

**Alcohol and other drug use amongst older Australians: A synopsis of
biopsychosocial issues for medical practitioners.**

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Development of report

This report has been written to support the audio visual resources “Alcohol and other drug use amongst older Australians” developed by Sue Helfgott and Shireen Narayanan, Sushi Productions for the WA Primary Health Alliance.

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Key points

- While alcohol and other drug use (AOD) amongst older Australians remains relatively low compared to other age groups, trends suggest increases in use amongst recent cohorts of older Australians. This has significant public and primary health implications.
- There are increased numbers of older people drinking at high-risk levels, using illicit drugs and presenting at AOD treatment services.
- These demographic shifts in AOD use amongst older Australians present a number of public health challenges and highlight the important role that GPs as front line health professionals can play in reducing potential harm.
- The reasons that older people drink alcohol are diverse and include using alcohol to have fun, to socialise with friends and partners, to relax, to celebrate special events, and to deal with grief. However, illness and pain, stress, boredom, to replace meals, to keep warm and loneliness have also been cited as reasons for drinking amongst older people.
- Patients presenting to GPs and reporting any of these issues, may signal the need for investigation of any commencement, or increase of alcohol use.
- Chronic pain has been strongly associated with daily drinking while binge drinking amongst older people has been associated with anxiety.
- Older people with a history of illicit drug use are likely to be biologically older than their chronological age and have a range of chronic co-occurring illnesses.
- Shame and embarrassment are significant barriers to older Australians initiating conversations about alcohol use with medical practitioners and many older people with a history of illicit drug use delay or avoid accessing health services because of stigma and previous negative experiences.
- Harms related to prescribed medications may be compounded by the mistaken belief by a patient that as a doctor has prescribed a drug, it is therefore automatically 'safe' irrespective of when and how it is used.
- Older people may misuse pharmaceuticals to enhance or extend their effects in dealing with conditions, for which the drugs were originally prescribed.

- Older men and women are receptive to discussing and receiving alcohol-related health information from their GP when discussed in a respectful and culturally appropriate way.
- Evidence from overseas indicates that older people do as well, if not better than younger people in alcohol-related treatment, however, there is only limited research related to other drugs, making conclusions about efficacy difficult.
- Older people are the greatest consumers of health services. GPs have a high degree of trust amongst their patients and are ideally placed for initiating clinical conversations on AOD use with their older patients.
- Research conducted in the U.S. and Australia indicates that older drinkers would reduce their consumption of alcohol if they believed this would be beneficial for their health and if their **doctor** advised them to do so.
- Every Australian over the age of 50 should be screened for AOD use as part of a regular comprehensive annual check up by their GP.

Background

Since the latter part of the previous century, population ageing has become a significant phenomenon in all developed and many developing nations, including Australia (Evans, 2000; Lynskey, Day, & Hall, 2003; United Nations Department of Economic and Social Affairs Population Division, 1998). Australia is also now witnessing a significant demographic milestone as the first of the ‘baby boomer’ cohort, born in the postwar period between 1946 and 1966, near, reach or pass retirement.

The ageing of the baby boomer generation is significant for many reasons and may partly explain the apparent cohort shifts in patterns of drug use, with significant numbers of older people now drinking at high-risk levels, increases in the percentages using illicit drugs (Australian Institute of Health and Welfare, 2017b) and increases in the numbers of older Australians presenting at Alcohol and Other Drug (AOD) services (NSW Ministry of Health, 2015). These demographic shifts in AOD use amongst older Australians present a number of public health challenges and highlight the important role that medical practitioners as front line health professionals can play in reducing potential harm.

Rates of alcohol and other drug use amongst older Australians

Data from the most recent National Drug Strategy Household Survey (NDSHS), indicate that 77% of Australians aged 14 years and over had consumed alcohol in the past 12 months, and that close to 6% drank alcohol daily (Australian Institute of Health and Welfare, 2017b). Data also indicated that 1 out of every 4 (24.3%) males and 7.7% of females, aged 65-74 was drinking, on average, more than 2 standard drinks per day. While, the proportion of Australians exceeding lifetime alcohol-related risk guidelines have declined since 2004, more women aged 50-59 years of age (13.0%) are now exceeding the lifetime-risk alcohol guidelines than women 18-24 years of age (12.8%) (Australian Institute of Health and Welfare, 2017a).

Similarly, while rates of illicit drug use in the prior 12 months, amongst younger people (14-39 year olds) have decreased since 2001, the reverse has occurred amongst older Australians. In 2001, only 3.9% of Australians aged 60 years and older reported using illicit drugs in the prior 12 months while in 2016 this figure increased to 6.9% (Australian Institute of Health and Welfare, 2017a). Similarly, the proportion of males aged 65+ using cannabis in the past 12 months has more than doubled from 0.6% in 2001 to 1.3% in 2016 and the rates amongst older women have increased five fold from 0.1% to 0.5%. While data is not available for people aged 60+, data from the 2016 NDHS indicate that amongst Australians aged 55 years and older 0.2% had recently used cocaine, 0.2% methamphetamine and 0.2% had recently used ecstasy¹.

Results from the most recent NDSHS survey also indicate that 2.5 million Australians have misused a pharmaceutical drug in their lifetime (Australian Institute of Health and Welfare, 2017c). While the highest rate of misuse were among young adult (18-24 year old) males, use of 'pain killers/analgesics and opioids' was most common among people in their 40s (Australian Institute of Health and Welfare, 2017b), and 4.9% of women and 4.7% of men aged 65 and older also reported using a pharmaceutical drug for non-medical purposes in the past 12 months.

¹ Estimate has a relative standard error of 25% to 50% and should be used with caution.

Reasons for alcohol and other drug use amongst older people

In research with older Australians, Wilkinson (2008) reported the reasons for alcohol use were many and varied and included using alcohol to have fun, to socialise with friends and partners, to relax, to celebrate special events, and to deal with grief. However, illness and pain, stress, boredom, to replace meals, to keep warm and loneliness have also been cited as reasons for drinking amongst older people (Alcohol Concern, 2002; Brown & Chiang, 1984; Clough, Hart, Nugent, Fox, & Watkins, 2004; Gilson, Bryant, & Judd, 2014, 2017; Glynn, Bouchard, LoCastro, & Laird, 1985; Patterson & Jeste, 1999; Zimberg, 1978) and hence a patient presenting with these issues may signal the need for investigation of any commencement, or increase of alcohol use. This may particularly be the case for those patients presenting with or experiencing chronic pain, as this has been strongly associated with daily drinking, while binge drinking amongst older people has been associated with concomitant anxiety (Ilomaki et al., 2014).

There has also been a body of research examining why people choose to stop drinking and such knowledge is equally as important as understanding why older people commence or continue with drinking alcohol. While a major reason cited for cessation of alcohol use has been a deterioration in health (Graham, 1998; Green & Polen, 2001; Khan, Wilkinson, & Keeling, 2006; Moos, Brennan, Schutte, & Moos, 2005; Paganini-Hill, Kawas, & Corrada, 2007; Poikolainen, Vartiainen, & Korhonen, 1996; Rice et al., 2000; Straus, 1984; Vahtera, Poikolainen, Kivimaki, Ala-Mursula, & Pentti, 2002; Vogel-Sprott & Barrett, 1984) research conducted in the U.S. and Australia also indicates that older drinkers would reduce their consumption of alcohol if they believed this would be beneficial for their health and if their **doctor** advised them to do so (Borok et al., 2013; C. Wilkinson et al., 2016).

While many people reduce their use of alcohol and other drugs with age, others will continue to use or increase their drug use, while some will commence AOD use late in life. This typology has been referred to as early-onset versus late-onset use (Gossop & Moos, 2008; Kist, Sandjojo, Kok, & van den Berg, 2014; McGrath, Crome, & Crome, 2005; R. Nicholas, A. Roche, N. Lee, S. Bright, & K. Walsh, 2015b; Tavani, Negri, Franceschi, Talamini, & LaVecchia, 1994); or early-onset ‘survivors’ versus late-onset

'reactors' (European Monitoring Centre for Drugs and Drug Addiction, 2008). While most research investigating the early-onset/late-onset typology has occurred in relation to alcohol, there is some suggestion that this may also apply to the misuse of pharmaceuticals and to a lesser extent - the use of illicit drugs (Wu & Blazer, 2011). For example, there may be some older people who have a long history of misusing pharmaceuticals (early-onset), while there may be an even larger group who only commence doing so, later in life as a coping mechanism for pain, depression, loneliness, anxiety, sleeping problems etc. (Nicholas, Lee, & Roche, 2011). While explanations of illicit drug use amongst older Australians remains speculative at best, there is little doubt that older people are more likely to have chronic co-occurring conditions than younger people and as a consequence are also more likely to be prescribed medications. However, rather than primarily misusing pharmaceuticals to "get high", international research (Substance Abuse Mental Health Services Administration, 2017) indicates that most older people misuse pharmaceuticals to enhance or extend effects in dealing with conditions, for which the drugs were originally prescribed.

Potential problems associated with alcohol and other drug use amongst older people

There are a number of physiological changes that occur with ageing that relate to pharmacokinetics (the way the body affects drugs) and pharmacodynamics (the way drugs affect the body). For example, when a person ages, the percentage of water and lean tissue (mainly muscle) in the body decreases, while the percentage of fat tissue increases (Korrapati & Vestal, 1995; Schoeller, 1989; Watson, Watson, & Batt, 1980). These changes can effect the distribution and the length of time that a drug stays in the body as well as the amount that is absorbed by body tissues (Vestal et al., 1977). It has also been suggested that older adults may have altered pharmacokinetics through changes to kidney function, compromised liver function and changes to pharmacodynamics as a result of alterations in neurotransmitter function and receptor density (Jansen & Brouwers as cited in (Sullivan & Levin, 2016). Such changes may be profound if an older person has a long history of drug use, which in itself may have altered the function of various neurotransmitters and systems in the brain and exacerbated declines in other structures e.g. kidney function (Dowling, Weiss, & Condon, 2008).

Alcohol-related problems

There is a causal relationship between alcohol consumption and more than 60 types of disease and injury (English et al., 1995; Gutjahr, Gmel, & Rehm, 2001; Ridolfo & Stevenson, 2001; Single, Robson, Rehm, Xie, & Xi, 1999; World Health Organization, 2015b) and that a linear dose–response relationship between volume of drinking and the relative-risk of cancer exists (World Cancer Research Fund/ American Institute for Cancer Research, 2007; World Health Organization Department of Mental Health and Substance Abuse, 2004). Such research has prompted the Australian Cancer Council to conclude that alcoholic drinks are carcinogenic to humans and that there is **no** safe threshold of alcoholic consumption for avoiding cancer or that cancer risk varies between types of alcoholic beverages (Cancer Council of Australia, 2017). Problems can also result from the concomitant use of many prescription drugs commonly used by older people and alcohol (Korrapati & Vestal, 1995; Tanaka, 2003; Weathermon & Crabb, 1999). See Table 1 for details on commonly used medications, which can be contraindicated with alcohol use.

Table 1: Common medications used by older people that may cause complications when used with alcohol.

Drug type	Purpose of medication	Interaction with alcohol
Anaesthetic	Administered prior to surgery	Alcohol increases the dose of propofol required to induce loss of consciousness. Chronic alcohol consumption increases risk of liver damage that may be caused by anaesthetic gases enflurane and halothane.
Antibiotics	Used to treat infection	Alcohol use may cause nausea, vomiting, headache and possible convulsions with furazolidone, griseofulvin, metronidazole, and quinacrine. Isoniazid and rifampin used to treat tuberculosis—especially problematic among elderly. Acute alcohol consumption decreases availability of isoniazid in the bloodstream, while chronic use increases availability of rifampin.
Anticoagulants	Prescribed to retard bloods ability to clot	Acute alcohol enhances warfarin's availability increasing risk of haemorrhaging. Chronic alcohol reduces warfarin's availability lessening protection from consequences of blood clotting.
Antidepressants	Reduce depression	Alcohol increases sedative effect of tricyclic antidepressants, impairing mental skills. Chronic alcohol use increases the availability of some tricyclics and decreases availability of others. Tyramine, found in some beers and wine interacts with some antidepressants to produce a rise in blood pressure. As little as 12g of alcohol may create a risk of an ADR.
Antidiabetic medication	Hypoglycaemic drugs are prescribed to lower blood sugar	Acute alcohol consumption prolongs and chronic alcohol consumption decreases availability of tolbutamide. Alcohol can also

	levels.	interact to cause nausea and headache.
Antihistamine	Treat allergic symptoms	Alcohol may intensify sedation, in older persons may also cause dizziness.
Antipsychotic medication	Diminish psychotic symptoms	Acute alcohol use increases sedative effect, resulting in impaired coordination and breathing difficulties. Chronic use may result in liver damage.
Anti seizure medications	Treatment of epilepsy	Acute alcohol increases availability of phenytoin and risk of drug-related side effects. Chronic use may decrease phenytoin availability reducing protection against seizures.
Cardiovascular medications	Treat heart and circulatory system	Acute alcohol interacts with some of these drugs to cause dizziness or fainting. Chronic use decreases availability of propranolol used to treat high blood pressure.
Opiate based pain medication	Reduce moderate to severe pain	Combination of opiates and alcohol enhances sedative effect of both substances increasing risk of overdose.
Non opiate based pain medication	Reduce pain	Older people commonly use Aspirin and similar medications. Some drugs can cause stomach bleeding and inhibit blood clotting- alcohol can exacerbate these effects. Risk of gastric bleeding, in addition aspirin may increase availability of alcohol heightening effects of a given dose of alcohol. Chronic alcohol use activates enzymes that transform acetaminophen into chemical that can cause liver damage.
Benzodiazepines	Anxiety and insomnia	Alcohol use may increase sedation. Combination of alcohol and lorazepam may result in decreased heart and breathing function.

(Adams, 1995; Cusack & Vestal, 1986; Dart, 2001; Dunne, 1994; Forster, Pollow, & Stoller, 1993; Katona, 2001; Korrapati & Vestal, 1995; Kurfes & Dotson, 1987; Nicholas et al., 2015b; Patat, 2000; Pringle, Ahern, Heller, Gold, & Brown, 2005; Tanaka, 2003; Weathermon & Crabb, 1999).

Illicit drugs

The greater the length of time that a person engages in illicit drug use the greater the window of exposure to risk of illness and disease. For example, cocaine use amongst older adults may increase the risk of heart attack, cerebrovascular complications, delirium and stroke (Schlaerth, 2007) and long-term use of cocaine and amphetamines may predispose older adults to premature atherosclerosis, ventricular hypertrophy and cardiomyopathy (Dowling et al., 2008). Drug-induced toxicity may also increase with age, as there is evidence of increased sensitivity to methamphetamine toxicity with increasing age and apparent cardiovascular sensitivity (Darke, Duflou, & Kaye, 2017; Dowling et al., 2008).

Injecting drug use is also associated with blood-borne viral infections (Crofts & Aitken, 1997; Maher et al., 2006), and soft tissue and vascular problems (Dwyer et al., 2009), with such conditions aggravated by delayed treatment and continued drug use over time

(McCoy, Metsch, Chitwood, & Miles, 2001; Morrison, Elliott, & Gruer, 1997). There are also some potential adverse drug reactions that can occur when different types of illicit drugs are taken with certain medications and these are outlined in Table 2.

Table 2: Illicit drugs and commonly used medications that may cause adverse reactions

Drug	Prescription medication	Potential adverse reaction
Cannabis	Antidepressants	Mania, rapid heart rate, delirium
	Erectile dysfunction drugs	Heart attack
	Disulfiram	Hypomania
	Sedative hypnotics	Increased sedation, central nervous system depression
Heroin	Benzodiazepines	Sedation, respiratory depression
	Opiate based pain medications	Central nervous system depression, lowered blood pressure
Amphetamine type stimulants	Antidepressants	Hypertension, CNS stimulation
	Anti- seizure medications	Increased risk of seizures
	Urinary alkalinisers	Increased effect and prolonged duration of amphetamines type stimulant
Cocaine	Beta Blockers	Potentiates the effects of cocaine on coronary vasoconstriction
	Disulfiram	Increased cardiovascular effect including heart rate and systolic blood pressure
Ecstasy	Monoamine oxidase inhibitors	Risk of serotonin syndrome related deaths
	Ritonavir (used in HIV therapy)	Risk of cardiac arrest

(Lindsey, Stewart, & Childress, 2012; R. Nicholas, A. Roche, N. Lee, S. Bright, & K Walsh, 2015a)

Misuse of pharmaceutical drugs

When “drugs” come from a medical practitioners prescription pad, misuse may be much more difficult to identify (Sollitto, 2016). Additionally, as such drugs have been prescribed by a doctor or dispensed by a pharmacist, patients are often unaware there may be risks from inappropriate use (Mhatre & Sansgiry, 2015; Wilcox, Cryer, & Triadafipoulos, 2005).

Subsequently, individuals who use such drugs inappropriately (whether intentionally or unintentionally) may not be aware that they are at-risk of any harm, nor identify as a “drug user” per se, or attend AOD services for assistance. Not only are there a myriad of potential complications with incorrect drug dosage, but pharmaceutical drug misuse can pose significant risks if drugs are not taken as prescribed e.g. injecting a substance which was designed to be swallowed can lead to severe circulation problems.

Receptiveness of older Australians to health related messages on alcohol and other drugs

Ensuring that information about alcohol and other drugs is relayed effectively to older people is essential for changing patient attitudes and behaviours and subsequently the WHO (2015a) recommend that it is important for messages to be relevant to older people i.e. discussing the importance of physiological changes that occur with ageing, and emphasizing gains to promote preventive behaviours, (such as avoiding alcohol use to decrease cancer risk) rather than focusing on the losses.

As older Australians are higher users of health services (Australian Institute of Health and Welfare, 2014a) than younger adults, general practitioners (GPs) are ideally placed to provide health promotion information and advice on alcohol and other drug (AOD) related information to older Australians (Ostini et al., 2009; C. Wilkinson et al., 2016). Equally, older Australians are receptive to receiving such information, with Australian research by Wilkinson et al. (2016) reporting that 94% of older men and 87% of older women believed it appropriate for their GP to ask them about their use of alcohol. Moreover, participants reported that they would particularly welcome receiving tailored information regarding alcohol and medication use from their GP (C. Wilkinson et al., 2016).

However, as communication barriers such as hearing loss, speech impairments, and slowed speed of cognitive processing can inhibit an older patient’s involvement in clinical conversations (Bynum, Barre, Reed, & Passow, 2014; Czaja, 2016), medical practitioners may need to spend additional time communicating AOD related information with elderly patients (Bynum et al., 2014) or may wish to consider the possibility (with consent from the patient) of companion involvement during medical appointments. The companion may

be able to provide support through asking questions, taking notes, and recalling information. Such assistance has been shown to lead to improved understanding by the patient of advice given by the medical practitioner (Laidsaar-Powell et al., 2013).

Issues are more complex for patients who may be using illicit drugs and/or misusing pharmaceutical drugs, with research demonstrating that individuals engaged in illicit drug use are hesitant about disclosing this behaviour due to fear of stigma and discrimination. This fear may be more pronounced for people who inject drugs (Australian Injecting and Illicit Drug Users League, 2011; Drumm, McBride, Metsch, Neufeld, & Sawatsky, 2005; Higgs & Dietze, 2017; Islam et al., 2013; H. Wilson, Brener, Mao, & Treloar, 2014) and most evident amongst those who have injected pharmaceutical drugs (Islam et al., 2013). As a result, many have worse health than the population norms for their own age group and often present as biologically much older than their chronological age (Beynon, Stimson, & Lawson, 2010; Rosen, Hunsaker, Albert, Cornelius, & Reynolds, 2011; Rosen, Smith, & Reynolds, 2008).

In relation to treatment options, the evidence suggests that Cognitive Behaviour Therapy (CBT) approaches in relation to alcohol and benzodiazepine use with older people are effective (Kuerbis & Sacco, 2013; Morin et al., 2004; Satre, 2015). Research has also shown that pharmacotherapy and psychotherapy programs for substance use disorders and mental health problems have equivalent or more positive treatment outcomes amongst older people than their younger counterparts (Karlin et al., 2013; Kuerbis & Sacco, 2013, Weiss & Petry, 2013 as cited in (Choi, Marti, & DiNitto, 2014). Finally, there is also evidence that older patients are usually more compliant with treatment than younger patients (Gossop & Moos, 2008).

Screening for alcohol and other drug use in General Practice

Based upon prevalence data in the most recent NDSHS, it is recommended every Australian over the age of 50 should be screened for AOD use as part of a regular comprehensive annual check up by their GP and that re-screening should occur if the patient has experienced a major life event (e.g. loss of spouse, retirement etc.) or that changes in prescribing practices need to occur. According to Wilson, Jackson, Crome, Rao

and Crome (2015) when conducting an medical examination pertaining to AOD use practitioners should consider that:

- AOD use may lead to problems with urination and incontinence and hence the presence of skin injury, pressure area breakdown, evidence of damage from incontinence or ulceration may occur.
- Urine screening may be clinically appropriate so as not to miss commonly misused substances whether prescribed or not.
- Alcohol misuse or hepatitis C infection may result in a patient presenting with evidence of liver function abnormalities such as liver cirrhosis, e.g. palmar erythema, spider naevi and caput medusae or jaundice. Similarly, alcohol misuse is also associated with psoriasis, increased risk of skin carcinomata and porphyria cutanea tarda (also common in hep C).
- Injected drugs are associated with thrombosed superficial and deep veins, ulcerations and sinus formation.
- In bacterial endocarditis, immune complex deposits can lead to nail fold infarcts, splinter haemorrhages and Osler's nodes in the pulps of the digits.
- Poor nutrition, which can accompany AOD problems may be evident from gum disease and dental caries, or the cork screw shaped body hair seen in scurvy (vitamin c deficiency). Methamphetamine use is particularly associated with dental problems.

Finally, falls and/or unexplained bruising, unexplained adverse drug reactions, sleeping problems, cognitive impairment, unexplained gastrointestinal problems and motor coordination difficulties are also symptoms that **may** indicate the presence of AOD use problems (Nicholas et al., 2015a; C. Wilkinson, Lintzeris, & Haber, 2009)

Summary

While this brief report has focused primarily on the current generation of older Australians, there are concerns that the next generation may have higher levels of AOD use and subsequently higher levels of harm. For example, cannabis use amongst 55-64 year olds has increased from 1.2% in 2001 to 7.5% in 2016 and rates for the recent use of any illicit

drug amongst 50-59 year olds has increased from 6.7% in 2001 to 11.7% in 2016 (Australian Institute of Health and Welfare, 2017b). There is also an ageing cohort of injecting opioid users and opioid substitution therapy (OST) clients in Australia (Australian Injecting and Illicit Drug Users League, 2011; Australian Institute of Health and Welfare, 2014b), with reports from the Australian Institute of Health and Welfare (2014b) indicating that from 2006–2013 the proportion of OST clients aged under 30 more than halved (from 28% to 11%), and simultaneously the proportion of clients aged 50 and over more than doubled (from 8% to 19%).

The ageing of the population and the current levels of AOD use amongst older Australians, represent a significant public health issue, which projections suggest will likely increase in coming years. A multi-sectoral, multi-disciplinary approach will be required to respond to the issues systemically, but there is little doubt that the major frontline professionals required take on a leadership role will be medical practitioners.

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