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NORTH WESTERN
MELBOURNE

An Australian Government Initiative

Alcohol and Other Drugs Profile

November 2018

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1 ALCOHOL AND OTHER DRUGS PROFILE

Summary

- In the North Western Melbourne Primary Health Network (NWMPHN) catchment, lower socio-economic areas such as Brimbank, Hume and Melton have proportionally higher rates of alcohol-related societal harms than other Local Government Areas (LGAs). This is despite these areas showing relatively high rates of people who abstain from drinking, and relatively low per capita rates of high-risk drinking.
- Melbourne and Yarra LGAs have elevated levels of assault and violence related to alcohol use, most likely due to their high concentration of evening entertainment venues.
- Domestic violence, either definitely or potentially attributable to alcohol, is also present in relatively high rates in the catchment – in particular in the Hobsons Bay, Moorabool, Melbourne and Yarra LGAs.
- Broad patterns of alcohol and other drug service usage are:
    - Alcohol – very high rates in Melbourne, Maribyrnong and Yarra, with mildly elevated rates in Suburban LGAs and Macedon Ranges. Lower rates in Growth Area LGAs.
    - Illicit – very high rates in Melbourne, Maribyrnong and Yarra, elevated throughout the catchment, except for in Peri-Urban LGAs.
    - Amphetamines and methamphetamines – Yarra, Melton, Moreland and Hume exhibit very high rates of methamphetamine episodes of care.
    - Heroin – the Inner City LGAs of Melbourne, Yarra and Maribyrnong, as well as Brimbank, Darebin and Hobsons Bay, display very high rates of referrals.
    - Cannabis – Melton, Hobsons Bay, Brimbank, Moreland and Yarra have the highest rates of referral.

2 ABBREVIATIONS

ADIS – Alcohol and Drug Information Services

AIDS – Acquired Immune Deficiency Syndrome

AOD – Alcohol and Other Drugs

HIV – Human Immunodeficiency Virus

LGA – Local Government Area

LGBTIQ – Lesbian, gay, bi, trans, intersex, queer

MDMA – 3,4-methylenedioxy-methamphetamine, also known as ‘ecstasy’

MSIR – Medically Supervised Injecting Room

NDSHS – National Drug Strategy Household Survey

NWDMP – National Wastewater Drug Monitoring Program

NWMPHN – North Western Melbourne Primary Health Network

PBS – Public Benefit Scheme

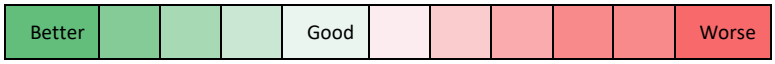
SES –Socio-Economic Status

VPHS – Victorian Population Health Survey

3 ANALYSIS NOTES

Many tables in this profile include shaded columns, with colours that correspond to a 'rank' relative to a comparison of the NWMPHN population.

If an LGA in the NWMPHN catchment is performing worse than the comparison population, it is red. The deeper the shade of red, the worse it is performing. Green indicates performance better than the comparison population. The deeper the shade of green, the better it is performing, similar to the sample below.



No shading indicates a similar score to the comparison population.

Some data in figures was analysed further by age and/or gender. For these analyses, LGAs in the NWMPHN catchment were compared with the median for Greater Melbourne, comprising 31 LGAs. To develop a distribution scale for Greater Melbourne, the 31 Greater Melbourne LGAs were ranked by performance for each indicator. They were then divided into approximately 10 groups – with about three LGAs in each.

All rates used in this document are age-standardized. This allows populations to be compared when the age profiles of the populations are different.

4 ABOUT ALCOHOL AND OTHER DRUGS

The problematic use of alcohol and other drugs is an ongoing challenge for the Australian health care system. The damage to individuals, families and communities from the use of alcohol, tobacco and other drugs is significant, as is the broader public cost.

- The cost to the public of alcohol, tobacco and other drug misuse in Australia in 2004-05 was estimated at $56.1 billion.[1] This include costs to the health and hospitals system, lost workplace productivity, and the cost of road accidents and crime. Tobacco smoking accounted for more than half the total cost.
- Excessive consumption of alcohol is a major cause of health and social harm. Short episodes of heavy alcohol consumption are a major cause of road and other accidents, domestic and public violence, and crime. Long-term heavy drinking is a major risk factor for chronic disease, including liver disease and brain damage, and contributes to family breakdown and broader social dysfunction.
- Tobacco smoking is one of the top risk factors for chronic disease, including many types of cancer, respiratory disease and heart disease.
- Illegal drugs not only endanger health, but are a significant contributor to crime, and a major activity and income source for organised crime groups. Like alcohol, illegal drug use contributes to road accidents and violence, and to family breakdown and social dysfunction. Unsafe injecting drug use is also a major driver of blood-borne virus infections such as hepatitis C and HIV/AIDS.
- Use of alcohol, tobacco and other drugs is related to and reinforces social disadvantage. Children in households with parents who misuse drugs are more likely to develop behavioural and emotional problems, tend to perform more poorly at school and are more likely to be the victims of maltreatment.[2]
- One in five hospitalisations of older Australians is due to avoidable drug-adverse reactions, according to a recent Tasmanian review.[3] Cardiovascular complaints, such as hypotension/orthostatic hypotension/syncope, are the most common avoidable drug-adverse reactions resulting in hospital admission.

The National Drug Strategy Household Survey (NDSHS) provides data on the overall level of alcohol and drug consumption. In 2016:

- Fewer people drank alcohol in quantities that exceeded the lifetime risk guidelines than in 2013 (17.1 per cent, down from 18.2 per cent). But there was no change in the proportion exceeding the guidelines for single-occasion risk.
- Young adults were drinking less: 42 per cent of people aged 18 to 24 consumed five or more standard drinks monthly, compared to 47 per cent in 2013.
- The proportion of people using any illicit drug did not increase significantly between 2013 and 2016. However, there had been a gradual increase since 2007, from 13.4 per cent to 15.6 per cent of the population. The total number of people using illicit drugs increased from about 2.3 million to 3.1 million since 2007.

[1] Collins & Lapsley. The costs of tobacco, alcohol and illicit drug abuse to Australian society in 2004/05. Commonwealth of Australia 2008.
[2] MCDS (Ministerial Council on Drug Strategy) 2011. The National Drug Strategy 2010–2015. Canberra: Commonwealth of Australia.
[3] Nair et al. Adverse drug reaction-related hospitalizations in elderly Australians: a prospective cross-sectional study in two Tasmanian hospitals. Drug safety. 2017(40.7):597-606.

4.1 Wastewater drug monitoring

Countries worldwide apply wastewater analysis to measure and interpret drug use. (It is important to note that wastewater testing has limitations and may not necessarily provide a comprehensive indication of overall patterns of drug use.)*

Australia's National Wastewater Drug Monitoring Program provides data on licit and illicit drug use using wastewater. Its 2018 report suggested that: [4]

- Of the 23 countries with comparable reported data for the four common stimulants considered (MDMA, cocaine, amphetamine and methamphetamine), Australia had the second highest total estimated consumption overall, after the United States.
- While there is variation in consumption levels within and across states and territories, there had been an overall decrease in the population-weighted average consumption of many of the drugs measured by the program, between December 2017 and April 2018.
- Nationally, nicotine and alcohol remained the highest consumed substances of those tested, by population-weighted average consumption.
- While the population-weighted average consumption of methamphetamine decreased in both capital city and regional sites from December 2017 to April 2018, it remained the highest consumed illicit drug monitored by the program.
- Compared to 2017, there had been an increase in fentanyl (opioid used as a pain medication) consumption, particularly in regional sites.
- Victoria had the highest level of heroin use of any state or territory in Australia.

* For more information about the limitations of wastewater testing, visit the Drug and Alcohol Research Connections website at connections.edu.au or use the link http://connections.edu.au/opinion/wastewater-analysis-what-does-it-mean-aod-policy-and-practice.

[4] National Wastewater Drug Monitoring Program, Report 5, Australian Criminal Intelligence Commission, August 2018.

5 TARGET POPULATIONS

Analysis of the distribution of NWMPHN's target population is essential to understanding potential demand and locations of need.

Table 1 shows problematic alcohol and other drug use, by age groups, for the total population. The NDSHS also identified population sub-groups at greater risk of problematic drug use. Findings included that:

- Use of illicit drugs in the past 12 months was much more common among people who identified as homosexual or bisexual. Amphetamine and methamphetamine use (collectively 'methamphetamine' in this document) and MDMA ('ecstasy') use in this group was 5.8 times higher than use by heterosexual people.
- People who live in remote and very remote areas, unemployed people and Aboriginal and Torres Strait Islanders continue to be more likely to smoke daily and use illicit drugs than other population groups.
- The proportion of illicit drug users experiencing high or very high levels of psychological distress increased between 2013 and 2016, from 17.5 per cent to 22 per cent. However, there was also an increase over the same period among those who had not used an illicit drug in the past 12 months, from 8.6 per cent to 9.7 per cent.

Table 1: Summary of drug use, by age, for Australian population 2016 (per cent)

	14-19 yr	20-29 yr	30-39 yr	40-49 yr	50-59 yr
Daily smoker	3.0#	14.8	14.0	16.9	14.3
Monthly risk of single occasion harm from alcohol	18#	39.9	31.1	29.7	24.6
Any illicit use in previous 12 months	15.9	28.2	18.1	16.2#	11.7
Marijuana/cannabis in previous 12 months	12.2	22.1	12.7	10.7	7.2
Ecstasy in previous 12 months	3.2	7	2.6	1.0	0.4*
Cocaine in previous 12 months	1.0*	6.9	4.6#	2.2	0.5
Methamphetamine in previous 12 months	0.8*	2.8#	2.4	2.0	0.6

*Source: National Drug Strategy Household Survey 2016. * Estimate has a relative standard error of 25 per cent to 50 per cent and should be used with caution. # statistically significant change between 2013 and 2016*

5.1 Population growth

The NWMPHN area catchment contains some of the fastest growing Local Government Areas (LGAs) in Australia: Hume, Wyndham and Melton (Table 2). These LGAs are also earmarked for further expansion as part of Melbourne's West Growth Corridor[5]. Rapid population growth, especially of younger people, is expected to continue. It is therefore likely that alcohol and other drug use and misuse may also become increasingly problematic.

Table 2: NWMPHN LGAs estimated population and growth of those aged 20 to 49 from 2016 to 2021, and additional persons in 2021

	LGA	2016	2021	Growth 2016-21	% growth 2016-21
Inner City	Maribyrnong	47434	53740	6305	13
	Melbourne	90190	110043	19854	22
	Yarra	53718	56934	3216	6
Suburban	Brimbank	89853	91693	1840	2
	Darebin	77924	82456	4532	6
	Hobsons Bay	41579	42026	447	1
	Moonee Valley	54527	56374	1848	3
	Moreland	53718	56934	3216	6
Growth Area	Hume	88660	95785	7125	8
	Melton	61895	74631	12736	21
	Wyndham	107135	120486	13351	12
Peri-Urban	Macedon Ranges	16621	17210	589	4
	Moorabool	12006	13030	1023	9
NWMPHN		**795259**	**871342**	**76083**	**10**
Victoria		**2591119**	**2761983**	**145860**	**7**

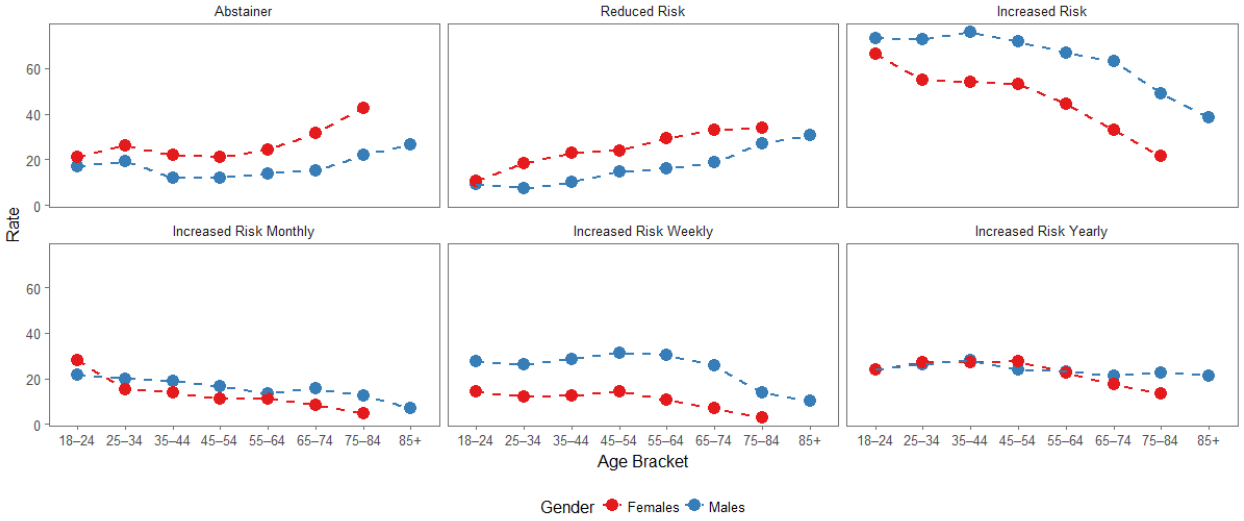
Source: Victoria In Future 2016

[5] https://vpa.vic.gov.au/greenfield/growth-corridor-plans/

5.2 Alcohol

Alcohol consumption is common across all age groups (18+). However, drinking at risky levels is more common in males, peaking in age groups from 18 to 55. Approximately 70 per cent of males and 50 per cent of females in this age range are drinking at risky levels, according to the 2014 Victorian Population Health Survey, as shown in the 'increased risk' graph in Figure 1.

Figure 1: Risk associated with single occasion alcohol consumption by age and gender



Source: Victorian Population Health Survey 2014

5.3 Adolescents and Young Adults

Adolescence and young adulthood are critical stages of development. During these periods, young people undergo major brain development, seek out new experiences with increased risk-taking behaviour, and encounter stresses such as peer pressure and poor mental health. These factors make adolescents and young adults particularly susceptible to developing risky alcohol and drug use behaviours, and related chronic health conditions.

6 ALCOHOL AND OTHER DRUGS IN NWMPHN CATCHMENT

6.1 Determinants of Alcohol and Other Drugs use

Individual, societal and community factors can influence alcohol and illicit drug use and misuse. Age, gender, employment, social disadvantage and social norms for alcohol and other drugs are among the potential influencers.

Regarding age and gender, a recent Australian study showed that the prevalence of risky drinking was declining in males but increasing in women aged 50 to 69.[6] This indicates that the relationship between age and alcohol use is different for each gender.

The relationship between alcohol and other drug use and socio-economic status (SES) is complex.[7] It is 'bi-directional': SES can influence levels of drug use, and drug use can affect SES status, reinforcing adverse effects. For example, drug use can lead to relationship breakdown, leading to further drug use, then loss of employment. Generally, people from low SES areas are more likely to drink alcohol more frequently than those in higher SES areas.[8] A 2014 study showed that Victorians living in regional areas had higher consumption levels for both single-occasion and lifetime risk consumption measures.[9]

Australian research has shown a disproportionate burden of alcohol-related harms among disadvantaged populations.[10] This is also a consistent finding of European research, which has shown that harm from acute and chronic alcohol use, including death, is more common among the disadvantaged.[11] Awareness of, and access to services that address alcohol and other drug misuse problems may also be lower among people from low SES areas.[12]

Vulnerable populations, such as Aboriginal and Torres Strait Islanders, culturally and linguistically diverse (CALD) groups and lesbian, gay, bisexual, transgender, intersex and queer (LGBTIQ) communities may suffer additional exposure to marginalisation, stigma and discrimination. Their ability to access appropriate, culturally sensitive support services may also be limited.[13]

[6] Livingston et al. Is there gender convergence in risky drinking when taking birth cohorts into account? Evidence from an Australian national survey 2001-13. Addiction. 2018;113(11):2019-28
[7] Spooner et al. Social Determinants of Drug Use (Technical Report 228). National Drug And Alcohol Research Centre. UNSW. 2004
[8] Bloomfield et al. Social inequalities in alcohol consumption and alcohol-related problems in the study countries of the EU concerted action 'Gender, culture and alcohol problems: a multi-national Study'. Alcohol. 2006;41(1):i26-36
[9] Heilbronn et al. Social Determinants, Drinking and Chronic Disease. Turning Point. September 2014.
[10] Najman et al. Increasing socioeconomic inequalities in male cirrhosis of the liver mortality: Australia 1981-2002. Drug and Alcohol Review. 2007;26(3):273-78
[11] Makela, P. Alcohol-related mortality as a function of socio-economic status. Addiction. 1999;94(6):867–86
[12] Morley et al. Socioeconomic and geographic disparities in access to pharmacotherapy for alcohol dependence. Journal of substance abuse treatment 2017;74:23-25
[13] Roche et al. Evidence Review: The social determinants and inequities of alcohol consumption and alcohol related health outcomes. VicHealth. 2015

7 PREVALENCE OF ALCOHOL AND OTHER DRUGS

7.1 Alcohol

Alcohol has a complex role in Australian society. Most Australians drink alcohol for enjoyment, relaxation and when socialising, at levels that cause little apparent or obvious harm. However, a substantial proportion of people drink at levels that clearly increase their risk of alcohol-related harm.

7.1.1 Alcohol-related risks and death

In many countries, including Australia, the public health burden of alcohol is considerable, contributing to a significant proportion of deaths, diseases and injuries.

Alcohol-induced mortality *rates* are declining. However, in 2017 there was a record-high *number* of alcohol-induced deaths: 1366 people died as a direct result of alcohol, and alcohol was mentioned as a contribution to death in 2820 cases. Alcoholic liver disease was the most common cause of alcohol-induced death, while the most common contributor to alcohol-related death was mental and behavioural conditions.[14]

Despite proportional declines, these numbers make clear that alcohol consumption is still a significant problem. In addition to the damage to personal health, the excessive consumption of alcohol is a significant social and economic burden on individuals, families, bystanders and the broader community.

7.1.2 Single-occasion risky consumption

High-risk single-occasion alcohol use is classified as five or more alcoholic drinks in one sitting. It is considered an indicator of likelihood for shorter-term harm, including assault, injuries and acute hospitalisation.

The 2014 Victorian Population Health Survey indicates the prevalence of this type of consumption. Analysis of the survey, in Table 3, shows that in the NWMPHN catchment:

- High-risk single occasion drinking was most prominent in Yarra, Macedon Ranges, Moorabool. Melbourne and Hobsons Bay also had elevated levels. (Yarra and Melbourne's significant entertainment precincts may explain higher prevalence rates.)
- Hume and Melton had the lowest levels of risky single-occasion drinking.
- Melton and Brimbank had the highest proportions of abstainers or ex-drinkers.

[14] ABS, 3303.0 - Causes of Death, Australia, 2017, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3303.0Main+Features12017?OpenDocument

Table 3: Proportion of population by LGA with single-occasion alcohol consumption (per cent)

	LGA	Abstainer (%)	Reduced Risk (%)	Increased Risk (%)
Inner City	Maribyrnong	21.3	34.5	42.5
	Melbourne	19.5	32.2	47.7
	Yarra	18.3	25.6	55.1
Suburban	Brimbank	33	32	33.8
	Darebin	28.1	33.4	37.1
	Hobsons Bay	17.7	35	46.2
	Moonee Valley	19.6	38.8	40.4
	Moreland	29.2	26.8	43.8
Growth Area	Hume	31.2	40	27.6
	Melton	35.2	35.8	27.5
	Wyndham	25	39.3	34.7
Peri-Urban	Macedon Ranges	13.1	32.9	53.7
	Moorabool	22.7	32.1	44.3
NWMPHN		**22.7**	**33.4**	**42.5**
Victoria		**20.8**	**35.8**	**42.5**

Source: Victorian Population Health Survey 2014. Note that the data is aged-standardized.

7.1.3 Lifetime risky consumption

High-risk lifetime alcohol use is classified as three or more alcoholic drinks in one sitting. This type of consumption is considered an indicator of longer-term alcohol-related health problems and illnesses, such as cardiovascular disease, cancer, liver disease and mental health conditions.

The lifetime risk of death from alcohol-related disease more than triples when consumption increases from two to three standard drinks a day. At higher levels of drinking, the risk for women is significantly higher than that for men.[15]

The 2014 Victorian Population Health Survey indicates the prevalence of this type of consumption in different LGAs. Table 4 shows that in the NWMPHN catchment, Melbourne, Macedon Ranges, Yarra, Maribyrnong, Hobsons Bay and Moorabool had the highest rates.

Table 4: Proportion of population by LGA with lifetime risk alcohol consumption (per cent)

	LGA	Abstainer (%)	Reduced Risk (%)	Increased Risk (%)
Inner City	Maribyrnong	21.3	15.6	60.9
	Melbourne	19.5	10.3	69.1
	Yarra	18.3	13.5	64.9
Suburban	Brimbank	33	20.7	43.2
	Darebin	28.1	18.1	53
	Hobsons Bay	17.7	20.2	60.1
	Moonee Valley	19.6	21	57.9
	Moreland	29.2	13.2	57.3
Growth Area	Hume	31.2	19.6	47
	Melton	35.2	24.3	38.6
	Wyndham	25	22.2	51.7
Peri-Urban	Macedon Ranges	13.1	17.2	68.6
	Moorabool	22.7	16.2	59.3
NWMPHN		**22.7**	**18.1**	**57.9**
Victoria		**20.8**	**18.3**	**59.2**

Source: Victorian Population Health Survey 2014. Note that the data is aged-standardized.

[15] NHMRC. Australian Guidelines to Reduce Health Risks from Drinking Alcohol. 2009

7.1.4 Alcohol societal harms

Turning Point is an Australian addiction research and education centre, which also provides treatment. As part of its work, it analyses alcohol-related societal harm by examining assaults, road injuries and domestic violence related to alcohol use.

Table 5 is a summary of this data by per capita rates in LGAs in the NWMPHN catchment. Assault and serious road injuries are recorded according to occurrence in either low, medium or high 'alcohol hours'[16]. Low alcohol hours (LAH) cover every day, from 6am to 8pm. High alcohol hours (HAH) are Friday or Saturday, from 8pm to 6am. Medium alcohol hours are Sunday to Thursday, from 8pm to 6am. (The occurrence of family violence is not divided by timeframe.)

The data shows that overall, the NWMPHN catchment has lower rates of alcohol-related societal harm than Victoria overall. The exception is harm related to low alcohol hours.

Despite lower rates of harm overall, some LGAs in the catchment have consistently higher rates of assault, road injury and family violence than Victoria overall. The data shows that:

- The LGAs with high rates of single-occasion drinking – Yarra and Melbourne (as shown in Table 3) – also have high levels of alcohol-related assaults across all timeframes, and high levels of family violence.
- Alcohol-related assaults are also prevalent in Hume, Melton and Brimbank.
- Definite and potential alcohol-related family violence is elevated in Melbourne, Yarra, Hobsons Bay, Moorabool and Maribyrnong.
- Serious road injuries (SRI) during HAH occur at an elevated rate in Melbourne, Yarra and Hume, as well as Macedon Ranges and Moorabool.

Table 5: Rates per 10,000 persons for alcohol-related societal harm measures by LGA

	LGA	Assault HAH	Assault LAH	Assault MAH	SRI HAH	Definite or possible alcohol-related Family Violence
Inner City	Maribyrnong	8.4	37.2	13.7	1.7	19.8
	Melbourne	45.8	86.1	38.4	5.4	28.9
	Yarra	15.6	38.1	20.4	4.2	26.6
Suburban	Brimbank	9.1	41.9	15.9	2.7	17.5
	Darebin	5.8	31.8	11.5	2.3	16.6
	Hobsons Bay	9.4	27.6	10.6	2.2	21.6
	Moonee Valley	6.4	29.4	11.2	1.1	12.2
	Moreland	8.2	34.3	11.7	2.2	13.5
Growth Area	Hume	10.3	46.5	18	3.7	17.1
	Melton	10.2	41.6	16.3	2.3	17.9
	Wyndham	6.8	32.1	9.2	1.7	17.1
Peri-Urban	Macedon Ranges	5.3	30.2	9.3	5.1	14.3
	Moorabool	9.2	37.1	13.3	5.1	20
NWMPHN		**9.1**	**37.1**	**13.3**	**2.3**	**17.5**
Victoria		**10.1**	**35.2**	**13.7**	**3**	**23.7**

Source: Turning Point 2014-15. Note: HAH= High Alcohol Hours; LAH= Low Alcohol Hours; SRI=serious road injury

[16] http://aodstats.org.au Turning Point supplied from various sources

8 SERVICE RESPONSE

Turning Point gauges the use of services for alcohol and drug issues from:

- Ambulance service data that indicates the frequency and location of ambulance attendances, by location of incident.
- Hospitalisation data that indicates the frequency and location of hospital admissions for specific alcohol and drug reasons, by residential location of the patient.
- Alcohol and Drug Information System (ADIS) data is the primary source of data for several state-funded alcohol and drug treatment service programs, including Alcohol and other Drug Treatment Services, Alcohol and other Drug Primary Health Services, and the Drink-Driver Education Program.

Table 6, below, shows per capita rates of alcohol-related ambulance attendances and hospital admissions from 2016-17, and 'ADIS episodes of care' across LGAs in NWMPHN in the period 2014-15. (An 'ADIS episode of care' is a completed course of treatment undertaken by a client as registered in the ADIS database.)

8.1 Alcohol

Table 6 shows ambulance attendance rates were very high in the NWMPHN's Inner City LGAs, and slightly elevated in Suburban LGAs. This may be related to the relative proportions of licensed venues.

Maribyrnong and Yarra had the highest per capita rates of ADIS episodes of care; rates in Moreland and Macedon Ranges were also elevated. Alcohol-related hospitalisations were low to very low in all Growth and Peri-Urban LGAs.

Brimbank, Darebin and Moreland had elevated ADIS episode rates, despite relatively low risk profiles for lifetime and single-occasion risk, as shown in Table 2 and Table 3. It could be that people in these communities are more willing to seek help, or direct people to help. There may be more or better treatment services, and/or better awareness of services.

Table 6: Rates per 10,000 persons for alcohol-related ADIS episodes of care, hospitalisations and ambulance attendances

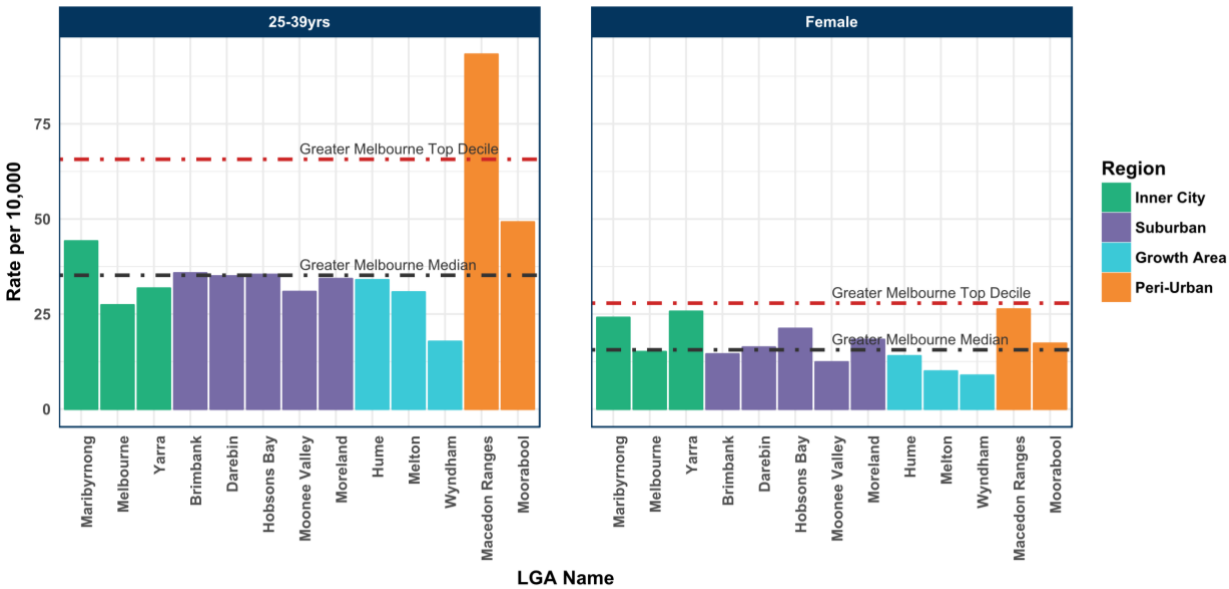
	LGA	ADIS episode	Hospital admission	Intoxication – ambulance	Alcohol only – Ambulance
Inner City	Maribyrnong	34.8	51.1	45.9	37.7
	Melbourne	25.2	51.9	152.8	131.2
	Yarra	40.9	74.3	80.4	63.6
Suburban	Brimbank	26.3	38.3	25.8	22.1
	Darebin	26.2	41	36.5	30.1
	Hobsons Bay	23.5	48.6	30.6	26.5
	Moonee Valley	20.6	44.4	31.4	27.5
	Moreland	29.8	39.8	30.7	24.7
Growth Area	Hume	23.1	29.2	27.3	21.7
	Melton	20.9	28.1	22.9	17.9
	Wyndham	17.7	24.5	20.4	17.1
Peri-Urban	Macedon Ranges	27.1	30.9	17.9	15.6
	Moorabool	18.6	36.2	22.7	19.3
NWMPHN		**25.2**	**39.8**	**30.6**	**24.7**
Victoria		**27**	**46.6**	**31.9**	**26.4**

Source: Turning Point 2014-15 (ADIS episodes of care, hospitalisations) and 2016-17 (ambulance attendances). Note that 'Alcohol intoxication' is with or without other drugs, whereas 'Alcohol only' is intoxication without other drugs

8.1.1 Analysis by age and gender

Figure 2 shows that 25 to 39-year-olds in Macedon Ranges had ADIS episode of care rates more than double those for most other LGAs. The rate for females in this age group in the Macedon Ranges is near the top decile for Greater Melbourne overall, while the male rate is just above median. (See Figure 6, in the Appendix, for ADIS episode of care rates across all age groups.)

Figure 2: ADIS episodes of care rates per 10,000 population for alcohol, aged 25-39 years



Source: Turning Point 2014-15

8.2 Illicit drugs

Per capita rates of illicit drug ADIS episodes of care, and ambulance attendances, are high across the Inner City and Suburban LGAs (Table 7). Maribyrnong and Yarra had the highest rates for ADIS episodes of care, while ambulance attendances due to illicit drugs was highest in Melbourne and Yarra. (See Figure 7, in the Appendix, for ADIS episode of care rates across all age groups.)

In contrast to the geographic distribution for alcohol-related ADIS episodes of care, the Growth Area municipality of Melton had rates of ADIS episodes of care above the median for the NWMPHN catchment overall. Given the official projections for rapid population growth, this area can be expected to have continued high demand for drug therapy services.

Table 7: Rates per 10,000 persons for any illicit drug related ADIS episodes of care, hospitalisations and ambulance attendances

	LGA Name	Illicit (any) ADIS	Illicit (any) – Ambulance	Illicit (any) – Hospital
Inner City	Maribyrnong	55.7	35.6	27.4
	Melbourne	35.5	90.0	29.6
	Yarra	74.8	86.0	27.4
Suburban	Brimbank	50.9	21.0	28.8
	Darebin	40.9	23.7	22
	Hobsons Bay	41.2	11.6	22.1
	Moonee Valley	33.9	17.2	22.1
	Moreland	42.9	18.0	23.1
Growth Area	Hume	41.6	15.7	18.8
	Melton	48.3	12.8	20.4
	Wyndham	36.2	9.5	14.3
Peri-Urban	Macedon Ranges	17.6	5.1	13.6
	Moorabool	18	7.0	18.4
NWMPHN		**41.2**	**17.2**	**22.1**
Victoria		**36.2**	**12.5**	**21**

Source: Turning Point 2014-15 (ADIS episodes of care, hospitalisations) and 2016-17 (ambulance attendances)

8.3 Methamphetamines

There is growing public awareness and alarm regarding the illegal use of amphetamines and methamphetamines (collectively referred to here as methamphetamines) – particularly of crystal methamphetamine, known as 'ice'. Methamphetamine use has overtaken excessive alcohol use as the drug use most concerning to Australians.[17] The LGAs of Melbourne and Yarra had very high ambulance attendance rates related to methamphetamines, possibly due to much higher numbers of evening recreation and entertainment venues.

Table 8 shows Hume and Melton had higher methamphetamine-related referrals and Hume had higher ambulance attendances than the NWMPHN catchment overall. (This is in contrast to its rates for alcohol, in Table 6, which were lower than for NWMPHN overall.) Methamphetamine was responsible for almost half the illicit drug referrals from these regions.[18]

Rapid population growth is expected in Growth Areas – already heavily populated – and methamphetamine use will likely increase accordingly, posing a significant challenge.

Table 8 also shows that Brimbank, Maribyrnong and Moreland had high ADIS episodes of care rates compared to other LGAs in the NWMPHN catchment.

Table 8: Rates per 10,000 persons for methamphetamine-related ADIS episodes of care and methamphetamine and crystal methamphetamine-related ambulance attendances

	LGA	Amphetamines ADIS	Amphetamines – ambulance	Crystal methamphetamine – ambulance
Inner City	Maribyrnong	17.5	7.4	5.6
	Melbourne	11.2	22.0	14.7
	Yarra	25.6	13.5	10.4
Suburban	Brimbank	17.8	6.6	4.8
	Darebin	14.1	7.2	5.8
	Hobsons Bay	12.8	3.9	3.2
	Moonee Valley	15	5.5	3.7
	Moreland	20.1	5.1	3.9
Growth Area	Hume	20	6.6	5.4
	Melton	21.2	4.7	3.6
	Wyndham	16.2	4.2	3.2
Peri-Urban	Macedon Ranges	6.8	1.9	1.5
	Moorabool	8.9	4.0	3.1
NWMPHN		**16.2**	**5.5**	**3.9**
Victoria		**14.1**	**4.2**	**3.2**

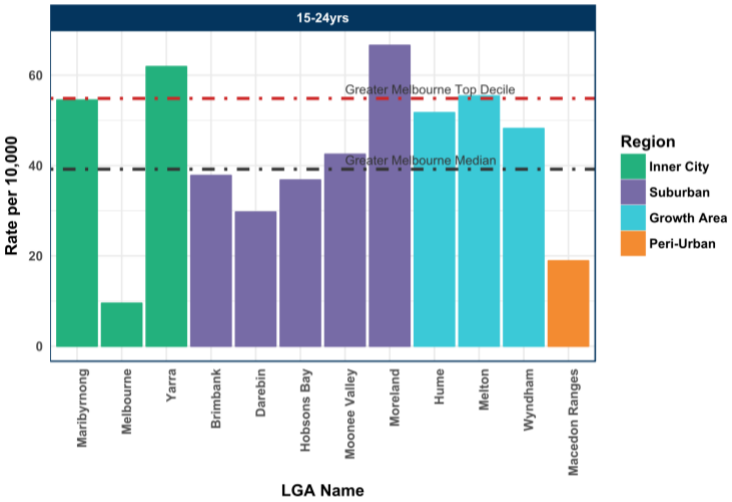
Source: Turning Point 2014-15 (ADIS episodes of care) and 2016-17 (ambulance attendances)

[17] https://www.aihw.gov.au/reports/illicit-use-of-drugs/ndshs-2016-key-findings/contents/illicit-use-of-drugs
[18] http://aodstats.org.au Turning Point supplied from various sources

8.3.1 Analysis by age

Most methamphetamine ADIS referrals are for 15 to 24-year-olds. Figure 3 shows episodes of care for this age group by per capita rates across the NWMPHN catchment. (Figure 8 in the Appendix provides the same data for other age groups.) Moreland had extremely high per capita rates for this the age group, well above Yarra, Maribyrnong and Melton. All four of these LGAs were in the top decile for Greater Melbourne overall.

Figure 3: ADIS episodes of care rates per 10,000 population for methamphetamines, aged 14-24 years



Source: Turning Point 2014-15

8.4 Heroin

Use of services related to heroin use is centred on known 'hotspots' in the Yarra and Maribyrnong LGAs. Table 9 shows that Yarra's ADIS episodes of care rates were seven times those for Victoria overall, and that its ambulance attendance rate for overdoses was more than 40 times the rate for Victoria overall. Maribyrnong had more than five times the overall Victorian ADIS episodes of care rate, and more than 10 times the overall Victorian ambulance attendance rate.[19]

Brimbank and Darebin also reported well above the NWMPHN median ADIS referrals and overdose-related ambulance attendance rates. Brimbank's rates were more than triple the overall Victorian rate.

Table 9: Rates per 10,000 persons for heroin related ADIS referrals, hospitalisations and ambulance attendances

LGA		Heroin ADIS	Heroin overdose – ambulance	Other heroin – ambulance	Heroin – hospital
Inner City	Maribyrnong	21.9	8.5	8.7	0.9
	Melbourne	12.8	8.0	12.1	1.1
	Yarra	29.7	31.8	28.1	1.2
Suburban	Brimbank	14.6	5.0	5.0	0.5
	Darebin	11.5	2.3	3.9	0.8
	Hobsons Bay	9.6	0.9	2.1	0.7
	Moonee Valley	6.3	2.2	2.4	NA
	Moreland	6	1.4	2.4	0.4
Growth Area	Hume	5.1	1.0	0.9	0
	Melton	8.4	1.1	1.6	NA
	Wyndham	4.2	1.1	1.5	NA
Peri-Urban	Macedon Ranges	4.3		NA	0
	Moorabool	1.7	0.0	NA	0
NWMPHN		**8.4**	**1.8**	**2.4**	**0.5**
Victoria		**4.2**	**0.7**	**1.1**	**0**

Source: Turning Point 2014-15 (ADIS episodes of care, hospitalisations) and 2016-17 (ambulance attendances)

Injecting Room

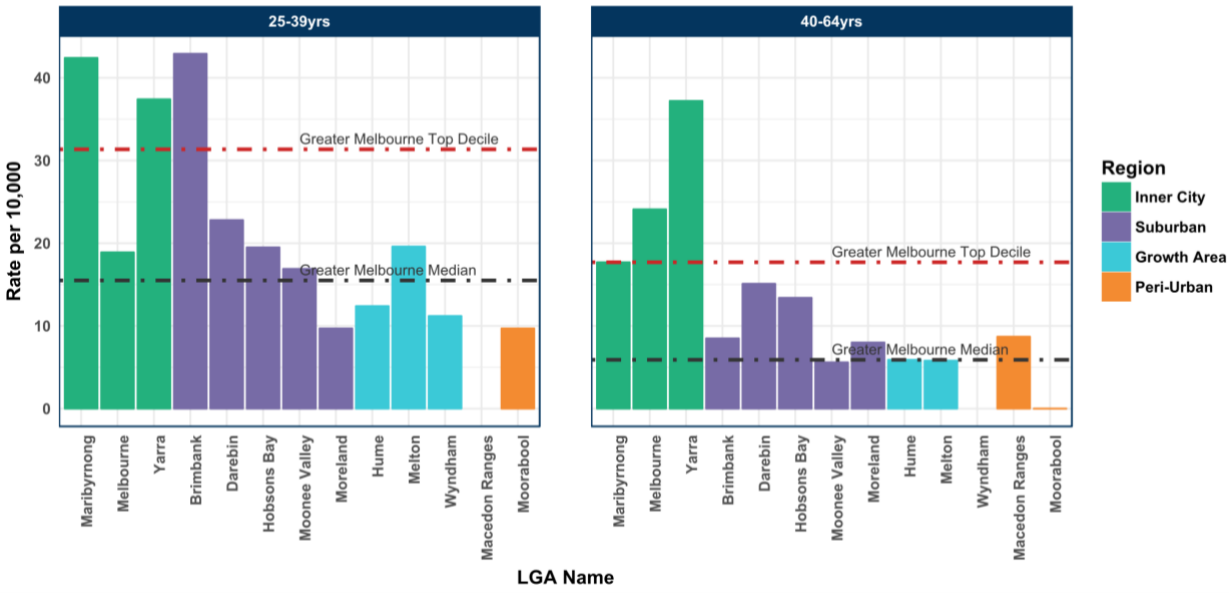
In July 2018, the Victorian Government began a trial of a Medically Supervised Injecting Room (MSIR) in North Richmond, in the Yarra LGA. The trial is aimed at reducing the large number of overdoses and ambulance attendances in the area.[20] Over the next two years, an independent panel will review the medically supervised injecting room, then report their findings and opinion about the service's continuation.[21] Since opening, the MSIR has recorded more than 8000 visits, and responded to more than 140 overdoses. Thirty of these involved the use of naloxone, a drug that can reverse overdoses on opioids such as heroin.

[19] http://aodstats.org.au Turning Point supplied from various sources
[20] https://www.premier.vic.gov.au/more-rehab-beds-better-treatment-and-safer-streets/
[21] https://nrch.com.au/services/alcohol-and-other-drugs/medically-supervised-injecting-room/

8.4.1 Analysis by age

Figure 4, below, shows that while Yarra has extremely high rates of heroin-related referrals across all ages, Maribyrnong and Brimbank show substantial declines in the 40 to 64-year-old group. Maribyrnong's rate is still very high, relative to the median for all LGAs, at half the rate of Yarra's. But Brimbank declines from the highest rate in the younger age bracket to approach the median in the older age group. (See Figure 9, in the Appendix, for ADIS episode of care rates across all age groups.)

Figure 4: ADIS episodes of care rates per 10,000 population for heroin, ages 25-39 and 40-64



Source: Turning Point 2014-15

8.5 Cannabis

Cannabis remains the most widely used illicit drug. Findings from the NDSHS indicate that about 10 per cent of the Australian population had used the drug in the past 12 months.[22] Although often considered relatively harmless, cannabis use can cause or exacerbate serious mental health problems.[23]

Most LGAs in the NWMPHN catchment had cannabis-related ADIS episodes of care higher than the NWMPHN median rate (Table 10). Melbourne, Moonee Valley, Darebin, Macedon Ranges and Moorabool rates were below the median.[24]

Table 10: Rates per 10,000 persons for cannabis-related ADIS referrals, hospitalisations and ambulance attendances

LGA		Cannabis ADIS	Cannabis Ambulance	Cannabis Hospital
Inner City	Maribyrnong	15.4	4.6	8.6
	Melbourne	10.7	10.6	6.1
	Yarra	18.7	7.2	7.9
Suburban	Brimbank	17.6	3.9	9.6
	Darebin	14	6.2	7.3
	Hobsons Bay	18	3.6	7.3
	Moonee Valley	11.8	4.3	7.7
	Moreland	16.1	5.5	7
Growth Area	Hume	14.8	4.7	6.8
	Melton	18	3.7	6.2
	Wyndham	15.2	3.0	5.5
Peri-Urban	Macedon Ranges	6.2	1.9	7.2
	Moorabool	7.1	4.6	7.4
NWMPHN		**15.2**	**4.6**	**7.3**
Victoria		**15.2**	**4.3**	**7.3**

Source: Turning Point 2014-15 (ADIS episodes of care, hospitalisations) and 2016-17 (ambulance attendances)

8.5.1 Analysis by age

Cannabis ADIS episode of care rates are highest for ages 15 to 24, and for males (see Figure 10 in the Appendix). The episode of care rates for Melton, Hobsons Bay and Wyndham are high, while Yarra is relatively under-represented within this age group compared to others.

[22] https://www.aihw.gov.au/reports/illicit-use-of-drugs/ndshs-2016-key-findings/contents/illicit-use-of-drugs
[23] https://www.healthdirect.gov.au/marijuana-and-mental-health
[24] http://aodstats.org.au Turning Point supplied from various sources

8.6 Pharmaceuticals

In the context of illicit drug use, a pharmaceutical is 'a drug that is available from a pharmacy, over-the-counter or by prescription, which may be subject to misuse'.[25]

Misuse includes use for non-medical purposes or in doses or frequencies other than those prescribed. In terms of recent use (past 12 months) – and relative to illegal drug use – pain-killers/opiates were the second most commonly misused drug after cannabis (3.6 per cent of the population had used them in the past 12 months).[26]

Note that the pattern of pharmaceutical misuse differs slightly from that for illicit drugs. Table 11 shows that the Inner City LGAs of Melbourne, Yarra and Maribyrnong had the highest ADIS episodes of care and ambulance attendance rates related to pharmaceutical misuse, consistent with their rates for other substances. Moonee Valley, Moreland and Darebin also had high rates. But Brimbank, which had elevated rates for other substances, had low rates related to pharmaceutical misuse.[27]

Table 11: Rates per 10,000 persons for pharmaceutical-related ADIS episodes, hospitalisations and ambulance attendances

LGA		Pharmaceuticals (any) ADIS	Pharmaceuticals (any) Ambulance	Pharmaceuticals (any) Hospital
Inner City	Maribyrnong	6.1	18.9	12.3
	Melbourne	3.1	24.1	20.1
	Yarra	4	30.5	17
Suburban	Brimbank	2.8	14.1	10.7
	Darebin	3.2	18.1	16.1
	Hobsons Bay	2.1	13.7	12.4
	Moonee Valley	3.7	15.0	16.5
	Moreland	3.2	16.3	15.5
Growth Area	Hume	2.8	18.3	11.1
	Melton	2.7	15.0	13
	Wyndham	1.8	12.0	10.1
Peri-Urban	Macedon Ranges	2.1	10.3	7.6
	Moorabool	NA	19.9	10.3
NWMPHN		**3.0**	**16.3**	**12.4**
Victoria		**3.2**	**16.1**	**14.6**

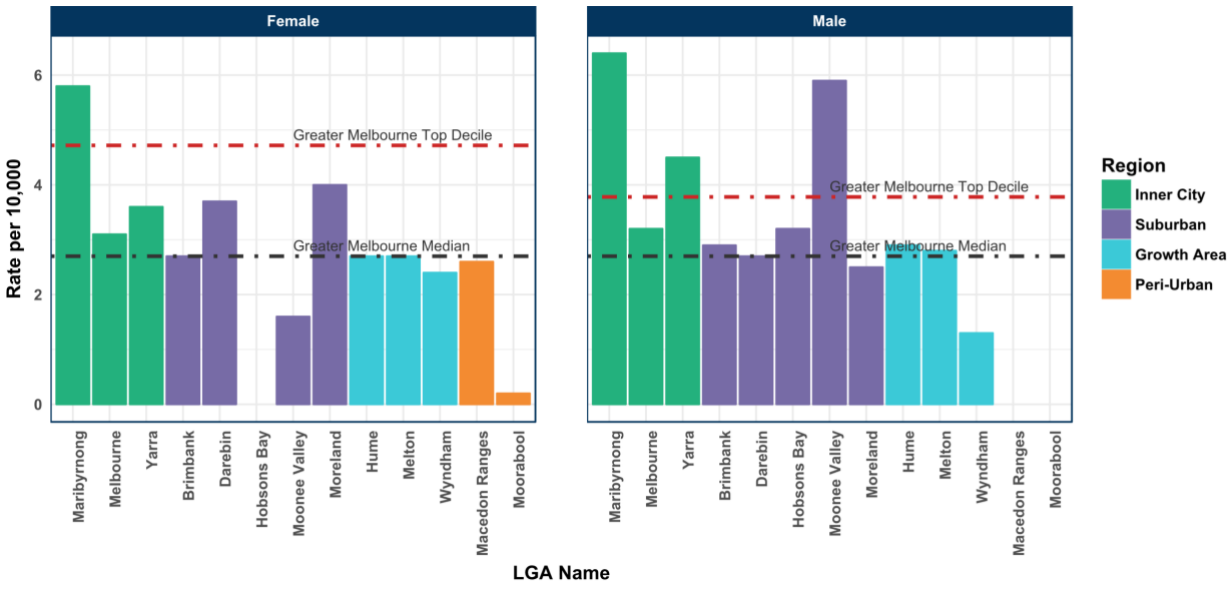
Source: Turning Point 2014-15 (ADIS episodes of care, hospitalisations) and 2016-17 (ambulance attendances)

8.6.1 Analysis by age and gender

Figure 5, below, shows that while Maribyrnong had higher referral rates for pharmaceutical misuse for both genders, variation by gender is noticeable in Yarra and Moonee Valley. Both had relatively higher rates (top decile) for males, and only slightly elevated rates for females. (See Figure 11, in the Appendix, for ADIS episode of care rates across all age groups.)

[25] http://www.nationaldrugstrategy.gov.au
[26] https://www.aihw.gov.au/reports/illicit-use-of-drugs/ndshs-2016-key-findings/contents/illicit-use-of-drugs
[27] http://aodstats.org.au Turning Point supplied from various sources

Figure 5: ADIS episodes of care rates per 10,000 population for pharmaceuticals, sex and LGA



Source: Turning Point 2014-15

8.6.2 Polypharmacy

Polypharmacy, defined here as 'five or more regular prescription medications', is increasing in Australia.[28] It can be a significant burden on older people: research has shown a significant association between polypharmacy and adverse outcomes among older people.[29] Polypharmacy is also associated with the prevalence of chronic diseases, for which one or more medicines may be indicated, and as such increases with age. Currently, no NWMPHN-specific data on polypharmacy is available.

[28] Gnjidic et al. Assessing medication burden and polypharmacy: finding the perfect measure. Expert Rev Clin Pharmacol. 2017

[29] Gnjidic et al. Polypharmacy cutoff and outcomes: five or more medicines were used to identify community-dwelling older men at risk of different adverse outcomes. J Clin Epidemiol 2012;65:989-995.

8.7 Opioids

Opioid dependence is a chronic, relapsing condition that requires long-term treatment. Treatment is tailored to a person's individual circumstances, and treatment types may be combined (for example, opioid pharmacotherapy combined with counselling) or varied over time.[30]

Analysis of data from the Australian Public Benefit Scheme (PBS) and Australian studies [31] suggests that prescriptions for an opioid medication, which is used for the relief of moderate to severe pain (oxycodone), are increasing in Australia. This was predominantly the case for low-dose formulations, and for older patients. The drug's increased availability has been linked to increased misuse, medical emergencies and poisoning death.[32]

Table 12 shows that elevated ADIS episodes of care rates for opioid misuse were widespread in the NWMPHN catchment. Most LGAs were above the median, except Hume, Hobsons Bay, Wyndham, Macedon Ranges and Melbourne. Maribyrnong has the highest rates of opioid-related ADIS episodes of care and hospitalisation. (See Figure 12, in the Appendix, for ADIS episode of care rates across all age groups).

Table 12: Rates per 10,000 persons for opioid-related ADIS episodes of care, hospitalisations and ambulance attendances

	LGA	Opioids ADIS	Opioids – Ambulance	Opioids – Hospital
Inner City	Maribyrnong	4.4	1.0	11.8
	Melbourne	1.2	1.6	11.4
	Yarra	3.1	1.5	11.2
Suburban	Brimbank	1.8	1.2	10.2
	Darebin	1.7	1.6	6.6
	Hobsons Bay	1.6	1.2	5.8
	Moonee Valley	1.7	1.2	7.7
	Moreland	2.3	1.1	8.1
Growth Area	Hume	1.1	2.5	4
	Melton	1.9	1.2	5.5
	Wyndham	1.5	1.5	3.6
Peri-Urban	Macedon Ranges	1.3	NA	3.1
	Moorabool	NA	NA	3.2
NWMPHN		**1.7**	**1.2**	**6.6**
Victoria		**1.7**	**1.7**	**5.7**

Source: Turning Point 2014-15 (ADIS episodes of care, hospitalisations) and 2016-17 (ambulance attendances)

While the overall per capita rates are low compared with those for alcohol and illicit drugs, opioid misuse is a concern because:

- About a quarter of patients prescribed opioids for chronic pain misuse them.
- About 10 per cent of people who are prescribed opioids develop an opioid-use disorder.

About 80 per cent of people who use heroin first misused prescription opioids.[33]

[30] NDARC (National Drug and Alcohol Research). Treatment options for heroin and other opioid dependence: a guide for frontline workers. Canberra: DoHA for the National Drug Strategy. 2014
[31] Roxburgh et al. Prescription of opioid analgesics and related harms in Aust. MJA 2011;195(5):280-84
[32] Lalic et al. Harms associated with extramedical use of prescription opioid analgesics in Australia: A scoping review. Research in Social and Administrative Pharmacy. July 2018
[33] https://www.drugabuse.gov/drugs-abuse/opioids/opioid-crisis

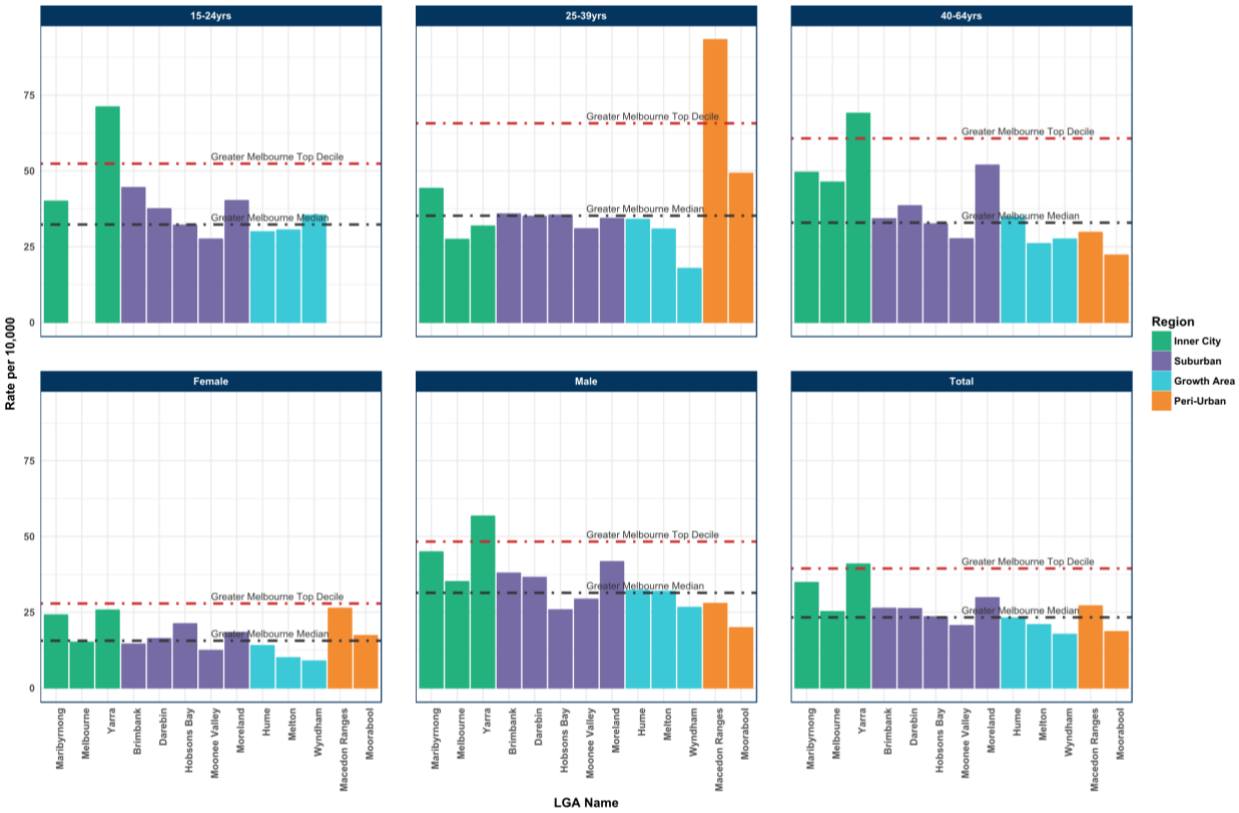
Government programs

New Victorian and Australian government programs aim to reduce the scale and impact of pharmaceutical opioid misuse. These include testing of a real-time prescription monitoring program, called *Safescript*, in Western Victoria Primary Health Network[34] from October 2018. From February 2018, the common painkiller codeine, and medicines containing codeine, were no longer available over-the-counter – their use deemed too harmful without a doctor's prescription.[35]

[34] https://vphna.org.au/safescript-hub/
[35] https://www.tga.gov.au/codeine-info-hub

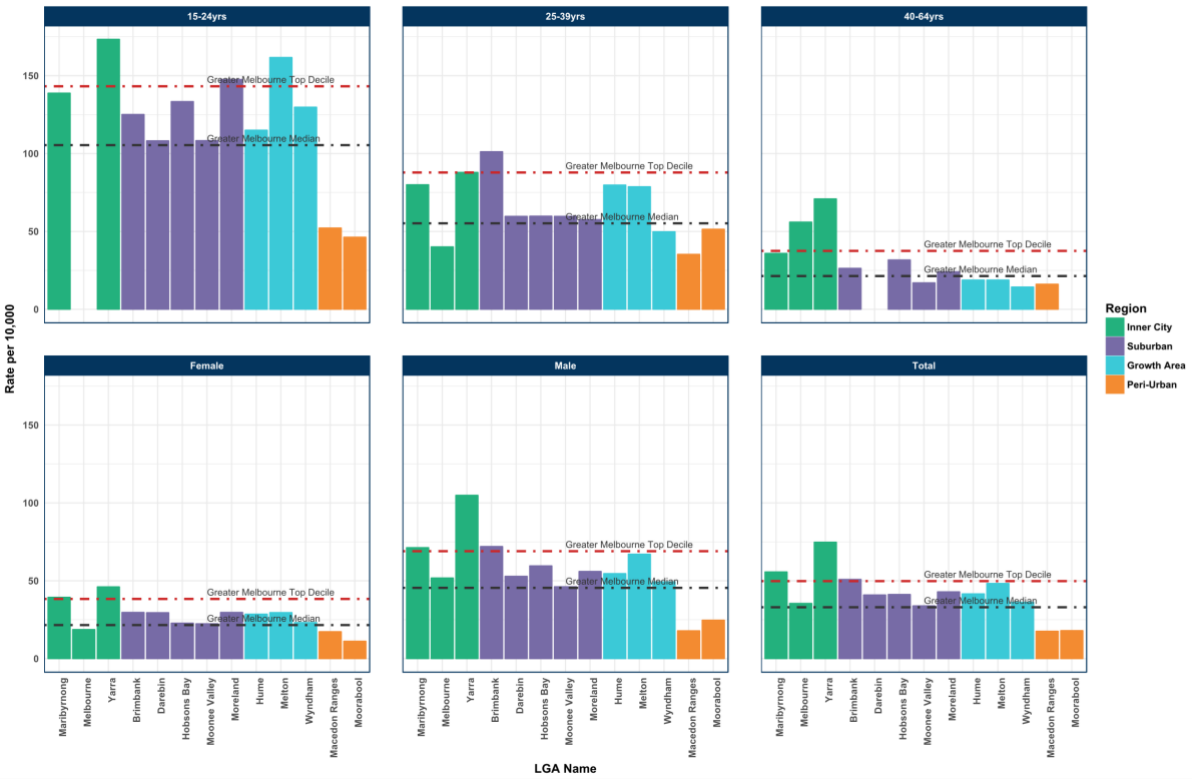
ADDITIONAL DATA - APPENDIX

Figure 6: ADIS episodes of care rates per 10,000 population for alcohol, aged 15-64 years, sex



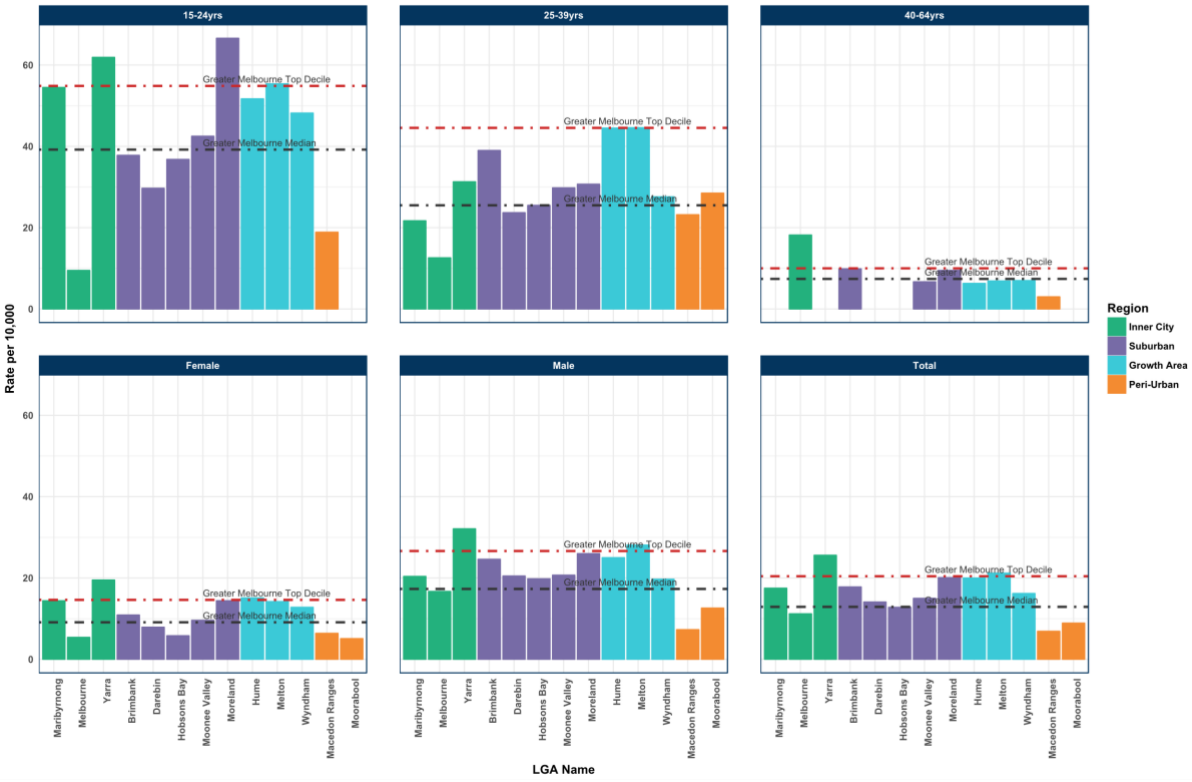
Source: Turning Point 2014-15

Figure 7: ADIS episodes of care rates per 10,000 population for illicit drugs, aged 15-64 years, sex



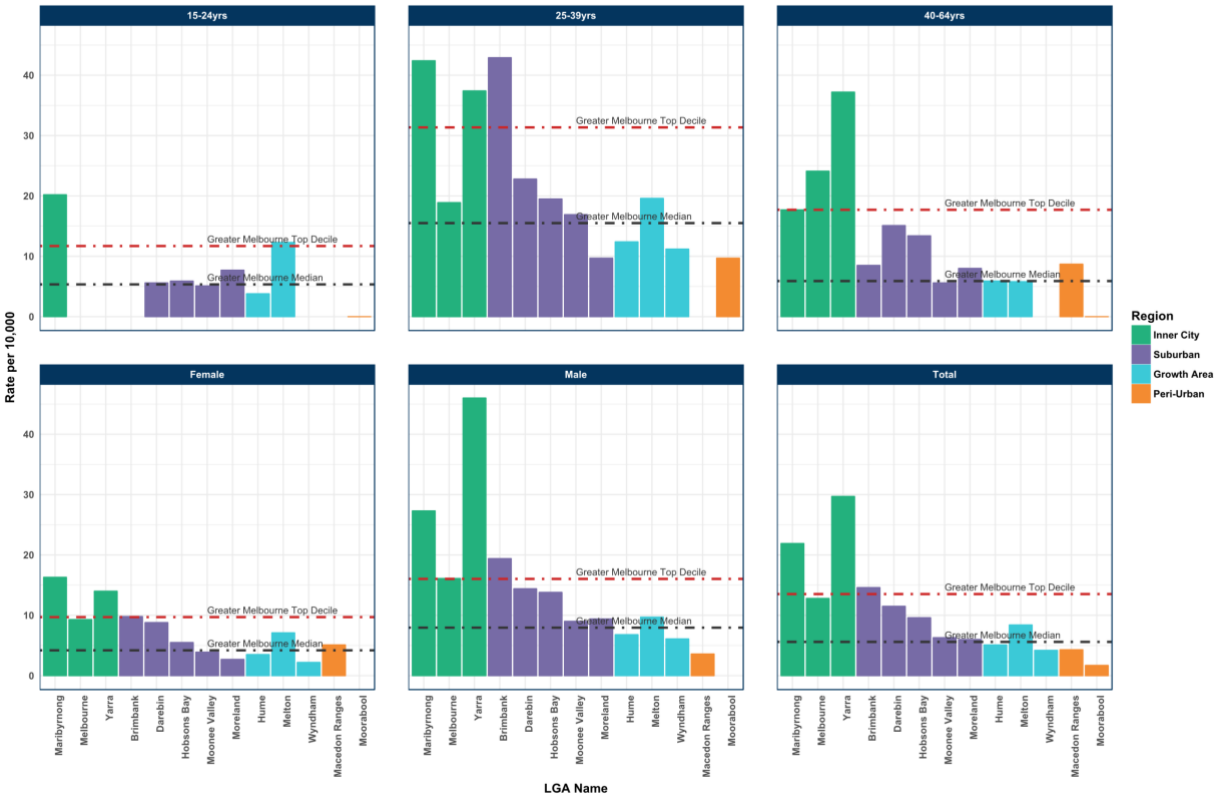
Source: Turning Point 2014-15

Figure 8: ADIS episodes of care rates per 10,000 population for methamphetamine, aged 15-64 years, sex



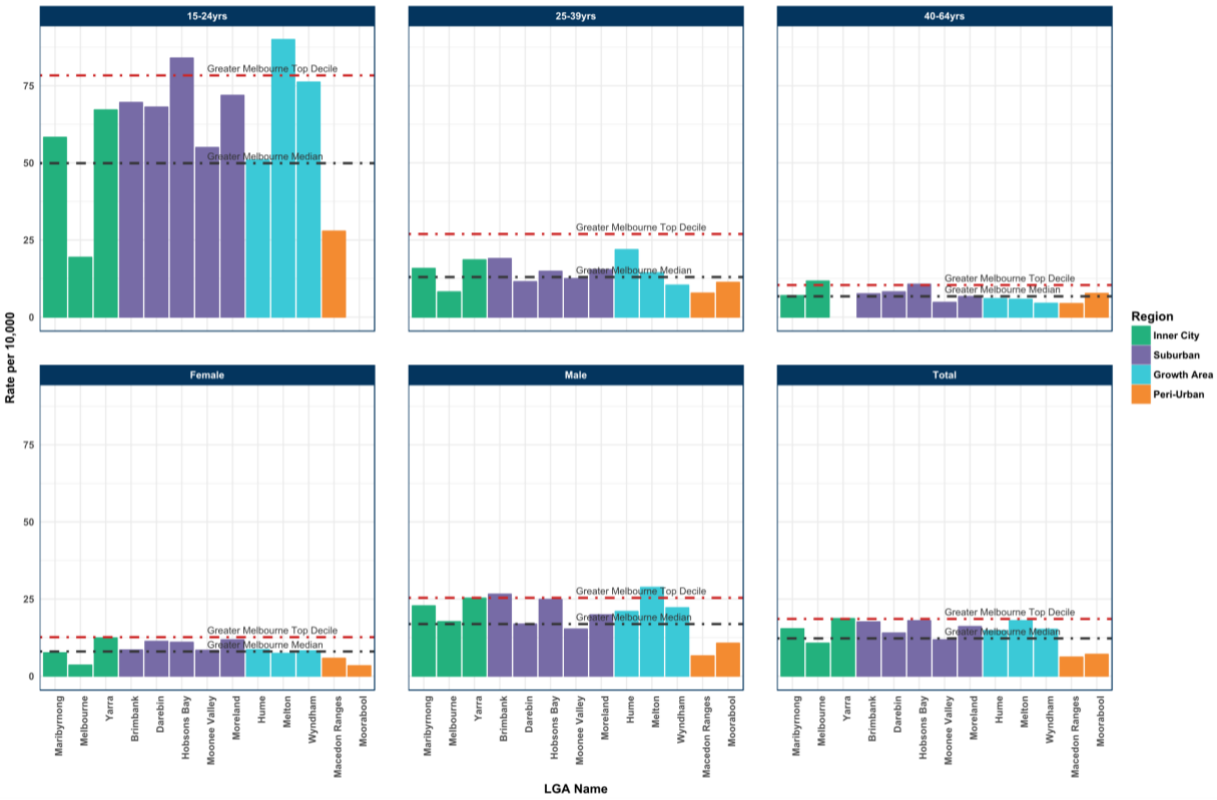
Source: Turning Point 2014-15

Figure 9: ADIS episodes of care rates per 10,000 population for heroin, aged 15-64 years, sex



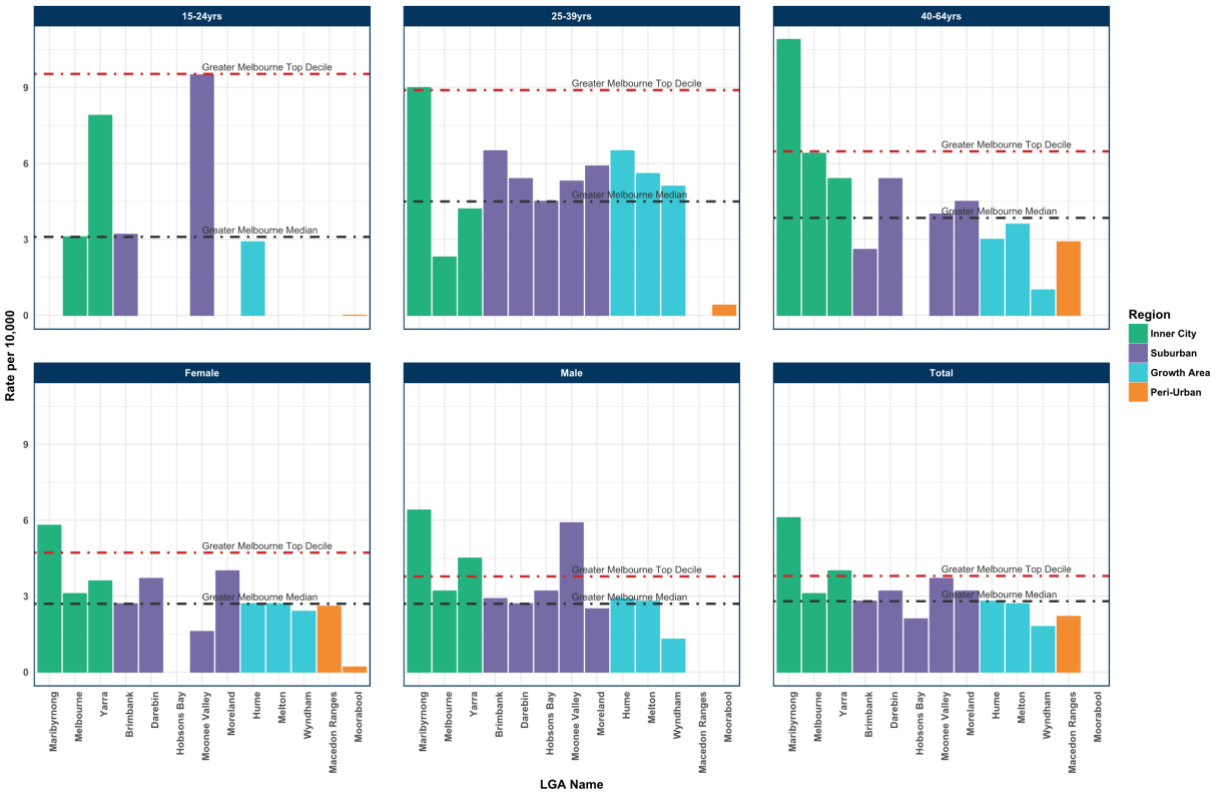
Source: Turning Point 2014-15

Figure 10: ADIS episodes of care rates per 10,000 population for cannabis, aged 15-64 years, sex



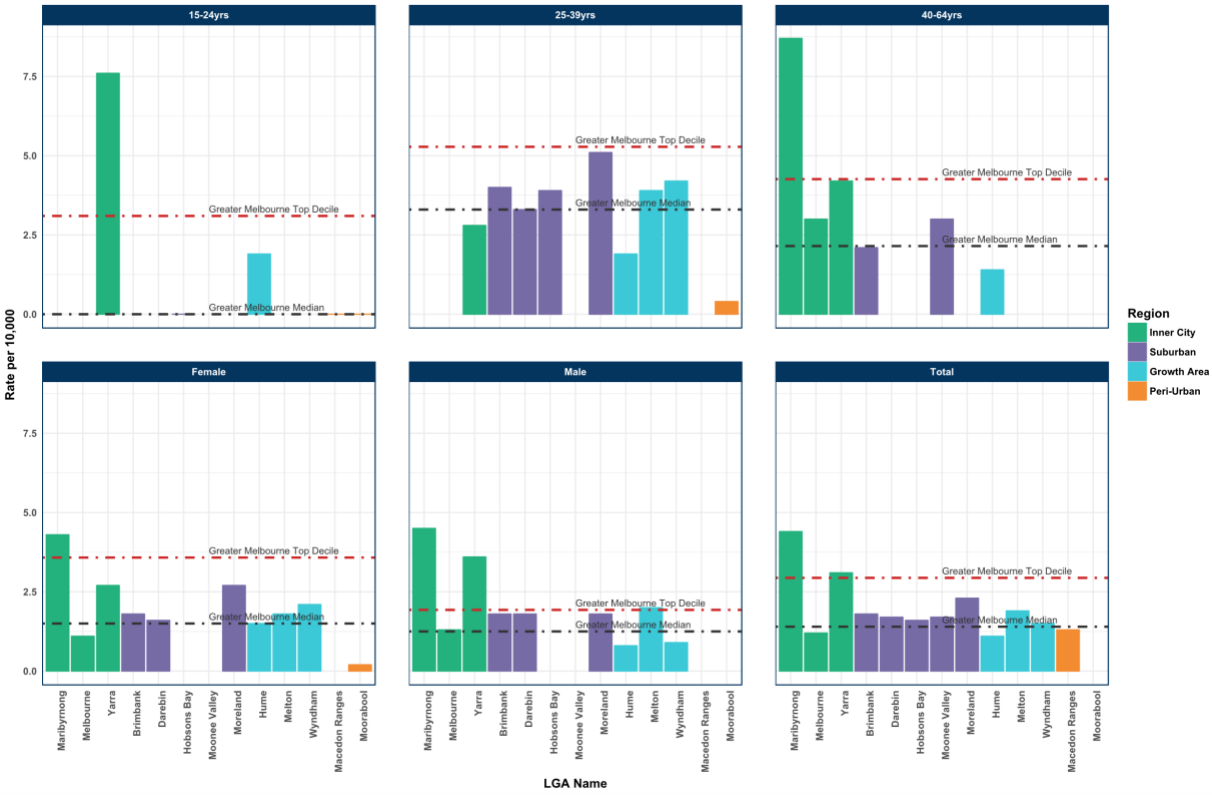
Source: Turning Point 2014-15

Figure 11: ADIS episodes of care rates per 10,000 population for pharmaceuticals, aged 15-64 years, sex



Source: Turning Point 2014-15

Figure 12: ADIS episodes of care rates per 10,000 population for opioids, aged 15-64 years, sex



Source: Turning Point 2014-15