



**NCETA**

*Australia's National Research Centre  
on AOD Workforce Development*

# **ALCOHOL AND OTHER DRUG USE IN SOUTH AUSTRALIA: PATTERNS & PREVALENCE**

## **SUMMARY REPORT ONE**

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### About the National Centre for Education and Training on Addiction (NCETA)

NCETA is based at Flinders University in South Australia and is an internationally recognised research and training centre that works as a catalyst for change in the alcohol and other drug (AOD) field. NCETA's areas of expertise include training needs analyses, the provision of training and other workforce development approaches. We have developed training curricula, programs and resources, and provided training programs, to cater for the needs of: specialist AOD workers; frontline health and welfare workers; Indigenous workers; community groups; mental health workers; police officers; and employers and employee groups. The Centre focuses on supporting evidence-based change and specialises in change management processes, setting standards for the development of training curriculum content and delivery modes, building consensus models and making complex and disparate information readily accessible to workers and organisations.

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The Australian Government Department of Health PHN website has a comprehensive [Alcohol and Other Drug Information](#) webpage including a link to NCETA's [National Alcohol and Drug Knowledgebase \(NADK\)](#). The NADK identifies relevant, up-to-date, and high-quality data from reliable sources. It provides a one-stop source of accurate and easy to understand information (presented as frequently asked questions - FAQs) about alcohol, cannabis and methamphetamine with other drug topics regularly added.

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## Abbreviations

Adl	Adelaide
ASSAD	Australian Secondary School Alcohol and Drug Survey
Barossa	Barossa – Yorke – Mid North
AIHW	Australian Institute of Health and Welfare
DUSC	Drug Utilisation Sub-Committee
NDSHS	National Drug Strategy Household Survey 2013
NCETA	National Centre for Education and Training on Addiction
NHMRC	National Health and Medical Research Council
Prospect	Prospect - Walkerville
PHN	Primary Health Network
PHNs	Primary Health Networks
PBS	Pharmaceutical Benefits Scheme
SA	Statistical Area Level
SAs	Statistical Areas Levels
Sth Aus	South Australia

## 1. EXECUTIVE SUMMARY

The Adelaide and Country SA Primary Health Networks (PHNs) commissioned the National Centre for Education and Training on Addiction (NCETA) to undertake a statewide analysis of indicators of problematic patterns of alcohol and other drug use by small geographical areas and using relevant datasets. The purpose of the analysis is to provide additional input to the PHN needs assessments currently being undertaken to inform the development, provision and funding of needs- and evidence-based alcohol and other drug (AOD) services within each respective PHN geographical region.

As part of this process, NCETA was requested to:

1. Identify patterns and prevalence of users of key drug types
2. Identify drugs of concern for specific risk groups
3. Describe AOD treatment utilisation patterns.

This report addresses the first of these issues. Subsequent reports address the remaining two issues.

There are 12+ datasets available to inform these questions, of which the following three were used in the current report:

- The National Drug Strategy Household Survey (NDSHS) (2013)
- The Australian Secondary School Alcohol and Drug Survey (ASSAD) (2014)
- Pharmaceutical Benefits Scheme (PBS) dispensing data (2013-14).

This report examines the patterns and prevalence of alcohol, illicit drug and prescribed opioid and anxiolytic use across South Australia. Data are provided at PHN, SA4 and where possible SA3 levels. Each dataset has strengths and limitations.

NDSHS is a triennial national household survey of alcohol, tobacco and other drugs used by Australians >12 years of age. It uses a stratified, randomised weighted sample but may under-represent some hard to access at-risk groups. Data are presented here in three age groups 12-24, 25-64, and 65+ years. Data are considered to be conservative estimates.

ASSAD is a national triennial survey of school children aged 12-17 years. It only contains data for children in this age group at school and hence does not include early school leavers who may be a greater risk of AOD use.

PBS data are presented as rates per 100,000 population for both opioids and anxiolytics. The data for anxiolytics are presented for those aged <64 and >65 years. Data for prescribed opioids and anxiolytics are age adjusted at the SA3 level only.

Risky alcohol use is defined using the short term NHMRC descriptor of more than 4 drinks in a session. In the NDSHS this is measured weekly, monthly and yearly. In ASSAD it is measured as risky consumption in the last fortnight. Illicit drug use is defined as any consumption in the past 12 months in NDSHS, and in ASSAD as any use in the past week, lifetime and last 12 months in the case of cannabis.

Key findings are summarised below by drug type and then by PHN. For a summary overview see Tables 1-4 provided at the end of the Executive Summary.

## 1.1 Alcohol

### **Overall**

- Prevalence of risky alcohol use was consistently higher in Country vs Adelaide PHN at weekly, monthly and yearly levels (18% vs 13%, 31% vs 26%, 41% vs 38%)
- Country PHN **males** were more likely to drink, and to do so at risky levels, than Adelaide PHN males (weekly 26% vs 20%, monthly 43% vs 34%, yearly 54% vs 48%)
- Country **females** were more likely to drink at risky levels than Adelaide PHN females on a weekly (10% vs 7%) and monthly (20% vs 17%) basis, but not yearly
- Among 12-17 year old students, past fortnight risky drinking was more slightly common in Adelaide than Country PHN (17% vs 15%).
- There was no consistent pattern in risky drinking by SEIFA. While lowest levels of risky drinking occurred in some high SEIFA areas, other high SEIFA areas were also found to have high levels of risky drinking.

### **Adelaide PHN**

- Highest prevalence of risky drinking occurred in SA403 (Adelaide – South) and SA404 (Adelaide – West)
- At SA3 level, monthly risky drinking ranged from 10% (SA40107 Unley) to 37% (Port Adelaide – West 40402)
- SA3 areas with the highest prevalence of risky alcohol consumption were:
  - SA40402 Port Adelaide – West (37%)
  - SA40301 Holdfast Bay (32%)
  - SA40205 Tea Tree Gully (31%)
  - SA40101 Adelaide City (29%)
- Among 12-17 year old students, highest prevalence of risky drinking in the past fortnight occurred in SA403 (Adelaide - South, 22%).

### **Country PHN**

- The Country PHN SA3 areas with highest prevalence of monthly risky drinking were:
  - SA40102 Adelaide Hills (43%)
  - SA405 Barossa (40%)
  - SA406 South Australia – Outback (35%)
  - SA407 South Australia – South East (23%).
- Among 12-17 year old students, those living in SA407 (South Australia - East, 21%) had the second highest prevalence of risky drinking in the past fortnight in the state.

## **1.2 Cannabis, Meth/Amphetamines & Opioids/Painkillers (non-medical use)**

### ***Overall***

- Use of cannabis, meth/amphetamines and opioids was similar in Adelaide and Country PHNs. Males were more likely to use these drugs
- Cannabis was the illicit drug most commonly used in Adelaide (10%) and Country (12%) PHNs in past 12 months
- Recent cannabis use was higher among males (Country PHN: 15%; Adelaide PHN: 13%) than females (Country PHN: 9%; Adelaide PHN: 8%)
- Among 12-17 year old students, recent cannabis use was slightly more common in Adelaide PHN (10%) than Country PHN (9%)
- Prevalence of meth/amphetamine and opioids/painkillers varied but was generally low
- Within Country PHN, prevalence of recent cannabis use was highest in SA40102 (Adelaide Hills) and SA405 (Barossa).

### ***Adelaide PHN***

- At SA4 levels, recent cannabis use ranged from 6% (SA402, North) to 14% (SA403, South)
- SA403 (South) reported highest prevalence of recent cannabis use (23%) among 12-17 year old students
- Prevalence of recent meth/amphetamine and non-medical use of opioid/painkillers in SA4s was not reported due to small numbers
- At SA3 levels, prevalence of cannabis use was difficult to establish due to small numbers.

### ***Country PHN***

- The highest prevalence of recent cannabis use was found in SA40201 (Gawler) and SA405 (Barossa) – both 18%.
- Prevalence of cannabis use was difficult to establish at SA3 levels due to small numbers.

## **1.3 Heroin**

Little data is available on patterns of heroin use at the SA PHN levels. The prevalence of heroin use is too low for population surveys (such as the NDSHS) to yield reliable data.

## **1.4 2013-14 PBS Prescribed Opioids**

### ***Overall***

- The rate of PBS prescriptions dispensed for opioid medicine per 100,000 persons was lower in Adelaide than Country PHN (69,682 and 80,898, respectively).

### **Adelaide PHN**

- PBS prescriptions dispensed for opioid medicine ranged from 50,950 (SA401 Central) to 77,533 (SA402 North)
- SA3 areas with lower socio-economic status had higher rates of prescribed opioids dispensed.

### **Country PHN**

- Rates of PBS prescriptions dispensed for opioid medicine ranged from 53,757 (SA40102, Adelaide Hills) to 94,892 (SA405, Barossa)
- SA3 areas with lower socio-economic status had higher rates of prescribed opioids dispensed.

There was wide variation in levels of prescribed opioids dispensed in SA3 areas, ranging from 34,245 in Burnside to 109,191 in Playford. Playford has the second highest rate of opioid dispensing of any SA3 in Australia, and a dispensing rate 10 times that of the region in Australia with the lowest level of dispensing (Daly-Tiwi-West Arnhem). Hence, the Playford dispensing rate is approximately double the average prescribing rate for South Australia and Australia (63,688 and 55,126 per 100,000 persons respectively).

These data do not include over-the-counter codeine-containing medicines. Hence, the level of opioid use is likely to be much higher than indicated.

## **1.5 2013-14 PBS Prescribed Anxiolytics**

- Among 18-64 year olds the rate of dispensing of anxiolytics was higher in Adelaide (22,094 per 100,000) than Country PHN (19,937 per 100,000)
- Among >65 year olds the dispensing rate was 52,578 and 35,552 in Adelaide and Country PHNs, respectively
- Rate of PBS prescriptions dispensed for anxiolytic medicine to persons aged 65+ years in Adelaide PHN was 138% higher than for 18-64 year olds
- In Country PHN, the dispensing rate was 78% higher for persons aged 65+ years than their younger counterparts.
- There was wide variation in the levels of anxiolytic dispensing across SA3 regions.
- Among 18-64 year olds, anxiolytic scripts ranged from 13,398 per 100,000 (Barossa) to 36,292 in Playford. South Australian and national rates of dispensing for 18-64 year olds were 21,527 and 17,201 per 100,000, respectively.
- Among those aged 65+, dispensing rates for anxiolytics ranged from 30,074 per 100,000 (Eyre Peninsula and South West) to 74,380 in Playford. South Australian and national rates of dispensing for this age group were 46,426 and 37,659 per 100,000, respectively.

## 1.6 Implications

This report identifies high levels of risky drinking, drug use and use of some prescribed drugs in specific parts of the state and PHNs. Patterns of use are highly variable and warrant tailored interventions that address local needs and issues.

A combination of primary, secondary and tertiary interventions are required to address alcohol and illicit drug use and prescribed opioid and anxiolytic medication use in South Australia. While universal strategies are appropriate across the state, more specific interventions are indicated for the areas nominated below.

### **Adelaide PHN**

Key targets for prevention and intervention activities in Adelaide PHN include:

- Risky alcohol consumption at least monthly, particularly in SA402 (SA40205, Tea Tree Gully), SA403 (SA40304, Onkaparinga; SA40302 Marion; SA40301, Holdfast Bay) and SA404 (SA40402, Port Adelaide – West)
- Alcohol and illicit drug use among young people aged 12-17 years from SA403 (South)

In relation to prescribed drugs, both residents and prescribers are flagged for attention in this report including:

- Both opioids and anxiolytics users in SA402 (SA40202, Playford; SA40204, Salisbury; SA40205, Tee Tree Gully) and SA403 (SA40302, Marion)
- Opioids users in SA402 (SA40203, Port Adelaide – East) and SA403 (SA40304, Onkaparinga)
- Anxiolytics users in SA404 (SA40402, Port Adelaide - West)
- Residents aged 65+ years and prescribers of anxiolytics in SA40101 (Adelaide City).

### **Country PHN**

Key targets for prevention and intervention activities in Country PHN include:

- Weekly and monthly risky alcohol consumption, particularly among 25-64 year old males throughout the PHN
- Recent cannabis use among the adult population in SA405 (Barossa), SA40102 (Adelaide Hills) and SA40201 (Gawler – Two Wells)
- Residents and prescribers of:
  - Both opioids and anxiolytics in SA40201 (Gawler – Two Wells), SA405 (SA40504, Yorke Peninsula) and SA407 (SA40703, Murray and Mallee)
  - Opioids in SA405 (SA40502, Lower North; SA40503, Mid North)
  - Anxiolytics in SA406 (SA40602, Outback - North and East).

## 1.7. Summary Tables

The following tables provide an overview of the patterns of AOD use by SA3 and SA4 for Adelaide and Country PHN, with PHN, state, and national benchmark comparisons indicated.

### **Legend**

1. Risky drinking (monthly) – general population (NDSHS) data
2. Used cannabis in past 12 months – general population (NDSHS) data
3. Rate of opioid dispensing per 100,000 persons – PBS data (age standardised at SA3 level, non-age standardised at SA4 level)
4. Rate of anxiolytic dispensing per 100,000 persons – PBS data (age standardised at SA3 level, non-age standardised at SA4 level)

† more than 5% higher than national average

§ more than 5% higher than PHN average (Adelaide or Country, as appropriate)<sup>1</sup>

~ more than 5% higher than SA state average

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<sup>1</sup> Unable to be calculated for prescribed opioids and anxiolytics at the SA3 level

Table 1. Adelaide PHN SA4 Areas Exceeding AOD PHN, State and National Averages by >5%

Adelaide PHN SA4 Areas	Alcohol <sup>1</sup>	Cannabis <sup>2</sup>	Opioids <sup>3</sup>	Anxiolytics (PBS) <sup>4</sup>	
				<64 years	65+ years
401 - Central					†
402 - North			~ † §	~ † §	~ † §
403 - South			† §	†	~ †
404 - West	† §		†	†	~ † §

Table 2. Adelaide PHN SA3 Areas x SEIFA Exceeding AOD PHN, State and National Averages by >5%

SEIFA	Adelaide PHN SA3 Areas		Alcohol <sup>1</sup>	Cannabis <sup>2</sup>	Opioids <sup>3</sup>	Anxiolytics <sup>4</sup>	
						<64 yrs	65+ yrs
5	40103	Burnside					†
	40303	Mitcham					†
4	40101	Unley					~ †
	40106	Prospect					†
	40101	Adelaide City				~ †	
	40301	Holdfast Bay	† §			†	†
	40205	Tea Tree Gully				†	~ †
3	40104	Campbelltown					†
	40105	Norwood		~ † §		†	~ †
	40302	Marion				†	~ †
2	40403	West Torrens		~ † §		†	~ †
	40401	Charles Sturt	† §			†	†
	40304	Onkaparinga			~ †	~ †	~ †
1	40203	Port Adl - East			†	~ †	†
	40402	Port Adl – West	~ † §		~ †	~ †	~ †
	40204	Salisbury			~ †	~ †	~ †
	40202	Playford			~ †	~ †	~ †

**Table 3. Country PHN SA4 Areas Exceeding AOD PHN, State and National Averages by >5%**

Country PHN SA4 Areas	Alcohol <sup>1</sup>	Cannabis <sup>2</sup>	Opioids <sup>3</sup>	Anxiolytics <sup>4</sup>	
				<64 years	65+ years
405 - Barossa	~ † §	~ † §	~ † §	† §	
406 - Sth Aus Outback	~ † §		†	†	
407 - Sth Aus Sth East			~ † §	† §	
40102 - Adl Hills	~ † §	~ † §			
40201 - Gawler Two Wells			~ † §	† §	† §

**Table 4. Country PHN SA3 Areas x SEIFA Exceeding AOD PHN, State and National Averages by >5%**

SEIFA	Country PHN SA3 Areas		Alcohol <sup>1</sup>	Cannabis <sup>2</sup>	Opioids <sup>3</sup>	Anxiolytics <sup>4</sup>	
						<64 years	65+ years
4	40102	Adelaide Hills	~ † §	~ † §			
3	40201	Gawler - Two Wells			~ †	†	†
2	40702	Limestone Coast			†		
	40501	Barossa			†		
	40701	Fleurieu - Kangaroo Is			~ †	†	
	40502	Lower North			~ †	†	
	40504	Yorke Peninsula			~ †	~ †	
1	40602	Outback - North & East			†		
	40601	Eyre Peninsula & South West	~ †		~ †	†	
	40703	Murray & Mallee			~ †	~ †	†
	40503	Mid North			~ †		

## 2. INTRODUCTION

The Adelaide and Country SA Primary Health Networks (PHNs) are undertaking a needs assessment to inform the development, provision and funding of evidence-based alcohol and other drug (AOD) services within their respective South Australian geographical regions.

The National Centre for Education and Training on Addiction (NCETA), Flinders University, was commissioned by the Adelaide and Country SA PHNs to address the following questions:

- Q1: What are the number of users for each drug type of most concern (alcohol, methamphetamines, opioids (illicit), cannabis, benzodiazepines, other drugs) by gender, age group and Indigenous status for each Statistical Area Level (SAL) 2 (or SAL 3 or Local Government Area) in South Australia?
- Q2: What are the drugs of concern for each of the following at-risk groups: Aboriginal and Torres Strait Islander (ATSI); Lesbian, Gay, Bisexual, Transgender, Intersex (LGBTI); youth; older adults; culturally and linguistically diverse (CALD); Socio-Economic Indices for Areas (SEIFA); Index of Relative Social Disadvantage (IRSD); and Accessibility/ Remoteness Index of Australia (ARIA)?
- Q3: What are the number of AOD treatment episodes in South Australia for each drug type of concern by age group, gender, Indigenous status and treatment type for SA 2 (or SA 3 or Local Government Area) of clients' usual residence in South Australia?

This report addresses question one. Subsequent reports address Qs 2-3.

The report includes a brief description of the datasets analysed, key findings and the implications of identified patterns of use.

### Primary Health Networks

In South Australia there are two Primary Health Networks (PHNs): Adelaide PHN and Country PHN.

The Adelaide PHN is centred in and around the city of Adelaide and comprises statistical areas, levels 4 (SA4) SA401 (Central), SA402 (North), SA403 (South) and SA404 (West), excluding statistical areas SA40102 (Adelaide Hills) and SA40201 (Gawler - Two Wells) (see Table 5).

The Country PHN covers all of rural South Australia, 99.8% of the State's geography, and approximately 30% of South Australia's total population. The SA4s comprising Country PHN are SA40102 (Adelaide Hills) and SA40201 (Gawler – Two Wells), SA405 (Barossa – Yorke – Mid North), SA406 (South Australia – Outback) and SA407 (South Australia - South East) (see Table 5).

**Table 5. Adelaide and Country SA Primary Health Networks (PHNs) Statistical Areas, Levels 4 (SA4) and 3 (SA3)**

Primary Health Network (PHN)	Statistical Areas, Level 4 (SA4)		Statistical Areas, Level 3 (SA3)	
	Code		Code	
Adelaide	401~	Central	40101	Adelaide City
			40103	Burnside
			40104	Campbelltown
			40105	Norwood
			40106	Prospect - Walkerville
			40107	Unley
	402^	North	40202	Playford
			40203	Port Adelaide - East
			40204	Salisbury
			40205	Tea Tree Gully
	403	South	40301	Holdfast Bay
			40302	Marion
			40303	Mitcham
			40304	Onkaparinga
	404	West	40401	Charles Sturt
			40402	Port Adelaide - West
40403			West Torrens	
Country	Not Applicable		40102	Adelaide Hills
	Not Applicable		40201	Gawler - Two Wells
	405	Barossa – Yorke – Mid North (Barossa)	40501	Barossa
			40502	Lower North
			40503	Mid North
			40504	Yorke Peninsula
	406	South Australia - Outback	40601	Eyre Pen & South West
			40602	Outback - North & East
	407	South Australia - South East	40701	Fleurieu - Kangaroo Island
			40702	Limestone Coast
40703			Murray & Mallee	

<sup>-</sup>Excluding SA40102 (Adelaide Hills); <sup>^</sup>Excluding SA40201 (Gawler – Two Wells)

### **3. REPORT STRUCTURE**

This report provides descriptive data on the patterns and prevalence of the use of alcohol, illicit drugs (cannabis, methamphetamine, and opioids/painkillers) and prescribed opioids and anxiolytics. Data has primarily been derived from three recent datasets:

1. 2013 National Drug Strategy Household Survey (NDSHS) which provides an overview of general population prevalence estimates of alcohol and other drug use
2. 2014 Australian Secondary School Student Alcohol and Drug (ASSAD) survey of SA school students aged 12-17 years
3. 2013-14 PBS data on rates of prescribed opioids and anxiolytics (primarily benzodiazepines) per 100,000 persons.

More detail on these datasets is provided in the Methods Section.

The report first provides the key findings in relation to patterns of alcohol use at the general population level (derived from the NDSHS); and then among 12-17 year old school students using ASSAD data.

Next, the report examines patterns of illicit drug use (excluding heroin) among the general population (using NDSHS data) and among 12-17 year old students using ASSAD data. Since the ASSAD dataset examines patterns of cannabis use specifically, the use of this drug among 12-17 year old students is examined next.

Finally, patterns of dispensing of prescribed opioids and anxiolytics are examined using Pharmaceutical Benefits Scheme data.

## **4. METHODS**

### **4.1 Datasets Analysed**

Data was extracted from three datasets:

- National Drug Strategy Household Survey (NDSHS), 2013
- Australian Secondary School Alcohol and Drug Survey (ASSAD), 2014
- National Prescribing Data, Pharmaceutical Benefits Scheme (PBS), 2013-14.

The characteristics of each dataset are described in Table 6 and in more detail below.

**Table 6. Datasets analysed**

Name of Dataset	Description	Sample Size		Data Provided	Year(s) Reported	Postcode & Statistical Area Levels (SA)				Data Items Included		
		SA	Total	Type		Post code	SA2	SA3	SA4	Sex	Age	Indigenous Status
National Drug Strategy Household Survey (NDSHS) 2013 <sup>1</sup>	Provides three-yearly estimates of the proportion of the population aged 12 years and older using tobacco, alcohol and illicit drugs. The Survey also captures information about drug-related attitudes, perceptions and support for government policy.	1,930	23,855	Descriptive tabulated data by SA & age and gender	2013	No	No	Yes <sup>2,3</sup>	Yes <sup>3</sup>	Yes	Yes	No
Australian Secondary School Alcohol and Drug (ASSAD) Survey 2014 <sup>4</sup>	Investigated the use of alcohol, tobacco and illicit drugs among secondary school students Australia wide	1,844	23,960	Descriptive tabulated data by SA & age and gender	2014	No	No	Yes <sup>2</sup>	Yes	Yes	Yes	No
National Prescribing Data, Pharmaceutical Benefits Scheme (PBS), 2013-14 <sup>5</sup>	Provides annual estimates of the aggregate community use of prescribed medicines in Australia listed on the Pharmaceutical Benefits Scheme.	Not Applicable	Not Applicable	Tabulated data of prescribed opioids and anxiolytics per 100,000 persons by SA3	2013-14	No	No	Yes <sup>2,6</sup>	Yes	No	No	No

<sup>1</sup> For further information: [http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/BCBF6B2C638E1202CA257ACD0020E35C/\\$File/Tobacco%20Report%202014.PDF](http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/BCBF6B2C638E1202CA257ACD0020E35C/$File/Tobacco%20Report%202014.PDF)

<sup>2</sup> Some sample sizes are insufficient for analyses

<sup>3</sup> Weighted to the South Australian population aged 12+ years

<sup>4</sup> For further information: <http://www.aihw.gov.au/publication-detail?id=60129549469&tab=3>.

<sup>5</sup> For further information: <http://www.pbs.gov.au/info/browse/statistics>

<sup>6</sup> Age-standardised to the South Australian population aged 18+ years and 64+ years in statistical areas, level 3 (SA3)

#### **4.1.1 National Drug Strategy Household Survey (NDSHS)**

The NDSHS is a triennial national household survey of alcohol, tobacco and other drug (ATOD) use by Australians aged 12 years and older. The data collected provides estimates of ATOD use in Australia, and identifies groups at risk of harm. Further information about the NDSHS and its methodology can be found at: <http://www.aihw.gov.au/publication-detail/?id=60129549469&tab=3>.

The present report includes weighted data from the 2013 NDSHS survey in which 1,930 South Australians participated. These data comprise population prevalence estimates for South Australian PHNs and statistical areas SA4 and SA3 by gender and age. Population estimates are calculated by applying survey prevalence rates to the relevant population count and were based on the June 2013 Australian Bureau of Statistics estimated resident population (AIHW, 2014 p. 129).

For the purposes of this report, NCETA requested secondary analyses of the NDSHS SA data to be undertaken by AIHW. Details of the NCETA request to AIHW are provided in Appendix 1.

#### **4.1.2 Australian Secondary School Alcohol and Drug (ASSAD)<sup>2</sup>**

The ASSAD survey is a national study of alcohol, tobacco and other drug use amongst secondary school students aged 12-17 years. The survey covers use of tobacco, alcohol, cannabis, and other substances. Further information about the ASSAD can be found at: [http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/BCBF6B2C638E1202CA257ACD0020E35C/\\$File/Tobacco%20Report%202014.PDF](http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/Publishing.nsf/content/BCBF6B2C638E1202CA257ACD0020E35C/$File/Tobacco%20Report%202014.PDF)

South Australian data from the 2014 ASSAD survey involved 1,844 school students. Tabulated data for South Australian PHNs and statistical areas SA4 and SA3 by gender and age have been incorporated into this report.

For the purposes of this report, NCETA requested secondary analyses of the ASSAD South Australian survey data to be undertaken by the ASSAD data custodians (Cancer Council Victoria). Details of the ASSAD data request are provided in Appendix 2.

#### **4.1.3 National Prescribing Data, Pharmaceutical Benefits Scheme (PBS)**

PBS data were obtained from the Australian Commission on Safety and Quality in Healthcare. The data were analysed by the Commission in preparation for the development of the Atlas of Healthcare Variation publication. The data obtained includes the number of PBS prescriptions dispensed for medicines of interest. Data are disaggregated by the area in which the person lives.

This report includes 2013-14 PBS rates of prescriptions for dispensed opioid and anxiolytic medications for South Australians by PHN and statistical areas SA4 and SA3 per 100,000 persons.

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<sup>2</sup> For a further breakdown at state level of the 2014 ASSAD findings for South Australia see the DASSA Statistical Bulletin Number 9 – October 2015.

At the SA3 level, rates have been age-standardised to the Australian population aged 12 years and over using the estimated SA3 resident population at June 2013<sup>3</sup>. For anxiolytics, PBS rates are provided for persons aged 18-64 years and 65 years and over per 100,000 persons.

Opioids in PBS data included here are:

- buprenorphine
- codeine
- fentanyl
- hydromorphone
- methadone
- morphine
- oxycodone
- oxycodone + naloxone
- paracetamol + codeine
- tapentadol
- tramadol

Anxiolytic medications included in the PBS data examined here are:

- alprazolam
- bromazepam
- buspirone
- diazepam
- oxazepam

PBS data were obtained from the local area data spreadsheets located within Chapter 4: Interventions for mental health & psychotropic medicines and Chapter 5: Opioid medicines of the *Australian Atlas of Healthcare Variation*. For further information see <https://www.safetyandquality.gov.au/atlas/>.

## 4.2 Definitions

### 4.2.1 Risky Drinking

Two measures of risky drinking have been established by the NHMRC, reflecting short and long term harms. Short term risky drinking is defined as: “*drinking more than four standard drinks on a single occasion*” (NHMRC 2010). This is the measure of risky drinking reported here for NDSHS and ASSAD data.

The NDSHS assesses short term risky drinking in terms of how frequently consumption of 4 or more drinks occurs; i.e., at least weekly, at least monthly or at least yearly. These measures are cumulative whereby the yearly measure subsumes the monthly and weekly measures, and the monthly measure subsumes the weekly measure.

In the ASSAD, the time duration over which risky drinking is reported is the last 14 days (less frequent consumption among 12-17 year olds yielded less reliable data).

Further information on Australia’s alcohol guidelines and standard drinks can be found at: <https://www.nhmrc.gov.au/health-topics/alcohol-guidelines>.

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<sup>3</sup> National Health Performance Authority analysis of Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 (data supplied 11/02/2015) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013. Full data specifications at <http://meteor.aihw.gov.au/content/index.phtml/itemId/623427>.

### 4.2.2 Illicit Drug Use

Illicit drug use is defined as illegal drugs, drugs and volatile substances used illicitly, and pharmaceuticals used for non-medical purposes (AIHW, 2014).

The NDSHS measure of recent illicit drug use comprised any use in the previous 12 months.

The ASSAD included three measures of illicit drug use:

1. Ever used (i.e., lifetime use of an illicit drug)
2. Use in the last week
3. Any cannabis use in the last 12 months.

### 4.3 Legend for Interpreting Symbols and Notes

Throughout this document, various notations are used within the text and Figures. Please refer to the box below for the meaning of these symbols and notes.

~	Excludes SA40102 (Adelaide Hills)
^	Excludes SA40201 (Gawler – Two Wells)
≡	No data for SA40201 (Gawler – Two Wells)
#	Alcohol risk categories are not mutually exclusive
◆	Denotes Socio-Economic Indices for Areas (SEIFA) quintile. SEIFA ranges from 5 (highest) to 1 (lowest)
*	Estimate has a relative standard error of 25% - 50% and should be used with caution
N.A.	Not applicable
N.P.	Not published because of small numbers, confidentiality or other concerns about data quality
(a)	Had not consumed alcohol in the past 12 months
(b)	Had not consumed more than 4 standard drinks on any one drinking occasion
(c)	Had consumed more than 4 standard drinks on a single drinking occasion at least once in the past year
(d)	Had consumed more than 4 standard drinks on a single drinking occasion at least once a week
(e)	Had consumed more than 4 standard drinks on a single drinking occasion at least once a month
(f)	Use in last 12 months
Totals may not sum to 100% due to rounding	

## 5. ALCOHOL

This Section presents data from two datasets:

- 2013 National Drug Strategy Household Survey (NDSHS), general population prevalence data on alcohol use.
- 2014 Australian Secondary School Student Alcohol and Drug (ASSAD) survey of SA school students aged 12-17 years, alcohol use.

Data from these datasets are reported for Adelaide and Country PHNs and, where possible, by SA4 and SA3.

### 5.1 Alcohol Use in the General Population (NDSHS)

Patterns of alcohol consumption are described below using data from the 2013 NDSHS. Weighted data from a representative stratified South Australian sample of 1,930 aged 12+ years are used.

Risky alcohol consumption is defined in terms of NHMRC short term risk levels. Low risk consumption is drinking four or less drinks on a single occasion.<sup>4</sup> Risky drinking is consuming more than four drinks on a single occasion, and may be measured in terms of weekly, monthly or yearly risky drinking.

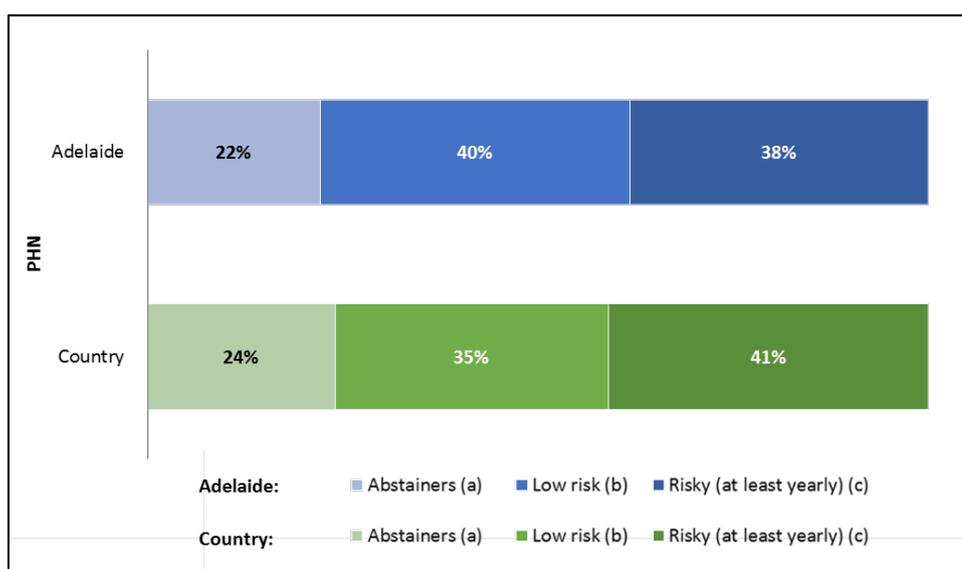
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<sup>4</sup> Note that not all figures display data for low risk consumption and may only show data for abstainers and risky drinkers (at a specified frequency of consumption). The proportions of low risk drinkers can be ascertained by subtracting the proportion of abstainers plus risky drinkers from 100.

## **Patterns of alcohol use in South Australia: A comparison of Adelaide and Country PHNs**

### *Prevalence*

- There was a slightly higher a proportion of abstainers in Country PHN (24%) than Adelaide PHN (22%)
- Among those who did drink alcohol, more people in Adelaide PHN (40%) than in Country PHN (35%) consumed at a low risk levels
- There was a higher proportion of drinkers who consumed alcohol at a yearly risky level in Country PHN (41%) than Adelaide PHN (38%) (Figure 1).



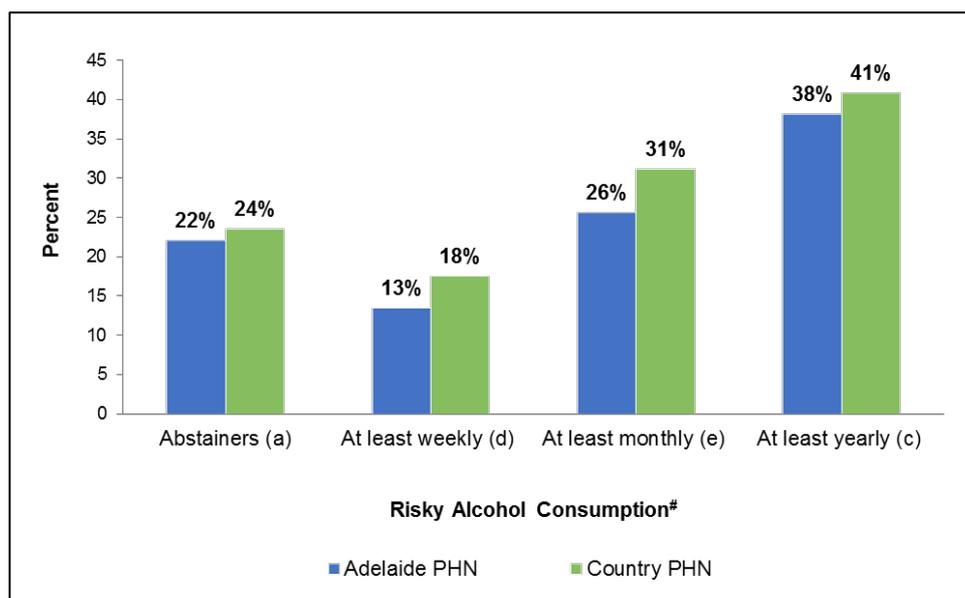
**Figure 1. Alcohol consumption Adelaide and Country PHNs.** 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

- Among all South Australians aged 14 years<sup>5</sup> and over, 21% were abstainers, 39% drank at low risk levels and 40% at risky levels at least yearly.
- Nationally, 22% of the population were abstainers, 40% low risk drinkers and 38% drank at risky levels at least yearly (AIHW 2014).

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<sup>5</sup> Note that the national and state comparator NDSHS data only used data for respondents 14 years and over, whereas the analysis provided for the PHN level data used NDSHS data for participants 12 years and over. As there were comparatively few respondents aged 12-13 years of age in the NDSHS this should not yield substantial differences in population level patterns of AOD use.

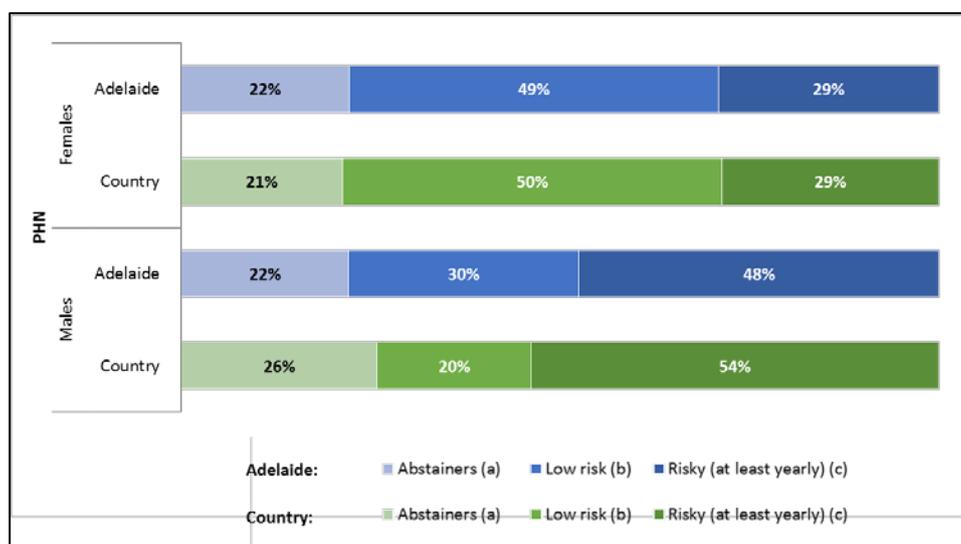
- Weekly and monthly risky drinking was also higher in Country PHN (18%, 31%) than Adelaide PHN (13%, 26%) (Figure 2).
- Among all South Australians, 15% and 28% drank alcohol at risky levels at least weekly and monthly, respectively.
- Nationally, 14% and 26% of the population drank at risky levels at least weekly and monthly, respectively (AIHW 2014).



**Figure 2. Risky alcohol consumption Adelaide and Country PHNs.**  
 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

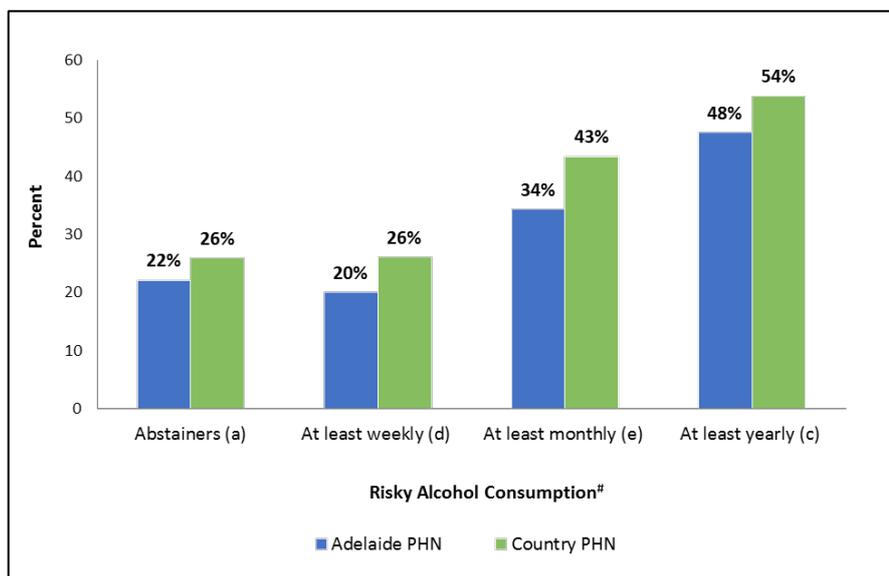
## Gender

- Among females, prevalence of abstainers, low risk drinkers and yearly risky drinkers was similar in both Adelaide and Country PHNs (Figure 3). State-wide, 20% were abstainers, 51% drank at low risk levels and 30% at risky levels at least yearly. Nationally, 25% were abstainers, 48% drank at low risk levels and 28% drank at risky levels at least yearly (AIHW 2014).
- Among males, there was a higher proportion of both abstainers and yearly risky drinkers in Country (26%, 54%) than Adelaide (22%, 48%) PHN (Figure 3). State-wide, 22% were abstainers, 28% drank at low risk levels and 50% at risky levels at least yearly. Nationally, 19% were abstainers, 33% drank at low risk levels and 48% at risky levels at least yearly (AIHW 2014).



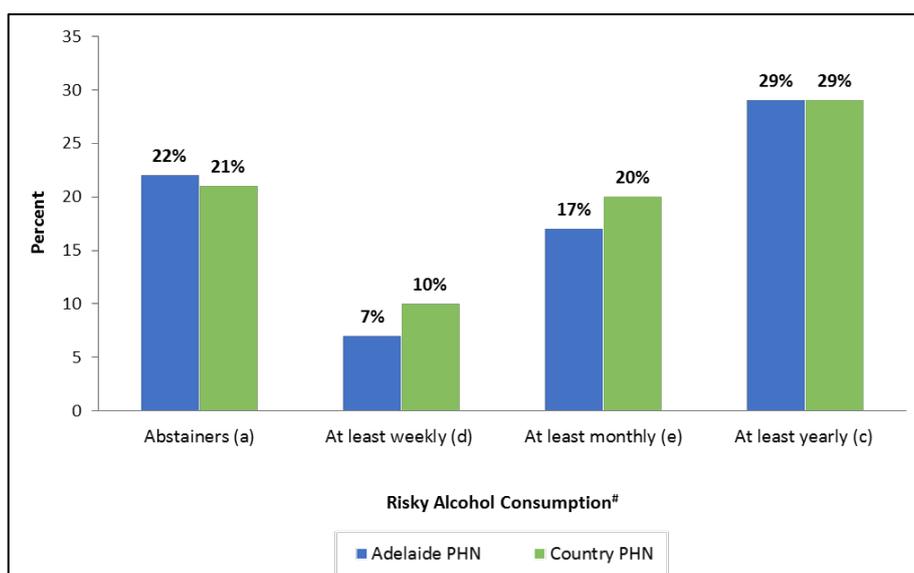
**Figure 3. Alcohol consumption by gender Adelaide and Country PHNs.**  
2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

- There were more abstainers among males in Country (26%) than Adelaide (22%) PHN.
- Among those who drank there was a higher proportion of risky weekly (26%), monthly (43%) and yearly (54%) drinkers in Country than Adelaide PHN (Figure 4).



**Figure 4. Male risky alcohol consumption Adelaide and Country PHNs.**  
 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

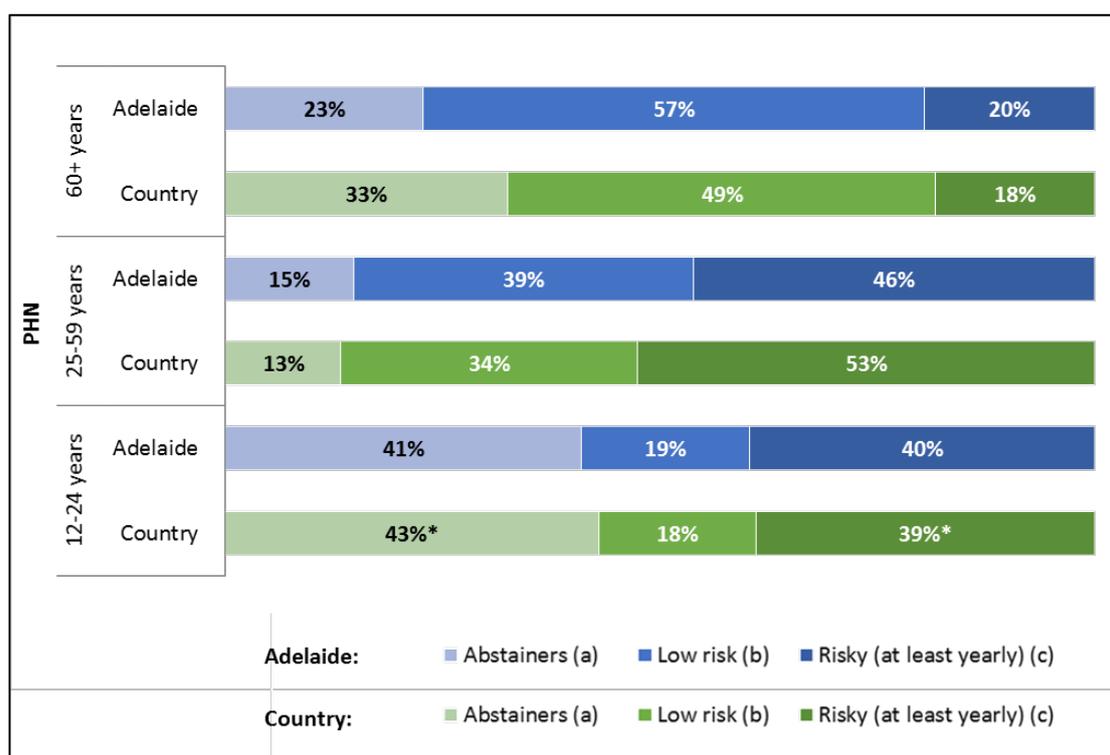
- Among females, there were similar proportions of abstainers in Country and Adelaide PHN.
- More Country PHN females drank at risky weekly (10%) and monthly (20%) levels, but similar proportions of Country and Adelaide PHN females drank at risky levels yearly (29%) (Figure 5).



**Figure 5. Female risky alcohol consumption Adelaide and Country PHNs.**  
 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

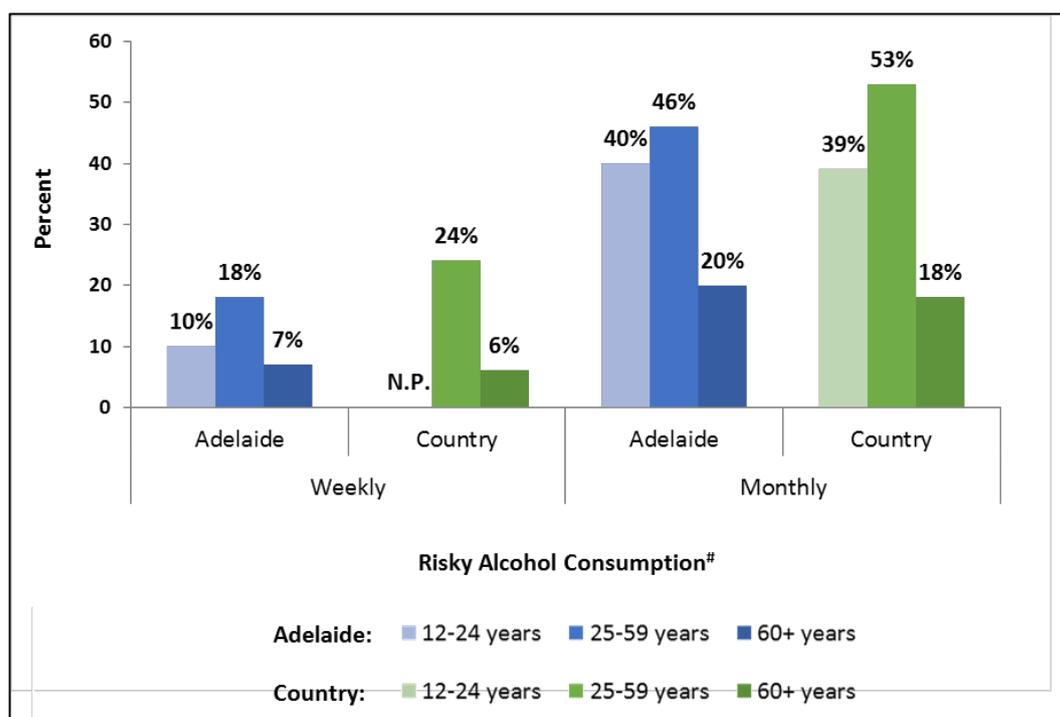
## Age

- Among both 12-24 and 60+ year olds there were higher proportions of abstainers in Country than Adelaide PHN (Figure 6), although the difference among 12-24 year olds was relatively small.
- Yearly risky drinking among 25-59 year olds was more prevalent in Country (53%) than Adelaide PHN (46%) (Figure 6).
- Yearly risky drinking among 12-24 year olds was high in both Adelaide and Country PHNs (40% and 39%, respectively) (Figure 6).



**Figure 6. Alcohol consumption Adelaide and Country PHNs by age.**  
 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

- Monthly risky drinking was common among 12-24 and 25-59 year olds. Similar proportions of 12-24 year olds in Adelaide and Country PHN drank at monthly risky levels (40%, 39%) but higher proportions of 25-59 year olds drank at monthly risky levels in Country compared to Adelaide PHN (53%, 46%) (Figure 7).
- Prevalence of weekly risky drinking was highest among 25-59 year olds, and higher in Country (24%) than Adelaide PHN (18%) (Figure 7).



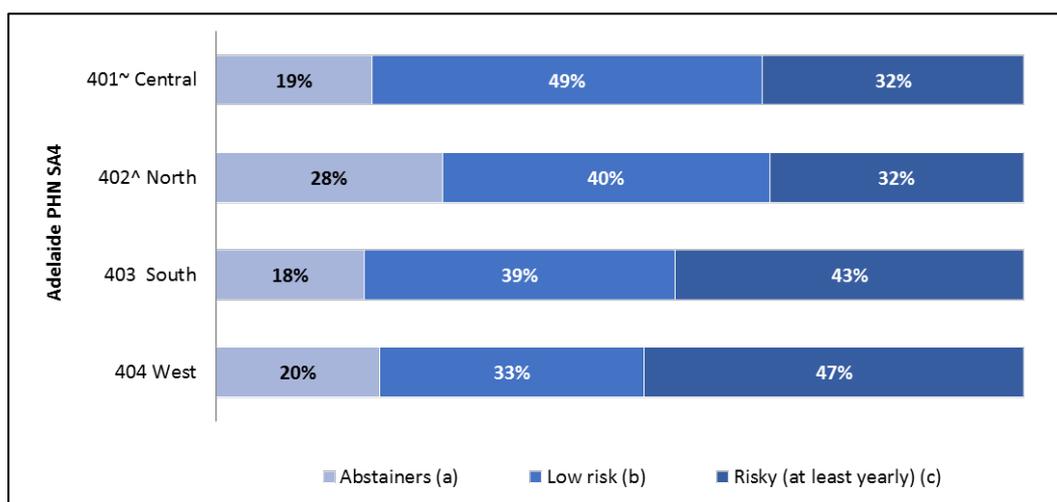
**Figure 7. Risky weekly and monthly alcohol consumption by age Adelaide and Country PHNs.**  
 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

### Alcohol use in Adelaide PHN at SA4 and SA3 levels

Patterns of alcohol consumption in Adelaide PHN at the SA4 and SA3 levels are examined below.

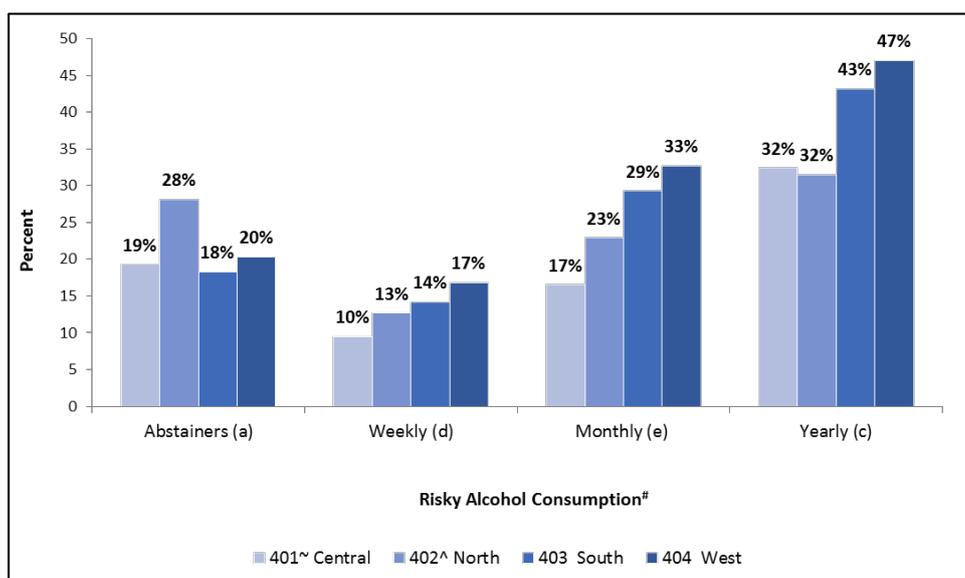
#### Statistical Areas, Level 4 (SA4)

- Yearly risky alcohol consumption varied across Adelaide PHN and was less prevalent in SA401~ (Central, 32%) and SA402^ (North, 32%) than SA403 (South, 43%) and SA404 (West, 47%) (Figure 8).



**Figure 8. Alcohol consumption Adelaide PHN Statistical Areas, Level 4.**  
2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

- SA401~ (Central) had the lowest prevalence of monthly (17%) and weekly (10%) risky drinking.
- SA404 (West) had the highest prevalence of yearly (47%), monthly (33%) and weekly (17%) risky drinking (Figure 9).



**Figure 9. Risky alcohol consumption# Adelaide PHN Statistical Areas, Level 4.**  
2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

### Statistical Areas, Level 3 (SA3)

At the SA3 level, monthly risky drinking ranged from 10% (SA40107 Unley) to 37% (40402 Port Adelaide – West).

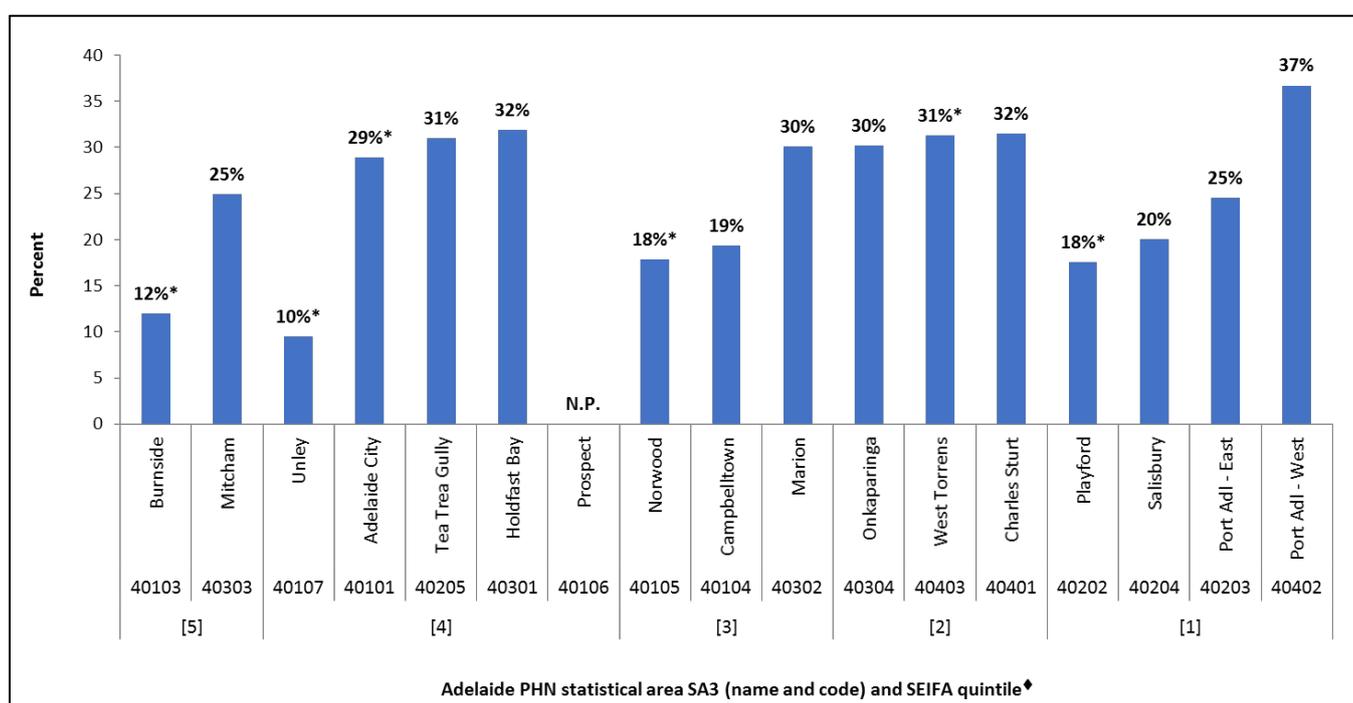
- The SA3 areas with highest prevalence of monthly risky drinking were:
  - SA40304 Onkaparinga (30%)
  - SA40302 Marion (30%)
  - SA40205 Tea Tree Gully (31%)
  - SA40301 Holdfast Bay (32%)
  - SA40401 Charles Sturt (32%)
  - SA40402 Port Adelaide – West (37%) (Table 7).
  
- Weekly risky drinking also varied across Adelaide PHN SA3 areas. Highest prevalence of weekly risky drinking (where data is reliable) occurred in:
  - SA40303 Mitcham (14%)
  - SA40304 Onkaparinga (16%)
  - SA40401 Charles Sturt (16%)
  - SA40402 Port Adelaide – West (20%) (Table 7).

**Table 7. Risky alcohol consumption# Adelaide PHN statistical areas, level 3. 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).**

SA4 Code & Name	SA3		Consumption Pattern %			
			Abstainers <sup>(a)</sup>	Risky Consumption <sup>#</sup>		
	Code	Name		Weekly <sup>(d)</sup>	Monthly <sup>(e)</sup>	Yearly <sup>(c)</sup>
401- Central	40101	Adelaide City	26*	N.P.	29*	38
	40103	Burnside	14*	N.P.	12*	31
	40104	Campbelltown	26*	14*	19	28
	40105	Norwood	N.P.	9*	18*	40
	40106	Prospect - Walkerville	14	N.P.	N.P.	26*
	40107	Unley	36	7*	10*	27
402^ North	40202	Playford	34	6*	18*	27*
	40203	Port Adelaide - East	33	20*	25	31
	40204	Salisbury	31	8*	20	30
	40205	Tea Tree Gully	16*	21*	31	39
403 South	40301	Holdfast Bay	N.P.	N.P.	32	48
	40302	Marion	16	12*	30	40
	40303	Mitcham	23*	14	25	45
	40304	Onkaparinga	19	16	30	43
404 West	40401	Charles Sturt	21*	16	32	40
	40402	Port Adelaide - West	14	20	37	59
	40403	West Torrens	24*	17*	31*	48

*Socio-economic Status*

- There was no consistent pattern in risky consumption by SEIFA. While lowest levels of risky drinking occurred in some high SEIFA areas, other high SEIFA areas were also found to have high levels of risky drinking (Figure 10).
- For example, the Adelaide PHN SA3 regions in the highest (level 5) SEIFA quintile had both low (40103: Burnside) and high (40303: Mitcham) levels of at least monthly risky drinking (12% and 25% respectively). Likewise two Adelaide PHN regions in the lowest (level 1) SEIFA quintile had both relatively low (40202: Playford) and very high levels of at least monthly risky drinking (18% and 37% respectively).



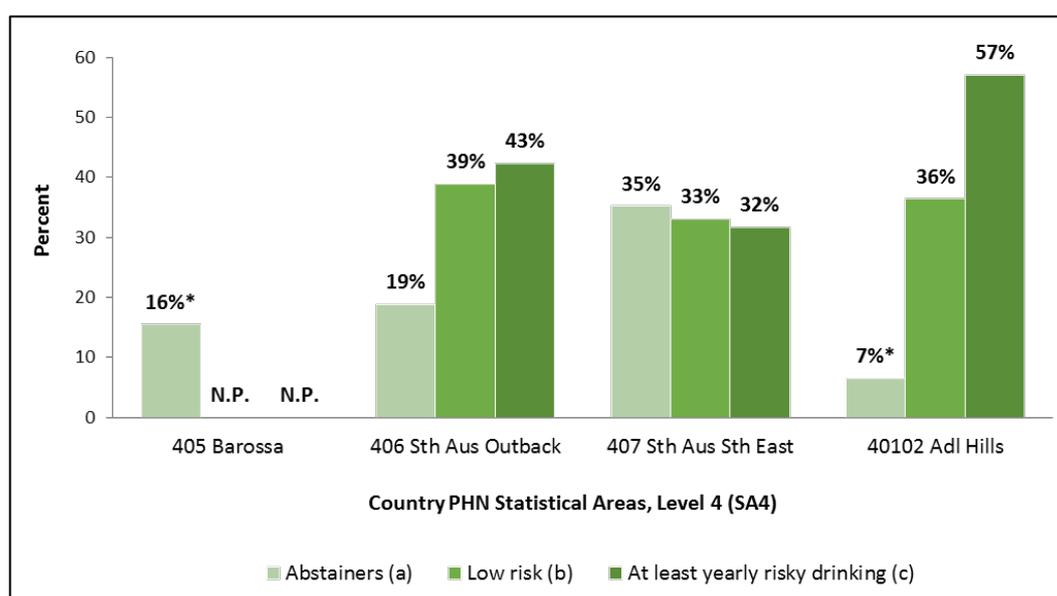
**Figure 10. Adelaide PHN risky alcohol consumption# at least monthly by SA3 and SEIFA ♦. 2013 National Drug Strategy Household Survey (NCETA secondary analysis, 2016).**

### Alcohol use in Country PHN at SA4 and SA3 levels

Patterns of alcohol consumption in Country PHN at SA4 and SA3 levels are examined below.

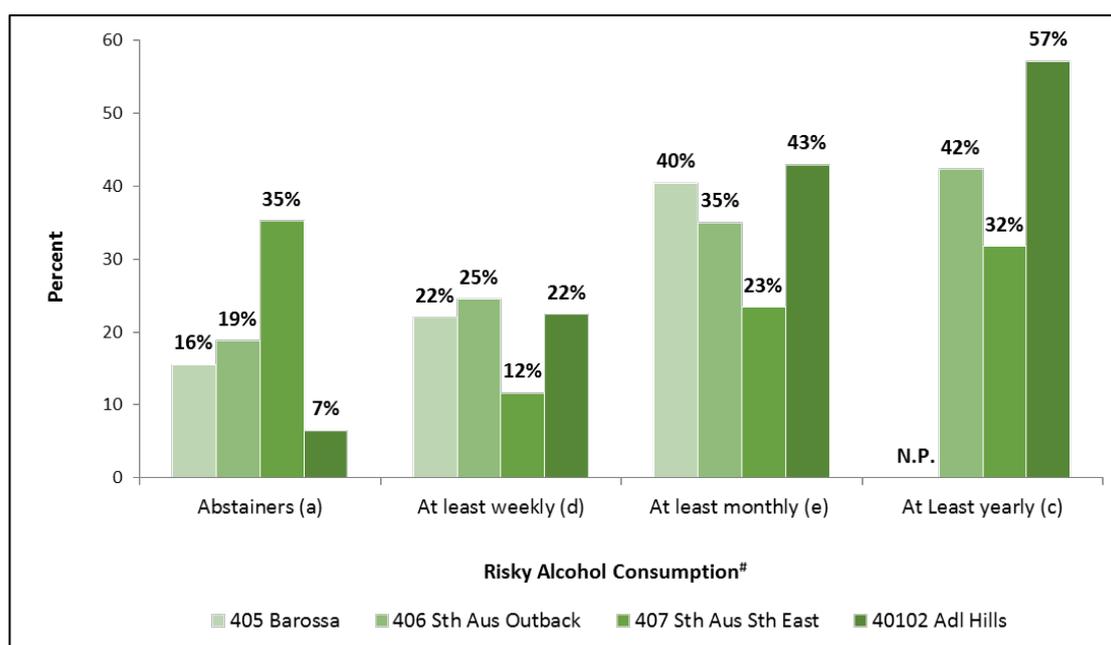
#### Statistical Areas, Level 4 (SA4)

- Proportions of abstainers in Country PHN varied from 7%\* (40102 Adelaide Hills) to 19% (406 South Australia - Outback).
- Yearly risky drinking varied widely and was less common in SA407 (South Australia – South East, 32%) and SA406 (South Australia – Outback, 43%) and highest in SA40102 (Adelaide Hills), where 57% of the population drank at risky levels at least yearly (Figure 11).



**Figure 11. Alcohol consumption Country PHN statistical areas, level 4.**  
2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

- Weekly risky drinking was highest in SA406 (South Australia - Outback) at 25%, while risky monthly and yearly drinking was highest in SA40102 (Adelaide Hills) (43% and 57%, respectively).
- Weekly risky drinking was common across most areas of Country PHN and was reported by approximately a quarter of those in SA405 Barossa (22%), SA406 South Australia – Outback (25%) and SA40102 Adelaide Hills (22%) (Figure 12).
- Lowest levels of risky weekly and monthly alcohol consumption were in SA407 (South Australia - South East) (12% and 23%, respectively) (Figure 12).



**Figure 12. Risky alcohol consumption# Country PHN statistical areas, level 4.**  
 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

Statistical Areas, Level 3 (SA3)

- Risky drinking on a monthly and yearly basis occurred most commonly in SA40102 (Adelaide Hills) (Table 8).

**Table 8. Risky alcohol consumption\* Country PHN statistical areas, level 3.**  
2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

SA4 Code & Name	SA3		Consumption Pattern# %			
			Abstainers <sup>(a)</sup>	Risky Consumption		
	Code	Name		Weekly <sup>(d)</sup>	Monthly <sup>(e)</sup>	Yearly <sup>(c)</sup>
Not Applicable	40102	Adelaide Hills	7	22	43	57
Not Applicable	40201	Gawler - Two Wells	N.P.	N.P.	N.P.	25*
405 Barossa	40501	Barossa	N.P.	N.P.	N.P.	N.P.
	40502	Lower North	--	--	--	--
	40503	Mid North	N.P.	N.P.	N.P.	N.P.
	40504	Yorke Peninsula	--	--	--	--
406 Sth Aus – Outback	40601	Eyre Pen & Sth West	19	25	35	42
	40602	Outback - Nth & East	--	--	--	--
407 Sth Aust – South East	40701	Fleurieu - Kangaroo Is	N.P.	N.P.	N.P.	N.P.
	40702	Limestone Coast	N.P.	N.P.	N.P.	N.P.
	40703	Murray & Mallee	37	14	28	35

## 5.2 Alcohol Use Among School Students (ASSAD)

This section examines patterns of alcohol consumption among 12-17 year old school students using data from the ASSAD survey.<sup>6</sup>

First patterns of alcohol consumption among 12-17 year olds in Adelaide and Country PHNs are compared, then alcohol consumption in the Adelaide and Country PHNs is considered separately. Alcohol consumption is measured in terms of:

1. Any use in the past 7 days, and
2. Any risky consumption (i.e., more than 4 drinks in a single session) in the last 14 days.

### ***Patterns of alcohol use among school students in South Australia: A comparison of Adelaide and Country PHNs***

#### *Prevalence*

Among 12-17 year olds, prevalence of any alcohol consumption in past 7 days and risky drinking in past 14 days was slightly higher in Adelaide than Country PHN (11% and 10% vs 17% and 15%, respectively) (Figure 13). State-wide, prevalence of alcohol consumption in the past week among 2-17 year olds was 10% and risky drinking in the past 14 days was 17% (DASSA, 2015).

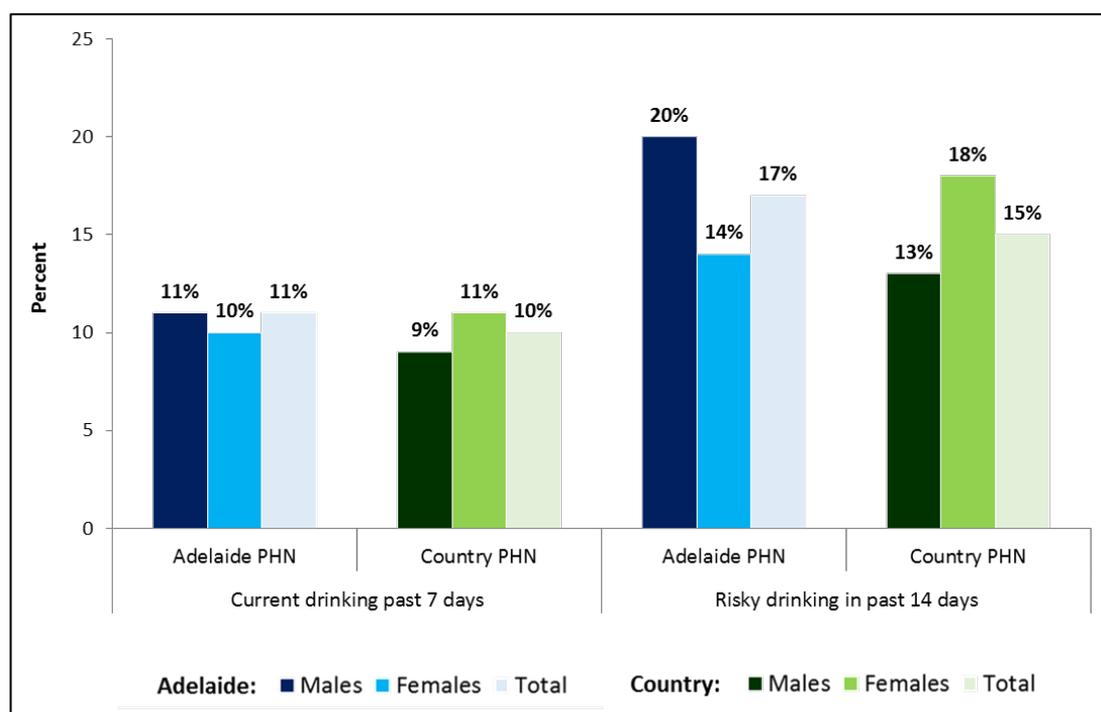
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<sup>6</sup> For a further breakdown at state level of the 2014 ASSAD findings for South Australia see the DASSA Statistical Bulletin Number 9 – October 2015.

## Gender

Among male school students aged 12-17 years, any alcohol consumption in the past 7 days and risky drinking in the past 14 days was higher in Adelaide than Country PHN (11% vs 9% and 20% vs 13%, respectively) (Figure 13). State-wide, prevalence of risky drinking in the past 14 days among males aged 12-17 years was 18% (DASSA, 2015).

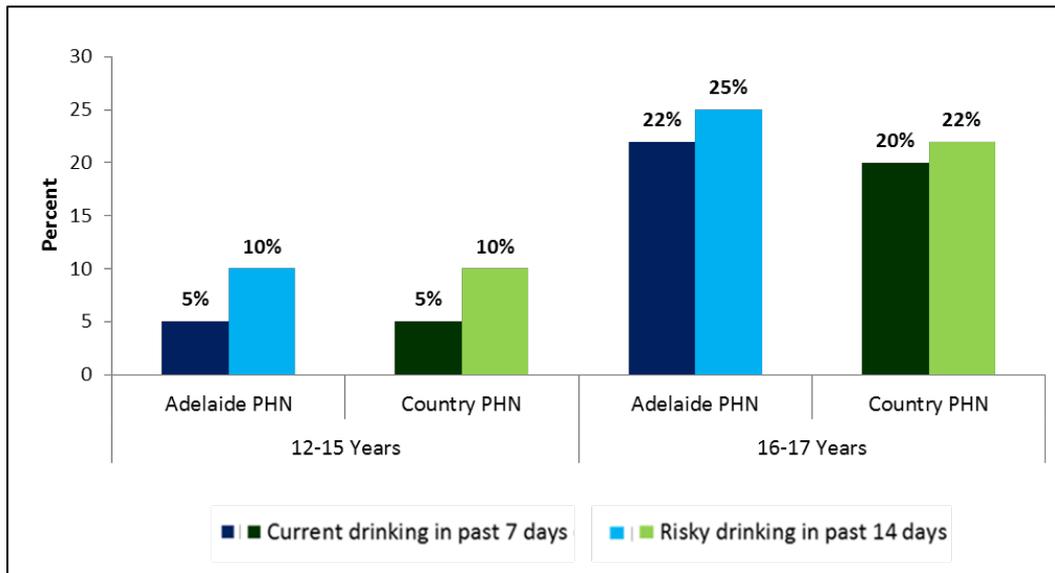
- Conversely, among female school students aged 12-17 years, prevalence of recent alcohol consumption and risky drinking in the past 14 days was higher in Country than Adelaide PHN (11% vs 10% and 18% vs 14%, respectively) (Figure 13). State-wide, prevalence of risky drinking in the past 14 days was 15% (DASSA, 2015).



**Figure 13. Alcohol consumption among 12-17 year olds, Adelaide and Country PHNs.**  
2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).

## Age

- Prevalence of recent alcohol consumption among 12-15 year olds was the same in both Adelaide and Country PHNs: current drinking in past 7 days: 5%; risky drinking in past 14 days: 10% (Figure 14).
- Prevalence of recent alcohol consumption among 16-17 year olds was higher among persons living in Adelaide PHN than Country PHN: current drinking in past 7 days: 22% vs 20%; risky drinking in past 14 days: 25% vs 22%, respectively (Figure 14).

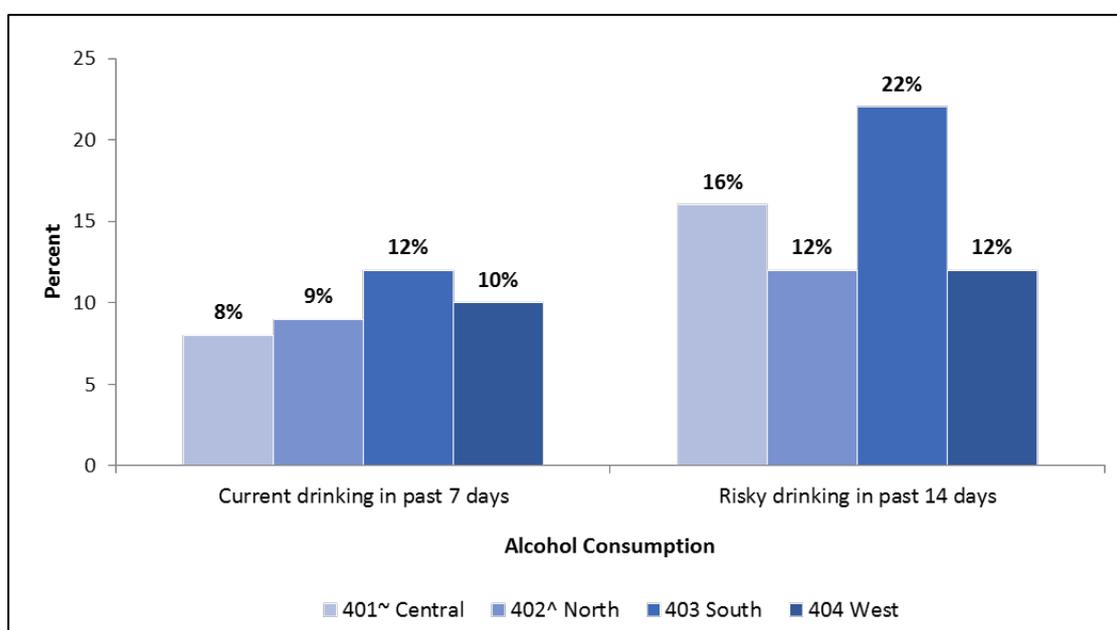


**Figure 14. Alcohol consumption among 12-17 year olds, Adelaide and Country PHNs.**  
2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).

### **Alcohol use among school students in Adelaide PHN at SA4 and SA3 levels**

Patterns of alcohol consumption among school students aged 12-17 years in Adelaide PHN at the SA4 and SA3 levels are examined below.

- Within Adelaide PHN, prevalence of any alcohol consumption in the past 7 days amongst 12-17 year olds ranged from 8% (SA401~ Central) to 12% (SA403 South) (Figure 15).
- Amongst 12-17 year olds living in Adelaide PHN, prevalence of risky alcohol consumption in the past 14 days ranged from 12% (SA402^ North and SA404 West) to 22% (SA403 South) (Figure 15).
- Prevalence of risky drinking in the past 14 days in SA403 South (22%) was the highest for any SA4 in South Australia (Figure 15).

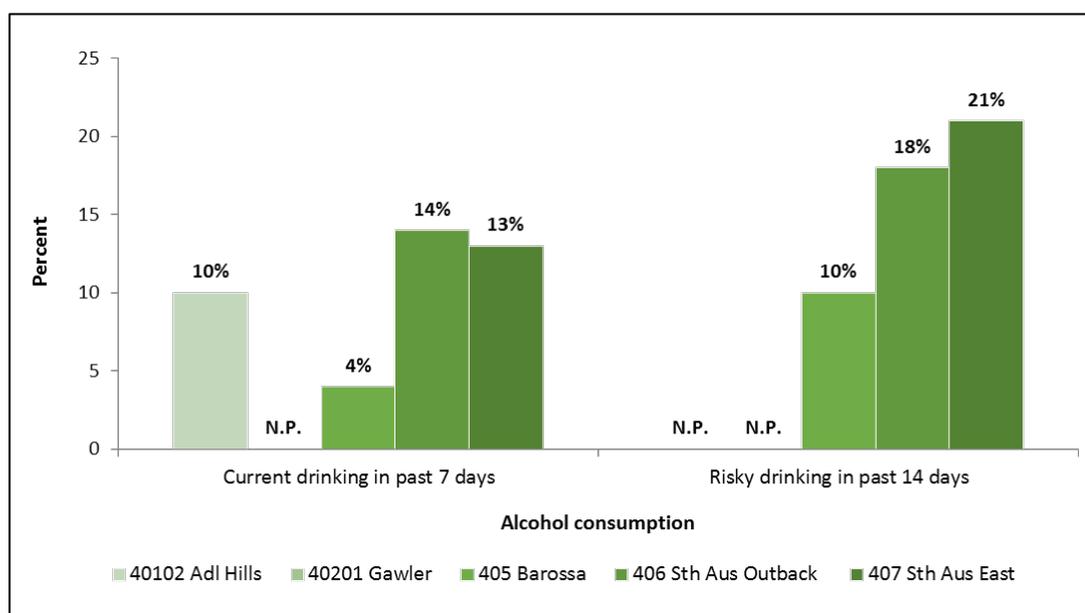


**Figure 15. Alcohol consumption among 12-17 year olds Adelaide PHN.**  
2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).

### **Alcohol use among school students in Country PHN at SA4 and SA3 levels**

Patterns of alcohol consumption among school students aged 12-17 years in Country PHN at the SA4 and SA3 levels are examined below.

- Within the Country PHN, prevalence of any alcohol consumption in the past 7 days amongst 12-17 year olds ranged from 4% (SA405 Barossa) to 14% (SA406 South Australia - Outback) (Figure 16).
- Amongst 12-17 year olds living in Country PHN, prevalence of risky alcohol consumption in the past 14 days ranged from 10% (SA405 Barossa) to 21% (SA407 South Australia - East) (Figure 16).
- Prevalence of risky drinking in the past 14 days in SA407 (21%, South Australia - East) was the second highest for any SA4 in South Australia (Figure 16), surpassed only by SA403 (South) (22%, Figure 15).



**Figure 16. Alcohol consumption among 12-17 year olds Country PHN.**  
2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).

## **6. ILLICIT DRUG USE**

This Section presents data from two datasets:

- 2013 National Drug Strategy Household Survey (NDSHS), general population prevalence estimates of drug use
- 2014 Australian Secondary School Student Alcohol and Drug (ASSAD) survey of SA school students, aged 12-17 years, illicit drug and cannabis use.

Data from these datasets are reported for Adelaide and Country PHNs and, where possible, by SA4 and SA3.

### **6.1 Illicit Drug Use in the General Population (NDSHS)**

This section examines patterns of illicit drug use, using data from the 2013 NDSHS. The drug groups included are:

- Cannabis
- Methamphetamine
- Opioids/pain killers (this category does not include heroin and refers to non-medical use.)

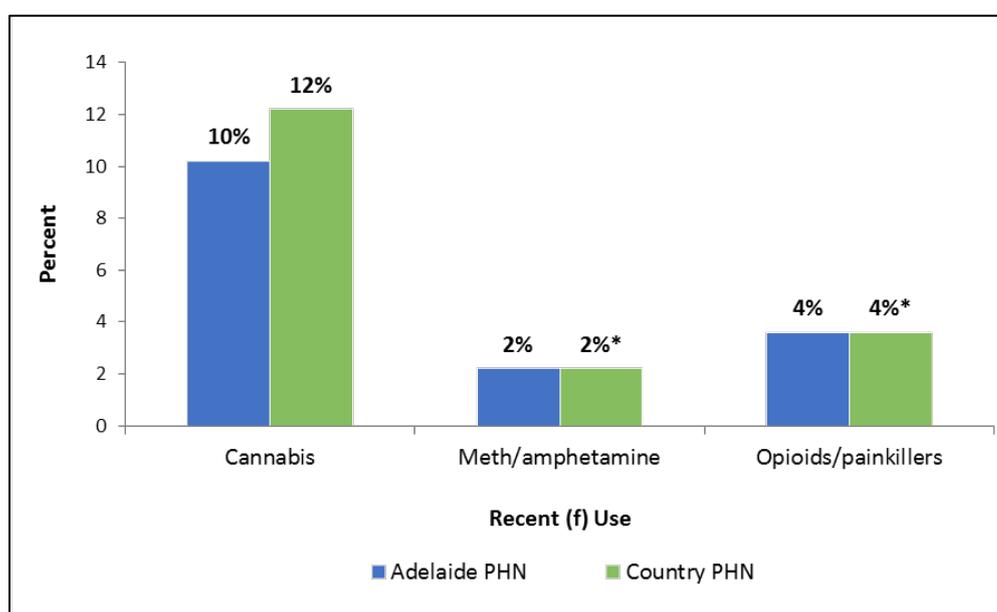
Opioids and painkillers are defined in the NDSHS as pharmaceuticals that are available from a pharmacy, over-the-counter or by prescription which may be subject to misuse (Ministerial Council on Drug Strategy, 2011). Opioid/painkiller data reported here refers to use for non-medical purposes which may include using medications in doses or frequencies other than those prescribed (AIHW, 2014).

This Section first compares patterns of illicit drug use in Adelaide and Country, and then considers illicit drug use in Adelaide and Country PHNs separately.

## Patterns of illicit drug use in South Australia: A comparison of Adelaide and Country PHNs

### Prevalence

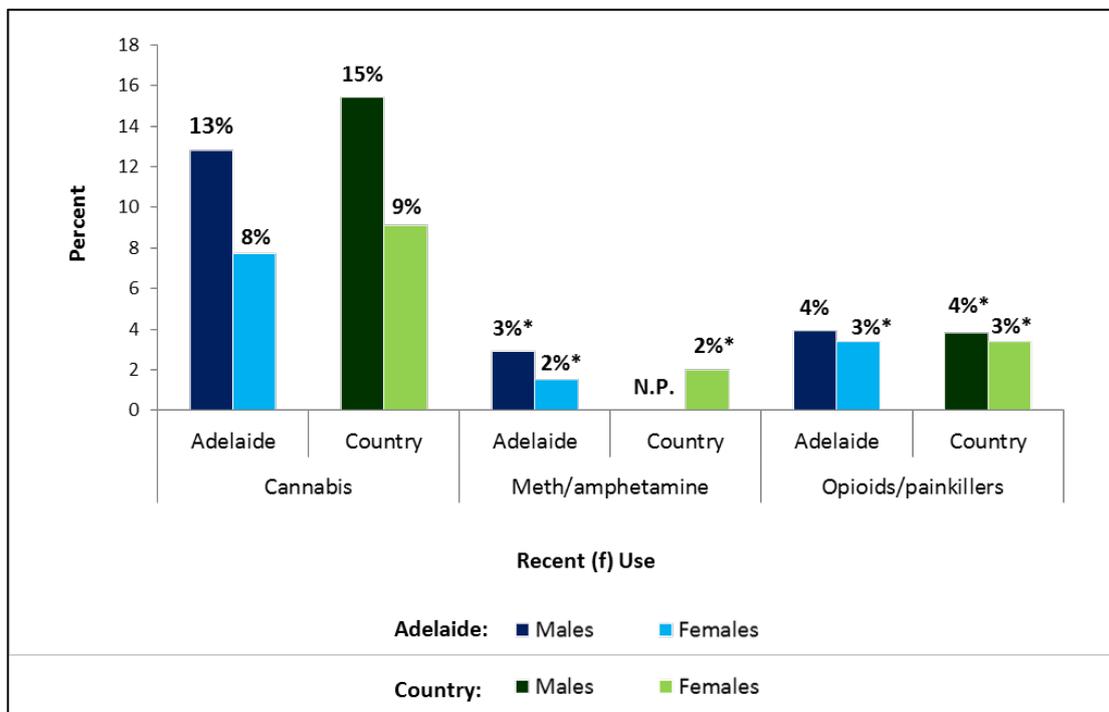
- The most common illicit drug used in South Australia was cannabis, with prevalence slightly higher in Country (12%) than Adelaide (10%) PHN (Figure 17). Prevalence of recent cannabis use among persons aged 18 years and over for South Australia overall was 11% and 10% nationally (AIHW, 2014).
- Prevalence of recent meth/amphetamine and opioid/painkiller use was 2% and 4% respectively, in both Adelaide and Country PHNs (Figure 17). This was similar to the South Australian and national prevalence rates (2.2% and 2.1% respectively) among persons aged 18 years and over (AIHW, 2014).



**Figure 17. Recent (f) cannabis, meth/amphetamine and opioids/painkillers use Adelaide and Country PHNs. 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).**

## Gender

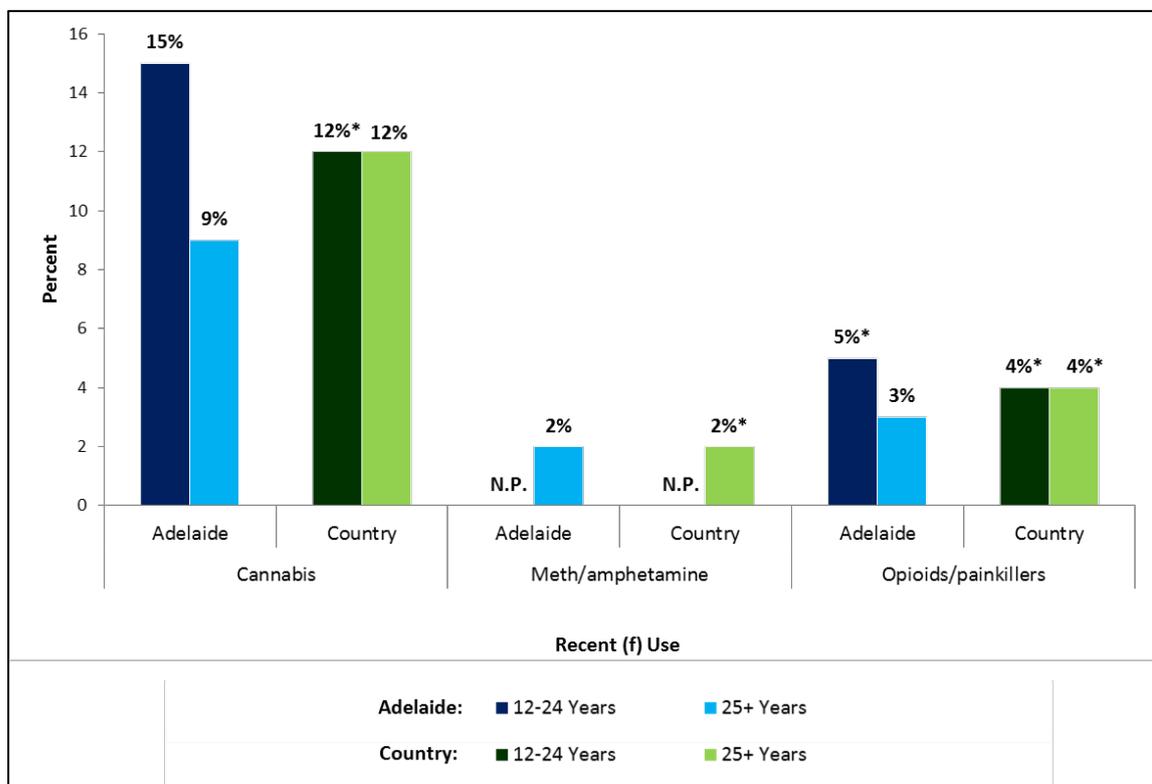
- In both Adelaide and Country PHNs, prevalence of recent cannabis use was higher among males (13% and 15%) than females (8% and 9%) (Figure 18). Highest overall use of cannabis in South Australia occurred among Country PHN males (15%). The prevalence of recent cannabis use among South Australian males and females over 18 years of age was 15% and 9% respectively (age-standardised). Nationally it was 13% among males and 8% among females (AIHW, 2014).
- Use of meth/amphetamine and opioids/painkillers was also more common among males than females in both Adelaide and Country PHNs. However, these prevalence estimates have relative standard errors of 25% - 50% and should be interpreted with caution (Figure 18). Prevalence of recent methamphetamine use among South Australian males and females aged over 18 years of age was 2.8% and 1.7% respectively. Nationally, it was 2.7% among males and 1.5% among females (AIHW, 2014).



**Figure 18. Male and female recent (f) cannabis, meth/amphetamine and opioids/painkillers use Adelaide and Country PHNs. 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).**

## Age

- Prevalence of recent cannabis use in Adelaide PHN was higher among 12-24 year olds (15%) than those aged >25 years (9%). Prevalence of recent use in Country PHN was lower among 12-24 year olds but higher among those aged >25 years, compared to Adelaide PHN (Figure 19).
- Data on meth/amphetamine use by age may be unreliable due to small numbers.
- Prevalence of opioid/painkiller use appears higher among persons aged 12-24 years than those aged 25+ years, however, these data may be unreliable (Figure 19).



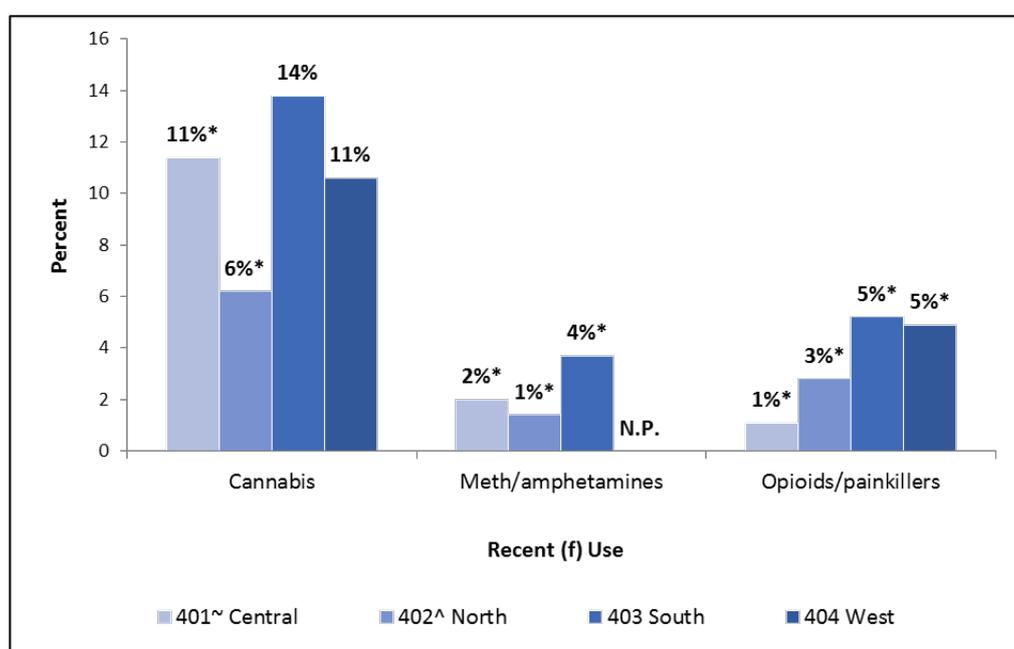
**Figure 19. Recent (f) cannabis, meth/amphetamine and opioids/painkillers use Adelaide and Country PHNs by age groups. 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).**

### Illicit drug use in Adelaide PHN at SA4 and SA3 levels

Patterns of illicit drug use in Adelaide PHN at the SA4 and SA3 levels are examined below.

#### Statistical Areas, Level 4 (SA4)

- Within Adelaide PHN, recent cannabis use (i.e. in the last 12 months) ranged from 6% (SA402^ North) to 14% (SA403 South) (Figure 20).
- Meth/amphetamine use ranged from 1% (SA402^ North) to 4% (SA403 South), whilst use of opioids/painkillers in the last 12 months ranged from 1% (SA401~ Central) to 5% (SA403 South and SA404 West). The reported prevalence rates of meth/amphetamine and opioids/painkillers should be interpreted with caution (Figure 20).
- Use of cannabis, methamphetamine and opioids/painkillers was consistently higher in SA403 South (Figure 20).



**Figure 20. Recent (f) cannabis, meth/amphetamine and opioids/painkillers use Adelaide PHN statistical areas, level 4. 2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).**

Statistical Areas, Level 3 (SA3)

- Prevalence of recent cannabis use across Adelaide PHN SA3s ranged from 6% (SA 40401 Charles Sturt) to 20% (SA40105 Norwood). Where indicated (\*), prevalence rates should be interpreted with caution due to small numbers (Table 9).

**Table 9. Recent (f) cannabis use, Adelaide PHN SA4 and SA3 levels.**  
2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).

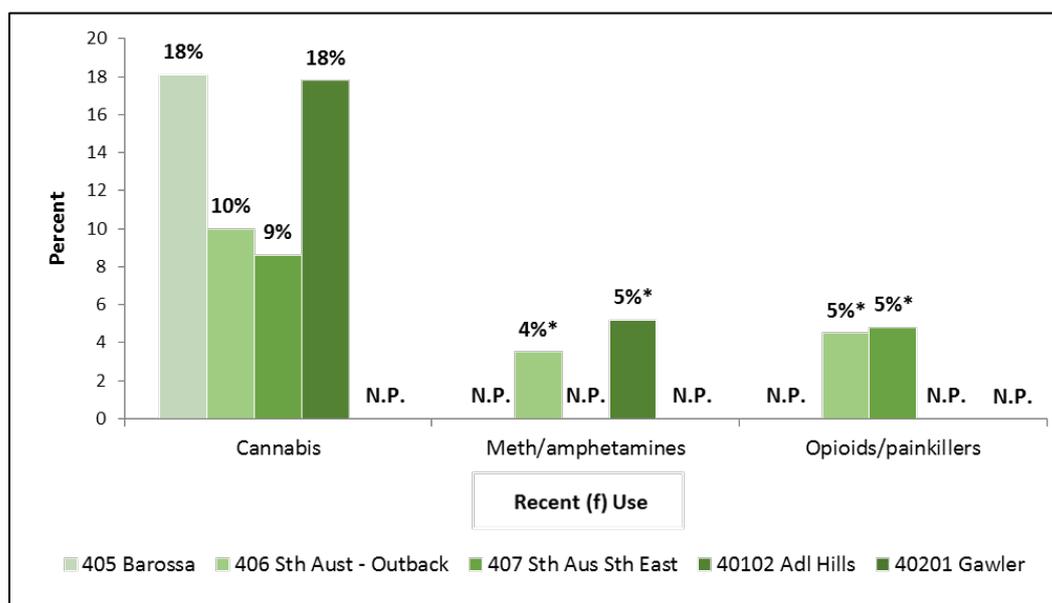
SA4 Code & Name	SA3		Recent <sup>(f)</sup> Cannabis Use (%)
	Code	Name	
401~ Central	40101	Adelaide City	10*
	40103	Burnside	N.P.
	40104	Campbelltown	8
	40105	Norwood	20*
	40106	Prospect	N.P.
	40107	Unley	N.P.
402^ Adelaide	40202	Playford	14
	40203	Port Adelaide - East	8*
	40204	Salisbury	N.P.
	40205	Tea Tree Gully	N.P.
403 South	40301	Holdfast Bay	15*
	40302	Marion	10*
	40303	Mitcham	15*
	40304	Onkaparinga	15
404 West	40401	Charles Sturt	6*
	40402	Port Adelaide - West	N.P.
	40403	West Torrens	19*

### Illicit drug use in country PHN at SA4 and SA3 levels

Patterns of illicit drug use in Country PHN at the SA4 and SA3 levels are examined below.

#### Statistical Areas, Level 4 (SA4)

- Within Country PHN, prevalence of recent cannabis use was highest in SA40102 (Adelaide Hills) and SA405 (Barossa) (18%) (Figure 21).



**Figure 21. Recent (f) cannabis, meth/amphetamine and opioids/painkillers use Country PHN statistical areas, level 4. 2013 National Drug Strategy Household Survey. (AIHW secondary analysis, 2016).**

*Statistical Areas, Level 3 (SA3)*

- At SA3 level, prevalence of recent cannabis use was 18% in the Adelaide Hills (SA40102), 10% in Eyre Peninsula and South West (SA40601) and 9% in Murray & Mallee (SA40703) (Table 10). Recent use of cannabis in other Country PHN SA3s was not published, due to data quality.
- Data on recent use of meth/amphetamine and opioids/painkillers was not available at SA3 levels due to small numbers.

**Table 10. Recent (f) cannabis use, Country PHN SA4s and SA3 levels.**  
*2013 National Drug Strategy Household Survey (AIHW secondary analysis, 2016).*

SA44 Code & Name	SA3		Recent <sup>(f)</sup> Cannabis Use (%)
	Code	Name	
Not Applicable	40102	Adelaide Hills	18
Not Applicable	40201	Gawler - Two Wells	N.P.
405 Barossa - Yorke - Mid North	40501	Barossa	N.P.
	40502	Lower North	--
	40503	Mid North	N.P.
	40504	Yorke Peninsula	--
406 Sth Aus - Outback	40601	Eyre Peninsula & South West	10
	40602	Outback – North & East	--
407 Sth Aus - South East	40701	Fleurieu – Kangaroo Is	N.P.
	40702	Limestone Coast	N.P.
	40703	Murray & Mallee	9

## **6.2 Illicit Drug Use Among School Students (ASSAD)**

This section examines patterns of illicit drug use (ever used and used in the past week), with a specific focus on cannabis use in the last 12 months, among 12-17 year old school students.

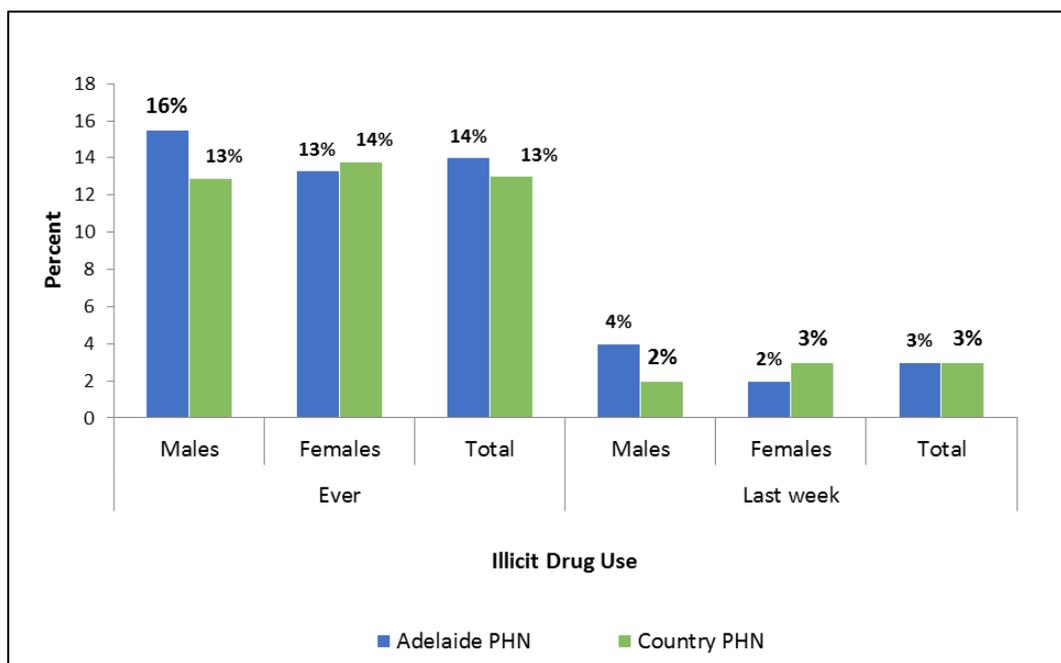
First patterns of illicit drug use in Adelaide and Country PHNs are compared. Then illicit drug use in Adelaide and Country PHNs is considered separately.

### ***Patterns of illicit drug use in South Australia: A comparison of Adelaide and Country PHNs***

- Prevalence of illicit drug use (ever) among 12-17 year old school students was 14% and 13% in Adelaide and Country PHNs respectively (Figure 22). State-wide, the prevalence of illicit drug use (ever) among 12-17 year old South Australian school students was 14% and the prevalence of illicit drug use in the past week was 3% (DASSA, 2015).

## Gender

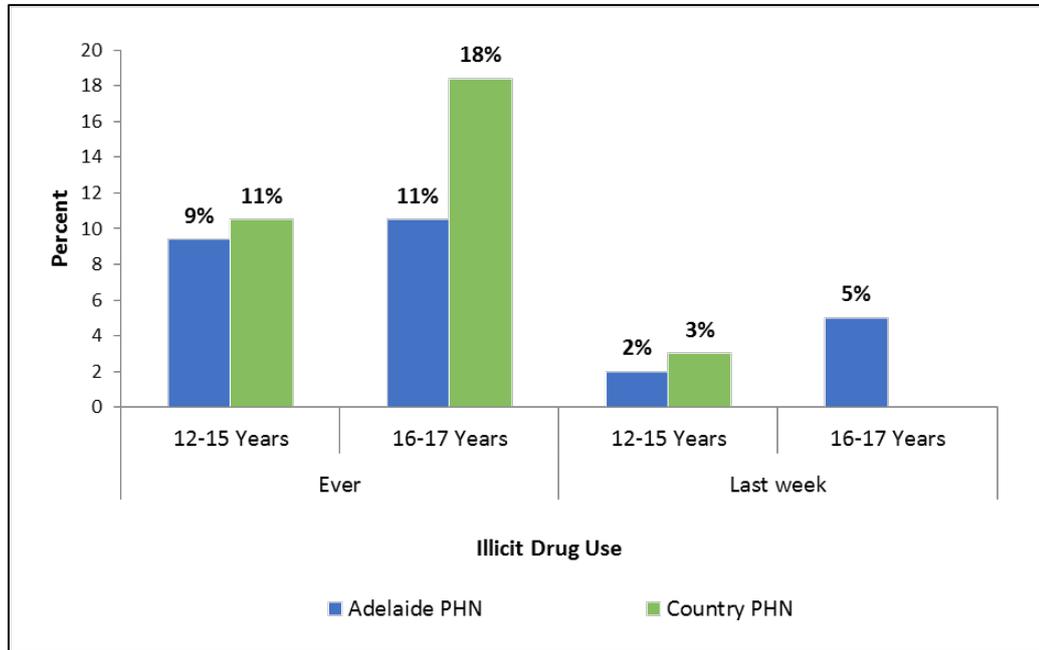
- Among males aged 12-17 years, prevalence of illicit drug use was higher among those in Adelaide than Country PHN (16% and 13% respectively). State-wide, prevalence of illicit drug use (ever) among South Australian males aged 12-17 years was 15% and 4% had used in the last week (DASSA, 2015).
- Prevalence was slightly lower among females in Adelaide than Country PHN (13% and 14%, respectively) (Figure 22). State-wide, the prevalence of illicit drug use (ever), among females in South Australia aged 12-17 years was 14% and 2% had used in the last week (DASSA, 2015).



**Figure 22. Illicit drug use among males and females aged 12-17 year Adelaide and Country PHNs.**  
*2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).*

Age

- For both 12-15 and 16-17 year olds, ever use of an illicit drug was higher in Country than Adelaide PHN (Figure 23).

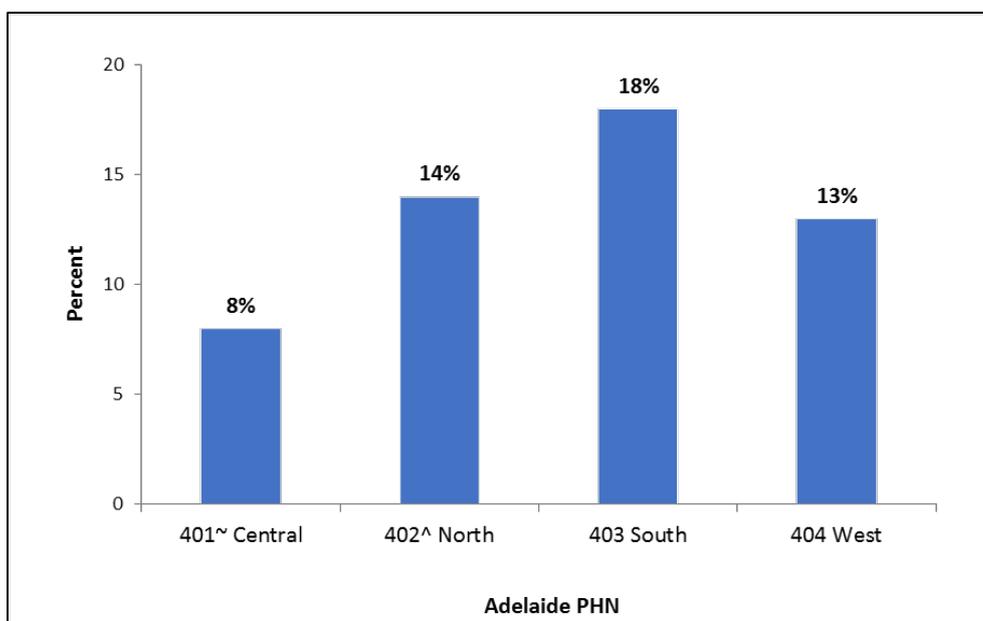


**Figure 23. Illicit drug use among Adelaide and Country PHNs by age group.**  
*2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).*

### **Illicit drug use among school students in Adelaide PHN at SA4 and SA3 levels**

Patterns of illicit drug use among school students aged 12-17 years in Adelaide PHN at the SA4 and SA3 levels are examined below.

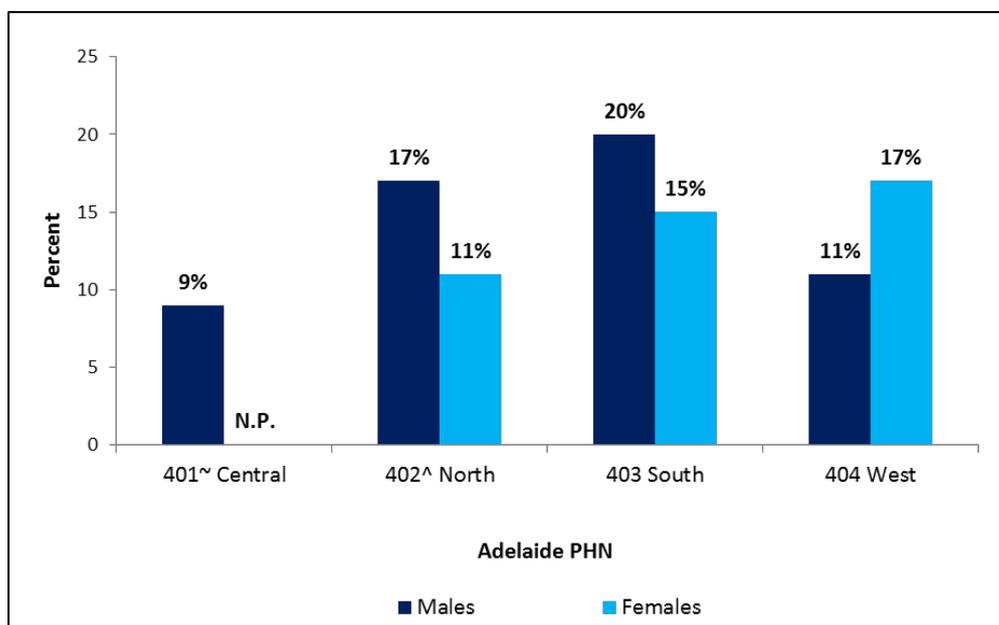
- Within Adelaide PHN, prevalence of lifetime illicit drug use among 12-17 year olds ranged from 8% (SA401~ Central) to 18% (SA403 South) (Figure 24).



**Figure 24. Illicit drug use (ever) among 12-17 year olds Adelaide PHN Statistical Areas, level 4.**  
*2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).*

### Gender

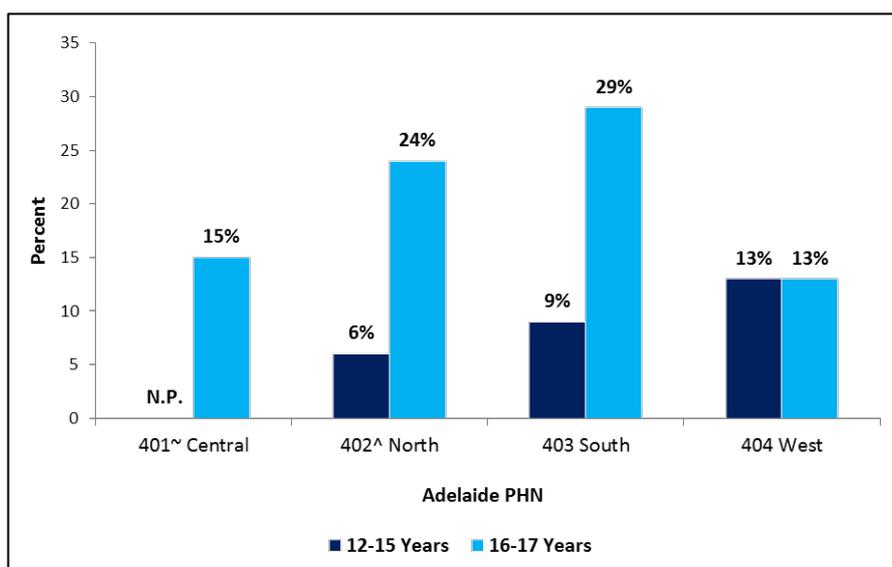
- Apart from SA404 (West), males aged 12-17 years were more likely to have ever used illicit drugs than females (Figure 25).



**Figure 25. Male and female Illicit drug use (ever) among 12-17 year olds Adelaide PHN Statistical Areas, level 4. 2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).**

### Age

- Illicit drug use among 16-17 year olds ranged from 13% (SA404 West) to 29% (SA403 South) (Figure 26).

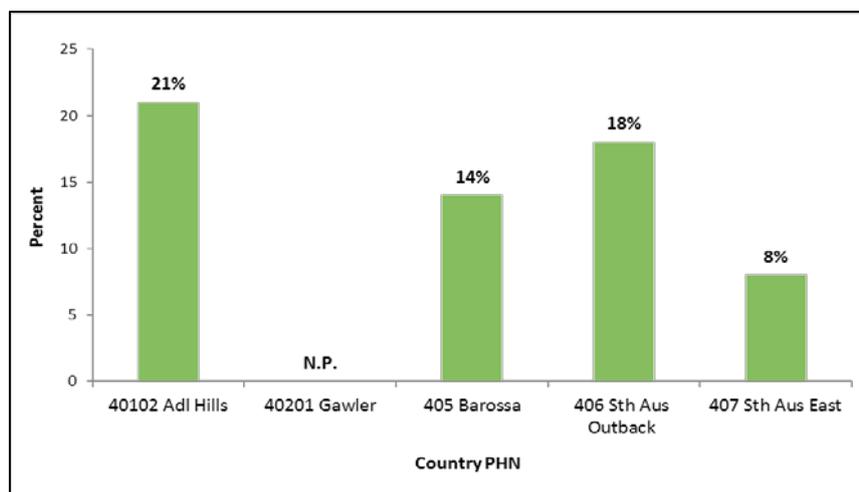


**Figure 26. Illicit drug use (ever) among 12-17 year olds, by age group Adelaide PHN Statistical Areas, level 4. 2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).**

### **Illicit drug use among school students in Country PHN at SA4 and SA3 levels**

Patterns of illicit drug use among school students aged 12-17 years in Country PHN at the SA4 and SA3 levels are examined below.

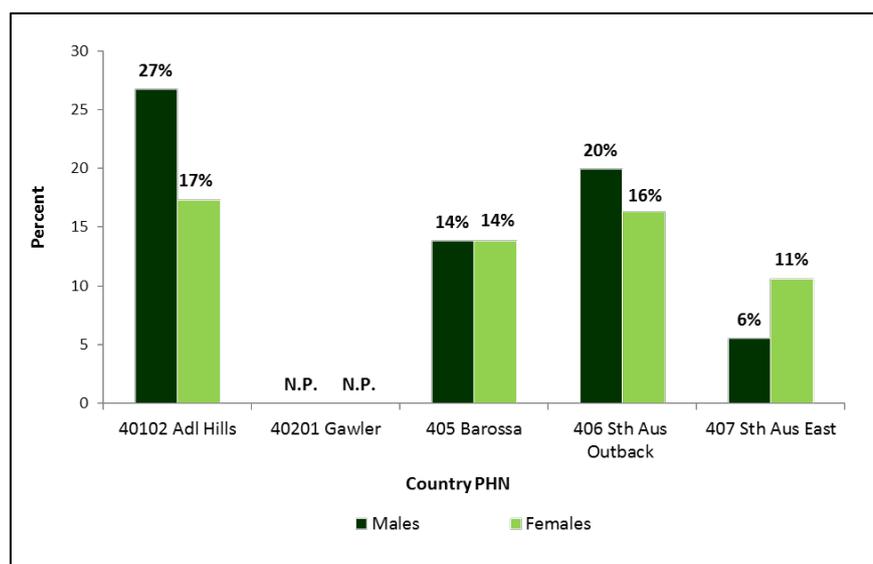
- Prevalence of lifetime illicit drug use ranged from 8% (SA407 South Australia – East) to 21% (SA40102 Adelaide Hills) (Figure 27).



**Figure 27. Illicit drug use (ever) among 12-17 year olds Country PHN Statistical Areas, level 4, SA40102 (Adelaide Hills) and SA40201 (Gawler – Two Wells). 2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).**

### **Gender**

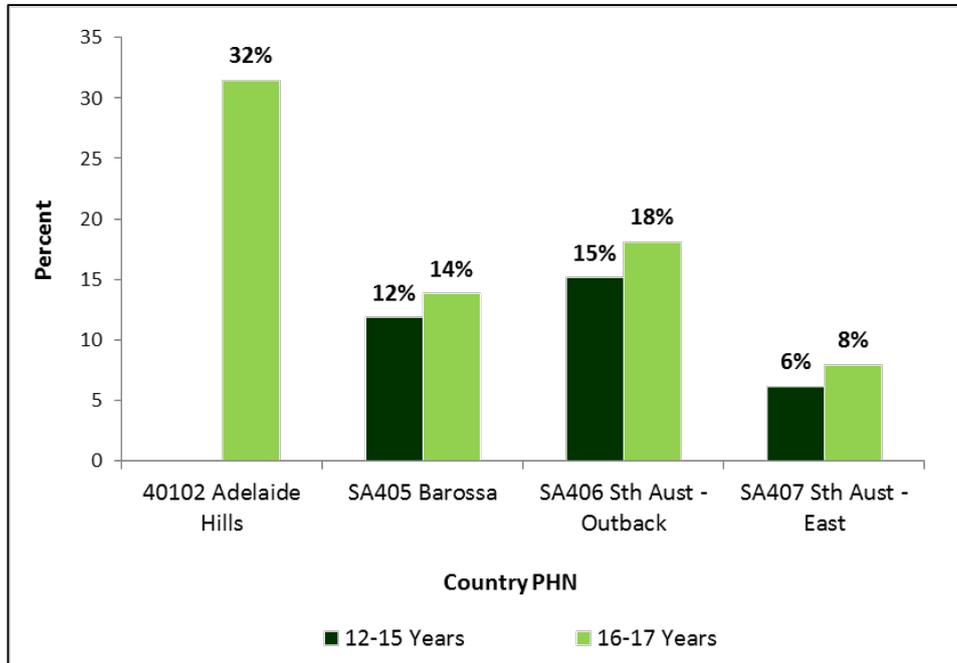
- Among males aged 12-17 years, lifetime illicit drug use ranged from 6% (SA407 South Australia – East) to 27% (SA40102 Adelaide Hills). Among females it ranged from 11% (SA407 South Australia – East) to 17% (SA40102 Adelaide Hills) (Figure 28).



**Figure 28. Male and female Illicit drug use (ever) among 12-17 year olds Country PHN Statistical Areas, level 4, SA40102 (Adelaide Hills) and SA40201 (Gawler – Two Wells). 2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).**

Age

- Illicit drug use among 16-17 year olds ranged from 8% (SA407 South Australia - East) to 32% (SA40402 Adelaide Hills) (Figure 29).



**Figure 29. Illicit drug use (ever) among 12-17 year olds, by age group Country PHN Statistical Areas. 2014 ASSAD Survey. (Cancer Council Victoria secondary analysis, 2016).**

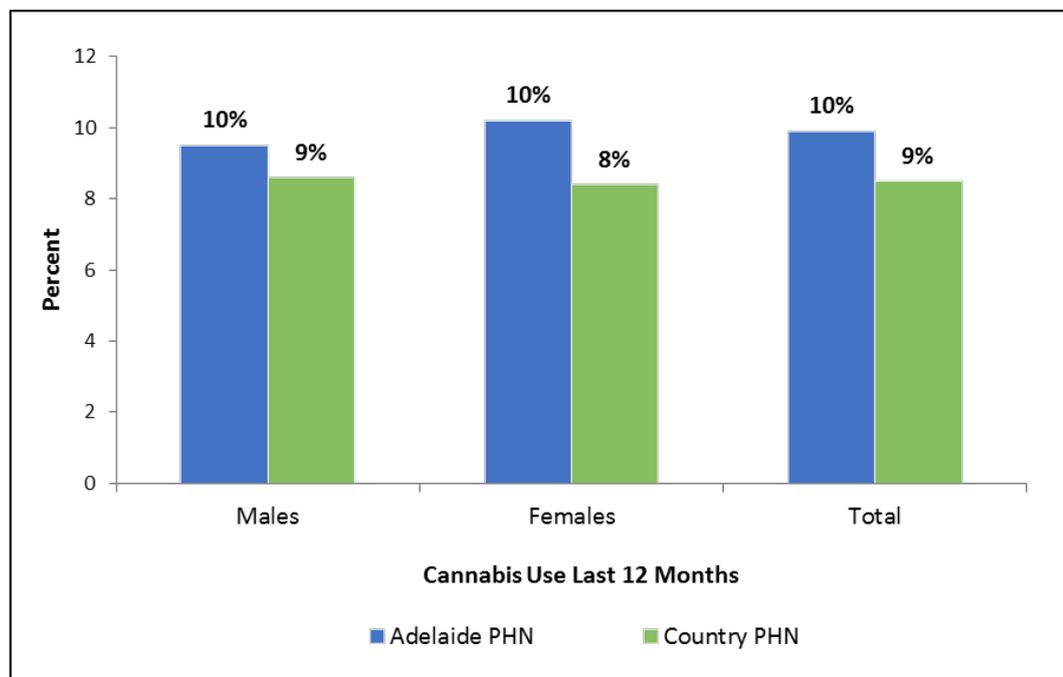
### 6.3 Cannabis Use Among School Students (ASSAD)

This section presents data on patterns of cannabis use in the last 12 months. First Adelaide and Country PHNs are compared. Then patterns of cannabis use are considered separately for Adelaide and Country PHNs.

#### ***Patterns of cannabis use among school students in South Australia: A comparison of Adelaide and Country PHNs***

##### *Gender*

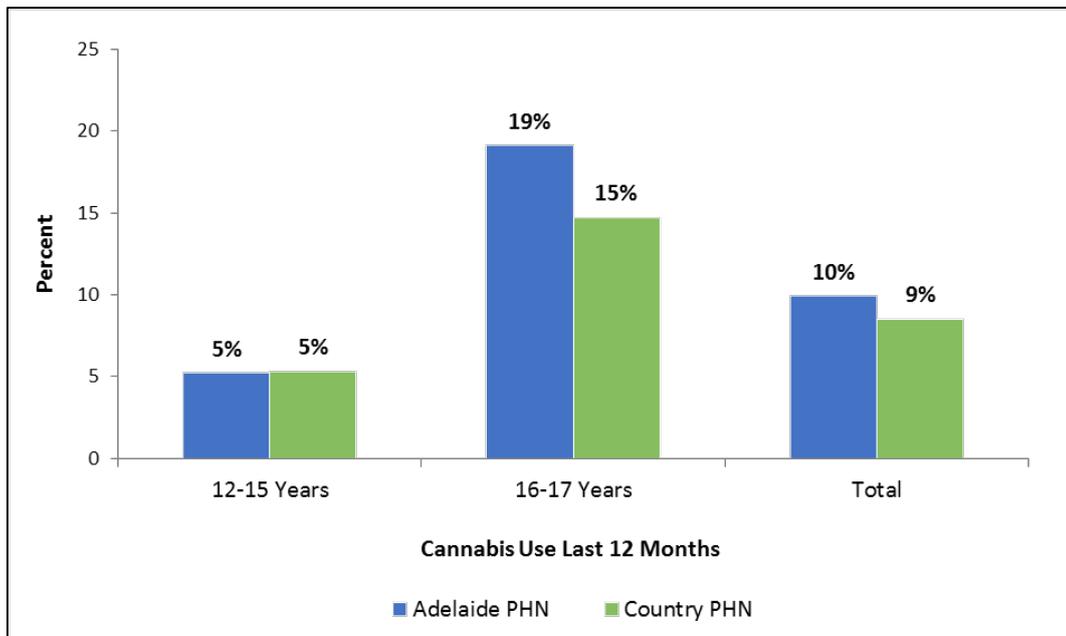
- The prevalence of cannabis use in the last 12 months among males and females aged 12-17 years was higher for both sexes in Adelaide PHN (10%; 10%) than in Country PHN (9%; 8%) (Figure 30).



**Figure 30. Use of cannabis in last 12 months by males and females aged 12-17 years of age Adelaide and Country PHNs. 2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).**

### Age

- Prevalence of cannabis use in the last 12 months amongst 12-15 years olds was similar in both Adelaide and Country PHNs (5%).
- However, prevalence of recent cannabis use among 16-17 year olds was higher among those in Adelaide PHN (19%) than Country PHN (15%) (Figure 31).

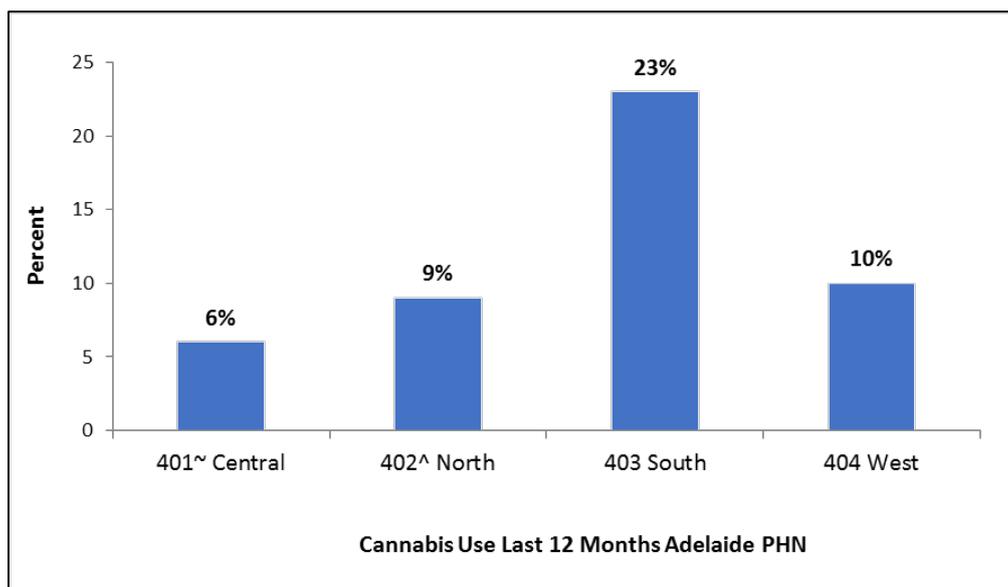


**Figure 31. Use of cannabis in last 12 months among 12-17 year olds Adelaide and Country PHNs by age group. 2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).**

### **Cannabis use among school students in Adelaide PHN at SA4 and SA3 levels**

Patterns of cannabis use among school students aged 12-17 years in Adelaide PHN at the SA4 and SA3 levels are examined below.

- Within Adelaide PHN, prevalence of cannabis use in the last 12 months amongst 12-17 year olds ranged from 6% (SA401~ Central) to 23% (SA403 South) (Figure 32).
- Among 16-17 year olds, prevalence of cannabis use in the last 12 months ranged from 13% (SA401~ Central) to 24% (SA403 South) (Figure not shown).



**Figure 32. Use of cannabis in last 12 months among 12-17 year olds Adelaide PHN Statistical Areas, level 4.n2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).**

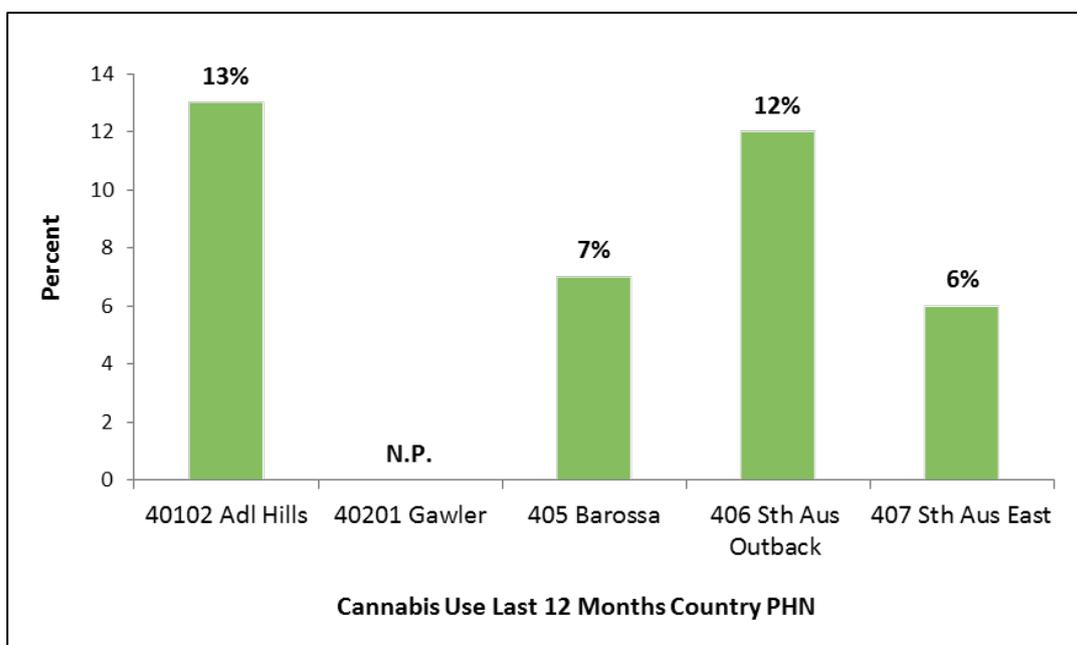
### *Gender*

- Prevalence of cannabis use in last 12 months by gender is not reported due to small numbers.

### **Cannabis use among school students in Country PHN at SA4 and SA3 levels**

Patterns of cannabis use among school students aged 12-17 years in Country PHN at the SA4 and SA3 levels are examined below.

- Within Country PHN, prevalence of cannabis use in the last 12 months ranged from 6% (SA407 South Australia – East) to 13% (SA40102 Adelaide Hills) (Figure 33).



**Figure 33. Use of cannabis in last 12 months among 12-17 year olds Country PHN Statistical Areas, level 4. 2014 ASSAD Survey (Cancer Council Victoria secondary analysis, 2016).**

### **Gender and Age**

- Prevalence of cannabis use in the last 12 months by gender and age is not reported for SA3 areas due to small numbers.

## 7. PRESCRIBED OPIOIDS

This section examines patterns of opioid dispensing throughout South Australia in 2013/14. The first part of Section 7 compares opioid dispensing in Adelaide vs Country PHNs. Patterns of dispensing in Adelaide and Country PHNs are then considered in more detail separately.

In considering these data it is important to be mindful that it does not shed light on the *levels* or *types* of opioids being dispensed in a given area. For example, data on a given area does not provide insight into whether the opioids dispensed were relatively mild (e.g., Tramadol) or potent (e.g., Fentanyl). Nor do they provide an insight into whether the dosages of each drug were relatively low (e.g., 5 mg Oxycodone), or very high (e.g., 80 mg oxycodone).

The opioids included in these data are:

- buprenorphine
- codeine
- fentanyl
- hydromorphone
- methadone
- morphine
- oxycodone
- oxycodone + naloxone
- paracetamol and codeine
- tapentadol
- tramadol.

There was a wide variation in levels of dispensing of prescribed opioids. Potential reasons for this variation in dispensing levels include differences in:

- Prescribing practices, training, knowledge and attitudes of general practitioners
- Individuals' understanding about the appropriate use of opioids to treat pain, the risks associated with high-dose and/or long-term opioid use, and the importance and efficacy of alternative non-pharmacological treatments
- The type of opioid dispensed and the number of authority prescriptions supplied in each region
- Access to pain specialists
- Availability and accessibility of appropriate non-pharmacological treatment options, particularly in rural and remote locations
- Access to alternate management, such as opioid dependency treatments (Australian Commission on Safety and Quality in Health Care, 2015).

## 7.1. Patterns of prescribed opioid use in South Australia: A comparison of Adelaide and Country PHNs

The number of PBS prescriptions dispensed for opioid medicine in 2013/14 was 69,682 per 100,000 persons in Adelaide PHN and 80,898 per 100,000 in Country PHN.

The non-age standardised rate of PBS prescriptions dispensed for opioid medicine in 2013/14 for South Australia was 72,925 per 100,000 persons.

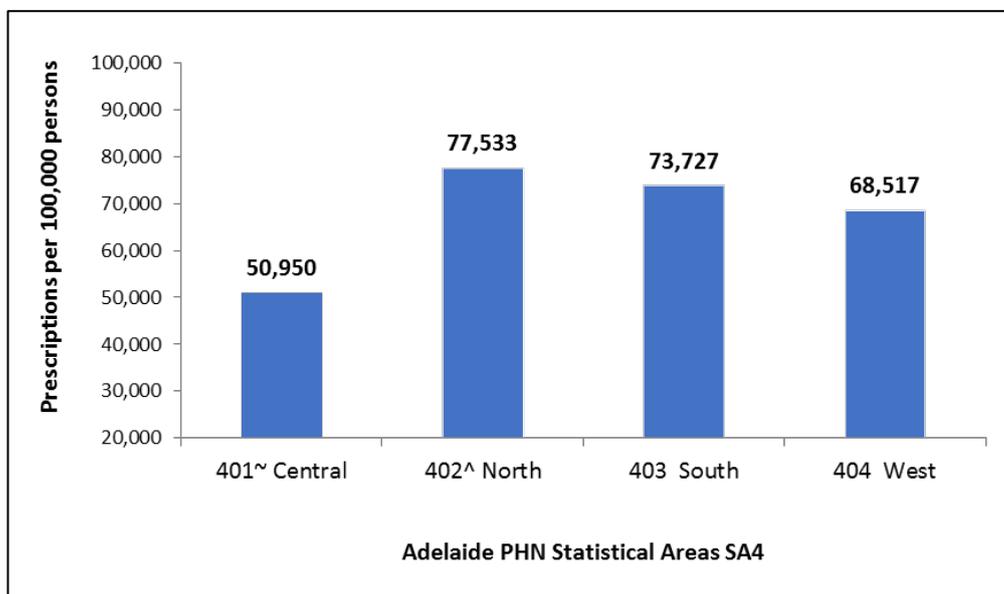
The age standardised rates for PBS prescriptions dispensed for opioid medicine in 2013/14 were 63,688 and 55,126 per 100,000 persons, for South Australia and Australia respectively (Australian Commission on Safety and Quality in Health Care, 2015).

## 7.2. Prescribed opioid use in Adelaide PHN at SA4 and SA3 levels

Patterns of prescribed opioid use in Adelaide PHN at the SA4 and SA3 levels are examined below.

### **Statistical areas, Level 4 (SA4)**

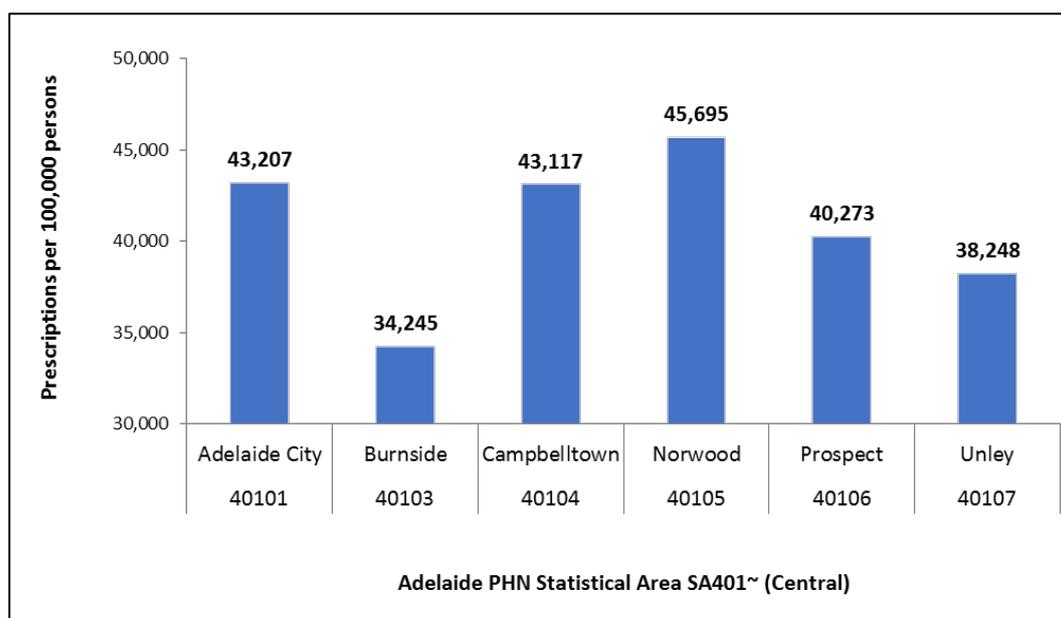
- The rate of PBS prescriptions dispensed for opioid medicine in Adelaide PHN SA4 ranged from 50,950 (SA401~ Central) to 77,533 (SA402^ North) per 100,000 persons (Figure 34).



**Figure 34. Number of PBS prescriptions dispensed for opioid medicine per 100,000 persons by Adelaide PHN SA4 divisions.** *Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (NCETA secondary analysis, 2016).*

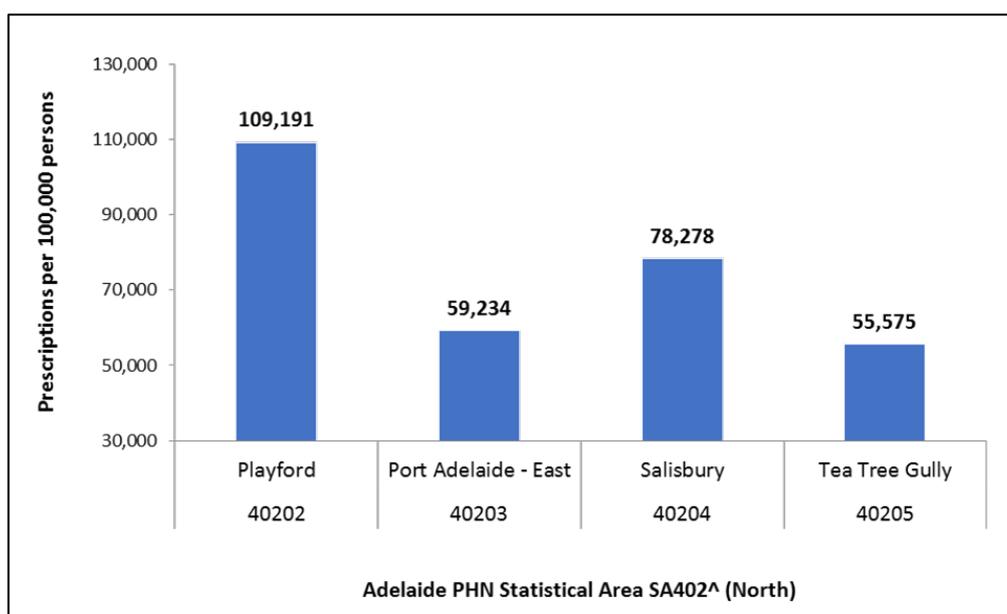
### Statistical areas, Level 3 (SA3)

- Within Adelaide PHN SA401~ (Central), the age standardised rate of PBS prescriptions dispensed for opioid medicine ranged from 34,245 (SA40103 Burnside) to 45,695 (SA40105 Norwood) per 100,000 persons (Figure 35).
- Burnside (SA40103) had the lowest SA3 age standardised rate for dispensed prescribed opioids in South Australia (Figure 35).



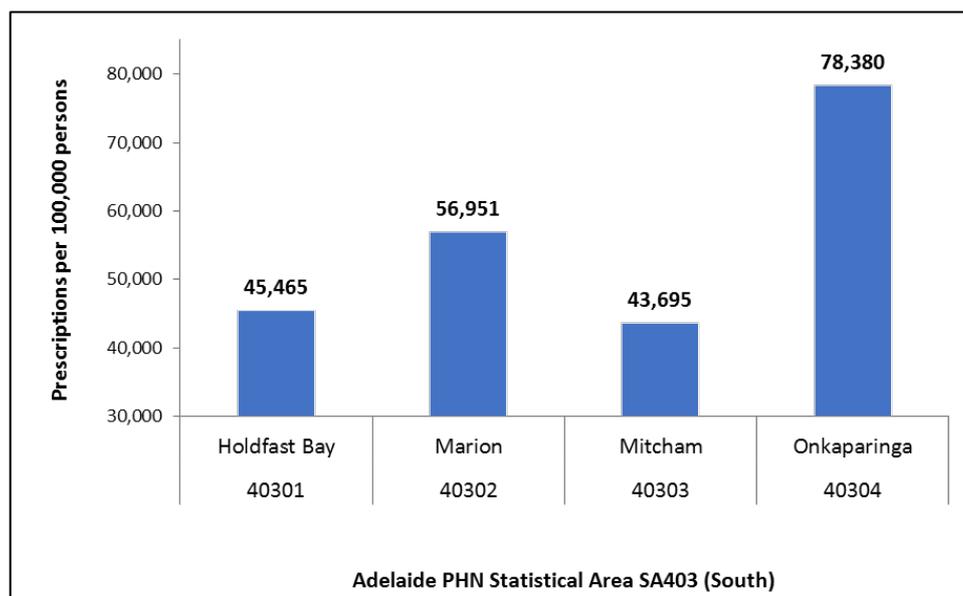
**Figure 35. Number of PBS prescriptions dispensed for opioid medicine age standardised rate per 100,000 persons Adelaide PHN SA401~ (Central).** *Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident. Population 30 June 2013 (National Health Performance Authority analysis, 2016).*

- Within Adelaide PHN SA402^ (North), age standardised rates of PBS prescriptions dispensed for opioid medicine ranged from 55,575 (SA40205 Tea Tree Gully) to 109,191 (SA40202 Playford) per 100,000 persons (Figure 36).
- Adelaide PHN SA402^ (North) had two SA3 divisions with some of the highest age standardised rates for dispensed prescribed opioids in South Australia: Playford (SA40202) had the highest rate and Salisbury (SA40204) the third highest (Figure 36).



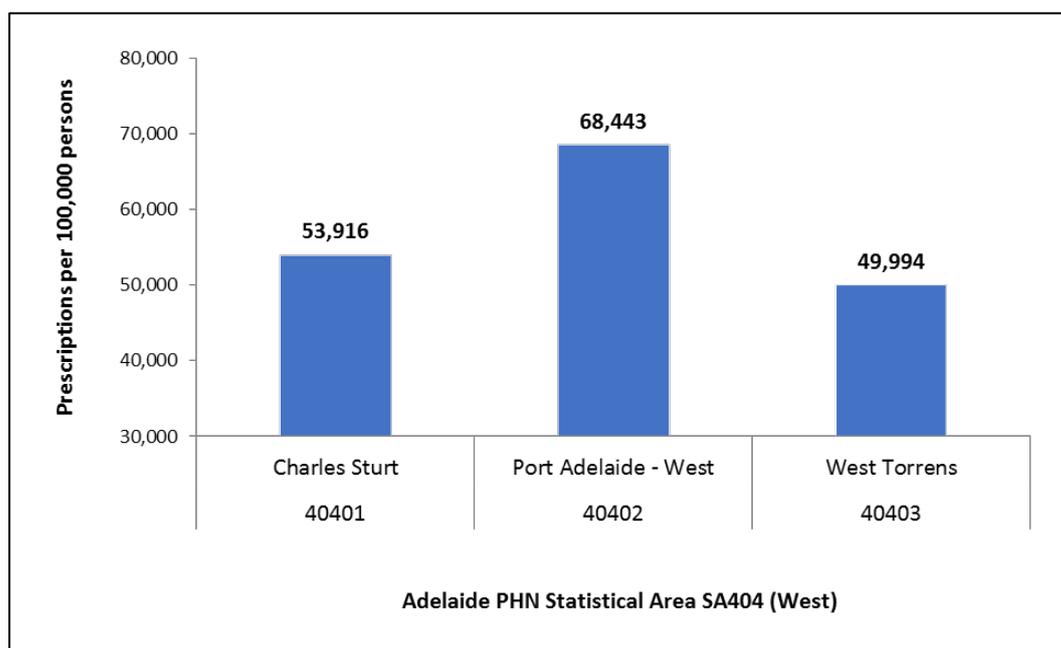
**Figure 36. Number of PBS prescriptions dispensed for opioid medicine age standardised rate per 100,000 persons Adelaide PHN SA402^ (North).** *Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).*

- Within Adelaide PHN SA403 (South), age standardised rates of PBS prescriptions dispensed for opioid medicine ranged from 43,695 (SA40303 Mitcham) to 78,380 (SA40304 Onkaparinga) per 100,000 persons (Figure 37).
- Onkaparinga (SA40304) had the second highest rate of dispensed prescribed opioids in the Adelaide PHN (Figure 37).



**Figure 37. Number of PBS prescriptions dispensed for opioid medicine age standardised rate per 100,000 persons Adelaide PHN SA403 (South).** *Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).*

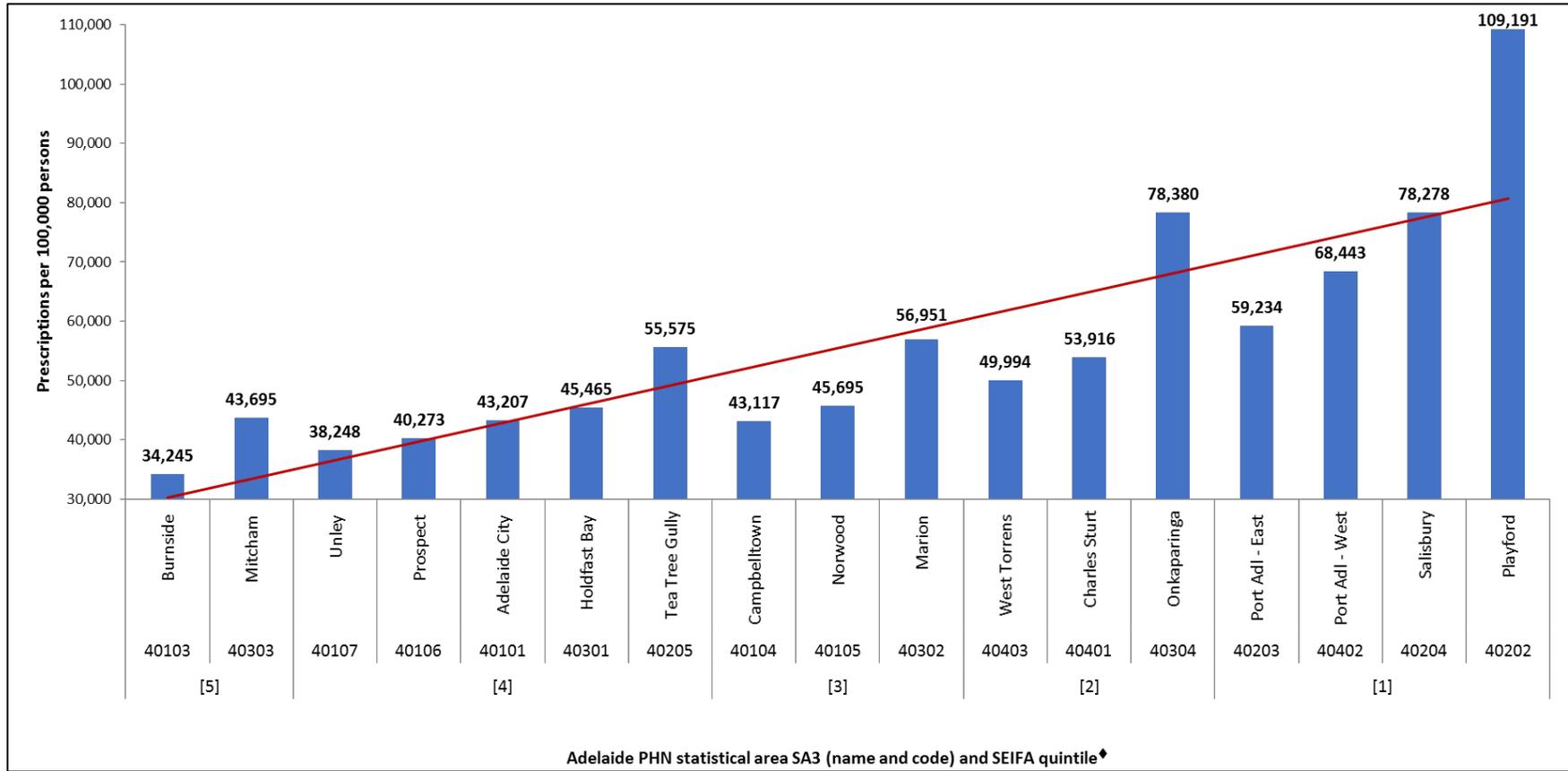
- Within Adelaide PHN SA404 (West), age standardised rates of PBS prescriptions dispensed for opioid medicine per 100,000 ranged from 49,994 (SA40403 West Torrens) to 68,443 (SA40402 Port Adelaide – West) (Figure 38).



**Figure 38. Number of PBS prescriptions dispensed for opioid medicine age standardised rate per 100,000 persons Adelaide PHN, SA404 (West).** *Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013. (National Health Performance Authority analysis, 2016).*

### **Socio-economic status**

- Within all Adelaide PHN SA4s, a clear social gradient was apparent in the age standardised rate of dispensed prescribed opiates, as illustrated by the solid diagonal line in Figure 39. Areas with a lower socio-economic status within an SA4 had higher rates of dispensed prescribed opiates.
- Figure 39 shows the age-standardised rate of PBS prescriptions for opioid medication (lowest to highest) according to socio-economic status, as measured by SEIFA (highest to lowest) across Adelaide PHN at SA3 level.



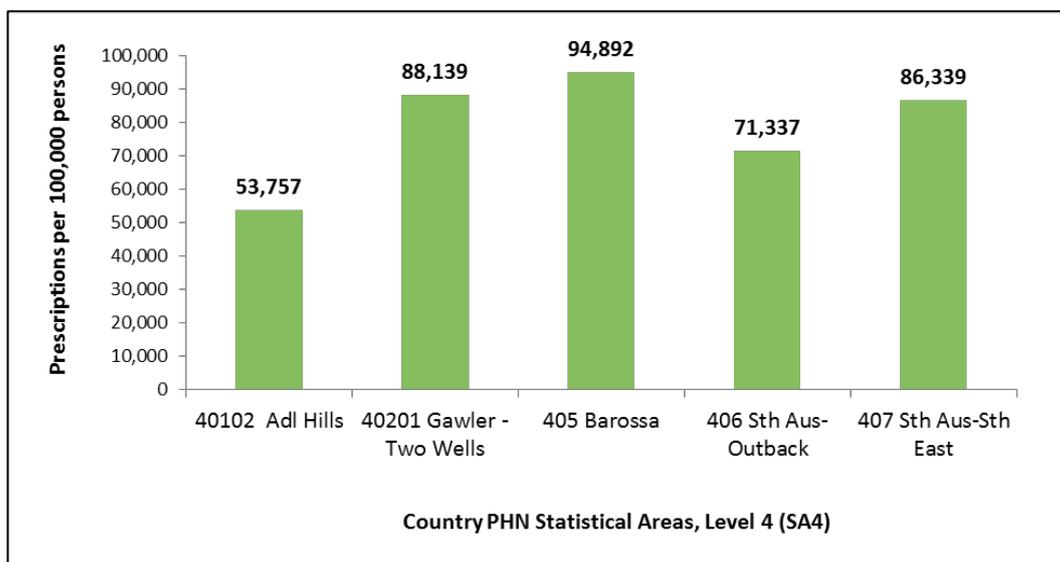
**Figure 39. Adelaide PHN SA4s age standardised rate of PBS dispensed prescriptions for opioid medication per 100,000 persons by SA3 and SEIFA.**  
*Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (NCETA secondary analysis, 2016).*

### 7.3. Prescribed opioid use in Country PHN at SA4 and SA3 levels

Patterns of prescribed opioid use in Country PHN at the SA4 and SA3 levels are examined below.

#### **Statistical areas, Level 4 (SA4)**

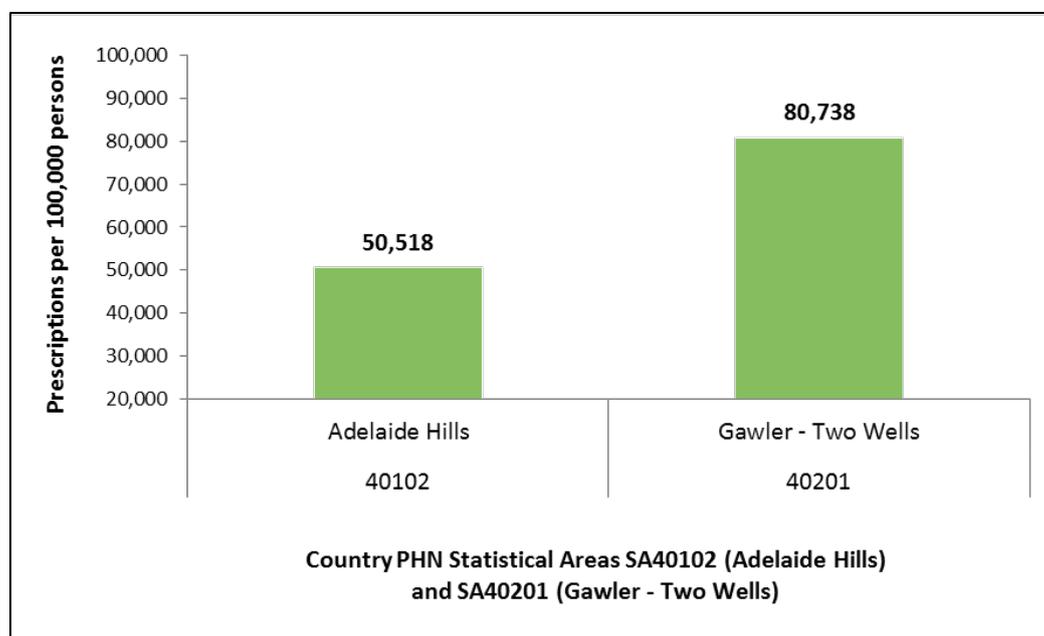
- Rates of PBS prescriptions dispensed for opioid medicine in the Country PHN varied widely from 53,757 (SA40102 Adelaide Hills) to 94,892 (SA405 Barossa) per 100,000 persons (Figure 40).
- SA405 (Barossa) had the highest rate in South Australia at the SA4 level for PBS prescriptions dispensed for opioid medicine (Figure 40).



**Figure 40. Number of PBS prescriptions dispensed for opioid medicine per 100,000 persons Non age standardised, Country PHN.** *Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).*

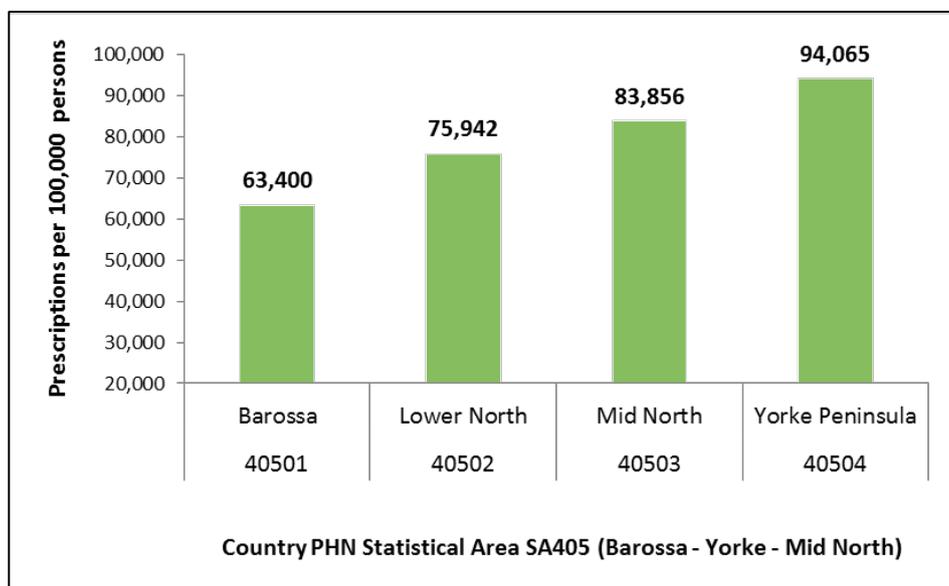
### Statistical areas, Level 3 (SA3)

- Within Country PHN, age standardised rates of PBS prescriptions dispensed for opioid medicine were 50,518 and 80,738 per 100,000 persons in SA40102 (Adelaide Hills) and SA40201 (Gawler – Two Wells) respectively (Figure 41).



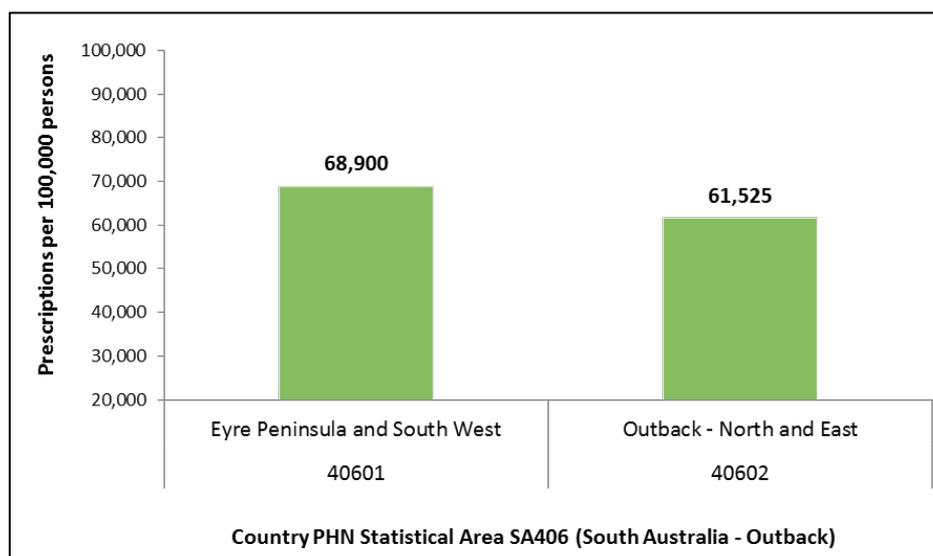
**Figure 41. Number of PBS prescriptions dispensed for opioid medicine age standardised rate per 100,000 persons Adelaide PHN, SA40102 (Adelaide Hills) and SA40201 (Gawler - Two Wells). Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).**

- Within Country PHN SA405 (Barossa), age standardised rates of PBS prescriptions dispensed for opioid medicine ranged from 63,400 (SA40501 Barossa) to 94,065 (SA40504 Yorke Peninsula) per 100,000 persons (Figure 42).
- The Yorke Peninsula (SA40504) and mid-north (SA40503) had the highest and second highest PBS opioid prescribing rate in Country PHN, and the second and third highest rate in South Australia overall (Figure 42).



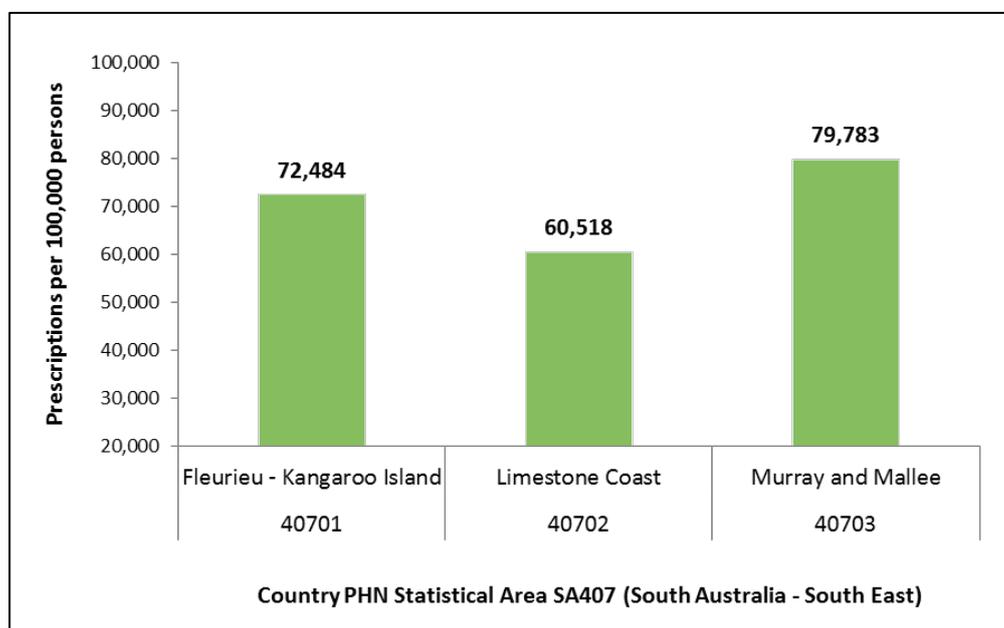
**Figure 42. Number of PBS prescriptions dispensed for opioid medicine age Standardised rate per 100,000 persons Adelaide PHN SA405 (Barossa- Yorke - Mid North).**  
*Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).*

- Within Country PHN SA406 (South Australia – Outback), age standardised rates of PBS prescriptions dispensed for opioid medicine were 68,900 (SA40601 Eyre Peninsula & Southwest) and 61,525 (SA40602 Outback – North & East) per 100,000 (Figure 43).



**Figure 43. Number of PBS prescriptions dispensed for opioid medicine age standardised rate per 100,000 persons Adelaide PHN SA406 (South Australia - Outback).**  
*Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).*

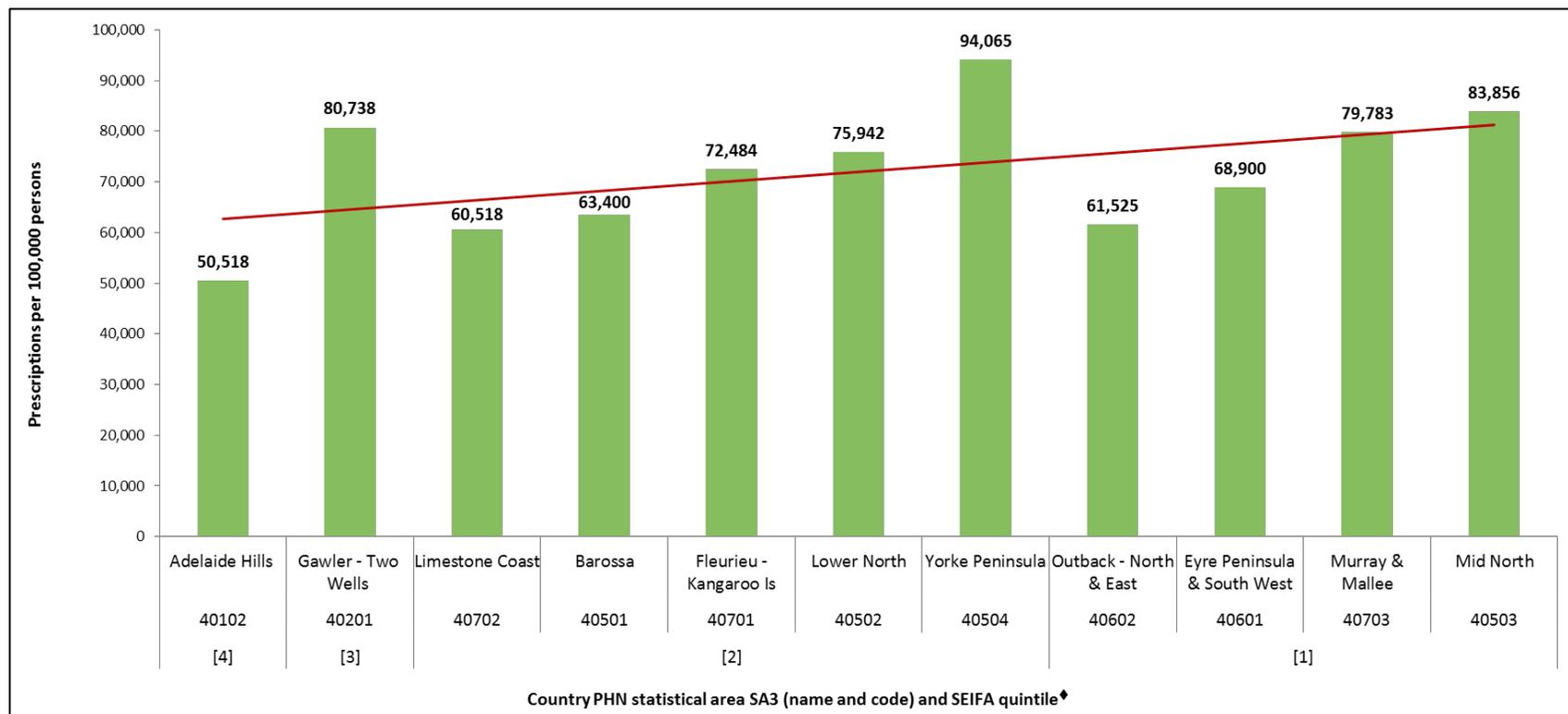
- Within Country PHN SA407 (South Australia – South East), age standardised rates of PBS prescriptions dispensed for opioid medicine ranged from 60,518 (SA40702 Limestone Coast) to 79,783 (SA40703 Murray and Mallee) (Figure 44).



**Figure 44. Number of PBS prescriptions dispensed for opioid medicine age standardised rate per 100,000 persons Adelaide PHN SA407 (South Australia - South East).**  
*Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).*

### **Socio-economic Status**

- Within all Country PHN SA4s, a social gradient was apparent in the age standardised rate of dispensed prescribed opiates, as illustrated by the solid diagonal line in Figure 45.
- Areas with a lower socio-economic status had higher rates of dispensed prescribed opioids. Figure 45 shows the rate of PBS prescriptions for opioid medication (lowest to highest) according to socio-economic status, as measured by SEIFA (highest to lowest) across the entire Adelaide PHN.



**Figure 45. Country PHN SA4s age standardised rate of PBS dispensed prescriptions for opioid medication per 100,000 persons by SA3 and SEIFA<sup>†</sup>.**  
*Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (NCETA secondary analysis, 2016).*

## 8. ANXIOLYTICS

This section examines patterns of anxiolytics dispensed throughout South Australia in 2013/14 for persons aged 18-64 years, and 65 years and over. The first part of Section 8 compares anxiolytic dispensing in Adelaide vs Country PHNs. Patterns of dispensing in Adelaide and Country PHNs are then considered separately in more detail.

Note that these data do not indicate the *levels* or *types* of anxiolytics being dispensed in a given area.

The anxiolytics included in these data are:

- alprazolam
- bromazepam
- buspirone
- diazepam
- oxazepam.

In considering the implications of these data for overall trends in benzodiazepine dispensing throughout South Australia, note that buspirone belongs to the azapirone (rather than the benzodiazepine) class of medicines. In addition, not all benzodiazepines are included in the data provided here. In particular, nitrazepam (Mogadon®, Alodorm®) and temazepam (Euhypnos®, Normison®) are not included as these medicines are marketed as hypnotics not anxiolytics.

There was wide variation in the level of anxiolytics dispensed across South Australia. Potential reasons for this variation in dispensing rates according to age group and location include differences in:

- The density of aged-care facilities and disadvantaged communities
- Older people's referrals for psychological therapies
- Access to psychological treatment pathways- a barrier that is compounded among older people
- Individual clinicians' prescribing practices
- Community awareness regarding prevention, self-management and non-medication treatments for anxiety
- Private prescriptions, which are not included in this data (Australian Commission on Safety and Quality in Health Care, 2015).

## 8.1. Patterns of anxiolytic use in South Australia: A comparison of Adelaide and Country PHNs

The rate of PBS prescriptions dispensed for anxiolytic medicine in 2013/14 for 18-64 year olds was **22,094** per 100,000 persons in Adelaide PHN, and **19,937** per 100,000 in Country PHN. During the same time period, the rate of PBS prescriptions dispensed for anxiolytic medicines among persons aged 65 years and over was **52,578** and **35,552** per 100,000 persons in Adelaide and Country PHNs, respectively.

The non-age standardised rate of PBS prescriptions dispensed for anxiolytics medicine in 2013/14 for 18-64 year olds in South Australia was 21,500 per 100,000 persons. During the same period, the age standardised rates were 21,527 and 17,201 per 100,000 persons in South Australia and Australia, respectively (Australian Commission on Safety and Quality in Health Care, 2015).

In 2013/14, the non-age standardised rate of PBS prescriptions dispensed for anxiolytics medicine for 65+ year olds in South Australia was 47,177 per 100,000 persons. During the same period, the age standardised rates were 46,426 and 37,695 per 100,000 persons in South Australia and Australia respectively (Australian Commission on Safety and Quality in Health Care, 2015).

Generally, there was a higher rate of prescribing in the Adelaide PHN compared to the Country PHN for both older and younger age groups. In Adelaide PHN the relative difference in the rate of prescribing between persons aged 65+ years to persons aged 18-64 years was 2.38, and in Country PHN this was 1.78. The rate of PBS prescriptions dispensed for anxiolytic medicine to persons aged 65+ years in Adelaide PHN was 138% higher than among 18-64 year olds. In contrast, the relative rate in Country PHN was 1.78; in other words, 78% more prescriptions were issued to persons aged 65+ years olds compared to their younger counterparts (Table 11).

**Table 11. PBS prescription for anxiolytic medication rates per 100,000 persons and relative ratio (65+ years: 18-64 years).** *Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013. (NCETA secondary analysis, 2016).*

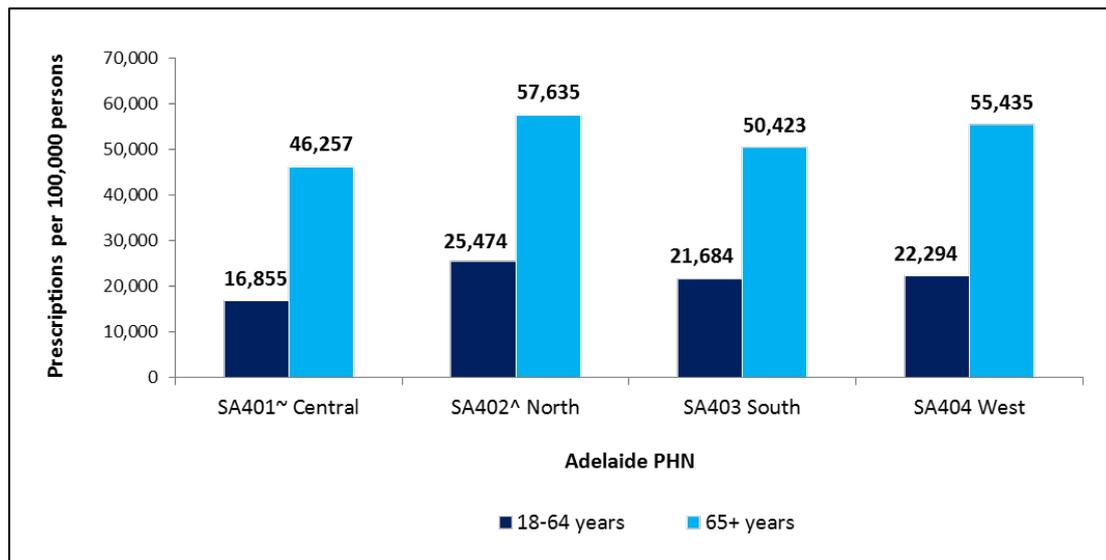
Age Group	PHN Rate per 100,000 persons	
	Adelaide PHN	Country PHN
18-64 years	22,094	19,937
65+ years	52,578	35,552
Relative Ratio	2.38	1.78

## 8.2. Anxiolytic use in Adelaide PHN at SA4 and SA3 levels

Patterns of prescribed anxiolytic use in Adelaide PHN at the SA4 and SA3 levels are examined below.

### **Statistical areas, Level 4 (SA4)**

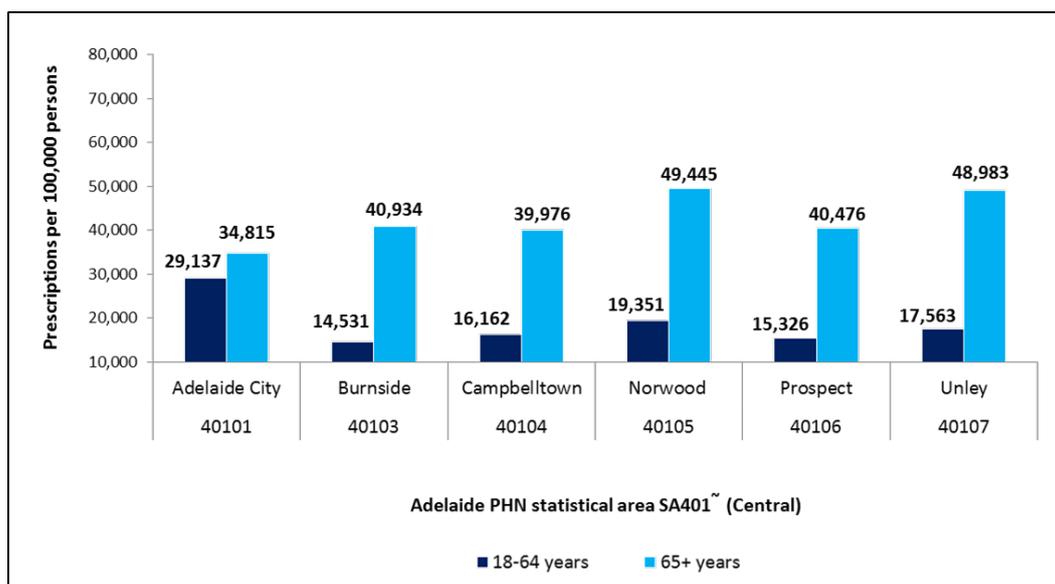
- The rate of PBS prescriptions dispensed for anxiolytic medicine among 18-64 year olds in Adelaide PHN SA4 regions ranged from 16,855 (SA401~ Central) to 25,474 (SA402^ North) per 100,000 persons (Figure 46).
- For persons aged 65 years and older, the rate of PBS prescriptions dispensed for anxiolytic medicine in Adelaide PHN SA4 ranged from 46,257 (SA401~ Central) to 57,635 (SA402^ North) per 100,000 persons (Figure 46).



**Figure 46. Number of PBS prescriptions dispensed for anxiolytics medicine per 100,000 persons by Adelaide PHN SA4 divisions 18-64 and 65+ years of age. Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (NCETA secondary analysis, 2016).**

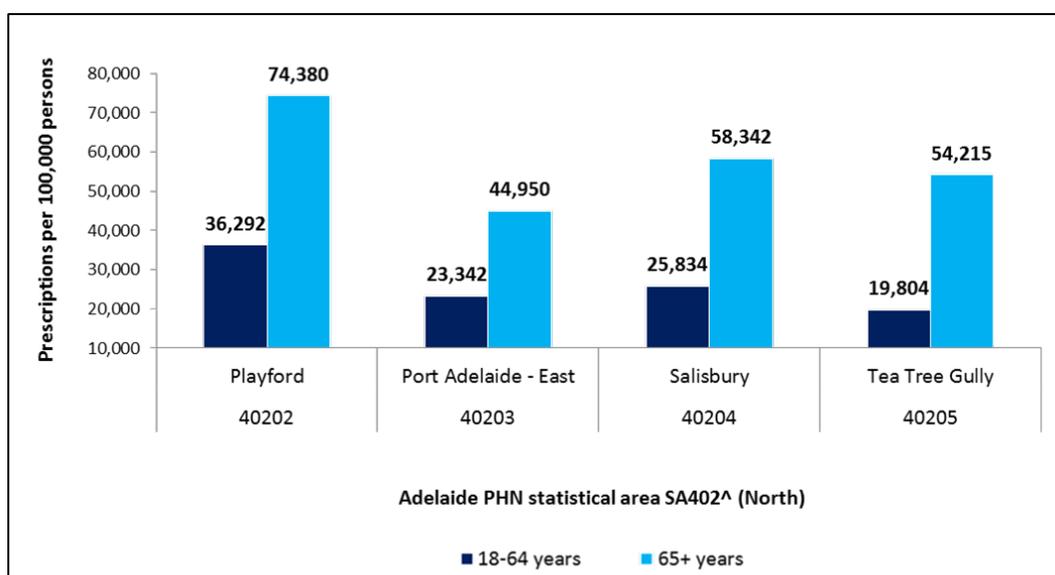
### Statistical areas, Level 3 (SA3)

- Within Adelaide PHN SA401~ (Central), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine among 18-64 year olds ranged from 14,531 (SA40103 Burnside) to 29,137 (SA40101 Adelaide City) per 100,000 persons (Figure 47).
- Among persons aged 65 years and over in Adelaide PHN SA401~ (Central), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine ranged from 34,815 (SA40101 Adelaide City) to 49,445 (SA40105 Norwood) per 100,000 persons (Figure 47).



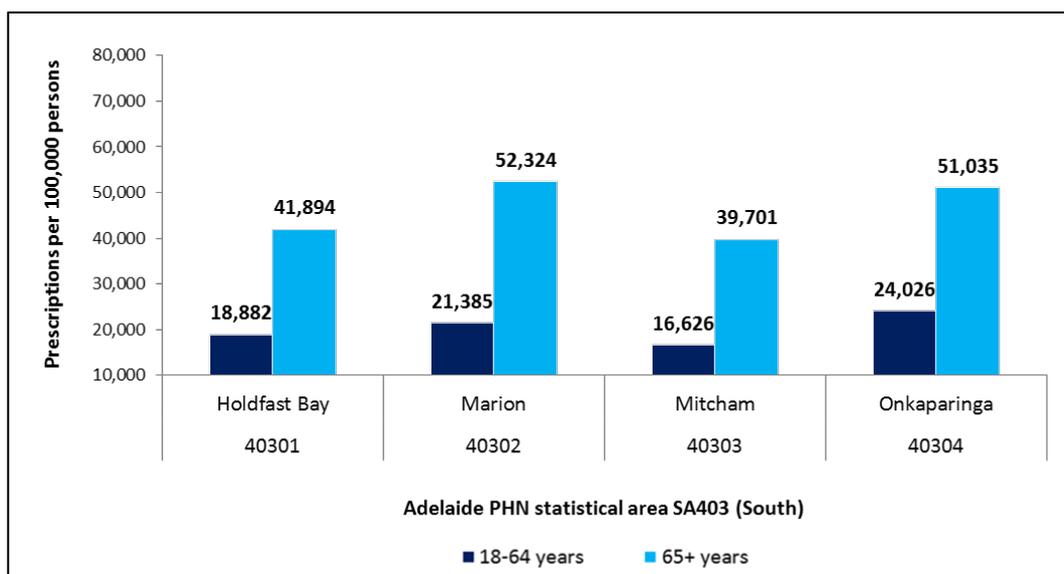
**Figure 47. Number of PBS prescriptions dispensed for anxiolytic medicine age standardised rate per 100,000 persons Adelaide PHN SA401~ (Central) 18-64 and 65+ years of age.**  
*Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).*

- Within Adelaide PHN SA402^ (North), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine among 18-64 year olds ranged from 19,804 (SA40205 Tea Tree Gully) to 36,292 (SA40202 Playford) per 100,000 persons (Figure 48).
- Among persons aged 65 years and over in Adelaide PHN SA402^ (North), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine ranged from 54,215 (SA40205 Tea Tree Gully) to 74,380 (SA40202 Playford) per 100,000 persons (Figure 48).
- The rates of anxiolytic dispensing for people aged 18-64 years were relatively high in Adelaide City (SA40101). The dispensing rates were also relatively high for people aged 65+ years in Norwood (SA40105) and Unley (SA40107) (Figure 47).



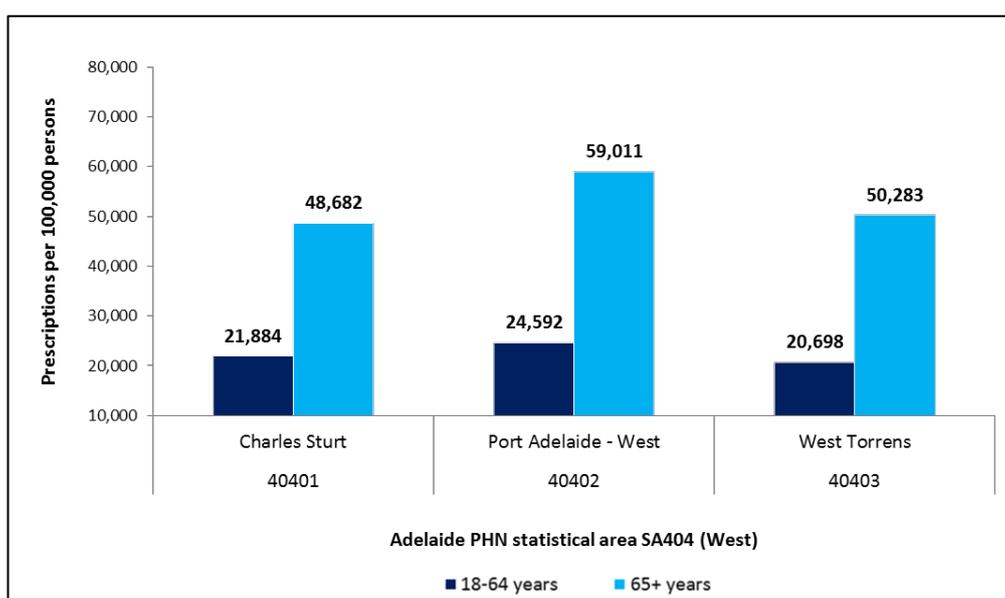
**Figure 48. Number of PBS prescriptions dispensed for anxiolytic medicine age standardised rate per 100,000 persons Adelaide PHN SA402^ (North) 18-64 and 65+ years of age.**  
*Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).*

- Within Adelaide PHN SA403 (South), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine among 18-64 year olds ranged from 16,626 (SA40303 Mitcham) to 24,026 (SA40304 Onkaparinga) per 100,000 persons (Figure 49).
- Among persons aged 65 years and over in Adelaide PHN SA403 (South), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine ranged from 39,701 (SA40303 Mitcham) to 52,324 (SA40302 Marion) per 100,000 persons (Figure 49).



**Figure 49. Number of PBS prescriptions dispensed for anxiolytic medicine age standardised rate per 100,000 persons Adelaide PHN SA403 (South) 18-64 and 65+ years of age.**  
*Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).*

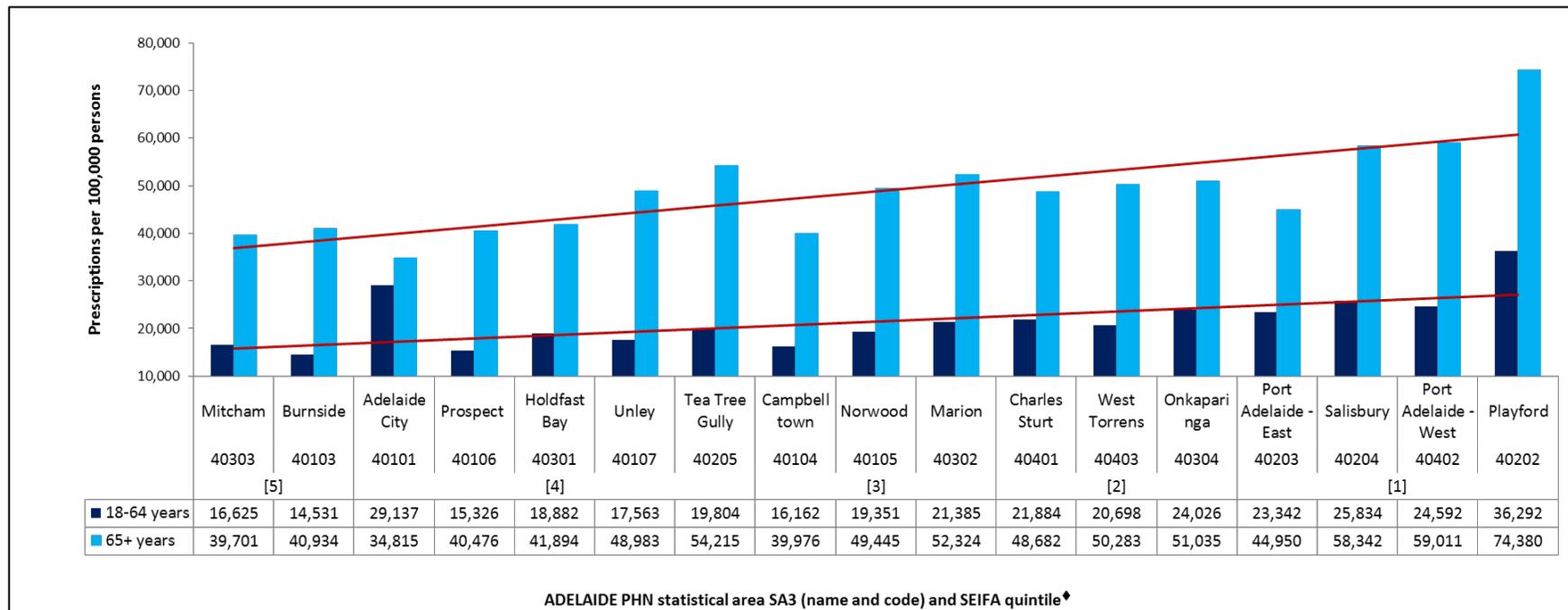
- Within Adelaide PHN SA404 (West), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine among 18-64 year olds ranged from 20,698 (SA40403 West Torrens) to 24,592 (SA40402 Port Adelaide – West ) per 100,000 persons (Figure 50).
- Among persons aged 65 years and over in Adelaide PHN SA404 (West), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine ranged from 48,682 (SA40401 Charles Sturt) to 59,011 (SA40402 Port Adelaide – West) per 100,000 persons (Figure 50).



**Figure 50. Number of PBS prescriptions dispensed for anxiolytic medicine age standardised rate per 100,000 persons Adelaide PHN SA404 (West) 18-64 and 65+ years of age. Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).**

### **Socio-economic Status**

- Within all Adelaide PHN SA4s, a clear social gradient was apparent in the age standardised population rate of dispensed prescribed anxiolytics. As socio-economic status within an SA4 declined, the rate of dispensed prescribed opiates increased (Figure 51).
- The difference in rate of age standardised population prescribed anxiolytic dispensing between persons aged 18-64 and 65 years widened as SEIFA quintile declined, as illustrated by the solid horizontal lines in Figure 51.



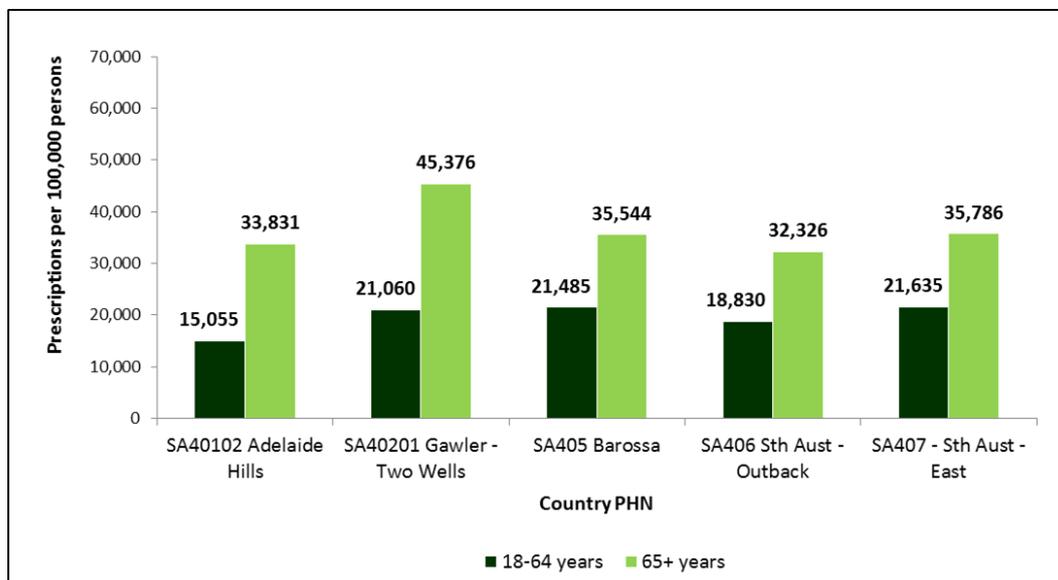
**Figure 51. Rate of PBS prescriptions for anxiolytics per 100,000 persons aged 18-64 years and 65+ years of age by Adelaide PHN SA3s and SEIFA ♦.**  
*Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (NCETA secondary analysis, 2016).*

### 8.3. Anxiolytic use in Country PHN at SA4 and SA3 levels

Patterns of prescribed anxiolytic use in Country PHN at the SA4 and SA3 levels are examined below.

#### **Statistical areas, Level 4 (SA4)**

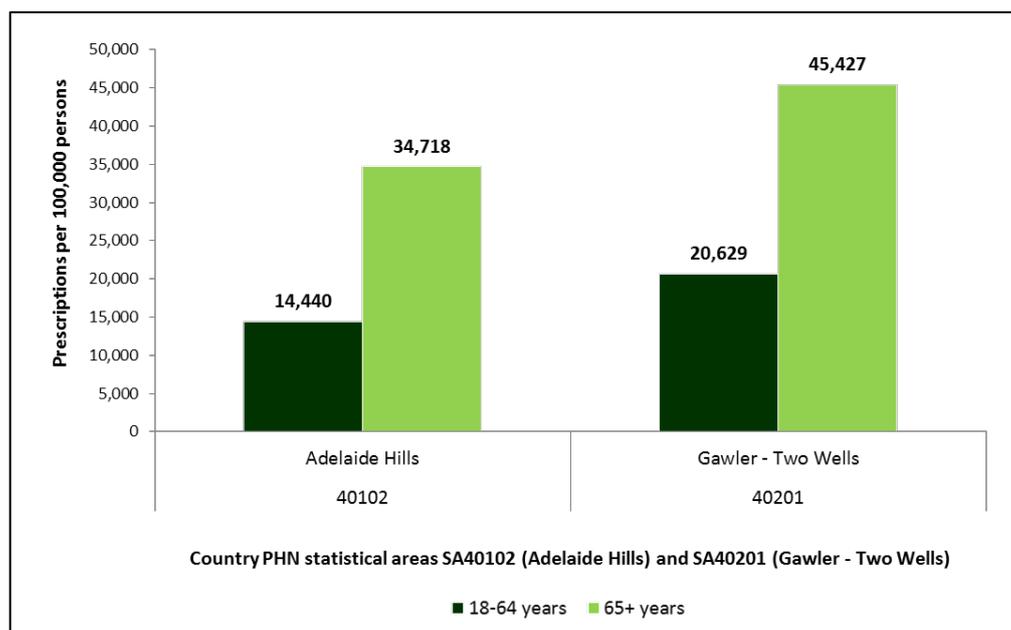
- The rate of PBS prescriptions dispensed for anxiolytic medicine among 18-64 year olds in Country PHN SA4 ranged from 15,055 (SA40102 Adelaide Hills) to 21,635 (SA407 South Australia - East) per 100,000 persons (Figure 52).
- For persons aged 65 years and older, the rate of PBS prescriptions dispensed for anxiolytic medicine in Country PHN SA4 ranged from 32,326 (SA406 South Australia - Outback) to 45,376 (SA40201 Gawler – Two Wells) per 100,000 persons (Figure 52).



**Figure 52. Number of PBS prescriptions dispensed for anxiolytics medicine per 100,000 persons by Country PHN SA4 divisions 18-64 and 65+ years of age.** *Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (NCETA secondary analysis, 2016).*

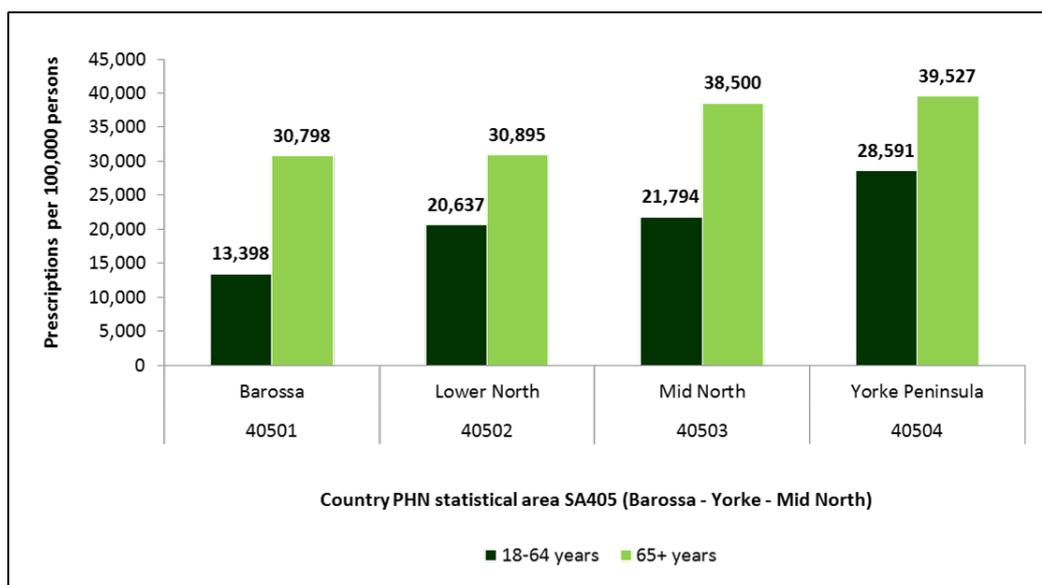
### Statistical areas, Level 3 (SA3)

- Within Country PHN, age standardised rates of PBS prescriptions dispensed for anxiolytic medicine among 18-64 year olds were 14,440 (SA40102 Adelaide Hills) and 20,629 (SA40201 Gawler – Two Wells) per 100,000 persons (Figure 53).
- The age standardised rates of PBS prescriptions dispensed for anxiolytic medicine among persons 65 years and over were 34,718 (SA40102 Adelaide Hills) and 45,427 (SA40201 Gawler – Two Wells) (Figure 53).



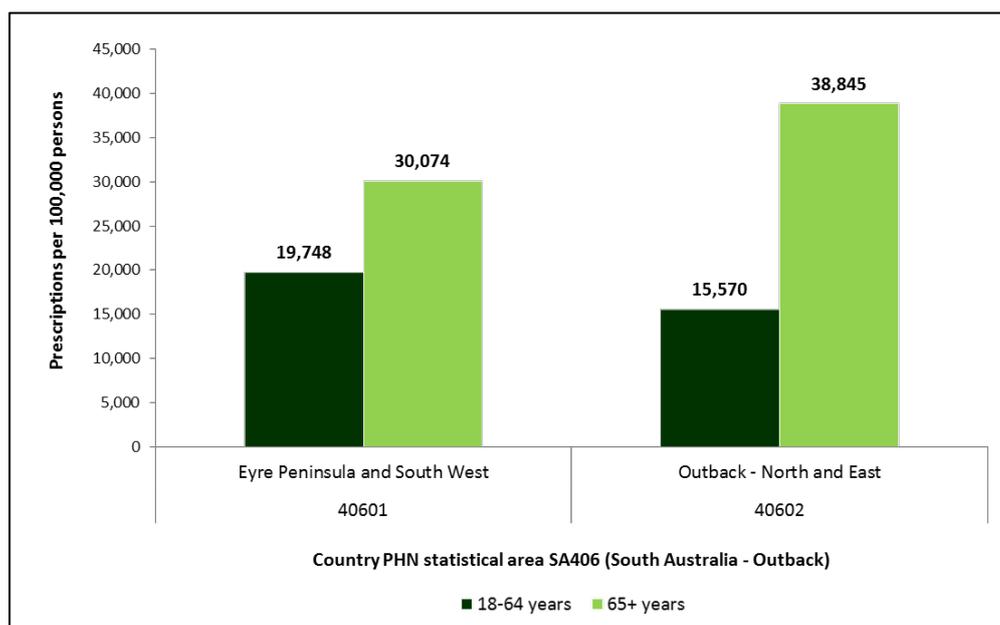
**Figure 53. Number of PBS prescriptions dispensed for anxiolytic medicine age standardised rate per 100,000 persons Country PHN SA40102 (Adelaide Hills) and SA40201 (Gawler – Two Wells) 18-64 and 65+ years of age. Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013. (National Health Performance Authority analysis, 2016).**

- Within Country PHN SA405 (Barossa), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine among 18-64 year olds ranged from 13,398 (SA40501 Barossa) to 28,591 (SA40504 Yorke Peninsula) per 100,000 persons (Figure 54).
- Among persons aged 65 years and over in Country PHN SA405 (Barossa), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine ranged from 30,798 (SA40501 Barossa) to 39,527 (SA40504 Yorke Peninsula) per 100,000 persons (Figure 54).



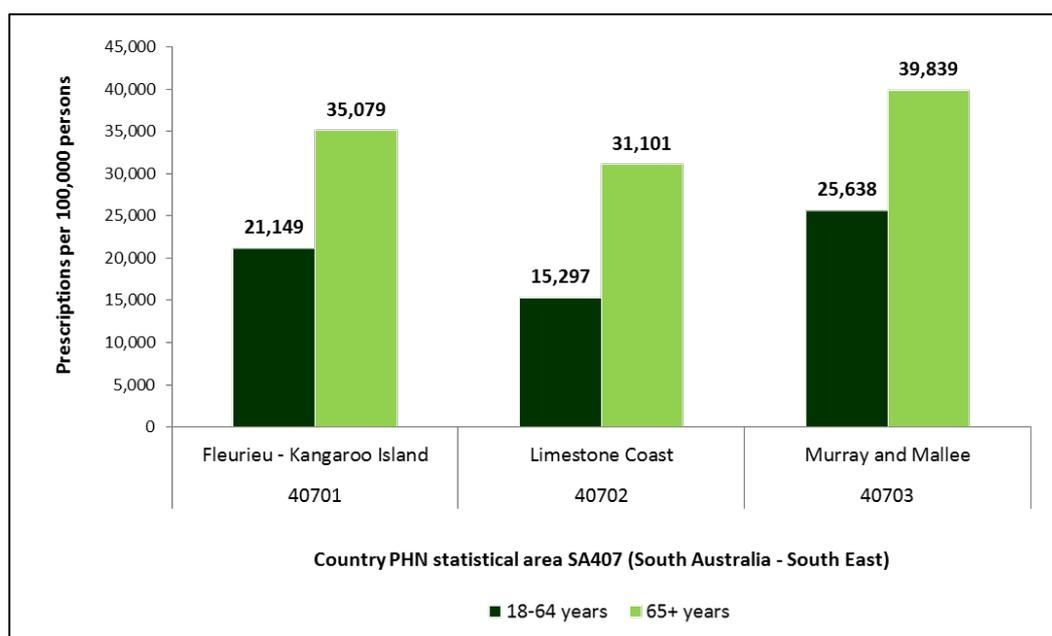
**Figure 54. Number of PBS prescriptions dispensed for anxiolytic medicine age standardised rate per 100,000 persons Country PHN SA405 (Barossa – Yorke – Mid North) 18-64 and 65+ years of age. Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).**

- Within Country PHN SA406 (South Australia - Outback), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine among 18-64 year olds was 15,570 (SA40602 Outback – North and East) and 19,748 (SA40601 Eyre Peninsula and South West) per 100,000 persons (Figure 55).
- Among persons aged 65 years and over in Country PHN SA406 (South Australia - Outback), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine was 30,074 (SA40601 Eyre Peninsula and South West) and 38,845 (SA40602 Outback – North and East) per 100,000 persons (Figure 55).



**Figure 55. Number of PBS prescriptions dispensed for anxiolytic medicine age standardised rate per 100,000 persons Country PHN SA406 (South Australia Outback) 18-64 and 65+ years of age. Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).**

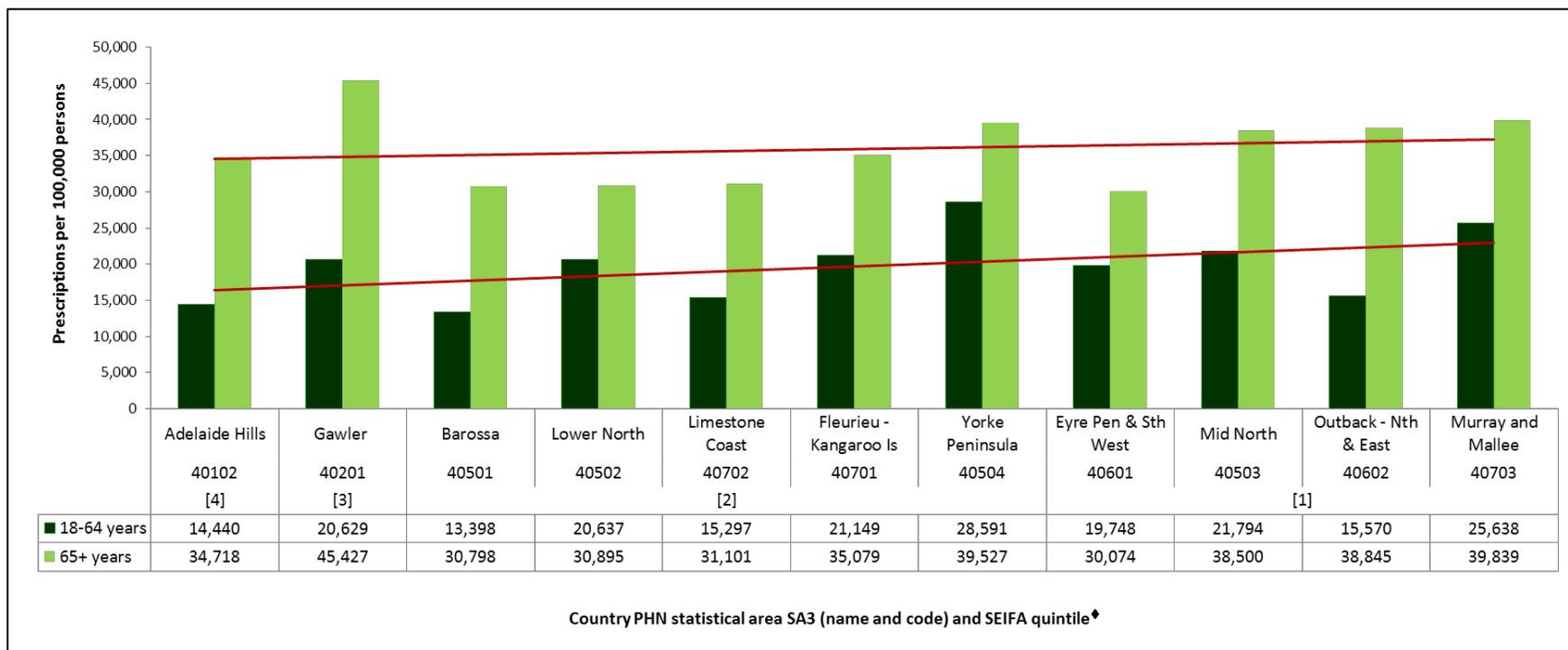
- Within Country PHN SA407 (South Australia – South East), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine among 18-64 year olds ranged from 15,297 (SA40702 Limestone Coast) to 25,638 (SA40703 Murray and Mallee) per 100,000 persons (Figure 56).
- Among persons aged 65 years and over in Country PHN SA407 (South Australia – South East), the age standardised rate of PBS prescriptions dispensed for anxiolytic medicine ranged from 31,101 (SA40702 Limestone Coast) to 39,839 (SA40703 Murray and Mallee) per 100,000 persons (Figure 56).



**Figure 56. Number of PBS prescriptions dispensed for anxiolytic medicine age standardised rate per 100,000 persons Country PHN SA407 (South Australia – South East) 18-64 and 65+ years of age. Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (National Health Performance Authority analysis, 2016).**

### **Socio-economic Status**

- Within all Country PHN SA4s, a clear social gradient was apparent in the age standardised population rate of dispensed prescribed anxiolytics. As socio-economic status within an SA4 declined, the rate of dispensed prescribed opiates increased (Figure 57).
- The difference in rate of age standardised population prescribed anxiolytics dispensing between persons aged 18-64 and 65+ years narrowed as SEIFA quintile declined, as illustrated by the solid horizontal lines in Figure 57.



**Figure 57. Rate of PBS prescriptions for anxiolytics per 100,000 persons aged 18-64 years and 65+ years of age by Country PHN SA3s and SEIFA ♦.**  
*Pharmaceutical Benefits Scheme (PBS) statistics 2013–14 and ABS Estimated Resident Population 30 June 2013 (NCETA secondary analysis, 2016).*

## 9. DISCUSSION

### 9.1 Introduction

This report contains the results of Australia's first state-wide analysis of indicators of problematic patterns of alcohol and other drug use by small geographical areas and using multiple databases. Using the National Drug Strategy Household Survey, the Australian Secondary School Alcohol and Drug Survey, and Pharmaceutical Benefits Scheme dispensing data, NCETA has mapped patterns of alcohol, illicit drug and prescribed anxiolytic and opioid use across South Australia. Data is provided at PHN, SA4 and where possible SA3 levels. This data will help inform the funding of a range of alcohol- and other drug-related interventions and services across the state.

### 9.2 Overview of Findings

This analysis has highlighted a range of differences in indicators of alcohol- and other drug-related harm between and within PHNs. Prominent findings include:

- Prevalence of risky alcohol consumption, particularly among males aged 25-64 years in Country PHN
- Among school students (aged 12-17 years) alcohol consumption and illicit drug use was highest among males in Adelaide PHN
- The high prevalence of risky alcohol consumption in the Adelaide Hills, Port Adelaide, Holdfast Bay, Tea Tree Gully, Adelaide City, Barossa and SA Outback and South East regions
- A high prevalence of risky alcohol consumption, use of illicit drugs and recent cannabis use among school students aged 12-17 years in SA403 (South)
- High prevalence of recent cannabis use in Gawler, Barossa and the Adelaide Hills
- The low prevalence of meth/amphetamine and opioids/painkillers use within both PHNs.

The most noteworthy findings of this study concerned variations in the level of prescribed opioids and anxiolytics.

The level of prescribed opioids dispensed in SA3 areas across the state ranged from 34,245 per 100,000 persons in Burnside to 109,191 in Playford. In other words, the residents of Playford were more than three times more likely to be dispensed opioids compared with their counterparts in Burnside. Playford has the second highest rate of opioid dispensing of any SA3 in Australia, and has a dispensing rate which is:

- 10 times greater than the region in Australia with the lowest level of dispensing (Daly-Tiwi-West Arnhem)
- Approximately double the average prescribing rate for South Australia and Australia (63,688 and 55,126 per 100,000 persons respectively).

Across the state, the dispensing of anxiolytics was far more prominent among those aged 65+ compared with their younger counterparts. There was also wide variation in the levels of anxiolytic dispensing across SA3 regions.

As with prescribed opioids, Playford had very high rates of anxiolytic dispensing. Among 18-64 year olds, the number of anxiolytic scripts dispensed in Playford was:

- 33 times higher than the region in Australia with the lowest level of dispensing (Daly-Tiwi-West Arnhem)
- Approximately 1.6 times the rate for the rest of South Australia and more than twice the national rate.

Among those aged 65+, dispensing rates for anxiolytics in Playford were:

- Almost 5 times greater than the region in Australia with the lowest level of dispensing (Barkley NT)
- Approximately 1.6 times the rate for the rest of South Australia and almost twice the national rate.

There are likely to be a number of factors that influence differences in prescribing rates for opioids and anxiolytics. These include:

- Prescribing practices, training, knowledge and attitudes of prescribers
- The understanding of individuals about the appropriate use of medicines to treat pain and anxiety, and the importance and efficacy of alternative non-pharmacological treatments
- The type of medicines dispensed and the number of authority prescriptions supplied in each region
- Accessibility of medical specialists
- Availability and accessibility of appropriate non-pharmacological treatment options, particularly in rural and remote locations
- The density of aged-care facilities and disadvantaged communities (Australian Commission on Safety and Quality in Health Care, 2015).

Many of these factors will be amenable to initiatives able to be implemented by the SA PHNs.

### **9.3 Implications for Service Provision**

These findings have a range of implications for future specialist and non-specialist alcohol and other drug service provision. These differ between patterns and types of indicators of alcohol- and other drug-related drug harm.

For example, regions with high levels of risky alcohol use or illicit drug use are likely to benefit from an enhanced emphasis on screening and brief intervention in primary care settings. People with more severe alcohol- and other drug-related problems from these regions may also need greater access to more specialist alcohol and other drug services.

Regions with higher levels of prescribed opioid use may need closer engagement with prescribers to ensure that the use of these medicines is in accordance with evidence-based practice. There may also be a need for greater access to enhanced pain management at the primary health care level, access to non-pharmacological pain treatment, and enhanced access to specialist pain services.

Regions with higher levels of anxiolytic dispensing may also need closer engagement with prescribers to ensure that the use of anxiolytics is in accordance with evidence-based practice. These regions may also require enhanced access to cognitive-behavioural-based interventions for anxiety, and support to withdraw from these medicines in inpatient and outpatient settings.

The unique data outlined in this report will provide the South Australian PHNs with the opportunity to adopt a nuanced and localised approach to patterns of alcohol- and other drug-related harm in the state.

## **9.4 Limitations**

There are some limitations associated with the data sources used. For example, in relation to the use of certain illicit drugs with low prevalence levels the sample size of users may be too small to draw meaningful conclusions. Other limitations associated with the data sources used are outlined below.

### ***9.4.1 National Drug Strategy Household Survey***

The 2013 NDSHS used a 'drop and collect' household questionnaire method. Of the 48,579 households that were in scope to participate in the survey, and where contact was made with the householder, just 23,855 questionnaires were complete and useable. This represents a response rate of 49.1%. When the entire eligible sample is considered, including those dwellings where there was no contact with the householder (72,986 dwellings), the response rate was 32.7%. These response rates may have led to non-response bias.

Non-sampling errors may also have occurred. These could include failure of respondents' memories, incorrect completion of the survey form, or respondents' unwillingness to reveal accurate responses (particularly in relation to illicit drug use). All of these factors could impact the accuracy of the survey results.

### ***9.4.2 Australian Secondary School Students Alcohol and Drug Survey***

School student surveys are representative of only those young persons engaged within the school system. Responses of young people may also be influenced by factors including the presence of teachers or fellow students in the classroom during survey completion. Self-reporting may also result in underestimations as a result of factors such as stigma associated with illicit drug use.

### ***9.4.3 Pharmaceutical Benefits Scheme (PBS) Data***

PBS data may not include drugs for which no PBS subsidy applied. In addition, in relation to pharmaceutical opioids, it will not include codeine sold in over-the-counter preparations. The anxiolytics data used in this report do not include all benzodiazepines and include one medicine which is not a benzodiazepine (buspirone).

## REFERENCES

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National Health and Medical Research Council. 2009. *Australian guidelines to reduce health risks from drinking alcohol*. Canberra: National Health and Medical Research Council.

## APPENDICES

**Appendix 1: National Drug Strategy Household Survey (NDSHS) 2013. NCETA 2016 data request to the Australian Institute of Health and Welfare**

**Subject Area:** Alcohol and other drugs

**Years:** 2013

**Describe your request:** We require the most recent alcohol and illicit drug prevalence data for South Australians by Statistical Area Levels 4 and 3.

**Specific information/data needs:**

Customised 2013 National Drug Strategy Household Survey data (weighted and unweighted) from South Australian respondents (aged 14 years and older) for *Statistical Area Level 4 and 3*

**Request 1:** Create a new location variable based on SA4 and SA3 levels called PHN\_Location with two categories: 1=City & 2= Country

1: *City = SA4 Levels*

- 401 (except for 40102- Adelaide Hills)
- 402 (except for 40201-Gawler/Two Wells)
- 403
- 404

2: *Country = SA3 & SA4 levels*

- 40102
- 40201
- 405
- 406
- 407

**Request 2:** Create new variable based on age called PHN\_Age with four categories: 1= <18 years old; 2=18-24 years old; 3= 25-59 years old; 4=60+ years old

**Request 3:** Provide the following data by the newly created PHN\_location variable (Tables 1)

- Guideline 1-Lifetime risk (aveg1)
- Guideline 2 - single occasion risk at least weekly (g2week)
- Guideline 2 - single occasion risk at least monthly (g2month)
- Guideline 2 - single occasion risk at least yearly (g2year)
- Marijuana/cannabis use in the last 12 months (rcntmari)
- Non-medical meth/amphetamine use in the last 12 mths (rcntamph)
- Non-medical painkiller/analgesic use in the last 12 mths (rcntpain)
- Non-medical other opiate use in the last 12 mths (rcntopia)
- Non-medical tranquilliser use in the last 12 months (rcnttran)
- Guideline 1-Lifetime risk (aveg1) by gender
- Guideline 2 - single occasion risk at least weekly (g2week) by gender
- Guideline 2 - single occasion risk at least monthly (g2month) by gender
- Guideline 2 - single occasion risk at least yearly (g2year) by gender
- Marijuana/cannabis use in the last 12 months (rcntmari) by gender
- Guideline 1-Lifetime risk (aveg1) by PHN\_Age
- Guideline 2 - single occasion risk at least weekly (g2week) by PHN\_Age
- Guideline 2 - single occasion risk at least monthly (g2month) by PHN\_Age
- Guideline 2 - single occasion risk at least yearly (g2year) by PHN\_Age
- Marijuana/cannabis use in the last 12 months (rcntmari) by PHN\_Age

**Table 1: Alcohol risk level and drug prevalence (%) by South Australian PHN city and country location by age and gender**

	All	<18	18-24	25-60	60+
<b>Males</b>					
<b>PHN_location City</b>					
Abstainer					
Life time risk					
Single occasion risk weekly					
Single occasion risk monthly					
Single occasion risk yearly					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Painkiller/analgesic use last 12 mths					
Other opiate use last 12 mths					
Tranquilliser use last 12 months					
<b>PHN_location Country</b>					
Abstainer					
Life time risk					
Single occasion risk weekly					
Single occasion risk monthly					
Single occasion risk yearly					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Painkiller/analgesic use last 12 mths					
Other opiate use last 12 mths					
Tranquilliser use last 12 months					
<b>Females</b>					
<b>PHN_location City</b>					
Abstainer					
Life time risk					
Single occasion risk weekly					
Single occasion risk monthly					
Single occasion risk yearly					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Painkiller/analgesic use last 12 mths					
Other opiate use last 12 mths					
Tranquilliser use last 12 months					
<b>PHN_location Country</b>					
Abstainer					
Life time risk					
Single occasion risk weekly					
Single occasion risk monthly					
Single occasion risk yearly					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Painkiller/analgesic use last 12 mths					

Other opiate use last 12 mths					
Tranquilliser use last 12 months					
<b>Persons</b>					
<b>PHN_location City</b>					
Abstainer					
Life time risk					
Single occasion risk weekly					
Single occasion risk monthly					
Single occasion risk yearly					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Painkiller/analgesic use last 12 mths					
Other opiate use last 12 mths					
Tranquilliser use last 12 months					
<b>PHN_location Country</b>					
Abstainer					
Life time risk					
Single occasion risk weekly					
Single occasion risk monthly					
Single occasion risk yearly					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Painkiller/analgesic use last 12 mths					

**Request 4:** Provide the same alcohol and drug prevalence data as above for the following South Australian SA4 and SA3 levels (Tables 2 & 3)

SA4:

- 401 (except for 40102- Adelaide Hills)
- 402 (except for 40201-Gawler/Two Wells)
- 403
- 404
- 405
- 406
- 407

SA3:

- 40102
- 40201

**Table 2: Alcohol risk level and drug prevalence (%) by South Australian SA4 (adjusted) and SA3 (Adelaide Hills; Gawler/Two Wells) by age and gender**

	All	Gender		Age			
		Male	Female	<18	18-24	25-60	60+
<b>401 (except for 40102)</b>							
Abstainer							
Life time risk							
Single occasion risk weekly							
Single occasion risk monthly							
Single occasion risk yearly							
Cannabis use last 12 mths							
<b>402 (except for 40201)</b>							
Abstainer							
Life time risk							
Single occasion risk weekly							
Single occasion risk monthly							
Single occasion risk yearly							
Cannabis use last 12 mths							
<b>403</b>							
Abstainer							
Life time risk							
Single occasion risk weekly							
Single occasion risk monthly							
Single occasion risk yearly							
Cannabis use last 12 mths							
<b>404</b>							
Abstainer							
Life time risk							
Single occasion risk weekly							
Single occasion risk monthly							
Single occasion risk yearly							
Cannabis use last 12 mths							
<b>405</b>							
Abstainer							
Life time risk							
Single occasion risk weekly							
Single occasion risk monthly							
Single occasion risk yearly							
Cannabis use last 12 mths							
<b>406</b>							
Abstainer							
Life time risk							
Single occasion risk weekly							
Single occasion risk monthly							
Single occasion risk yearly							
Cannabis use last 12 mths							
<b>407</b>							
Abstainer							
Life time risk							

Single occasion risk weekly							
Single occasion risk monthly							
Single occasion risk yearly							
Cannabis use last 12 mths							
<b>40102</b>							
Abstainer							
Life time risk							
Single occasion risk weekly							
Single occasion risk monthly							
Single occasion risk yearly							
Cannabis use last 12 mths							
<b>40202</b>							
Abstainer							
Life time risk							
Single occasion risk weekly							
Single occasion risk monthly							
Single occasion risk yearly							
Cannabis use last 12 mths							

**Table 3: Non-medical drug use prevalence (%) by South Australian SA4 (adjusted) and SA 3 (Adelaide Hills; Gawler/Two wells)**

	Meth/amph use last 12 mths	painkiller/analgesic use in last 12 mths	other opiate use last 12 mths	tranquilliser use last 12 months
<b>401 (except for 40102)</b>				
<b>402 (except for 40201)</b>				
<b>403</b>				
<b>404</b>				
<b>405</b>				
<b>407</b>				
<b>40102</b>				
<b>40201</b>				

**Request 5:** Provide following alcohol and cannabis prevalence data by South Australian SAL3 population (Table 4)

- Guideline 1-Lifetime risk (aveg1)
- Guideline 2 - single occasion risk at least weekly (g2week)
- Guideline 2 - single occasion risk at least monthly (g2month)
- Guideline 2 - single occasion risk at least yearly (g2year)
- Marijuana/cannabis use in the last 12 months (rcntmari)

**Table 4: Alcohol risk level and cannabis use (last 12 months) prevalence (%) by South Australian Statistical Area Level 3**

SA 3 level	Alcohol					Cannabis
	Abstainer	Lifetime risk	Single occasion risk wkly	Single occasion risk mthly	Single occasion risk yearly	Cannabis use last 12 mths
40103						
40104						
40105						
40106						
40107						
40201						
40202						
40203						
40204						
40205						
40301						
40302						
40303						
40304						
40401						
40402						
40403						
40501						
40502						
40503						
40504						
40601						
40602						
40701						
40702						
40703						

**Appendix 2: Australian Secondary School Alcohol and Drug Survey (ASSAD) 2014. NCETA  
2016 data request to the Cancer Council of Victoria**

A request for most recent South Australian ASSADS alcohol and illicit drug prevalence data by Statistical Area Levels 4 (SA4) and 3 (SA3).

**Request 1:** Create a new location variable based on SA4 and SA3 levels called PHN\_location with two categories: 1=City & 2= Country

*1: City = SA4 Levels*

- 401 (except for 40102- Adelaide Hills)
- 402 (except for 40201-Gawler/Two Wells)
- 403
- 404

*2: Country = SA3 & SA4 levels*

- 40102
- 40201
- 405
- 406
- 407

**Request 2:** Create a new variable called PHN\_age with two categories: 1=12-15 years old & 2= 15+ years old.

**Request 3:** Provide the following data by the newly created PHN\_location variable (Tables 1)

- Current drinker (use in past 7 days)
- Single occasion risky drinking (5 or more std drinks) at least weekly (g2week)
- Any drug use (except tobacco) in last 12 months (rcntany)
- Ecstasy use in last 12 months (rcntecst)
- Marijuana/cannabis use in the last 12 months (rcntmari)
- Meth/amphetamine use in the last 12 mths (rcntamph)
- Painkiller/analgesic use in the last 12 mths (rcntpain)
- Tranquilliser use in the last 12 months (rcnttran)
- Current drinker (use in past 7 days) by gender
- Single occasion risky drinking (5 or more std drinks) at least weekly (g2week) by gender
- Any drug use (except tobacco) in last 12 months (rcntany) by gender
- Ecstasy use in last 12 months (rcntecst) by gender
- Marijuana/cannabis use in the last 12 months (rcntmari) by gender
- Meth/amphetamine use in the last 12 mths (rcntamph) by gender
- Painkiller/analgesic use in the last 12 mths (rcntpain) by gender
- Tranquilliser use in the last 12 months (rcnttran) by gender
- Current drinker (use in past 7 days) by PHN\_age
- Single occasion risky drinking (5 or more std drinks) at least weekly (g2week) by gPHN\_age
- Any drug use (except tobacco) in last 12 months (rcntany) by PHN\_age
- Ecstasy use in last 12 months (rcntecst) by PHN\_age
- Marijuana/cannabis use in the last 12 months (rcntmari) by PHN\_age
- Meth/amphetamine use in the last 12 mths (rcntamph) by PHN\_age
- Painkiller/analgesic use in the last 12 mths (rcntpain) by PHN\_age
- Tranquilliser use in the last 12 months (rcnttran) by PHN\_age

**Table 1: Alcohol risk level and drug prevalence (%) by South Australian PHN city and country location by age and gender**

	All	Gender		Age	
		Male	Female	12-15 yrs	15+yrs
<b>PHN_location City</b>					
Current drinker (use in past 7 days)					
Single occasion risky drinking (wkly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 months					
<b>PHN_location Country</b>					
Current drinker (use in past 7 days)					
Single occasion risky drinking (wkly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 months					

**Request 4:** Provide the same alcohol and drug prevalence data as above for the following South Australian SA4 and SA3 levels (Table 2)

SA4:

- 401 (except for 40102- Adelaide Hills)
- 402 (except for 40201-Gawler/Two Wells)
- 403
- 404
- 405
- 406
- 407

SA3:

- 40102
- 40201

**Table 2: Alcohol risk level and drug prevalence (%) by South Australian SA4 (adjusted) and SA3 (Adelaide Hills; Gawler/Two Wells) by age and gender**

	All	Gender		Age	
		Male	Female	12-15	15+
<b>401 (except for 40102)</b>					
Current drinker (use in past 7 days)					
Single occasion risky drinking (wkly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					

Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 months					
<b>402 (except for 40201)</b>					
Current drinker (use in past 7 days)					
Single occasion risky drinking (wkly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 mths					
<b>403</b>					
Current drinker (use in past 7 days)					
Single occasion risky drinking (wkly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 mths					
<b>404</b>					
Current drinker (use in past 7 days)					
Single occasion risky drinking (weekly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 mths					
<b>405</b>					
Current drinker (use in past 7 days)					
Single occasion risky drinking (wkly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 mths					
<b>406</b>					
Current drinker (use in past 7 days)					
Single occasion risky drinking (wkly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 mths					
<b>407</b>					
Current drinker (use in past 7 days)					

Single occasion risky drinking (wkly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 mths					
<b>40102</b>					
Current drinker (use in past 7 days)					
Single occasion risky drinking (wkly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 mths					
<b>40202</b>					
Current drinker (use in past 7 days)					
Single occasion risky drinking (wkly)					
Any drug use (excl tobacco) last 12 mths					
Cannabis use last 12 mths					
Meth/amph use last 12 mths					
Ecstasy use last 12 mths					
Painkiller/analgesic use last 12 mths					
Tranquilliser use last 12 mths					

**Request 5:** Provide following alcohol and drug prevalence data by South Australian SAL3 population by age (Table 3)

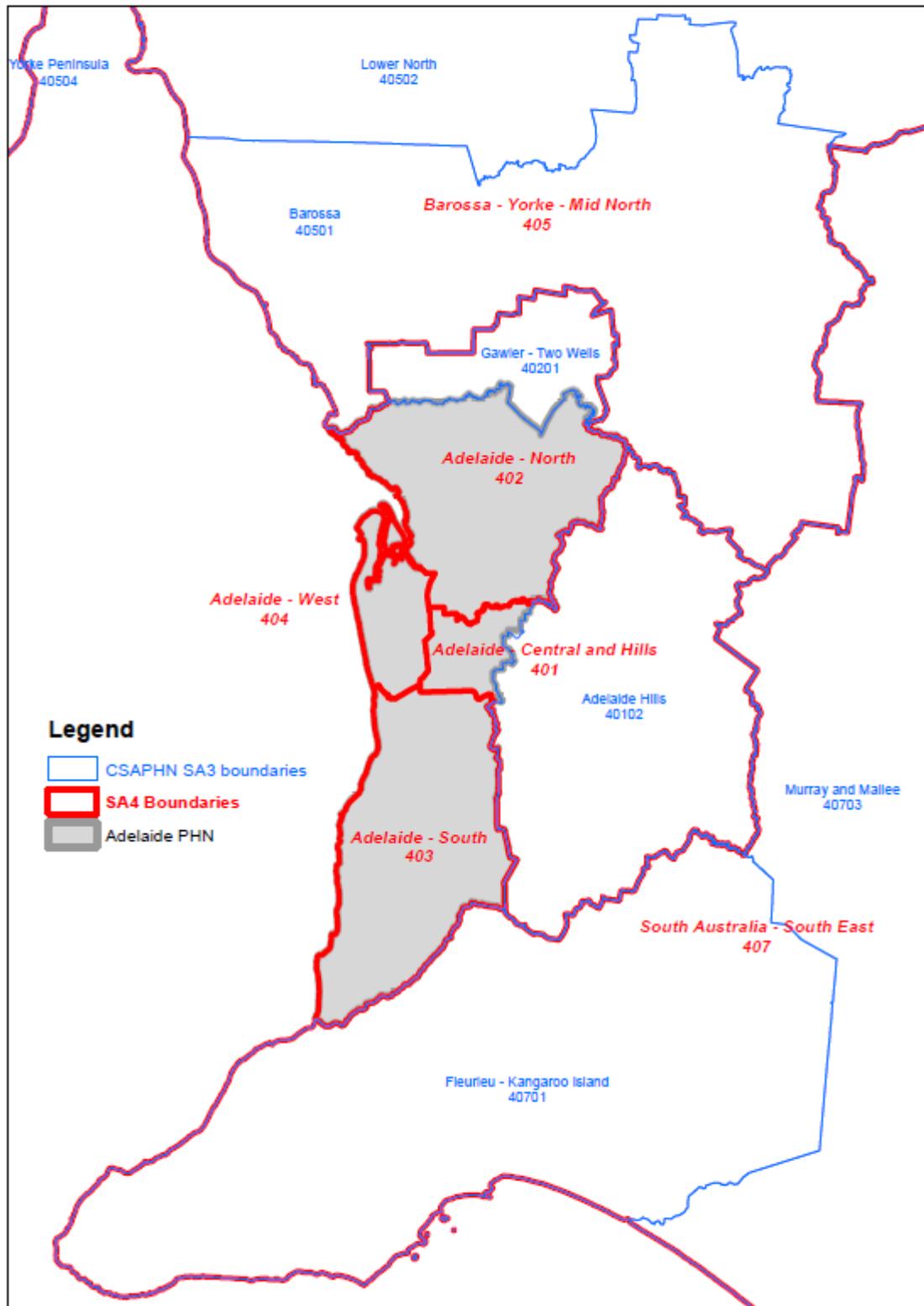
- Current drinker (use in past 7 days)
- Single occasion risky drinking at least weekly (g2week)
- Marijuana/cannabis use in the last 12 months (rcntmari)
- Any drug use (excluding tobacco) last 12 mths
- Cannabis use last 12 mths
- Meth/amph use last 12 mths
- Ecstasy use last 12 mths
- Painkiller/analgesic use last 12 mths
- Tranquilliser use last 12 months



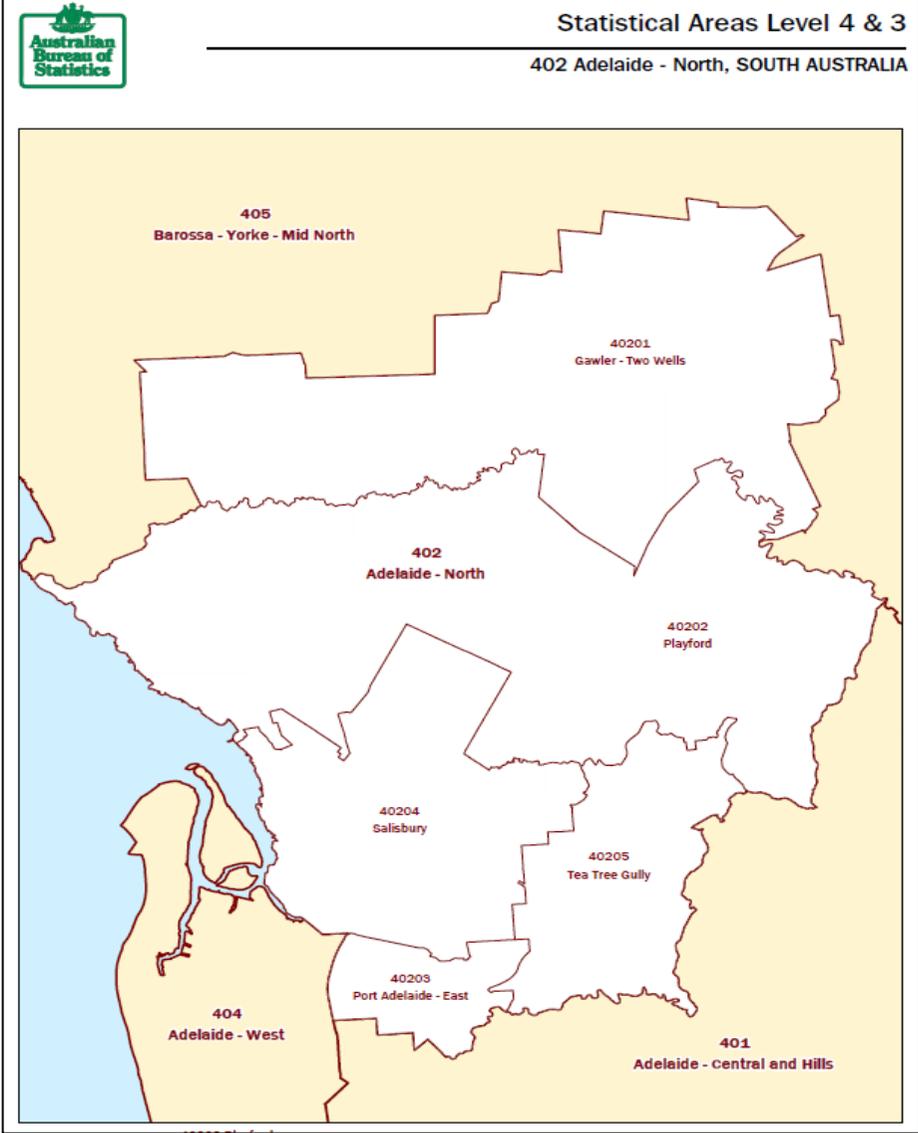
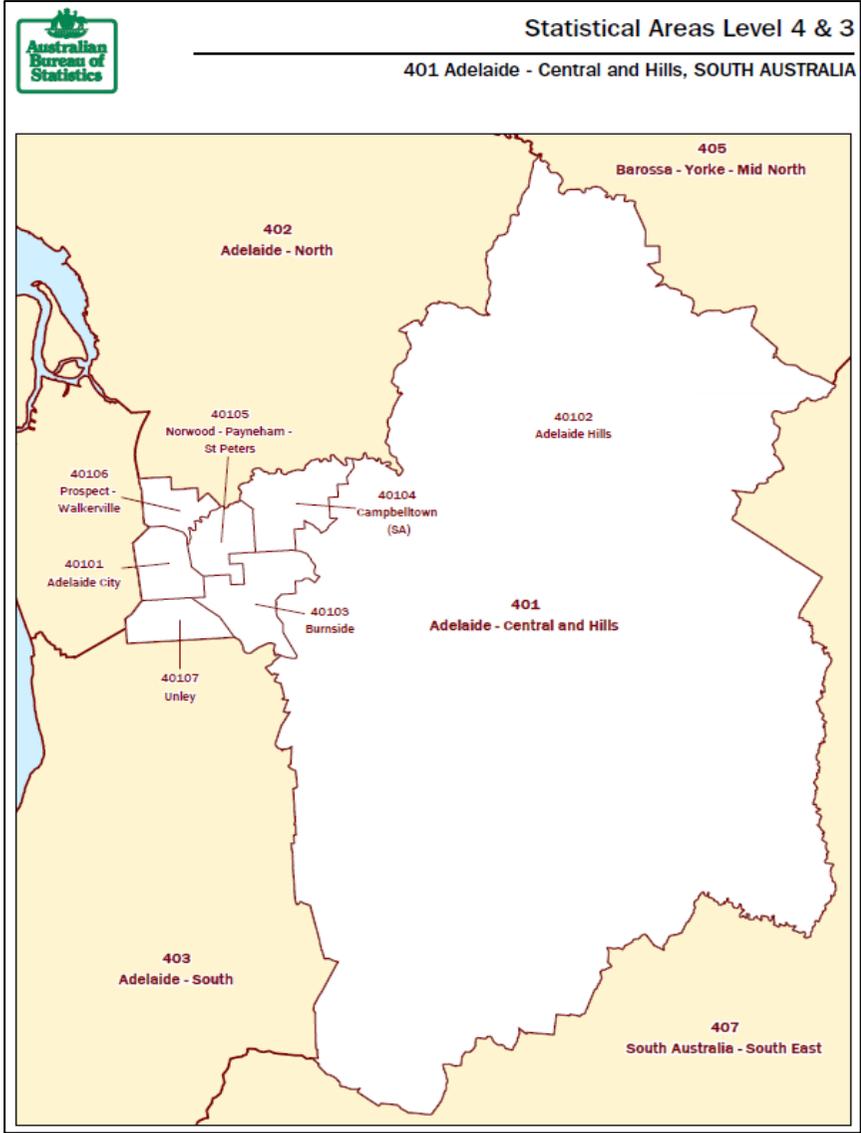
40501								
40502								
40503								
40504								
40601								
40602								
40701								
40702								
40703								
<b>15+ years old</b>								
40103								
40104								
40105								
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**Appendix 3: Adelaide and Country SA PHN Boundary SA3 and SA4 Distribution**

## APHN/CSAPHN Boundary SA3 and SA4 Distribution



**Appendix 4: Adelaide PHN Boundary Statistical Areas Level 4 and 3 (SA401<sup>~</sup>, Central; SA402<sup>^</sup>, North; SA403, South; and SA404, West)**



Note: Adelaide PHN SA401 excludes SA40101 (Adelaide Hills) and SA402 excludes SA40201 (Gawler - Two Wells)



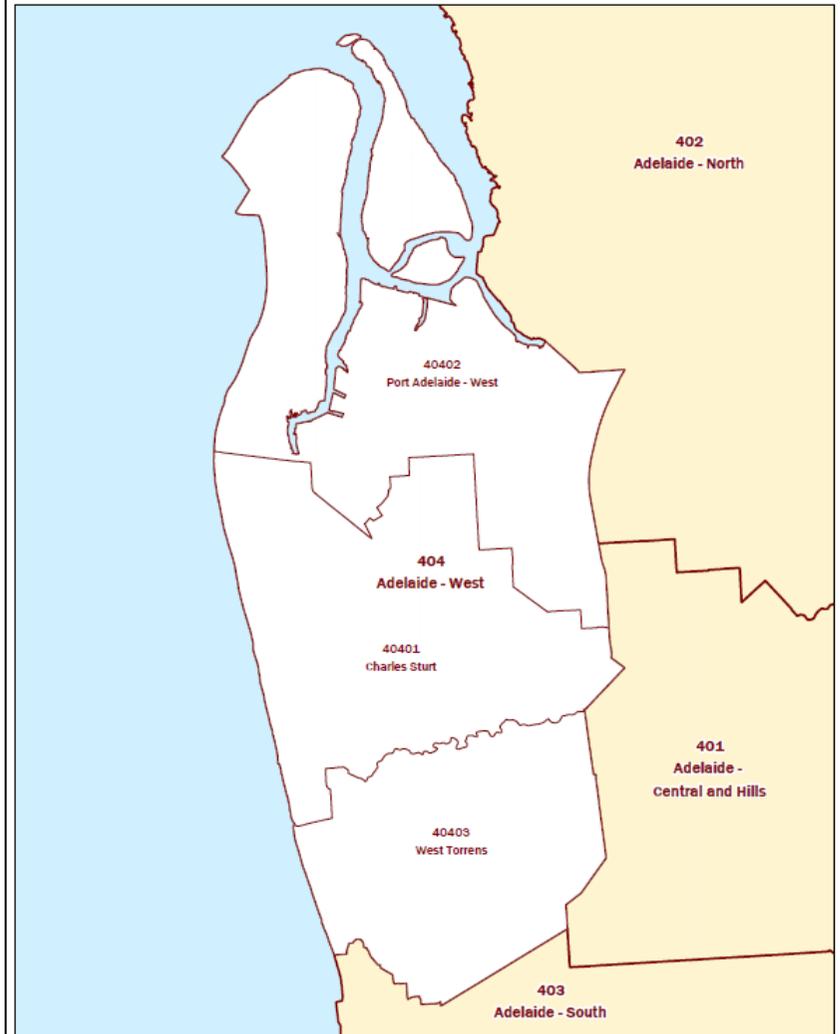
Statistical Areas Level 4 & 3

403 Adelaide - South, SOUTH AUSTRALIA



Statistical Areas Level 4 & 3

404 Adelaide - West, SOUTH AUSTRALIA

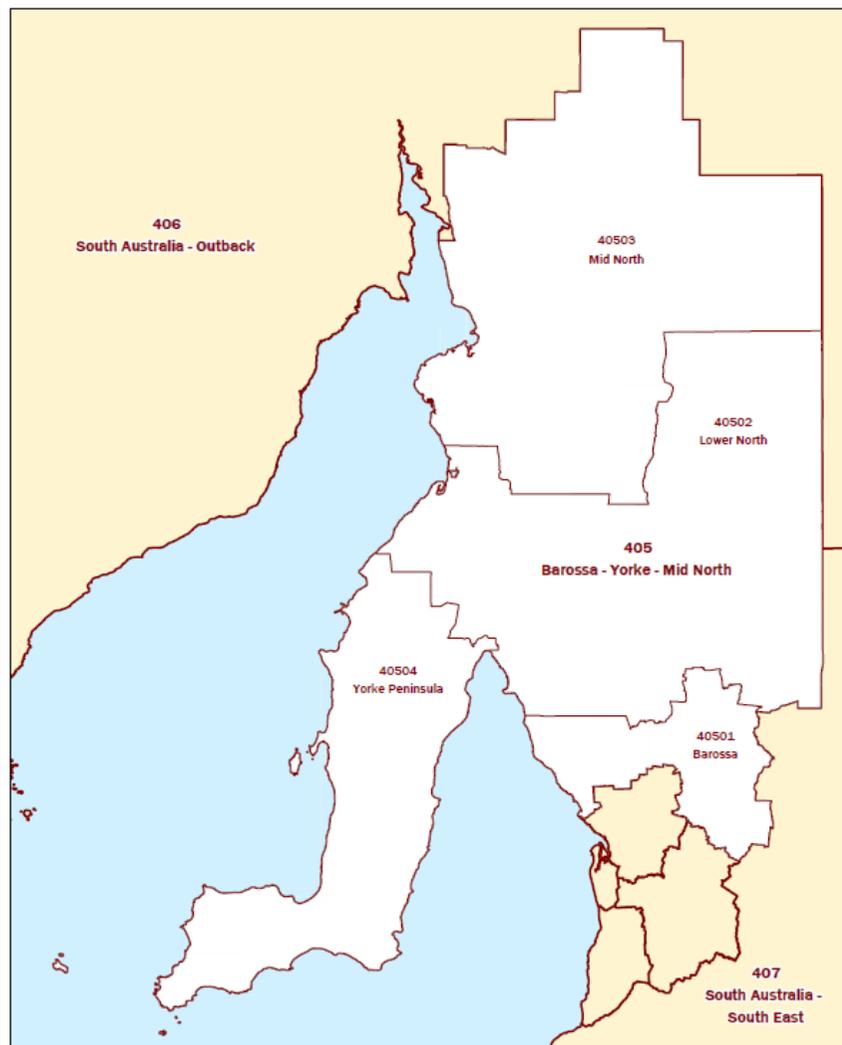


**Appendix 5: Country SA PHN Boundary Statistical Areas Level 4 and 3 (SA405, Barossa – Yorke – Mid North; SA406, South Australia – Outback; SA407, South Australia – South East; SA40101, Adelaide Hills; SA40201, Gawler - Two Wells)**



### Statistical Areas Level 4 & 3

405 Barossa - Yorke - Mid North, SOUTH AUSTRALIA



### Statistical Areas Level 4 & 3

406 South Australia - Outback, SOUTH AUSTRALIA





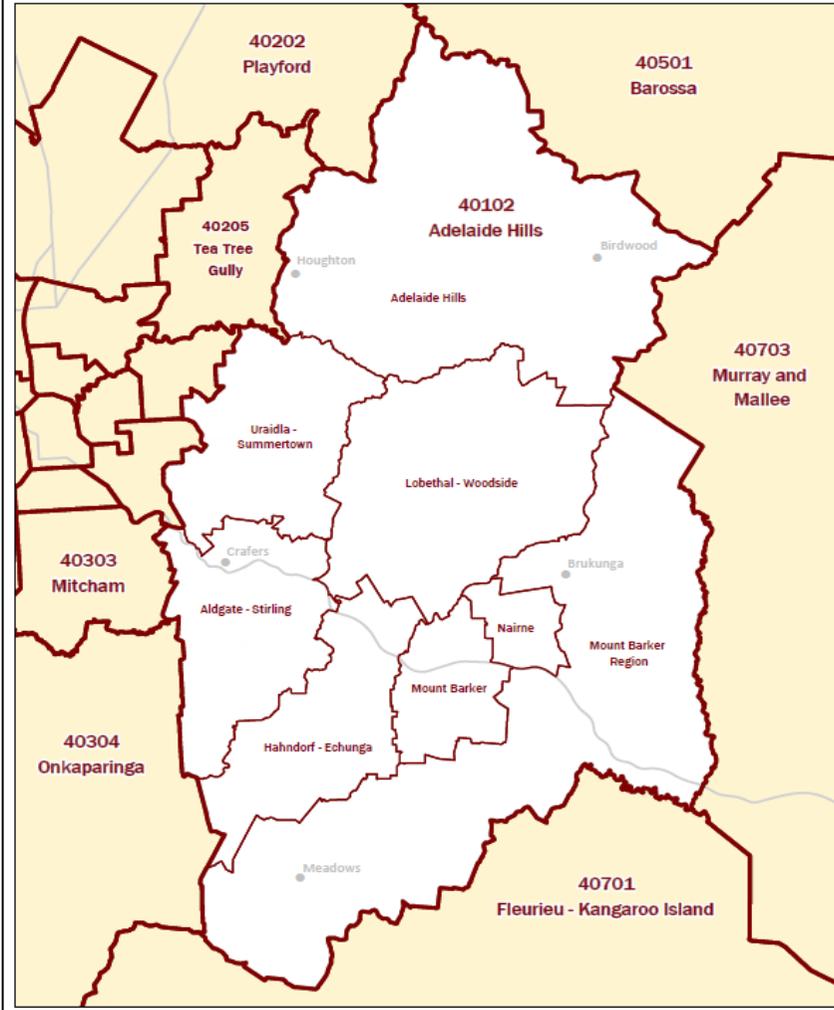
### Statistical Areas Level 4 & 3

407 South Australia - South East, SOUTH AUSTRALIA



### Statistical Areas Level 3 & 2

40102 Adelaide Hills, SOUTH AUSTRALIA





Statistical Areas Level 3 & 2

40201 Gawler - Two Wells, SOUTH AUSTRALIA

