	296,502
25–49	497,409	33,843	531,252	27,366	558,609	66,675	36,351	661,629
50–64	267,801	27,876	295,683	12,474	308,154	58,806	17,877	384,831
65–74	43,656	21,792	65,445	1,317	66,762	94,128	6,675	167,565
75–84	3,678	6,621	10,296	108	10,407	71,796	2,928	85,128
85+	378	1,137	1,512	15	1,527	23,817	840	26,184
<i>Total males, 65+</i>	<i>47,712</i>	<i>29,550</i>	<i>77,253</i>	<i>1,440</i>	<i>78,696</i>	<i>189,741</i>	<i>10,443</i>	<i>278,877</i>
Total males, New Zealand 15+	910,590	135,978	1,046,565	70,611	1,117,164	422,793	81,903	1,621,839
Females								
15–24	65,826	62,877	128,700	31,971	160,677	111,945	17,325	289,941
25–49	348,834	145,068	493,896	37,707	531,609	160,374	35,988	727,962
50–64	194,883	84,708	279,588	12,093	291,684	98,826	18,003	408,510
65–74	19,830	25,590	45,423	774	46,200	125,349	7,023	178,569
75–84	999	4,557	5,553	42	5,598	93,840	3,018	102,456
85+	114	1,167	1,284	9	1,296	44,988	852	47,133
<i>Total females, 65+</i>	<i>20,943</i>	<i>31,314</i>	<i>52,260</i>	<i>825</i>	<i>53,094</i>	<i>264,177</i>	<i>10,893</i>	<i>328,158</i>
Total females, New Zealand 15+	630,486	323,967	954,444	82,596	1,037,064	635,322	82,209	1,754,571
Total (males plus females)								
15–24	163,488	107,589	271,080	61,302	332,382	219,513	34,554	586,443
25–49	846,240	178,905	1,025,148	65,067	1,090,221	227,040	72,339	1,389,597
50–64	462,681	112,590	575,268	24,567	599,835	157,632	35,880	793,344
65–74	63,486	47,379	110,871	2,091	112,956	219,480	13,695	346,134
75–84	4,671	11,175	15,849	156	16,002	165,633	5,949	187,584
85+	492	2,304	2,796	27	2,823	68,805	1,689	73,317
<i>Total people, 65+</i>	<i>68,649</i>	<i>60,858</i>	<i>129,516</i>	<i>2,274</i>	<i>131,781</i>	<i>453,918</i>	<i>21,333</i>	<i>607,035</i>
Total people, New Zealand 15+	1,541,058	459,942	2,001,012	153,210	2,154,219	1,058,103	164,106	3,376,419

Source: Statistics NZ 2013 Census data

Notes: Figures do not necessarily sum to the totals because they are rounded

Data refer to a person's work and labour force status in the seven days ending 3 March 2013

'Not in the labour force' means a person is not employed and is not actively looking for work.

Appendix table 2.5b: Work and labour force status of New Zealand adults aged 15+, by age group and gender, 2013 (percentages)

Gender and age	Employed full-time	Employed part-time	Total people employed	Unemployed	Total people in labour force	Not in labour force	Work and labour force status unidentifiable	Total people
Males								
15–24	33	15	48	10	58	36	6	100
25–49	75	5	80	4	84	10	5	100
50–64	70	7	77	3	80	15	5	100
65–74	26	13	39	1	40	56	4	100
75–84	4	8	12	0	12	84	3	100
85+	1	4	6	0	6	91	3	100
<i>Total males, 65+</i>	<i>17</i>	<i>11</i>	<i>28</i>	<i>1</i>	<i>28</i>	<i>68</i>	<i>4</i>	<i>100</i>
Total males, New Zealand 15+	56	8	65	4	69	26	5	100
Females								
15–24	23	22	44	11	55	39	6	100
25–49	48	20	68	5	73	22	5	100
50–64	48	21	68	3	71	24	4	100
65–74	11	14	25	0	26	70	4	100
75–84	1	4	5	0	5	92	3	100
85+	0	2	3	0	3	95	2	100
<i>Total females, 65+</i>	<i>6</i>	<i>10</i>	<i>16</i>	<i>0</i>	<i>16</i>	<i>81</i>	<i>3</i>	<i>100</i>
Total females, New Zealand 15+	36	18	54	5	59	36	5	100
Total (males plus females)								
15–24	28	18	46	10	57	37	6	100
25–49	61	13	74	5	78	16	5	100
50–64	58	14	73	3	76	20	5	100
65–74	18	14	32	1	33	63	4	100
75–84	2	6	8	0	9	88	3	100
85+	1	3	4	0	4	94	2	100
<i>Total people, 65+</i>	<i>11</i>	<i>10</i>	<i>21</i>	<i>0</i>	<i>22</i>	<i>75</i>	<i>4</i>	<i>100</i>
Total people, New Zealand 15+	46	14	59	5	64	31	5	100

Source: Statistics NZ 2013 Census data

Notes: Figures do not necessarily sum to the totals because they are rounded

Data refer to a person's work and labour force status in the seven days ending 3 March 2013

'Not in the labour force' means a person is not employed and is not actively looking for work.

Appendix table 2.6: Median annual personal income (\$) for New Zealand adults, by age group and gender, 2013

	Male	Female	Total (males plus females)
15–19	800	900	800
20–24	20,900	15,600	17,900
25–29	38,900	28,900	34,400
30–34	47,200	29,700	38,500
35–39	53,000	29,800	40,700
40–44	54,500	31,600	41,800
45–49	53,800	33,500	42,300
50–54	51,900	33,700	41,700
55–59	48,300	31,100	38,900
60–64	42,000	24,400	32,600
65–69	30,300	21,600	24,600
70–74	21,700	19,600	20,300
75–79	19,500	19,300	19,400
80–84	19,400	19,600	19,500
85+	20,400	19,900	20,000
<i>Total people 65 Years and over</i>	<i>22,500</i>	<i>19,900</i>	<i>20,900</i>
Total people, New Zealand	36,500	23,100	28,500

Source: Statistics NZ 2013 Census data

Appendix table 2.7a: Current relationship status of New Zealand adults aged 15+, by age group and gender, 2013 (numbers)

Gender and age	Spouse	De facto partner	Partner, not further defined	Total partnered	Separated (marriage, civil union)	Divorced, dissolved (marriage, civil union)	Widowed (married or civil union)	Non partnered (never married or in civil union)	Non-partnered not further defined	Total non-partnered	Not stated	Total people
Males												
15–24	4,638	27,426	2,496	34,560	279	132	81	214,836	20,859	236,184	25,758	296,505
25–49	297,402	123,030	15,882	436,320	13,314	14,457	1,146	133,356	17,307	179,568	45,744	661,626
50–64	232,965	40,011	8,136	281,109	13,161	25,806	4,266	28,605	7,818	79,662	24,066	384,837
65–74	112,809	9,156	3,123	125,094	4,233	11,331	7,020	6,639	2,904	32,124	10,347	167,568
75–84	52,959	2,427	1,836	57,219	1,308	4,044	10,479	2,640	2,529	21,003	6,909	85,128
85+	11,013	384	570	11,967	204	663	7,302	783	1,419	10,374	3,846	26,184
<i>Total 65+</i>	<i>176,781</i>	<i>11,967</i>	<i>5,529</i>	<i>194,280</i>	<i>5,745</i>	<i>16,038</i>	<i>24,801</i>	<i>10,062</i>	<i>6,852</i>	<i>63,501</i>	<i>21,102</i>	<i>278,880</i>
Total	711,786	202,434	32,046	946,266	32,493	56,433	30,291	386,859	52,836	558,912	116,667	1,621,845
Females												
15–24	9,345	38,079	2,925	50,349	861	204	84	198,255	16,923	216,330	23,268	289,941
25–49	340,599	126,090	14,709	481,407	24,252	28,077	3,774	132,243	16,647	204,993	41,559	727,962
50–64	230,826	35,052	6,819	272,700	16,692	42,816	17,010	25,755	9,225	111,501	24,306	408,507
65–74	97,158	6,150	2,685	105,996	4,209	18,174	29,010	5,538	3,552	60,483	12,093	178,569
75–84	35,604	1,311	1,413	38,328	1,035	6,201	40,254	2,844	3,705	54,036	10,092	102,456
85+	5,058	261	276	5,598	147	1,212	27,171	1,377	1,971	31,875	9,657	47,130
<i>Total 65+</i>	<i>137,820</i>	<i>7,722</i>	<i>4,374</i>	<i>149,922</i>	<i>5,391</i>	<i>25,587</i>	<i>96,435</i>	<i>9,759</i>	<i>9,228</i>	<i>146,394</i>	<i>31,842</i>	<i>328,155</i>
Total	718,593	206,946	28,833	954,372	47,202	96,690	117,300	366,009	52,023	679,224	120,978	1,754,574
Total (males and females)												
15–24	13,980	65,502	5,424	84,903	1,140	333	165	413,094	37,782	452,517	49,026	586,443
25–49	638,001	249,120	30,597	917,724	37,569	42,534	4,914	265,593	33,954	384,567	87,303	1,389,591
50–64	463,791	75,060	14,955	553,809	29,856	68,622	21,282	54,357	17,049	191,163	48,372	793,347
65–74	209,973	15,309	5,808	231,090	8,445	29,505	36,030	12,174	6,456	92,604	22,437	346,134
75–84	88,560	3,735	3,249	95,544	2,343	10,248	50,733	5,481	6,234	75,039	17,001	187,581
85+	16,071	648	846	17,562	348	1,875	34,473	2,163	3,393	42,249	13,503	73,317
<i>Total 65+</i>	<i>314,604</i>	<i>19,692</i>	<i>9,903</i>	<i>344,196</i>	<i>11,136</i>	<i>41,628</i>	<i>121,236</i>	<i>19,818</i>	<i>16,083</i>	<i>209,892</i>	<i>52,941</i>	<i>607,032</i>
Total	1,430,379	409,380	60,879	1,900,638	79,695	153,120	147,591	752,868	104,856	1,238,133	237,645	3,376,419

Source: Statistics NZ 2013 Census data

Notes: Data refer to current / most recent relationship

Figures do not necessarily sum to totals because they are rounded.

Appendix table 2.7b: Current relationship status of New Zealand adults aged 15+, by age group and gender, 2013 (percentages)

Gender and age	Spouse	De facto partner	Partner, not further defined	Total partnered	Separated (marriage, civil union)	Divorced, dissolved (marriage, civil union)	Widowed (married or civil union)	Non partnered (never married or in civil union)	Non-partnered not further defined	Total non-partnered	Not stated	Total people
Males												
15-24	2	9	1	12	0	0	0	72	7	80	9	100
25-49	45	19	2	66	2	2	0	20	3	27	7	100
50-64	61	10	2	73	3	7	1	7	2	21	6	100
65-74	67	5	2	75	3	7	4	4	2	19	6	100
75-84	62	3	2	67	2	5	12	3	3	25	8	100
85+	42	1	2	46	1	3	28	3	5	40	15	100
<i>Total 65+</i>	<i>63</i>	<i>4</i>	<i>2</i>	<i>70</i>	<i>2</i>	<i>6</i>	<i>9</i>	<i>4</i>	<i>2</i>	<i>23</i>	<i>8</i>	<i>100</i>
Total	44	12	2	58	2	3	2	24	3	34	7	100
Females												
15-24	3	13	1	17	0	0	0	68	6	75	8	100
25-49	47	17	2	66	3	4	1	18	2	28	6	100
50-64	57	9	2	67	4	10	4	6	2	27	6	100
65-74	54	3	2	59	2	10	16	3	2	34	7	100
75-84	35	1	1	37	1	6	39	3	4	53	10	100
85+	11	1	1	12	0	3	58	3	4	68	20	100
<i>Total 65+</i>	<i>42</i>	<i>2</i>	<i>1</i>	<i>46</i>	<i>2</i>	<i>8</i>	<i>29</i>	<i>3</i>	<i>3</i>	<i>45</i>	<i>10</i>	<i>100</i>
Total	41	12	2	54	3	6	7	21	3	39	7	100
Total (males and females)												
15-24	2	11	1	14	0	0	0	70	6	77	8	100
25-49	46	18	2	66	3	3	0	19	2	28	6	100
50-64	58	9	2	70	4	9	3	7	2	24	6	100
65-74	61	4	2	67	2	9	10	4	2	27	6	100
75-84	47	2	2	51	1	5	27	3	3	40	9	100
85+	22	1	1	24	0	3	47	3	5	58	18	100
<i>Total 65+</i>	<i>52</i>	<i>3</i>	<i>2</i>	<i>57</i>	<i>2</i>	<i>7</i>	<i>20</i>	<i>3</i>	<i>3</i>	<i>35</i>	<i>9</i>	<i>100</i>
Total	42	12	2	56	2	5	4	22	3	37	7	100

Source: Statistics NZ 2013 Census data

Notes: Data refer to current / most recent relationship

Figures do not necessarily sum to totals because they are rounded.

Appendix table 2.8: Disability among adults living in households, by age group, 2006

	Age group (years)						Total
	15–24	25–49	50–64	65–74	75–84	85+	
Number							
Male	19,000	75,000	83,000	43,000	36,000	9,000	264,900
Female	14,000	76,000	81,000	43,000	43,000	18,000	274,300
Total	33,000	151,000	164,000	85,000	79,000	27,000	539,200
Percent of all adults living in households							
Male	8	11	24	34	48	69	16
Female	5	10	22	31	48	70	15
Total	7	11	23	33	48	69	16

Source: Statistics New Zealand 2006 Household Disability Survey (Office for Disability Issues & Statistics New Zealand, 2010 and 2013)

Appendix table 3.1: Selected New Zealand surveys covering alcohol issues for adults aged 65 and over

Survey name (organisation or person conducting/ commissioning study)	Survey location: Study year(s)	Survey design – and methods; study group; total number of participants (number of older participants)	Related publications used in current report
New Zealand Health Surveys (Ministry of Health)	National: (a) 1996/97 (b) 2002/03 (c) 2006/07 (d) 2011/12 (e) 2012/13	Serial cross-sectional surveys – face-to-face interviews (computer-assisted from 2006/07); ages 15+: (a) 7,862 (1,528 aged 65+) (b) 12,929 (no. aged 65+ not stated) (c) 12,488 (2,360 aged 65+) (d) 12,370 (2,637 aged 65+) (e) 13,009 (3,029 aged 65+)	Ministry of Health (1999, 2004, 2008, 2013b, 2013d)
Household Health Survey (Statistics New Zealand and Ministry of Health)	National: 1992/93	Cross-sectional survey – telephone interviews (linked to Household Labour Force Survey, forerunner to New Zealand Health Surveys); all ages; 7,065	Statistics New Zealand and Ministry of Health (1993), Ministry of Health (1995)
SoFIE-Health sub-study – Waves 3, 5 and 7 of Survey of Family, Income and Employment (SoFIE) (Statistics New Zealand)	National: Whole survey: 2002–10 Wave 3: 2004/05 Wave 5: 2006/07 Wave 7: 2008/09	Longitudinal survey (household panel) – face-to-face interviews; all ages; 29,000 (3,465 aged 60+ at baseline)	Carter, Cronin, Blakely, Hayward, & Richardson (2010), Jatrana et al. (2011), McKenzie et al. (2014)
Health, Work and Retirement Study (Massey University)	National: 2006	Cross-sectional survey – postal written questionnaires; ages 55–70; 6,662 (forerunner of New Zealand Longitudinal Study of Ageing)	Dulin et al. (2011), Towers et al. (2011)
Attitudes and Behaviour towards Alcohol Survey (Health Promotion Agency, Research New Zealand)	National: (a) 2009 (b) 2010 (c) 2011	Serial cross-sectional surveys – computer-assisted telephone interviews; 18+: (a) 1,809 (b) 1,806 (c) 2,132 (20% aged 65+) (Pooled 3-year total 5,747)	Research New Zealand (2013a, 2013b, 2013c, 2013d)

Table continues next page

Appendix table 3.1 continued

Survey name (organisation or person conducting/ commissioning study)	Survey location: Study year(s)	Survey design – and methods; study group; total number of participants (number of older participants)	Related publications used in current report
Te Rau Hinengaro: The New Zealand Mental Health Survey (Ministry of Health)	National: 2003/04	One-off cross-sectional survey – face-to-face interviews (computer-assisted); ages 16+; 12,992 (2,244 aged 65+)	Oakley Browne et al. (2006), Sellman et al. (2011), Wells et al. (2007)
GENACIS survey (University of Otago)	National: 2007	Cross-sectional survey – postal questionnaire; ages 18–70; 1,924 (27.6% aged 55+)	Meiklejohn (2010), Meikeljohn et al. (2012a, 2012b)
Meta-analysis of five New Zealand surveys (Alcohol Burden of Disease and Disability Group) (a) New Zealand Health Survey/Nutrition Survey (b) Sleep Survey (c) Fletcher Challenge/ University of Auckland Survey (d) New Zealand Blood Donors Health Study (e) Workforce Diabetes Survey	National (a–b), population-specific (c–e): (a) 1997 (b) 1999 (c) 1992 (d) 1998–99 (e) 1988–90	Cross-sectional surveys – all were interviews except the Sleep Survey, which used a self-completed questionnaire; ages 18–74; 44,830 (13,178 aged 50–74, 1,814 Māori, 11,364 non-Māori)	Bramley et al. (2003)
AUDIT scores in general practice patients (University of Auckland/ Regional Alcohol and Drug Services)	Auckland: 1995/96	Cross-sectional – AUDIT ⁵⁴ questionnaires; ages 16+; 15,670	Paton-Simpson et al. (2000)

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⁵⁴ Information about AUDIT is provided in chapter 4.

Appendix table 3.1 continued

Survey name (organisation or person conducting/ commissioning study)	Survey location: Study year(s)	Survey design – and methods; study group; total number of participants (number of older participants)	Related publications used in current report
Diabetes Heart and Health Study (University of Auckland)	Auckland: 2002/03	Cross-sectional – self-administered questionnaire; ages 35–74; 2,756 (1,011 Pacific, 1,745 European)	Sundborn et al. (2009)
Survey of community-dwelling older people (Christchurch School of Medicine and Health Sciences)	Christchurch: c. 2001	One-off cross-sectional survey – face-to-face interviews, AUDIT, assessed for DSM-IV-defined alcohol dependence; ages 65+; 141	Khan et al. (2002), Khan et al. (2006)
Survey of elderly rest home residents (Christchurch School of Medicine)	Christchurch: 1998	One-off cross-sectional survey – face-to-face interviews, AUDIT, assessed for DSM-IV-defined alcohol dependence; ages 65+ (mean age 82.6); 175	Khan (1998), Khan et al. (2001)
Survey of older adults living in Mosgiel (University of Otago)	Mosgiel: c. 1988	Cross-sectional survey – face-to-face interviews; ages 70+; 774 (316 aged 70–75, 252 aged 75–79, 130 aged 80–84, 76 aged 85+) Also observational follow-up with 173 adults from each of the four different drinking sub-groups (abstainers, infrequent drinkers, weekly drinkers, daily drinkers)	Busby et al. (1988)

Source: Table by authors

Appendix table 3.2: Selected New Zealand surveys covering alcohol issues for adults aged 50–65

Study name/ description (organisation or person conducting/ commissioning study)	Survey location: Study year(s)	Study design – and methods; study group; total number of participants	Related publications used in current report
Te Ao Waipiro 2000: Māori National Alcohol Survey (Whariki Research Group, Alcohol and Public Health Research Unit, SHORE)	National: 2000	One-off cross-sectional survey – computer-assisted telephone interviews; Māori 13–65; 1,992	Moewaka Barnes et al. (2003)
Pacific Drugs and Alcohol Survey (PDACS) (Alcohol and Public Health Research Unit, SHORE, Whariki Research Group)	National: 2002/03	One-off cross-sectional survey – computer-assisted telephone interviews; Pacific 13–65; 1,103 (155 aged 45–54, 98 aged 55–65)	Huakau et al. (2005), Pacific Research and Development Services and SHORE/Whariki, Massey University (2004)
Alcohol and Drug Use Survey (Ministry of Health)	National: 2007/08	One-off cross-sectional survey – computer-assisted face-to-face interviews; 14–64; 6,784	Ministry of Health (2009a, 2011)
Health Behaviours Survey – Alcohol Use (Ministry of Health/ Alcohol and Public Health Research Unit, SHORE, Whariki Research Group)	National: 2004	Cross-sectional survey – computer- assisted telephone interviews; 12– 65; 9,847	Ministry of Health (2007), Huckle, Yeh, Lin, & Jensen (2013)
National Alcohol Surveys (Alcohol and Public Health Research Unit, Centre for Social Health Outcomes Research and Evaluation [SHORE] Whariki Research Group)	National: (a) 1995 (b) 2000	Cross-sectional surveys – computer- assisted telephone interviews; 14– 65; (a) 4,232 (835 aged 50–65) (b) 5,113 (1,075 aged 50–65)	Habgood, Casswell, Pledger, & Bhatta (2001), New Zealand Health Information Service (2001), Huckle et al. (2013)
Auckland Alcohol Surveys (Alcohol and Public Health Research Unit, SHORE, Whariki Research Group)	Auckland: 1990–2000 (11 annual surveys)	Serial cross-sectional surveys – computer-assisted telephone interviews (CATI); 14–65; mean 1,208 (range 1,063–1,443).	Huckle, Pledger, & Casswell (2012)

Source: Table by authors

Appendix table 3.3: Information on drinking patterns from three selected surveys covering older adults aged 50–65

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
DRINKING STATUS		
Alcohol and Drug Use Survey (Ministry of Health); 2007/08 (national); Ministry of Health (2009a, 2009b)	Percent who had consumed alcohol in previous 12 months Percent who had ever consumed alcohol in lifetime Median age of first trying alcohol (for adults who had ever consumed alcohol)	<u>45–54 / males: 87%</u> <u>55–64 / males: 88%</u> <u>45–54 / females: 77%</u> <u>55–64 / females: 82%</u> <u>45–54 / total M&F: 82%</u> <u>55–64 / total M&F: 85%</u> <u>45–54 / males: 97%</u> <u>55–64 / males: 98%</u> <u>45–54 / females: 94%</u> <u>55–64 / females: 95%</u> <u>45–54 / total M&F: 96%</u> <u>55–64 / total M&F: 96%</u> <u>45–54 / males: 15 years</u> <u>55–64 / males: 16 years</u> <u>45–54 / females: 16 years</u> <u>55–64 / females: 18 years</u> <u>45–54 / total M&F: 16 years</u> <u>55–64 / total M&F: 17 years</u>
Te Ao Waipiro 2000: Māori National Alcohol Survey(Alcohol and Public Health Research Unit, SHORE, Whariki Research Group); 2000 (national); Moewaka Barnes et al. (2003)	Percent who had consumed alcohol in previous 12 months	<u>50–65 / Māori males: c. 77%*</u> <u>50–65 / Māori females: c. 65%*</u>

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Appendix table 3.3 continued

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
Pacific Drugs and Alcohol Survey (PDACS) (Alcohol and Public Health Research Unit, SHORE, Whariki Research Group); 2002/03 (national); Huakau et al. (2005), Massey University (2004), Pacific Research and Development Services and SHORE/Whariki,	Percent who had consumed alcohol in previous 12 months	<u>45–54 / Pacific males: c. 55%*</u> <u>55–65 / Pacific males: c. 65%*</u> <u>45–54 / Pacific females: c. 35%*</u> <u>55–65 / Pacific males: c. 25%*</u>
DRINKING FREQUENCY		
Alcohol and Drug Use Survey (Ministry of Health); 2007/08 (national); Ministry of Health (2009a, 2009b)	Percent (of all adults) who drank alcohol daily in previous 12 months Percent (of all adults) who drank alcohol 3–6 times a week in previous 12 months Percent (of all adults) who drank alcohol 1–2 times a week in previous 12 months	<u>45–54 / males: 8%</u> <u>55–64 / males: 18%</u> <u>45–54 / females: 7%</u> <u>55–64 / females: 9%</u> <u>45–54 / total M&F: 8%</u> <u>55–64 / total M&F: 14%</u> <u>45–54 / males: 24%</u> <u>55–64 / males: 26%</u> <u>45–54 / females: 21%</u> <u>55–64 / females: 18%</u> <u>45–54 / total M&F: 23%</u> <u>55–64 / total M&F: 22%</u> <u>45–54 / males: 32%</u> <u>55–64 / males: 24%</u> <u>45–54 / females: 24%</u> <u>55–64 / females: 19%</u> <u>45–54 / total M&F: 27%</u> <u>55–64 / total M&F: 21%</u>

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Appendix table 3.3 continued

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
Alcohol and Drug Use Survey (Ministry of Health) (continued)	<p>Percent (of all adults) who drank alcohol less than once a week in previous 12 months</p> <p>.....</p> <p>Percent (of all adults) who drank alcohol at least weekly in previous 12 months</p>	<p><u>45–54 / males: 24%</u></p> <p><u>55–64 / males: 19%</u></p> <p><u>45–54 / females: 32%</u></p> <p><u>55–64 / females: 32%</u></p> <p><u>45–54 / total M&F: 28%</u></p> <p><u>55–64 / total M&F: 26%</u></p> <p>.....</p> <p><u>45–54 / males: 63%</u></p> <p><u>55–64 / males: 69%</u></p> <p><u>45–54 / females: 52%</u></p> <p><u>55–64 / females: 45%</u></p> <p><u>45–54 / total M&F: 58%</u></p> <p><u>55–64 / total M&F: 56%</u></p>
Te Ao Waipiro 2000: Māori National Alcohol Survey; 2000 (national); Moewaka Barnes et al. (2003)	<p>Number of drinking occasions per year</p> <p>.....</p> <p>Percent of drinkers drinking 365+ times per year</p> <p>.....</p> <p>Percent of drinkers drinking once a month or less</p>	<p><u>50–65 / Māori male drinkers: c. 65 times*</u></p> <p><u>50–65 / Māori female drinkers: c. 25 times*</u></p> <p>.....</p> <p><u>50–65 / Māori male drinkers: c.15%*</u></p> <p><u>50–65 / Māori female drinkers: c. 6%*</u></p> <p>.....</p> <p><u>50–65 / Māori male drinkers: c.17%*</u></p> <p><u>50–65 / Māori female drinkers: c. 43%*</u></p>
Pacific Drugs and Alcohol Survey (PDACS) (Alcohol and Public Health Research Unit, SHORE, Whariki Research Group); 2002/03 (national); Huakau et al. (2005), Massey University (2004), Pacific Research and Development Services and SHORE/Whariki	Number of drinking occasions per year	<p><u>45–54 / Pacific males: c. 40 times*</u></p> <p><u>55–65 / Pacific males: c. 30 times*</u></p> <p><u>45–54 / Pacific females: c. 15 times*</u></p> <p><u>55–65 / Pacific males: c. 10 times*</u></p>

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Appendix table 3.3 continued

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
AMOUNT OF ALCOHOL CONSUMED		
Te Ao Waipiro 2000: Māori National Alcohol Survey; 2000 (national); Moewaka Barnes et al. (2003)	Mean number of drinks per typical drinking occasion Mean annual volume of absolute alcohol consumed per drinker (litres)	<u>50–65 / Māori males: c. 4 drinks*</u> <u>50–65 / Māori females: c. 3–4 drinks*</u> <u>50–65 / Māori males: c. 3 litres*</u> <u>50–65 / Māori females: c. 1 litre*</u>
Pacific Drugs and Alcohol Survey (PDACS) (Alcohol and Public Health Research Unit, SHORE, Whariki Research Group); 2002/03 (national); Huakau et al. (2005), Massey University (2004), Pacific Research and Development Services and SHORE/Whariki	Average quantity of absolute alcohol consumed on typical drinking occasion (ml) Mean annual volume of absolute alcohol consumed per drinker (litres)	<u>45–54 / Pacific males: c. 70ml (c. 5½ drinks)*</u> <u>55–65 / Pacific males: c. 50ml (c. 4 drinks)*</u> <u>45–54 / Pacific females: c. 35ml (c. 3 drinks)*</u> <u>55–65 / Pacific males: c. 20ml (c. 1½ drinks)*</u> <u>45–54 / Pacific males: c. 3 litres*</u> <u>55–65 / Pacific males: c. 2 litres*</u> <u>45–54 / Pacific females: c. 1 litre*</u> <u>55–65 / Pacific males: c. 0.5 litre*</u>
TYPES OF DRINK		
Alcohol and Drug Use Survey (Ministry of Health); 2007/08 (national); Ministry of Health (2009a, 2009b)	Percent of current drinkers who consumed beer in previous 12 months Percent of current drinkers who consumed wine in previous 12 months Percent of current drinkers who consumed spirits/liqueurs/mixed cocktails in previous 12 months**	<u>45–54 / males: 81%</u> <u>55–64 / males: 78%</u> <u>45–54 / females: 33%</u> <u>55–64 / females: 22%</u> <u>45–54 / total M&F: 57%</u> <u>55–64 / total M&F: 51%</u> <u>45–54 / males: 63%</u> <u>55–64 / males: 63%</u> <u>45–54 / females: 84%</u> <u>55–64 / females: 84%</u> <u>45–54 / total M&F: 74%</u> <u>55–64 / total M&F: 73%</u> <u>45–54 / total M&F: 44%</u> <u>55–64 / total M&F: 35%</u>

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Appendix table 3.3 continued

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
Alcohol and Drug Use Survey (Ministry of Health) (continued)	<p>Percent of current drinkers who consumed sherry/port/vermouth in previous 12 months**</p> <p>.....</p> <p>Percent of current drinkers who consumed cider in previous 12 months**</p> <p>.....</p> <p>Percent of current drinkers who consumed RTDs in previous 12 months**</p>	<p><u>45–54 / total M&F: 7%</u></p> <p><u>55–64 / total M&F: 6%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 4%</u></p> <p><u>55–64 / total M&F: 2%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 11%</u></p> <p><u>55–64 / total M&F: 4%</u></p>
DRINKING LOCATION		
Alcohol and Drug Use Survey (Ministry of Health); 2007/08 (national); Ministry of Health (2009a, 2009b)	<p>Percent of current drinkers who drank alcohol at home in previous 12 months**</p> <p>.....</p> <p>Percent of current drinkers who drank alcohol at someone else's home in previous 12 months**</p> <p>.....</p> <p>Percent of current drinkers who drank alcohol at pubs, hotels, restaurants, or cafés in previous 12 months**</p> <p>.....</p> <p>Percent of current drinkers who drank alcohol at special events in previous 12 months**</p> <p>.....</p> <p>Percent of current drinkers who drank alcohol at groups, workplaces, or meetings in previous 12 months**</p> <p>.....</p> <p>Percent of current drinkers who drank alcohol in outdoor public places in previous 12 months**</p>	<p><u>45–54 / total M&F: 89%</u></p> <p><u>55–64 / total M&F: 90%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 68%</u></p> <p><u>55–64 / total M&F: 63%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 69%</u></p> <p><u>55–64 / total M&F: 68%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 14%</u></p> <p><u>55–64 / total M&F: 12%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 25%</u></p> <p><u>55–64 / total M&F: 16%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 10%</u></p> <p><u>55–64 / total M&F: 9%</u></p>

Appendix table 3.3 continued

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
Alcohol and Drug Use Survey (Ministry of Health) (continued)	Percent of current drinkers who drank alcohol at nightclubs or bars in previous 12 months** Percent of current drinkers who drank alcohol at sports clubs or events in previous 12 months** Percent of current drinkers who drank alcohol in private motor vehicles in previous 12 months**	<u>45–54 / total M&F: 15%</u> <u>55–64 / total M&F: 9%</u> <u>45–54 / total M&F: 19%</u> <u>55–64 / total M&F: 17%</u> <u>45–54 / total M&F: 1%</u> <u>55–64 / total M&F: 1%</u>

Source: Table by authors

Notes:

*Figure estimated from chart data not specified numerically elsewhere in the published results

**Results for males and females not reported separately here as they are not very different, but gender-specific data are available in original study report

Results for total males and females (combined) were not available for Te Ao Waipiro 2000: Māori National Alcohol Survey or the Pacific Drugs and Alcohol Survey (PDACS)

M&F = males plus females

c. = about, approximately

RTDs = ready-to-drink alcoholic beverages.

Appendix table 4.1: CAGE questions

Do you ever feel the need to **C**ut down on your drinking?
Are you ever **A**nnoyed by criticism of your drinking?
Do you ever feel **G**uilty about drinking?
Do you ever need an **E**ye-opener, or a drink first thing in the morning?
(Addiction Research Foundation et al., c. 1993)

Appendix table 4.2: MAST-G questions

After drinking, have you ever noticed an increase in your heart rate or beating in your chest?
When talking with others, do you ever underestimate how much you actually drink?
Does alcohol make you sleepy so that you often fall asleep in your chair?
After a few drinks, have you sometimes not eaten or been able to skip a meal because you didn't feel hungry?
Does having a few drinks help decrease your shakiness or tremors?
Does alcohol sometimes make it difficult for you to remember parts of the day or night?
Do you have rules for yourself that you won't drink before a certain time of the day?
Have you lost interest in hobbies or activities you used to enjoy?
When you wake up in the morning, do you ever have trouble remembering part of the night before?
Does having a drink help you sleep?
Do you hide your alcohol bottles from family members?
After a social gathering, have you ever felt embarrassed because you drank too much?
Have you ever been concerned that drinking might be harmful to your health?
Do you like to end an evening with a night cap?
Did you find your drinking increased after someone close to you died?
In general, would you prefer to have a few drinks at home rather than go out to social events?
Are you drinking more now than in the past?
Do you usually take a drink to relax or calm your nerves?
Do you drink to take your mind off your problems?
Have you ever increased your drinking after experiencing a loss in your life?
Do you sometimes drive when you have had too much to drink?
Has a doctor or nurse ever said they were worried or concerned about your drinking?
Have you ever made rules to manage your drinking?
When you feel lonely does drinking help?
(Scores for each question – 1 for 'yes' and 0 for 'no'. The test has a threshold of 5+ for an indication of an alcohol problem) (Beresford, 1995, p. 17–18)

Appendix table 4.3: Information on hazardous and harmful drinking from three selected surveys covering older adults aged 50–65

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
HAZARDOUS / RISKY DRINKING		
Alcohol and Drug Use Survey (Ministry of Health); 2007/08 (national); Ministry of Health (2009a, 2009b)	Percent of adults who ever had a large amount of alcohol on one drinking occasion (more than 6 drinks for men and more than 4 drinks for women)	<u>45–54 / males: 79%</u> <u>55–64 / males: 80%</u> <u>45–54 / females: 70%</u> <u>55–64 / females: 59%</u> <u>45–54 / total M&F: 74%</u> <u>55–64 / total M&F: 69%</u>
Te Ao Waipiro 2000: Māori National Alcohol Survey; 2000 (national); Moewaka Barnes et al. (2003)	Percent of males drinking more than 6 drinks in one session at least once a week Percent of females drinking more than 4 drinks in one session at least once a week	<u>50–65 / Māori males: c.15%*</u> <u>50–65 / Māori females: c. 6%*</u>
HARMFUL DRINKING		
Alcohol and Drug Use Survey (Ministry of Health); 2007/08 (national); Ministry of Health (2009a, 2009b)	Percent of adults who had ever consumed enough alcohol to feel drunk	<u>45–54 / males: 87%</u> <u>55–64 / males: 90%</u> <u>45–54 / females: 76%</u> <u>55–64 / females: 67%</u> <u>45–54 / total M&F: 81%</u> <u>45–54 / total M&F: 78%</u>

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Appendix table 4.3 continued

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
Alcohol and Drug Use Survey (Ministry of Health) (continued)	<p>Median age of first drinking enough alcohol to feel drunk (for adults who had ever consumed enough alcohol to feel drunk</p> <p>.....</p> <p>Percent of adults drinking enough to feel drunk at least monthly in the previous 12 months</p> <p>.....</p> <p>Percent of adults who had driven while under the influence of alcohol at least once in the previous 12 months</p> <p>.....</p> <p>Percent of adults who had worked while under the influence of alcohol at least once in the previous 12 months</p>	<p><u>45–54 / males: 16 years</u></p> <p><u>55–64 / males: 18 years</u></p> <p><u>45–54 / females: 18 years</u></p> <p><u>55–64 / females: 20 years</u></p> <p><u>45–54 / total M&F: 17 years</u></p> <p><u>45–54 / total M&F: 18 years</u></p> <p>.....</p> <p><u>45–54 / males: 12%</u></p> <p><u>55–64 / males: 11%</u></p> <p><u>45–54 / females: 7%</u></p> <p><u>55–64 / females: 2%</u></p> <p><u>45–54 / total M&F: 9%</u></p> <p><u>55–64 / total M&F: 6%</u></p> <p>.....</p> <p><u>45–54 / males: 17%</u></p> <p><u>55–64 / males: 17%</u></p> <p><u>45–54 / females: 13%</u></p> <p><u>55–64 / females: 4%</u></p> <p><u>45–54 / total M&F: 14%</u></p> <p><u>55–64 / total M&F: 10%</u></p> <p>.....</p> <p><u>45–54 / males: 7%</u></p> <p><u>55–64 / males: 4%</u></p> <p><u>45–54 / females: 5%</u></p> <p><u>55–64 / females: <1%</u></p> <p><u>45–54 / total M&F: 6%</u></p> <p><u>55–64 / total M&F: 2%</u></p>

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Appendix table 4.3 continued

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
Alcohol and Drug Use Survey (Ministry of Health) (continued)	<p>Percent of adults whose own alcohol use had ever had at least one harmful effect on life⁵⁵</p> <p>.....</p> <p>Percent of adults whose own alcohol use had at least one harmful effect on life in the previous 12 months⁵⁶</p> <p>.....</p> <p>Percent of adults whose own alcohol use had a harmful effect on friendships or social life in the previous 12 months</p> <p>.....</p> <p>Percent of adults whose own alcohol use had a harmful effect on home life in the previous 12 months</p> <p>.....</p> <p>Percent of adults who had one day off work or school due to own alcohol use in the previous 12 months</p> <p>.....</p> <p>Percent of adults whose own alcohol use had a harmful effect on financial position in the previous 12 months</p>	<p><u>45–54 / males: 31%</u></p> <p><u>55–64 / males: 30%</u></p> <p><u>45–54 / females: 16%</u></p> <p><u>55–64 / females: 11%</u></p> <p><u>45–54 / total M&F: 24%</u></p> <p><u>55–64 / total M&F: 21%</u></p> <p>.....</p> <p><u>45–54 / males: 9%</u></p> <p><u>55–64 / males: 5%</u></p> <p><u>45–54 / females: 5%</u></p> <p><u>55–64 / females: 1%</u></p> <p><u>45–54 / total M&F: 7%</u></p> <p><u>55–64 / total M&F: 3%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 5%</u></p> <p><u>55–64 / total M&F: 2%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 4%</u></p> <p><u>55–64 / total M&F: 2%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 1%</u></p> <p><u>55–64 / total M&F: <1%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 2%</u></p> <p><u>55–64 / total M&F: 1%</u></p>

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⁵⁵ Includes: effects on friendships, social life, home life, financial position, work, study or employment; caused injuries or legal problems; difficulty learning things.

⁵⁶ Includes: effects on friendships, social life, home life, financial position, work, study or employment; caused injuries or legal problems; difficulty learning things.

Appendix table 4.3 continued

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
Alcohol and Drug Use Survey (Ministry of Health) (continued)	<p>Percent of adults who had injuries due to own alcohol use in the previous 12 months</p> <p>Percent of adults whose own alcohol use had a harmful effect on work, study or employment in the previous 12 months</p> <p>.....</p> <p>Percent of adults who had legal problems due to own alcohol use in the previous 12 months</p> <p>.....</p> <p>Percent of adults who had difficulty learning things due to alcohol use in the previous 12 months</p>	<p><u>45–54 / total M&F: 1%</u></p> <p><u>55–64 / total M&F: 1%</u></p> <p><u>45–54 / total M&F: 1%</u></p> <p><u>55–64 / total M&F: <1%</u></p> <p>.....</p> <p><u>45–54 / total M&F: 1%</u></p> <p><u>55–64 / total M&F: <1%</u></p> <p>.....</p> <p><u>45–54 / total M&F: <1%</u></p> <p><u>55–64 / total M&F: <1%</u></p>
Te Ao Waipiro 2000: Māori National Alcohol Survey; 2000 (national); Moewaka Barnes et al. (2003)	<p>Percent drinking enough to feel drunk at least once a week in the previous 12 months</p> <p>.....</p> <p>Had 5 or more of 15 listed drinking problems in previous 12 months⁵⁷</p> <p>.....</p> <p>Drove when probably had too much to drink in previous 12 months</p>	<p><u>50–65 / Māori males: c. 8%*</u></p> <p><u>50–65 / Māori females: c. 2%*</u></p> <p>.....</p> <p><u>50–65 / Māori males: c. 3%*</u></p> <p><u>50–65 / Māori females: c. 1%*</u></p> <p>.....</p> <p><u>50–65 / Māori males: c. 17%*</u></p> <p><u>50–65 / Māori females: c. 7%*</u></p>

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⁵⁷ The 15 problems were: felt drinking effects the next day; unable to remember what had done the day before; work, study, household duties affected; felt ashamed of something done; serious argument; work performance affected; got drunk when had important reason to stay sober; physical fight; morning alcoholic drink; shaking hands morning after; intoxicated for several days; told to leave a place; accident at work, study, home; drinking-related motor vehicle crash.

Appendix table 4.3 continued

Study name; study year (location); reference(s)	Outcomes measured	<u>Age group/ethnicity (if not all ethnic groups combined), gender: result</u>
Pacific Drugs and Alcohol Survey (PDACS) (Alcohol and Public Health Research Unit, SHORE, Whariki Research Group); 2002/03 (national); Huakau et al. (2005), Pacific Research and Development Services and SHORE/Whariki, Massey University (2004)	Percent drinking enough to feel drunk at least once a week in the previous 12 months	<u>45–54 / Pacific males: c. 50% *</u> <u>55–65 / Pacific males: c. 13%*</u> <u>45–54 / Pacific females: c. 3%*</u> <u>55–65 / Pacific: c. 0%*</u>

Source: Table by authors

Notes:

*Figure estimated from chart data not specified numerically elsewhere in the published results

Results for harmful effects experienced due to *someone else's* alcohol use are also available in original study report

Results for total males and females (combined) were not available for Te Ao Waipiro 2000: Māori National Alcohol Survey or the Pacific Drugs and Alcohol Survey (PDACS)

M&F = males plus females

c. = about, approximately.

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GLOSSARY

ABAS – Attitudes and Behaviour towards Alcohol Survey

ALAC – Alcohol Advisory Council of New Zealand

ARPS – Alcohol-related Problems Survey, an alcohol screening tool for older adults that includes questions about their health conditions, functional limitations, use of medicines and other health risk behaviours

AUDIT – Alcohol Use Disorders Identification Test – internationally-recognised screening tool with 10 questions about alcohol consumption and related negative consequences, to identify people with possible drinking problems. AUDIT was developed in the late 1980s by the World Health Organization. The maximum possible score is 40. A score of 8 or more is commonly used to identify hazardous / harmful drinking.

AUDIT-C – a cut-down version of the AUDIT tool using its first three questions (on frequency and amount of alcohol consumption)

AUDIT-3 – a cut-down version of the AUDIT tool using just the third question (how often do you have six or more drinks on one occasion?)

AUDIT-5 – a cut-down version of the AUDIT tool using just the fifth question (how often during the last year have you failed to do what was normally expected of you because of drinking?)

BAC – blood alcohol concentration

CAGE – alcohol screening tool with four questions

DSM-IV – Diagnostic and Statistical Manual of Mental Disorders version IV

GENACIS – Gender, Alcohol and Culture: an International Study

GP – general practitioner

HPA – Health Promotion Agency

Longitudinal survey – follows a group of the same individuals over time

MAST – Michigan Alcohol Screening Test

MAST-G – Michigan Alcohol Screening Test designed for older adults (geriatric population)

NZ – New Zealand

One-off cross-sectional survey – conducted only once, taking a ‘snap-shot’ of a group of people

OTC – over-the-counter (medicines)

SBI – screening and brief intervention

Serial cross-sectional survey – uses the same survey method more than once, taking ‘snapshots’ of different groups of individuals

SHORE – Centre for Social and Health Outcomes Research and Evaluation (Massey University)

SoFIE – Survey of Family, Income and Employment