Western Victoria PHN

Needs Assessment

November 2016
Western Victoria PHN Regional Map
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Identified Needs

Health workforce – general practitioner shortages and distribution
Health workforce – dentists
Health workforce – occupational therapists
Health workforce – optometrists
Health workforce – pharmacists
Health workforce – physiotherapists
Health workforce - psychologists
Access to health services – cost
Access to health services – after-hours services
Access to health services – mental health services
Health workforce – ageing workforce
Health workforce – recruitment and retention
Health workforce – specialists
Service coordination and communication
Aboriginal and Torres Strait Islander health – Indigenous Health Checks (MBS Item 715)
Digital health – My Health Record
Digital health – telehealth
Access to services – transport
Western Victoria PHN Needs Assessment

Section 1  Narrative

Needs Assessment Process and Issues
Work on the Needs Assessment has continued in accordance with the process outlined in the Baseline Needs Assessment submission. Since the March submission, work has centred on:

1. Analysing statistics made available since the last Needs Assessment process was submitted (e.g. breast, bowel, and cervical screening rates for the 2014-15 period). Consistent with the prior reporting period, the review centred on data relevant to the six priority areas for PHNs, the four national headline performance indicators, vulnerable groups, and health service availability and coordination. Data continued to be assessed in keeping with the ABS Data Quality Framework.

2. Consultations held with service providers and community members in rural localities across the Western Victoria PHN region.
   The consultations had a particular focus on chronic disease, as they were undertaken primarily to inform commissioning of services in this area in accordance with identified needs. Consultation sessions were advertised on social media, the Western Victoria PHN website, newsletter, and posters placed in pharmacies, GP clinics, supermarkets, and neighbourhood centres. Service provider consultations were held in Apollo Bay, Ararat, Ballan, Cobden, Daylesford, Heywood, Maryborough, Nhill, Port Fairy, Skipton, and Warracknabeal, with each session attracting between three and 19 participants, including pharmacists, allied and mental health practitioners, general practitioners, and administrators from health, community health, and social service organisations.
   Community consultations were held in Apollo Bay, Ararat, Cobden, Daylesford, Heywood, Port Fairy, and Stawell, with one to 17 persons attending each session. A joint service provider and community consultation session was held in Harrow. Community consultations scheduled to occur in five towns did not proceed because no community members registered and/or attended. For the Needs Assessment, notes from the consultations have been analysed for common themes. As such, the template reports on key issues identified across the consultations. Work to understand and verify issues related to particular localities is ongoing.

3. Consultations with the Western Victoria PHN Ballarat Goldfields, Geelong Otway, Great South Coast, and Wimmera Grampians Community Councils.
   These consultations were broader in scope than the service provider and community consultations. The consultations were particularly valuable in helping us to contextualise available statistical data.
   Within the template, data is typically presented at the Statistical Area Level 3 or local government area level, both for the sake of consistency and because most data available is aggregated to these areas. However, this can disguise important variations within these areas. For example, the unemployment rate for the City of Greater Geelong is 5.4 per cent, but in the Corio-Norlane Statistical Area Level 2 locality is 15.4 per cent (Department of Employment, Small Areas Labour Markets Australia, June Quarter 2016). Such nuances are not able to be captured in this document.
   To determine the health and service need priorities the identified issues were assessed against the impact that they will have on increasing the efficiency and effectiveness of health services for patients, particularly those at risk of poor health outcomes, and improvement in the coordination of care to ensure patients receive the right care in the right place at the right time. The six key priority areas for targeted work by the PHN, Digital Health, Population Health, Mental Health, Aged Care, Health Workforce and Aboriginal and Torres Strait Islander Health and the four Performance Indicators;
   - Potentially preventable hospitalisations
   - Childhood immunisation rates
   - Cancer screening rates and
   - Mental health treatment rates.
Additional Data Needs and Gaps

As indicated in the Western Victoria PHN Baseline Needs Assessment, there is limited up-to-date, localised, and high quality health data available for Aboriginal and Torres Strait Islander peoples, persons from culturally and linguistically diverse backgrounds, and persons with a disability and their carers. Since the submission of the Baseline Needs Assessment, we have conducted in-depth work to source and analyse relevant local-level data concerning Aboriginal and Torres Strait Islander peoples in the Western Victoria PHN. As a result of this work, we have identified specific gaps in our knowledge about the health needs and services available to Aboriginal and Torres Strait Islander peoples. We are now actively planning to address these gaps by engaging directly with Aboriginal and Torres Strait Islander health consumers and service providers.

We intend to take a similar approach to learning more about the health needs and service gaps pertinent to persons from culturally and linguistically diverse backgrounds and persons with a disability and their carers. Once it is made available, data collected during the 2016 Census of Population and Housing will likely be instructive in guiding this work. This is because we are aware the demographic make-up of some communities may have changed markedly since the 2011 Census of Population and Housing was completed. For example, we understand the Karen population in Nhill has increased substantially in recent years.

With regards to data availability on the PHN website, we are pleased that more data is being made available, particularly at Statistical Area Level 3. However, we note that in many cases intensive work is required to interpret and contextualise the data provided. For example, patient and service counts related to MBS items concerning mental health have relatively little utility from a population health planning perspective in the absence of data related to things such as the prevalence of mental health conditions, general demographics, and the availability of relevant health services. We note that some data on the PHN website goes some way towards addressing these issues. For example, in addition to the total number of potentially preventable hospitalisations, the Healthy Communities: Potentially preventable hospitalisations in 2013-14 report provides crude and age-standardised admission rates per 100,000 persons. To use another example, the Australian Institute of Health and Welfare Indigenous Health Check Data Tool provides a usage rate which indicates the proportion of Aboriginal and Torres Strait Islander population who have received an Indigenous Health Check. Although only a start, such information is useful. Where relevant, we would like to see such measures incorporated into future data releases.
Additional Comments and Feedback

The Western Victoria PHN supports the decision to bring forward the Needs Assessment submission date to November from March, as it now occupies a more logical place within the business planning cycle. Maintaining this standard cycle will now be critical in enabling the organisation to allocate its resources and execute its planned activities.

Consistent with feedback we have received from the Department of Health, we have named areas which may be high or low on a particular indicator relative to elsewhere in the Western Victoria PHN, (rural) Victoria and/or Australia. However, we add the caveat that such comparisons should be viewed with caution, and that we do not place undue emphasis upon where the Western Victoria PHN or localities therein sit in relation to one-another or some larger geographic unit in assessing and setting our priorities and activities. It is simply one element we consider in the process.

For example, the proportion of the population registered with the National Diabetes Service Scheme (NDSS registration data, updated 30 September 2016, and Australian Bureau of Statistics population projections) as having diabetes is 7 per cent in Glenelg Shire, compared to 5.4 per cent in the City of Ballarat. However, in terms of absolute numbers, there are 1,570 people registered with the NDSS in Glenelg Shire, compared to 5,783 people in the City of Ballarat. Furthermore, the age-standardised rate of Ambulatory Care Sensitive Condition (ACSC) hospital admissions attributed to diabetes complications in 2014-15 was the same in both areas, but this has not been the case in previous years, as indicated in Victorian Health Information and Surveillance System ACSC reports. Furthermore, it is also important to consider other issues such as the availability of health services in each area. In sum, there are complex relationships between various data sets, and the data available can be examined in numerous ways (e.g. relative prevalence versus absolute prevalence).
Section 2  Outcomes of the Health Needs Analysis

Identified Needs

<table>
<thead>
<tr>
<th>Population health – chronic conditions</th>
<th>Amongst persons aged 15 years and over in the Western Victoria PHN, 59.016 per cent have a long-term health condition. This figure is higher than that reported for all bar two PHNs (Australian Bureau of Statistics, 2015. Patient Experience Survey 2013-14, Customised report. Canberra: Australian Bureau of Statistics). The prevalence and/or management of major chronic conditions, such as type 2 diabetes, cardiovascular disease, and chronic obstructive pulmonary disease were raised as matters of concern in rural service provider and community consultations held across the Western Victoria PHN catchment. Findings in relation to particular chronic conditions are discussed below.</th>
</tr>
</thead>
<tbody>
<tr>
<td>High prevalence of chronic health conditions within the Western Victoria PHN catchment. Major chronic conditions are prominent causes of Ambulatory Care Sensitive Condition hospital admissions and are amongst the leading causes of death in the Western Victoria PHN catchment.</td>
<td></td>
</tr>
<tr>
<td>Population health – chronic conditions, diabetes</td>
<td>4.8 per cent of the Western Victoria PHN population is registered with the National Diabetes Services Scheme as having type 2 diabetes, compared to 4.5 per cent of persons in Victoria, and 4.4 per cent of the national population (National Diabetes Services Scheme [NDSS] registration data, updated 30 September 2016, and Australian Bureau of Statistics [ABS] population projections). Furthermore, amongst the 21 local government areas in the Western Victoria PHN, the proportion of the population registered with the NDSS as having type 2 diabetes was above the Victorian state rate in 16 instances (rounding data to one decimal place) (NDSS registration data, updated 30 September 2016, and from the ABS population projections). In 2013-14, diabetes complications were the number one cause of Ambulatory Care Sensitive Condition (ACSC) hospital admissions in all local government areas in the Western Victoria PHN (Victorian Health Information Surveillance System [VHISS] ACSC reports, 2013-14). In 2014-15, diabetes complications were the 7th most common cause of ACSC hospital admissions in both the Grampians and Barwon-South Western regions (which together largely overlap with the Western Victoria PHN catchment) (VHISS ACSC reports, 2014-15). This reflects the fact that ACSCs for 2014-15 were coded using a different classification system to that used in previous years. Between 2009 and 2013, diabetes was the 7th most common cause of death in the Western Victoria PHN catchment, accounting for 3 per cent of all deaths (compared to 2.9 per cent of all deaths in Australia) (Australian Institute of Health and Welfare [AIHW] 2016. Mortality Over Regions and Time books: Primary Health Network, 2009–2013. Canberra: AIHW).</td>
</tr>
<tr>
<td>High prevalence of type 2 diabetes in the Western Victoria PHN, relative to Victoria and Australia. Diabetes is also a common cause of Ambulatory Care Sensitive hospital admissions and death in the Western Victoria PHN catchment.</td>
<td></td>
</tr>
</tbody>
</table>

In 2013-14, diabetes complications were the number one cause of Ambulatory Care Sensitive Condition (ACSC) hospital admissions in all local government areas in the Western Victoria PHN (Victorian Health Information Surveillance System [VHISS] ACSC reports, 2013-14). In 2014-15, diabetes complications were the 7th most common cause of ACSC hospital admissions in both the Grampians and Barwon-South Western regions (which together largely overlap with the Western Victoria PHN catchment) (VHISS ACSC reports, 2014-15). This reflects the fact that ACSCs for 2014-15 were coded using a different classification system to that used in previous years.

Between 2009 and 2013, diabetes was the 7th most common cause of death in the Western Victoria PHN catchment, accounting for 3 per cent of all deaths (compared to 2.9 per cent of all deaths in Australia) (Australian Institute of Health and Welfare [AIHW] 2016. Mortality Over Regions and Time books: Primary Health Network, 2009–2013. Canberra: AIHW).
Population health – chronic conditions, chronic obstructive pulmonary disease

In the Western Victoria PHN, chronic obstructive pulmonary disease is a major cause of Ambulatory Care Sensitive Conditions hospital admissions, as well as a prominent cause of death.

On an age-standardised basis, the estimated incidence of chronic obstructive pulmonary disease (COPD) in the Western Victoria PHN is 2.1 persons per 100 – the same rate as that observed across the rest of Victoria excluding Greater Melbourne (data compiled by the Public Health Information Development Unit [PHIDU] based on modelled estimates from the 2011-13 Australian Health Survey, ABS [unpublished] and the average of the ABS Estimated Resident Population (ERP) at June 2011 and June 2012, based on the Australian standard). In total, four local government areas (LGAs) had a higher estimated rate of COPD compared to the Western Victoria PHN as a whole. These LGAs included Central Goldfields Shire (2.3 persons per 100), Glenelg Shire, City of Ballarat, and City of Warrnambool (2.2 persons per 100).

In 2014-15, COPD ranked amongst the top three causes of Ambulatory Care Sensitive Condition hospital admissions in 16 LGAs in the Western Victoria PHN catchment (Victorian Health Information Surveillance System ACSC reports 2014-15).

Chronic obstructive pulmonary disease is also a prominent cause of death. Between 2009 and 2013, COPD was the 5th most common cause of death in the Western Victoria PHN, accounting for 4.4 per cent of deaths in total, compared to 4 per cent of deaths across Australia (Australian Institute of Health and Welfare 2016. Mortality Over Regions and Time books: Primary Health Network, 2009–2013. Canberra: AIHW).

Population health – chronic conditions, musculoskeletal disease

High absolute prevalence of musculoskeletal disease in the Western Victoria PHN.

It has been estimated that, on an age-standardised basis, 28.2 persons per 100 in the Western Victorian PHN have musculoskeletal system disease. This figure is the same as that recorded for Victoria excluding Greater Melbourne, but is higher than that reported for Victoria as a whole (26.6 per cent) (Compiled by the Public Health Information and Development Unit [PHIDU] based on modelled estimates from the 2011-13 Australian Health Survey, Australian Bureau of Statistics [ABS] [unpublished]; and the average of the ABS Estimated Resident Population, 30 June 2011 and 30 June 2012, based on the Australian standard). Local government areas in the Western Victoria PHN where over 30 per cent of the population is estimated to have musculoskeletal disease include Northern Grampians Shire (30.8 per cent), Shire of Hindmarsh, West Wimmera Shire, and Yarriambiack Shire (30.4 per cent each) (Compiled by PHIDU based on modelled estimates from the 2011-13 Australian Health Survey, ABS [unpublished]; and the average of the ABS Estimated Resident Population, 30 June 2011 and 30 June 2012, based on the Australian standard).

In addition to the above data, the prevalence of musculoskeletal conditions, such as arthritis, was raised as a key issue of concern in the rural service provider and community consultations.
Population health – chronic conditions, asthma

High prevalence of asthma in some local government areas in the Western Victoria PHN, relative to rural Victoria as a whole.

The Victorian Population Health Survey 2011-12 found 11.6 per cent of adults across rural Victoria had ‘current’ asthma. Amongst the 21 local government areas (LGAs) in the Western Victoria PHN catchment, this figure was exceeded in 12 cases. The LGAs with the highest prevalence of asthma included Pyrenees Shire (16.1 per cent of adults), Rural City of Ararat (15.3 per cent), and Golden Plains Shire (15.3 per cent) (Victorian Population Health Survey 2011-12).

Amongst Aboriginal and Torres Strait Islander persons in the Western Victoria PHN, 15.2 per cent report having asthma, compared to 17.5 per cent across Australia (Australian Aboriginal and Torres Strait Islander Health Survey [National Aboriginal and Torres Strait Islander Health Survey component] 2012-13).

In 2014-15, asthma was the 11th most common cause of Ambulatory Care Sensitive Condition (ACSC) hospital admissions in both the Barwon-South West (485 admissions) and Grampians (236 admissions) regions (which together largely overlap with the Western Victoria PHN catchment) (Victorian Health Information Surveillance System ACSC reports, 2014-15).

Population health – chronic conditions, circulatory system disease

High prevalence of circulatory system disease in certain localities in the Western Victoria PHN. Conditions related to the heart and circulatory system are also common causes of Ambulatory Care Sensitive Condition hospital admissions and death.

In total, 19.9 per cent of persons aged two years and older in the Western Victoria PHN had circulatory system disease, compared to 17.4 per cent across Australia (Australian Bureau of Statistics, 2015. Australian Health Survey [Core component] 2011-12. Customised report. Canberra: ABS).

The local government areas (LGAs) in the Western Victoria PHN estimated to have the highest age-standardised rates of circulatory system disease amongst persons aged two years and over are Central Goldfields Shire (18.1 persons), Northern Grampians Shire (17.7 persons), and Rural City of Horsham (17.6 persons) (compiled by the Public Health Information and Development Unit [PHIDU] based on modelled estimates from the 2011-13 Australian Health Survey, Australian Bureau of Statistics [ABS] (unpublished); and the average of the ABS Estimated Resident Population, 30 June 2011 and 30 June 2012, based on the Australian standard). Other LGAs in the Western Victoria PHN with high rates of circulatory system disease relative to Victoria excluding Greater Melbourne (17.1 persons) include Pyrenees Shire, Rural City of Ararat, Hepburn Shire (17.5 persons each), City of Ballarat (17.4 persons), and City of Warrnambool and Southern Grampians Shire (17.3 persons each) (compiled by PHIDU based on modelled estimates from the 2011-13 Australian Health Survey, ABS (unpublished); and the average of the ABS Estimated Resident Population, 30 June 2011 and 30 June 2012, based on the Australian standard).

Furthermore, in 2014-15, congestive cardiac failure and angina were the 6th and 8th most common causes respectively of Ambulatory Care Sensitive Condition (ACSC) hospital admissions in both the Barwon-South West and Grampians regions (which together largely overlap with the Western Victoria PHN catchment) (Victorian Health Information Surveillance System ACSC reports, 2014-15).
### Population health – chronic conditions, circulatory system disease


Over the same period, cerebrovascular disease accounted for 5.8 per cent of all male deaths and 9.4 per cent of all female deaths in the Western Victoria PHN, and was amongst the top three causes of death (in terms of total number of deaths) for all persons in each Statistical Area Level 3 region in the Western Victoria PHN (Australian Institute of Health and Welfare [AIHW], 2016. Mortality Over Regions and Time books: Statistical Area Level 3, 2009-2013. Canberra: AIHW).

### Population health – health behaviours and risk factors, smoking

| High prevalence of smoking in certain local government areas. Smoking rates appear to be increasing in some localities. | The proportion of the adult population classified as a current smoker is higher than that reported for all rural regions in Victoria (15.5 per cent) in ten LGAs in the Western Victoria PHN (Victorian Population Health Survey [VPHS] 2014). The highest smoking rates were observed in Ararat Rural City Council (22.1 per cent), Central Goldfields Shire (20.8 per cent), and Hepburn Shire (19.8 per cent). Furthermore, compared with results from the VPHS 2011-12, in the VPHS 2014 the smoking rate was higher in seven LGAs located in the Western Victoria PHN. |
| A large proportion of adults in the Western Victoria PHN do not consume enough vegetables and fruit to meet national dietary guidelines. | According to national dietary guidelines, it is recommended adults consume at least five serves of vegetables (more for men aged 70 and under and breastfeeding women) and two serves of fruit per day (National Health and Medical Research Council [NHMRC], 2013. Eat for Health. Australian Dietary Guidelines - Summary. Canberra: NHMRC). Within the Western Victoria PHN, the proportion of adults not consuming enough vegetables and fruit to meet these guidelines was greater than that reported for rural Victoria (42.8 per cent) in all local government areas except the City of Greater Geelong (42.5 per cent), City of Warrnambool (39.2 per cent), Surf Coast Shire (34.5 per cent), and the Borough of Queenscliffe (33.6 per cent). |

### Population health – health behaviours and risk factors, alcohol

| Prevalence of alcohol consumption at levels which place individuals at increased risk of alcohol-related harm. | Over half of all adults in each local government area in the Western Victoria PHN have consumed alcohol at levels which place them at increased lifetime risk of alcohol-related harm (Victorian Population Health Survey 2014. Assessment based on National Health and Medical Research Council [NHMRC], 2009. Australian guidelines to reduce health risks from drinking alcohol. Canberra: NHMRC). Furthermore, in 17 of the 21 LGAs in the Western Victoria PHN, the proportion of adults in this group is higher than |
Population health – health behaviours and risk factors, alcohol

that reported for Victoria as a whole (59.2 per cent). Within this group, the LGA with the highest proportion of the adult population at increased lifetime risk of alcohol-related harm was the Borough of Queenscliffe (80.1 per cent), followed by Surf Coast Shire (79.7 per cent) and the City of Warrnambool (71.8 per cent). The same three LGAs have also been found to have the most adults (as a proportion of the adult population) to have consumed alcohol and levels placing them at increased risk of injury at least once a year (Borough of Queenscliffe, 59.9 per cent; Surf Coast Shire, 59.7 per cent, and City of Warrnambool, 57.1 per cent) (Victorian Population Health Survey 2014. Assessment based on NHMRC, 2009. Australian guidelines to reduce health risks from drinking alcohol. Canberra: NHMRC). Further information relating to substances of addiction can be viewed in the Alcohol and Other Drugs Needs Assessment.

Population health – health behaviours and risk factors, overweight/obesity

High prevalence of overweight/obesity across the Western Victoria PHN. Furthermore, the prevalence of obesity (i.e. persons with a Body Mass Index score greater than or equal to 30) within the adult population appears to be increasing in a number of local government areas. This has implications for the development and management of a range of health conditions.

According to results from the 2011-12 Australian Bureau of Statistics (ABS) Australian Health Survey (AHS) (Core component), 33.1 per cent of persons in the Western Victoria PHN aged two years and over are overweight (based on a Body Mass Index [BMI] of 25 to 29.99), and 23.8 per cent are obese (BMI of 30 or higher). The corresponding figures for Australia as a whole are 31.9 per cent (overweight) and 23.4 per cent (obese) (ABS AHS [Core component] 2011-12). Amongst Aboriginal and Torres Strait Islander persons in the Western Victoria PHN aged two years and over, 26.2 per cent are overweight and 23.6 per cent obese. The corresponding figures for Australia as a whole are 25.9 per cent (overweight) and 29 per cent (obese) (Australian Aboriginal and Torres Strait Islander Health Survey [Core component] 2012-13).

In local government areas (LGAs) in the Western Victoria PHN, the proportion of the adult population classified as overweight or obese exceeded that reported for rural Victoria as a whole (23 per cent) in 12 instances (Victorian Population Health Survey 2014). The LGAs with the most overweight and obese persons as a proportion of the adult population included West Wimmera Shire (68 per cent), Pyrenees Shire (65.8 per cent), and Yarriambiack Shire (65.8 per cent) (Victorian Population Health Survey 2014).

The prevalence of obesity also appears to be increasing in most LGAs. In 15 of the 21 LGAs in the Western Victoria PHN, the proportion of adults found to have a BMI greater than or equal 30 was higher in the 2014 edition than the 2011-12 edition of the Victorian Population Health Survey (Victorian Population Health Survey 2011-12; Victorian Population Health Survey 2014).

Population health – health behaviours and risk factors, high blood pressure

High prevalence of persons with high blood pressure in the Western Victoria PHN.

Findings from the Australian Health Survey (Core component) 2011-12 indicate 27.6 per cent of adults in the Western Victoria PHN have high blood pressure, compared to 21.5 per cent of adults across Australia. Amongst local government areas (LGAs) in the Western Victoria PHN, the proportion of adults reporting to have ever been diagnosed with high blood pressure was higher than that reported for all rural regions in Victoria (28 per cent) in eight instances.
Population health – health behaviours and risk factors, high blood pressure

(Victorian Population Health Survey [VPHS] 2014). Of these eight LGAs, the proportion of persons reporting to have been diagnosed with high blood pressure was highest in Central Goldfields Shire (34.4 per cent), followed by the City of Ballarat (31.9 per cent) and Northern Grampians Shire (29.7 per cent) (VPHS 2014).

Hypertension causes a greater proportion of female deaths in the Western Victoria PHN, relative to Australia. Hypertension is also a cause of Ambulatory Care Sensitive Condition hospital admissions.

In 2009-2013, hypertensive disease accounted for 1.3 per cent of deaths from all causes across both Australia and the Western Victoria PHN (amongst females, hypertensive disease accounted for 1.9 per cent of all causes of death in the Western Victoria PHN, compared to 1.7 per cent across Australia) (Australian Institute of Health and Welfare, 2016. Mortality Over Regions and Time books: Statistical Area Level 3, 2009-2013. Canberra: AIHW). Amongst Statistical Area Level 3 regions in the Western Victoria PHN catchment, the proportion of all deaths attributed to hypertensive disease exceeded the national rate in Glenelg – Southern Grampians (1.7 per cent), Grampians (1.6 per cent), and Geelong (1.4 per cent) (Australian Institute of Health and Welfare, 2016. Mortality Over Regions and Time books: Statistical Area Level 3, 2009-2013. Canberra: AIHW).

During 2014-15, hypertension was the 16th most common cause of Ambulatory Care Sensitive Condition (ACSC) hospital admissions in the Barwon – South Western region, and the 14th most common cause of such admissions in the Grampians region (together, these two regions overlap with much of the Western Victoria PHN) (Victorian Health Information Surveillance System [VHISS] ACSC reports 2014-15). The age-standardised rate of ACSC hospital admissions for hypertension per 1,000 people in the Grampians region was 0.42, compared to 0.37 across Victoria and 0.33 across rural Victoria (VHISS ACSC report 2014-15).

Population health – social determinants of health

There are a number of localities in the Western Victoria PHN which are disadvantaged on one or more indicators of the social determinants of health relative to other localities in the region and/or Victoria. These determinants influence the health experiences of individuals, population health outcomes, and important equity issues such as access to health care.

Data on a range of indicators related to the social determinants of health were sourced and assessed, using The Solid Facts (2nd edn.) report of 2003 from the World Health Organization (R. Wilkinson and M. Marmot [eds.]) as a guide. The social determinants of health were raised as an issue in almost all rural service provider and community consultations, as well as the consultations with the four Western Victoria PHN Community Councils. Three particular issues of note were identified, each concerning barriers to healthcare access. These issues included geographic isolation and limited access to transport (see separate entry on ‘Transport and access to services’ entry in the ‘Outcomes of service needs analysis’ below), socioeconomic disadvantage, and the related issue of health consumers not being able to access healthcare due to the financial cost involved (see ‘Cost of access to health services’ entry in the ‘Outcomes of service needs analysis’ section below).

Population health – social determinants of health Index of Relative Socioeconomic Disadvantage

A number of Statistical Area Level 2 locales in the Western Victoria PHN are in the most disadvantaged quintile in Victoria according to Index of Relative Socioeconomic Disadvantage scores.

There are 15 Statistical Area Level 2 (SA2s) locales in the Western Victoria PHN catchment ranked in the 1st or 2nd decile in Victoria on the Index of Relative Socioeconomic Disadvantage (IRSD) (that is, amongst the most disadvantaged areas in the state) (Australian Bureau of Statistics [ABS], 2013. Socio-economic Indexes for Areas).
Population health – social determinants of health

Index of Relative Socioeconomic Disadvantage

Canberra: ABS). Those SA2s ranked in the 1st decile include Ararat, Corio – Norlane, Maryborough, Newcomb – Moolap, and Wendouree – Miners Rest. Of the ten SA2s ranked in the 2nd decile, the three highest ranked (i.e. most disadvantaged) on the IRSD were Avoca, Maryborough Region, and Stawell (ABS, 2013. Socio-economic Indexes for Areas. Canberra: ABS).

Population health – social determinants of health, unemployment

The unemployment rate in certain localities in the Western Victoria PHN is higher than that recorded for Victoria as a whole. In the June 2016 quarter, the unemployment rate exceeded the Victorian state rate of 5.9 per cent in six local government areas (LGAs) in the Western Victoria PHN (Department of Employment, Small Areas Labour Markets Australia, June Quarter 2016). The LGAs with the three highest unemployment rates included Central Goldfields Shire (12.1 per cent), Pyrenees Shire (7.4 per cent), and Rural City of Ararat (7 per cent) (Department of Employment, Small Areas Labour Markets Australia, June Quarter 2016). In two LGAs (Central Goldfields Shire and Rural City of Ararat), the unemployment rate was higher than that recorded for the state of Victoria in all four quarters comprising the 2015-16 financial year (Department of Employment, Small Areas Labour Markets Australia, June Quarter 2016).

Population health – social determinants of health, children assessed as developmentally vulnerable

The proportion of children assessed as being developmentally vulnerable exceeds the overall Victorian rate in a number of communities in the Western Victoria PHN catchment. Across Victoria as a whole, the Australian Early Development Census 2015 found 19.9 per cent of children were developmentally vulnerable in one or more domains. A number of communities in the Western Victoria PHN had a higher proportion children assessed as developmentally vulnerable compared with this state rate. Those with the highest proportion of children assessed as developmentally vulnerable were Yarriambiack (30.4 per cent), Glenelg (29.1 per cent), Central Goldfields (27.9 per cent), Colac-Otway (26.7 per cent), and Horsham (25.1 per cent) (Australian Early Development Census Community Profiles 2015).

Population health – social determinants of health, expenditure on electronic gaming machines

Expenditure per adult on electronic gaming machines exceeds the Victorian average in certain local government areas in the Western Victoria PHN. In six local government areas (LGAs) in the Western Victoria PHN, the average expenditure per adult on electronic gaming machines in 2015-16 was higher than that reported for Victoria ($533.13). Amongst these six LGAs, the three with the highest expenditure per adult were City of Warrnambool ($709.36 per adult), Central Goldfields Shire ($695.30), and City of Ballarat ($691.56) (State of Victoria through the Victorian Commission for Gambling and Liquor Regulation, n.d. Current LGA population density and gaming expenditure statistics. Last accessed 1st of November 2016 at http://www.vcglr.vic.gov.au/home/resources/data+and+research/data/).
### Population health – social determinants of health, social connectedness

A lack of social connectedness has been identified as an issue of concern in a number of rural localities in the Western Victoria PHN. 

Social isolation and/or a lack of social connectedness was identified as an issue in the rural service provider consultations. Findings from the 2015 Regional Wellbeing Survey appear to lend some support to these concerns (see below).

Compared to rural and regional Victoria as a whole, in a number of localities in the Western Victoria PHN, a greater proportion of the population report feeling like an outsider.

According to the 2015 Regional Wellbeing Survey, 14.4 per cent of persons in rural and regional Victoria agreed they felt like an outsider in their community. Within the Western Victoria PHN, this figure was exceeded in a number of localities, including four areas where over 20 per cent of those surveyed reported feeling like an outsider. These places included West Wimmera Shire, Shire of Hindmarsh, and Yarriambiack Shire combined (29.8 per cent), Rural City of Ararat and Pyrenees Shire combined (26.3 per cent), Glenelg Shire (25.3 per cent), and Rural City of Horsham (20.4 per cent) (2015 Regional Wellbeing Survey, Barwon South West and Grampians VIC region data tables, version 1.01, July 2016).

In a number of localities in the Western Victoria PHN, the proportion of persons reporting they never/rarely catch up with friends or spend time with family members outside of their household is higher than that reported for rural and regional Victoria as a whole.

Results from the 2015 Regional Wellbeing Survey indicate 19.8 per cent of persons in rural and regional Victoria never/rarely reported making “time to keep in touch with my friends”, and 30.6 per cent never/rarely reported spending “time doing things with family members who don’t live with me”. Within the Western Victoria PHN, these figures were exceeded in a number of localities. This included three areas where over 25 per cent of those surveyed reported they never/rarely kept in touch with friends (Golden Plains Shire and Moorabool Shire combined, 30 per cent; Golden Plains Shire, 27.9 per cent; and Glenelg Shire 25.4 per cent) and six areas where 40 or more per cent reported never/rarely spending time with family members who don’t live with them (Corangamite Shire, 57.3 per cent; Southern Grampians Shire, 49.4 per cent; West Wimmera Shire, Shire of Hindmarsh, and Yarriambiack Shire combined, 46.6 per cent; Golden Plains Shire and Moorabool Shire combined, 43.6 per cent; Hepburn Shire, 40.8 per cent; and Golden Plains Shire, 40 per cent) (2015 Regional Wellbeing Survey, Barwon South West and Grampians VIC region data tables, version 1.01, July 2016).

### Population health – social determinants of health, family incidents

High prevalence of family incidents in a number of local government areas in the Western Victoria PHN, relative to the Victorian state rate.

In each of the past three years (June end), the number of family incidents per 100,000 people has exceeded the overall Victoria rate in 11 local government areas (LGAs) in the Western Victoria PHN (Crime Statistics Agency). From this group, the three LGAs with the highest number of family incidents per 100,000 persons in the last year for which data is available (June 2015 to June 2016) were Rural City of Horsham (2,861.3 incidents per 100,000 persons), Southern Grampians Shire (2,382), and Central Goldfields Shire (2,380.4). Over the same period, there were 1,288.7 family incidents per 100,000 persons across Victoria (Crime Statistics Agency).

### Population health – health literacy

Low levels of health literacy amongst health consumers and providers has been identified as an issue in communities across the Western Victoria PHN.

Health literacy was raised as an issue in consultations with all four Western Victoria PHN Community Councils as well as most consultations with rural service providers. Three broad concerns were prominent in these discussions. First, health consumers and service providers are often unaware of the range of services available in their region, and experience difficulties navigating the
**Population health – health literacy**

healthcare system (e.g. establishing appropriate referral pathways). Second, consumers often do not have the knowledge to support positive health behaviours, such as healthy eating. Third, health consumers might not be aware of how to manage their health conditions (e.g. diabetes) and when to access health services (e.g. accessing services when it is ‘too late’).

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**Population health – cancer**

High incidence of colorectal and prostate cancers in the Western Victoria PHN relative to Australia as a whole. Certain cancers also rank amongst the most prominent causes of death in the Western Victoria PHN.

The age-standardised rate of new colorectal and prostate cancer diagnoses made between 2005 and 2009 inclusive was higher in the Western Victoria PHN region compared with Australia as a whole (Australian Institute of Health and Welfare analysis of Australian Cancer Database 2011). In contrast, the age-standardised rate of new breast, cervical, lung, and melanoma of skin, cancer diagnoses in the Western Victoria PHN was below that observed at the national level (Australian Institute of Health and Welfare analysis of Australian Cancer Database 2011).

Between 2009 and 2013, the following cancers accounted for more than two per cent of all male deaths in the Western Victoria PHN catchment: lung cancer (6.1 per cent of deaths); prostate cancer (5.6 per cent); colorectal cancer (3.6 per cent); and cancer unknown, ill-defined (2.6 per cent) (Australian Institute of Health and Welfare 2016. Mortality Over Regions and Time books: Primary Health Network, 2009–2013. Canberra: AIHW). Over the same period, the following cancers accounted for more than two per cent of females in the Western Victoria PHN: lung cancer (4 per cent of deaths); breast cancer (3.7 per cent); colorectal cancer (2.8 per cent); and cancer, unknown, ill-defined (2.5 per cent) (Australian Institute of Health and Welfare 2016. Mortality Over Regions and Time books: Primary Health Network, 2009–2013. Canberra: AIHW).

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**Population health – ageing population**

A large proportion of the population in the Western Victoria PHN region is aged 65 years or over. Furthermore, the number of persons in this age group is projected to increase in most local government areas over the next decade.

In 2011, 17.16 per cent of persons in the Western Victoria PHN catchment were aged 65 years and over (calculation based on Australian Bureau of Statistics, 2011 Census of Population and Housing), compared to 14.22 per cent across Victoria (Australian Bureau of Statistics, 2011 Census of Population and Housing). Across LGAs in the Western Victoria PHN, the total number of persons in this age group is projected to reach 157,348 persons by 2026, up from 101,522 persons in 2011 (State of Victoria Department of Environment, Land, Water and Planning, 2016. Victoria in Future 2016. Population and household projections to 2051). Also by 2026, all local government areas in the Western Victoria PHN except the Shire of Hindmarsh and West Wimmera Shire, are projected to have more persons aged 65 years and older than they did 2011 (State of Victoria Department of Environment, Land, Water and Planning, 2016. Victoria in Future 2016. Population and household projections to 2051). As the population ages, it might be expected that health conditions often associated with ageing (e.g. dementia and cancer) will become more common and demand for certain health services will increase (AIHW 2014. Australia’s Health 2014. Australia’s health series No. 14. Cat. No. AU 178. Canberra: AIHW).
### Persons with a Disability

| High prevalence of disability in a number of localities. | Data on people with a severe or profound disability compiled by PHIDU based on unpublished data from the ABS 2011 Census of Population and Housing. Information on Disability Support Pension recipients at the SA2 level sourced from Department of Social Services Payment Demographic Data reports. |

### Population health – oral health

| Prevalence of poor self-rated dental health and infrequent visits made to dental health professionals in certain localities. | The proportion of adults rating their dental health as ‘poor’ was higher than that reported for rural Victoria (4.8 per cent) in 11 local government areas (LGAs) in the Western Victoria PHN (Victorian Population Health Survey 2011-12). From this group, the LGAs with the most adults (as a proportion of the adult population) reporting to have poor dental health were Central Goldfields Shire (13.2 per cent), Shire of Hindmarsh (11.1 per cent), and Yarriambiack Shire (10.9 per cent) (although it should be noted the relative standard error for the latter two LGAs was quite high) (Victorian Population Health Survey 2011-12). Most of the remaining LGAs were located in the Ballarat Goldfields and Wimmera Grampians regions. According to the Victorian Population Health Survey [VPHS] 2011-12, 7.1 per cent of adults in rural Victoria reported it had been 10 years or more since they had visited a dental professional, and 6.1 per cent reported their last visit had been more than 5 years, but less than 10 years ago. In total, then, about 13.2 per cent of adults (not accounting for rounding errors) in rural Victoria reported they had not visited a dental professional in at least 5 years. Overall, this proportion was exceeded in 14 local government areas (LGAs) in the Western Victoria PHN, with the highest rates (not accounting for rounding errors) observed in Shire of Hindmarsh (18 per cent), West Wimmera Shire (17.7 per cent), Northern Grampians Shire (17.6 per cent), Corangamite Shire (16.9 per cent), and Yarriambiack Shire (15.9 per cent) (VPHS 2011-12). |

| Dental conditions are a leading cause of Ambulatory Care Sensitive Condition (ACSC) hospital admissions in localities across the Western Victoria PHN. | In 2014-15, dental conditions were the leading cause of Ambulatory Care Sensitive Condition (ACSC) hospital admissions in the Barwon – South Western and Grampians regions (which together largely overlap with the Western Victoria PHN catchment) (Victorian Health Information Surveillance System [VHISS] ACSC reports 2014-15). Furthermore, the age-standardised rate of ACSC hospital admissions attributed to dental conditions exceeded the Victorian state rate in all local government areas in the Western Victoria PHN except Glenelg Shire, Hepburn Shire, Moyne Shire, City of Warrnambool, and West Wimmera Shire (VHISS ACSC reports 2014-15). |

### Aboriginal and Torres Strait Islander health – self-rated health

| A large proportion of Aboriginal and Torres Strait Islander persons in the Western Victoria PHN report having fair or poor health. | 27.1 per cent of Aboriginal and Torres Strait Islander persons aged 15 years and over in the Western Victoria PHN catchment report having fair or poor health, compared to 24.2 per cent across Australia (Australian Bureau of Statistics, 2015. Aboriginal and Torres Strait Islander Health Survey (Core component) 2012-13, Customised report. Canberra: ABS). |
### Aboriginal and Torres Strait Islander health – smoking

<table>
<thead>
<tr>
<th>High rate of smoking amongst Aboriginal and Torres Strait Islander peoples in the Western Victoria PHN.</th>
</tr>
</thead>
<tbody>
<tr>
<td>48.2 per cent of Aboriginal and Torres Strait Islander persons aged 15 years and over in the Western Victoria PHN smoke daily, compared to 41.6 per cent across Australia (Australian Bureau of Statistics, 2015. Aboriginal and Torres Strait Islander Health Survey (Core component) 2012-13, Customised report. Canberra: ABS).</td>
</tr>
</tbody>
</table>

### Aboriginal and Torres Strait Islander health – social determinants

<table>
<thead>
<tr>
<th>On a number of indicators related to the social determinants of health, Indigenous persons or households with Indigenous persons are disadvantaged compared to all persons or other households in a number of localities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous persons or households with Indigenous persons are often disadvantaged on a number of indicators of the social determinants of health, relative to non-Indigenous persons and households. For example, the proportion of Indigenous persons aged 15 years and over who have completed Year 12 is less than that for non-Indigenous persons in all Statistical Area Level 3 (SA3) regions in the Western Victoria PHN (based on Australian Bureau of Statistics [ABS] 2011 Census of Population and Housing). Compared to all other households, the median weekly income of households with Indigenous persons is lower in all SA3s in the Western Victoria PHN except Creswick – Daylesford – Ballan and Surf Coast – Bellarine Peninsula (ABS 2011 Census of Population and Housing). Furthermore, the Indigenous unemployment rate at the time of the ABS 2011 Census of Population and Housing was higher than the non-Indigenous unemployment rate in all SA3s in the Western Victoria PHN except for Barwon – West (ABS 2011 Census of Population and Housing).</td>
</tr>
</tbody>
</table>

### Aboriginal and Torres Strait Islander health – pregnant women and newborns

<table>
<thead>
<tr>
<th>Compared to babies born to all women, a higher proportion of babies born to Aboriginal and Torres Strait Islander women are of low birth weight.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 2007 and 2011, 11 per cent of babies born to Aboriginal and Torres Strait Islander women were of low birth weight (not including multiple births) (National Health Performance Authority [NHPA], 2014. Healthy Communities: Child and maternal health in 2009-2012 report). Of babies born to Aboriginal and Torres Strait Islander women in the Medicare Locals which once serviced the Western Victoria PHN catchment, 13 per cent in the Barwon, 11.9 per cent in the Grampians, and 16.4 per cent in the Great South Coast region were of low birth weight (NHPA, 2014. Healthy Communities: Child and maternal health in 2009-2012 report). In contrast, of babies born to all women between 2009 and 2011, 4.8 per cent across Australia, 4.4 per cent in the Barwon Medicare Local, 5.2 per cent in the Grampians Medicare Local, and 5 per cent in the Great South Coast Medicare Local region were of low birth weight (not including multiple births) (NHPA, 2014. Healthy Communities: Child and maternal health in 2009-2012 report).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Compared to all women, a higher proportion of Aboriginal and Torres Strait Islander women in the Grampians Medicare Local region smoked during pregnancy.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 2007 and 2011, 15.5 per cent of all women in the Grampians Medicare Local region smoked during pregnancy, compared to 34.7 per cent of Aboriginal and Torres Strait Islander women in Victoria was not available for 2007 and 2008; data for Aboriginal and Torres Strait Islander women in the Barwon and Great South Coast Medicare Local regions was not published) (National Health Performance Authority [NHPA], 2014. Healthy Communities: Child and maternal health in 2009-2012 report). Across Australia, 51.7 per cent of Aboriginal and Torres Strait Islander women, and 13.9 per cent of all women smoked during pregnancy between 2007 and 2011 (NHPA, 2014. Healthy Communities: Child and maternal health in 2009-2012 report).</td>
</tr>
</tbody>
</table>
### Aboriginal and Torres Strait Islander health – pregnant women and newborns

Compared to all women, a lower proportion of pregnant Aboriginal and Torres Strait Islander women in the Grampians Medicare Local had at least one antenatal visit in the first trimester. In 2010-11, 21.8 per cent of pregnant Aboriginal and Torres Strait Islander women in the Grampians Medicare Local had at least one antenatal visit in the first trimester (data for the Barwon and Great South Coast Medicare Local regions was not published), compared to 36.6 per cent of all pregnant women (National Health Performance Authority [NHPA], 2014. Healthy Communities: Child and maternal health in 2009-2012 report). In contrast, 50.3 per cent of pregnant Aboriginal and Torres Strait Islander women and 67.2 per cent of all pregnant women across Australia had at least one antenatal visit in the first trimester (National Health Performance Authority [NHPA], 2014. Healthy Communities: Child and maternal health in 2009-2012 report).

### Population health – participation in the National Bowel Cancer Screening Program

Participation rates in the National Bowel Cancer Screening Program vary across the Western Victoria PHN. In 2014-15, the participation rate in the National Bowel Cancer Screening Program (NBCSP) was 43.1 per cent in the Western Victoria PHN catchment. This was the 5th highest participation rate amongst PHNs, and higher than the overall participation rates recorded for Australia (38.9 per cent) and Victoria (39.9 per cent) (Australian Institute of Health and Welfare analysis of the National Bowel Cancer Screening Program Register).

Amongst Statistical Area Level 3 regions in the Western Victoria PHN, the three lowest participation rates in the NBCSP for 2014-15 were recorded in Geelong (40.7 per cent), Creswick – Daylesford – Ballan (40.9 per cent), and Warrnambool – Otway Ranges (42 per cent) (Australian Institute of Health and Welfare analysis of the National Bowel Cancer Screening Program Register).

### Population health – participation in BreastScreen Australia program

Low participation rates in the BreastScreen Australia program in certain Statistical Area Level 3 regions in the Western Victoria PHN relative to national and Victorian state participation rates. In 2014-15, 55.5 per cent of females in the Western Victoria PHN aged 50 to 74 years participated in the BreastScreen Australia program. This was the 13th highest participation rate amongst PHNs, and higher than the overall participation rates recorded for Australia (53.8 per cent) and Victoria (52.6 per cent) (Australian Institute of Health and Welfare analysis of BreastScreen Australia data).

Amongst Statistical Area Level 3 regions in the Western Victoria PHN, the participation rate in the BreastScreen Australia program fell below both the national and Victorian state rate in Maryborough – Pyrenees (46.8 per cent) and Creswick – Daylesford – Ballan (51.7 per cent) (Australian Institute of Health and Welfare analysis of BreastScreen Australia data).

### Population health – participation in the National Cervical Screening Program

Low cervical screening rates in some Statistical Area Level 3 regions in the Western Victoria PHN relative to state and national screening rates. In 2015-16, the participation rate amongst women aged 20 to 69 years in the National Cervical Screening Program (NCSP) was 59.2 per cent in the Western Victoria PHN catchment. This was the 5th highest participation rate amongst PHNs, equal to the participation rate observed across Victoria (59.2 per cent), and higher than the national participation rate (56.4 per cent).
Population health – participation in the National Cervical Screening Program

Amongst Statistical Area Level 3 regions in the Western Victoria PHN, the participation rate in the NCSP in 2014-15 was below the Victorian state and national participation rates in Ballarat (56.1 per cent), Grampians (55.3 per cent), and Maryborough – Pyrenees (54.8 per cent) (Australian Institute of Health and Welfare analysis of state and territory cervical screening register data).

Aged care – access to aged care services

In some areas in the Western Victoria PHN, the proportion of persons claiming to have good access to aged care facilities is lower than that reported for rural and regional Victoria as a whole.

The 2015 Regional Wellbeing Survey found 68.5 per cent of persons in rural and regional Victoria reported having good access to aged care services. This figure is higher than that reported for several local government areas (LGAs) in the Western Victoria PHN, including Golden Plains Shire (37.8 per cent), Golden Plains and Moorabool Shire combined (47.1 per cent), Rural City of Ararat and Pyrenees Shire combined (50 per cent), Moyne Shire (61.4 per cent), City of Ballarat (62.8 per cent), Colac – Otway Shire (67.7 per cent), and City of Warrnambool and Moyne Shire combined (68.1 per cent) (2015 Regional Wellbeing Survey, Barwon South West and Grampians VIC region data tables, version 1.01, July 2016).

Relative to Victoria, there are fewer residential aged care places available per 1,000 persons aged 70 years and older in some local government areas in the Western Victoria PHN. In 2011, the number of residential aged care places per 1,000 persons aged 70 years and over was below the Victorian state rate (87.3 places) in six local government areas in the Western Victoria PHN, including the Borough of Queenscliffe (56.4 places), Pyrenees Shire (61.4 places), Moorabool Shire (61.5 places), Central Goldfields Shire (74.7 places), City of Ballarat (78.1 places), and Surf Coast Shire (83.8 places) (Compiled by the Public Health Information and Development Unit based on data from the Department of Health and Ageing, June 2011; and the Australian Bureau of Statistics Estimated Resident Population, 30 June 2011).

The number of Home Care Packages available per 1,000 persons aged 70 years and over varies across the Western Victoria PHN. There is considerable variation in the number of Home Care Packages available in Statistical Area Level 3 (SA3) regions in the Western Victoria PHN. For example, the SA3 with the most Home Care Packages per 1,000 persons aged 70 years and over in June 2015 was Geelong (44.5 packages), while Maryborough – Pyrenees had the least (“nil or rounded to zero”) (Australian Government Department of Health [unpublished] Aged Care Data Warehouse).

Mental health – prevalence of mental health conditions

High prevalence of mental health conditions.

The prevalence of mental health conditions and/or access to mental health services (see the ‘Outcomes of the service needs analysis’ section below) was one of the top issues of local concern in almost all rural service provider and community consultations. Specific findings on the prevalence of particular mental health conditions are presented below.

Mental health – psychological distress

The proportion of the population reporting to have high or very high levels of psychological distress exceeds that seen across rural Victoria as a whole in several local government areas.

In six local government areas (LGAs) in the Western Victoria PHN, the proportion of adults found to have high or very high levels of psychological distress was greater than that reported for rural Victoria as a whole (13.1 per cent of adults surveyed) (Victorian
Mental health – psychological distress

Population Health Survey 2014). These LGAs included Central Goldfields Shire (20.3 per cent), Northern Grampians Shire (19 per cent), Pyrenees Shire (17.8 per cent), City of Greater Geelong (15.8 per cent), Hepburn Shire (15 per cent), and City of Warrnambool (14.7 per cent) ([VPHS] 2014).

Mental health – anxiety and depression

High prevalence of anxiety and depression in some localities relative to rural Victoria as a whole.

In eight local government areas (LGAs) in the Western Victoria PHN, the lifetime prevalence of depression and anxiety amongst adults has been found to be higher than that reported for all rural regions in Victoria (22.4 per cent) (Victorian Population Health Survey 2011-12). The LGAs where the lifetime prevalence of anxiety and depression was found to be highest were Pyrenees Shire (26.6 per cent), Yarriambiack Shire (26.4 per cent), and Colac-Otway Shire (25.4 per cent) (Victorian Population Health Survey 2011-12).

Mental health – dementia and Alzheimer’s disease

Dementia and Alzheimer’s disease is a leading cause of death in the Western Victoria PHN.

Between 2009 and 2013, dementia and Alzheimer’s disease was the 3rd most common cause of death for all persons in the Western Victoria PHN. Dementia and Alzheimer’s disease accounted for 9.3 per cent of all deaths amongst females (2nd amongst all causes), and 4.2 per cent of all deaths amongst males (6th amongst all causes) (Australian Institute of Health and Welfare 2016. Mortality Over Regions and Time books: Primary Health Network, 2009–2013. Canberra: AIHW).

Mental health – suicide

Relative to Australia, a high proportion of all deaths in certain Statistical Area Level 3 regions in the Western Victoria PHN are due to suicide.

Between 2009 and 2013, 1.4 per cent of deaths in the Western Victoria PHN were the result of suicide, compared to 1.7 per cent across Australia. However, on an age-standardised basis, there were more deaths from suicide per 100,000 persons in the Western Victoria PHN (12 deaths) compared with Australia as a whole (10.8) (Australian Institute of Health and Welfare 2016. Mortality Over Regions and Time books: Primary Health Network, 2009–2013. Canberra: AIHW).

Across the Western Victoria PHN, there were more deaths from suicide amongst males than females. On an age-standardised basis, the Statistical Area Level 3 regions with the highest number of males suicides per 100,000 persons were Ballarat (25.7 deaths), Grampians (25.7), and Warrnambool-Otway Ranges (20.9). In contrast, there were 16.7 male suicides per 100,000 persons across Australia between 2009 and 2013 (Australian Institute of Health and Welfare 2016. Mortality Over Regions and Time books: Primary Health Network, 2009–2013. Canberra: AIHW).

Population health – childhood immunisation rates

The proportion of children who are fully immunised varies across Statistical Area Level 3 regions in the Western Victoria PHN.

Over the March, June, and September quarters of 2016, the proportion of one-year-old children on the Australian Childhood Immunisation Register (ACIR) who were fully immunised in the
Western Victoria PHN ranged from 93.78 per cent (March quarter, 9th amongst PHNs) to 95.29 per cent (September quarter, 6th amongst PHNs) (Australian Government Department of Health, ACIR statistics). In at least two of these quarters, the immunisation rate fell below the overall Western Victoria PHN rate in the Ballarat, Creswick – Daylesford – Ballan, Surf Coast – Bellarine Peninsula, Glenelg – Southern Grampians, and Warrnambool – Otway Ranges Statistical Area Level 3 regions (Australian Government Department of Health, ACIR statistics).

Over the March, June, and September quarters of 2016, the proportion of two-year-old children on the ACIR who were fully immunised in the Western Victoria PHN ranged from 92.32 per cent (June quarter, 11th amongst PHNs) to 93.39 per cent (March quarter, 1st amongst PHNs) (Australian Government Department of Health, ACIR statistics). In at least two of these quarters, the immunisation rate fell below the overall Western Victoria PHN rate in the Creswick – Daylesford – Ballan, Barwon – West, Geelong, Glenelg – Southern Grampians, and Warrnambool – Otway Ranges Statistical Area Level 3 regions (Australian Government Department of Health, ACIR statistics).

Over the March, June, and September quarters of 2016, the proportion of five-year-old children on the ACIR who were fully immunised in the Western Victoria PHN ranged from 94.18 per cent (March quarter, 11th amongst PHNs) to 94.88 per cent (June quarter, 8th amongst PHNs) (Australian Government Department of Health, ACIR statistics). In at least two of these quarters, the immunisation rate fell below the overall Western Victoria PHN rate in the Creswick – Daylesford – Ballan, Barwon – West, Grampians, and Warrnambool – Otway Ranges Statistical Area Level 3 regions (Australian Government Department of Health, ACIR statistics).

The proportion of Aboriginal and Torres Strait Islander children in the Western Victoria PHN who have been fully immunised has varied over the first three quarters of 2016. However, relative to other PHNs, immunisation rates have been low amongst five-year-old children.

Over the first three quarters of 2016, the proportion of one-year-old Aboriginal and Torres Strait Islander children on the Australian Childhood Immunisation Register (ACIR) who were fully immunised in the Western Victoria PHN ranged from 87.93 per cent (June quarter, 26th amongst PHNs) to 94.74 per cent (March quarter, 7th amongst PHNs) (Australian Government Department of Health, ACIR statistics).

Over the same period, the proportion of two-year-old Aboriginal and Torres Strait Islander children on the ACIR who were fully immunised in the Western Victoria PHN ranged from 78.43 per cent (March quarter, 30th amongst PHNs) to 98.18 per cent (September quarter, 1st amongst PHNs) (Australian Government Department of Health, ACIR statistics).

Over the first three quarters of 2016, the proportion of five-year-old Aboriginal and Torres Strait Islander children on the ACIR who were fully immunised in the Western Victoria PHN ranged from 80 per cent (March quarter, 31st amongst PHNs) to 89.66 per cent (June quarter, 28th amongst PHNs) (Australian Government Department of Health, ACIR statistics).
<table>
<thead>
<tr>
<th>Population health – persons with a disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>High prevalence of disability in certain localities in the Western Victoria PHN relative to Victoria and Victoria excluding Greater Melbourne.</td>
</tr>
</tbody>
</table>

5.6 per cent of people in the Western Victoria PHN have a profound or severe disability, compared to 4.7 per cent in Victoria, and 5.3 per cent in Victoria excluding Greater Melbourne. In four local government areas (LGAs) in the Western Victoria PHN, more than 7 per cent of people have a profound or severe disability. These LGAs include Yarriambiack Shire (8.8 per cent), Central Goldfields Shire (8.6 per cent), Shire of Hindmarsh (7.9 per cent), and Northern Grampians Shire (7.7 per cent) (compiled by the Public Health Information and Development Unit [PHIDU] based on the Australian Bureau of Statistics Census [ABS] 2011 (unpublished) data).

In addition, 4.5 per cent of people in the Western Victoria PHN have a profound or severe disability and are living in the community (excludes persons in long-term accommodation), compared to 3.9 per cent in Victoria, and 4.4 per cent in Victoria excluding Greater Melbourne. (compiled by PHIDU based on the ABS Census 2011). In four local government areas (LGAs) in the Western Victoria PHN, at least 6 per cent of people have a profound or severe disability and live in the community. These LGAs include Central Goldfields Shire (7.2 per cent), Yarriambiack Shire (6.8 per cent), Pyrenees Shire (6.2 per cent), and Northern Grampians Shire (6 per cent) (compiled by PHIDU based on the ABS Census 2011 (unpublished) data).
## Section 3  
### Outcomes of the Service Needs Analysis

**Identified Needs**

### Health workforce – general practitioner shortages and distribution

<table>
<thead>
<tr>
<th>Shortage of general practitioners</th>
<th>Uneven distribution of general practitioners</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a shortage in a number of localities across the Western Victoria PHN. Furthermore, there is an uneven distribution of general practitioners across Statistical Areal Level 3 regions.</td>
<td>There is a shortage of general practitioners in most Statistical Area Level 2 localities outside of Portland and Stawell; locales in and around Ballarat, Horsham, and Warrnambool; and the central and southern suburbs of Geelong (Australian Government Department of Health, District of Workforce Shortage data, last accessed October 17, 2016). The shortage of general practitioners outside of major population centres in the Western Victoria PHN was confirmed in the rural service provider and community consultations.</td>
</tr>
</tbody>
</table>

In 2014, there were 113.8 full-time equivalent (FTE) general practitioners (GPs) per 100,000 persons in the Western Victoria PHN, compared to 109.5 across Victoria. Amongst Statistical Area Level 3 regions in the Western Victoria PHN, Barwon-West (60.4), Maryborough-Pyrenees (70.7), and Creswick-Daylesford-Ballan (88.4) had the fewest FTE GPs per 100,000 persons (Australian Institute of Health and Welfare National Health Workforce Dataset).

### Health workforce – dentists

<table>
<thead>
<tr>
<th>Fewer dentists</th>
<th>Uneven distribution of dentists</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Western Victoria PHN has fewer dentists on a full-time equivalent basis per 100,000 persons compared with Victoria, and an uneven distribution of dentists across Statistical Area Level 3 regions.</td>
<td>In 2014, there were 40.5 full-time equivalent (FTE) dentists per 100,000 persons in the Western Victoria PHN, compared to 51.7 across Victoria. Amongst the eight Statistical Area Level 3 regions in the Western Victoria PHN for which data is published, Creswick-Daylesford-Ballan (10.6), Surf Coast-Bellarine Peninsula (24.9), and Maryborough-Pyrenees (29) had the fewest FTE dentists per 100,000 persons (Australian Institute of Health and Welfare National Health Workforce Dataset).</td>
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</tbody>
</table>

### Health workforce – occupational therapists

<table>
<thead>
<tr>
<th>Uneven distribution of occupational therapists</th>
<th>Fewest FTE occupational therapists per 100,000 persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is an uneven distribution of occupational therapists across Statistical Area Level 3 regions in the Western Victoria PHN.</td>
<td>In 2014, there were 55 full-time equivalent (FTE) occupational therapists per 100,000 persons in the Western Victoria PHN, compared to 47.8 across Victoria (Australian Institute of Health and Welfare [AIHW] National Health Workforce Dataset). Amongst the seven Statistical Area Level 3 regions in the Western Victoria PHN for which data is reported, Maryborough-Pyrenees (21.1), Surf Coast-Bellarine Peninsula (26.4), and Warrnambool-Otway Ranges (39.8) had the fewest FTE occupational therapists per 100,000 persons (AIHW National Health Workforce Dataset).</td>
</tr>
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</table>

### Health workforce – optometrists

<table>
<thead>
<tr>
<th>Fewer optometrists</th>
<th>Fewest FTE optometrists per 100,000 persons</th>
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<tbody>
<tr>
<td>The Western Victoria PHN has fewer optometrists on a full-time equivalent basis per 100,000 persons compared with Victoria, and an</td>
<td>In 2014, there were 15.5 full-time equivalent (FTE) optometrists per 100,000 persons in the Western Victoria PHN, compared to 16.8 across Victoria (Australian Institute of Health and Welfare</td>
</tr>
</tbody>
</table>
### Health workforce – optometrists

<table>
<thead>
<tr>
<th>Description</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uneven distribution of optometrists across Statistical Area Level 3 regions.</td>
<td>[AIHW] National Health Workforce Dataset. Amongst the six Statistical Area Level 3 regions in the Western Victoria PHN for which data is published, Surf Coast-Bellarine Peninsula (8.4), Glenelg – Southern Grampians (14.2) and Ballarat (15.6) had the fewest FTE optometrists per 100,000 persons.</td>
</tr>
</tbody>
</table>

### Health workforce – pharmacists

<table>
<thead>
<tr>
<th>Description</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Western Victoria PHN has fewer pharmacists on a full-time equivalent basis per 100,000 persons compared with Victoria, and an uneven distribution of pharmacists across Statistical Area Level 3 regions.</td>
<td>In 2014, there were 77.5 full-time equivalent (FTE) pharmacists per 100,000 persons in the Western Victoria PHN, compared to 82 across Victoria (Australian Institute of Health and Welfare [AIHW] National Health Workforce Dataset). Amongst Statistical Area Level 3 regions in the Western Victoria PHN for which data is reported, Barwon – West (34.9), Maryborough-Pyrenees (45.5), and Surf Coast-Bellarine Peninsula (45.6) had the fewest FTE pharmacists per 100,000 persons.</td>
</tr>
</tbody>
</table>

### Health workforce – physiotherapists

<table>
<thead>
<tr>
<th>Description</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Western Victoria PHN has fewer physiotherapists on a full-time equivalent basis per 100,000 persons compared with Victoria, and an uneven distribution of physiotherapists across Statistical Area Level 3 regions.</td>
<td>In 2014, there were 72.6 full-time equivalent (FTE) physiotherapists per 100,000 persons in the Western Victoria PHN, compared to 83.5 across Victoria (Australian Institute of Health and Welfare [AIHW] National Health Workforce Dataset). Amongst Statistical Area Level 3 regions in the Western Victoria PHN for which data is published, Maryborough-Pyrenees (14.8), Barwon-West (17.5), and Creswick-Daylesford-Ballan (20.9) had the fewest FTE physiotherapists per 100,000 persons.</td>
</tr>
</tbody>
</table>

### Health workforce - psychologists

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>The Western Victoria PHN has fewer psychologists on a full-time equivalent basis per 100,000 persons compared with Victoria, and an uneven distribution of psychologists across Statistical Area Level 3 regions.</td>
<td>In 2014, there were 72 full-time equivalent (FTE) psychologists per 100,000 persons in the Western Victoria PHN, compared to 81.4 across Victoria. Amongst the eight Statistical Area Level 3 regions in the Western Victoria PHN for which data is published, Surf Coast-Bellarine Peninsula (18.3), Grampians (24.7), and Maryborough-Pyrenees (20.8) had the fewest FTE psychologists per 100,000 persons.</td>
</tr>
</tbody>
</table>

### Access to health services – cost

<table>
<thead>
<tr>
<th>Description</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost acts as a barrier to people accessing health services.</td>
<td>Financial cost as a barrier to health service access was a prominent theme in the rural service provider and community consultations, as well as consultations with the Western Victoria PHN Community Councils.</td>
</tr>
<tr>
<td></td>
<td>Findings from a number of surveys lend support to these concerns. For example, amongst local government areas in the Western Victoria PHN catchment, the proportion of adults who did not visit or delayed visiting a dental professional due to cost exceeded that recorded for rural Victoria (31.2 per cent) in Hepburn Shire (37.9 per cent), Golden Plains Shire and Moorabool Shire (34.3 per cent).</td>
</tr>
</tbody>
</table>
### Access to health services – cost

<table>
<thead>
<tr>
<th>City of Greater Geelong (33 per cent), and Central Goldfields Shire (32.8 per cent) (Victorian Population Health Survey 2011-12).</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Australian Bureau of Statistics Patient Experience Survey found 5.976 per cent of persons aged 15 years and over in the Western Victoria PHN catchment did not see a general practitioner (GP) or delayed seeing a GP due to cost (13th amongst PHNs), and 7.732 per cent did not get prescription medication, or delayed getting a prescription filled for the same reason (16th amongst PHNs) (Australian Bureau of Statistics, 2015. Patient Experience Survey 2013–14, Customised report. Canberra: Australian Bureau of Statistics).</td>
</tr>
<tr>
<td>In 2014-15, 80.8 per cent of GP attendances in the Western Victoria PHN were bulk-billed – a lower figure than that reported in most PHNs (22nd overall). Amongst Statistical Area Level 3 (SA3) regions in the Western Victoria PHN, the proportion of GP attendances that were bulk-billed fell below the overall Western Victoria PHN rate in Barwon – West (69.7 per cent), Surf Coast – Bellarine Peninsula (75.9 per cent), Warrnambool – Otway Ranges (76.1 per cent), and Geelong (79.6 per cent) (Australian Institute of Health and Welfare analysis of Department of Human Services, Medicare Benefits statistics 2014–15).</td>
</tr>
</tbody>
</table>

### Access to health services – after-hours services

<table>
<thead>
<tr>
<th>Limited access to after-hours services in some localities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited access to after-hours services (such as general practice and mental health services) was raised as an issue of concern in consultations with the Great South Coast Community Council as well as the rural service provider and community consultations.</td>
</tr>
</tbody>
</table>

### Access to health services – mental health services

<table>
<thead>
<tr>
<th>Rural service provider and community consultations indicate there is limited access to mental health services in areas outside of the major population centres in the Western Victoria PHN. Access to mental health services is also hindered by issues around stigma and confidentiality.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to mental health services (high acuity services in particular) and professionals (especially psychologists and psychiatrists) were highlighted as key issues of concern in the rural service provider and community consultations. It was also noted during these consultations – particularly those held in the Great South Coast region – that stigma and concerns about privacy/confidentiality discourage people from accessing services for mental health conditions.</td>
</tr>
</tbody>
</table>

### Health workforce – ageing workforce

<table>
<thead>
<tr>
<th>A substantial proportion of general practitioners in the Western Victoria PHN are aged 55 years and over.</th>
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</thead>
<tbody>
<tr>
<td>In 2014, 38.2 per cent of general practitioners (GPs) in the Western Victoria PHN were aged 55 years and older, compared to 39.1 per cent across Victoria (Australian Institute of Health and Welfare [AIHW] National Health Workforce Dataset). Within Statistical Area Level 3 regions in the Western Victoria PHN, the proportion of GPs aged 55 years or older is greater than that observed across Victoria in Geelong (48 per cent), Maryborough – Pyrenees (45 per cent), Grampians (40.5 per cent), Glenelg – Southern Grampians (39.8 per cent), and Warrnambool – Otway Ranges (39.2 per cent) (AIHW National Health Workforce Dataset). This is a concern given most of these regions already have a shortage of GPs (see separate entry on ‘Health workforce – general practitioner shortages and...</td>
</tr>
</tbody>
</table>
### Health workforce – recruitment and retention

**Health service providers have reported difficulties recruiting and retaining health professionals.**

The difficulty of recruiting and retaining health professionals (and general practitioners in particular) was a common issue raised in the rural service provider and community consultations.

### Health workforce – specialists

**There is a shortage of specialists in a range of disciplines across a number of regions in the Western Victoria PHN.**

There is a shortage of specialists in the areas of anaesthetics, cardiology, diagnostic radiology, medical oncology and psychiatry in all Statistical Area Level 3 regions in the Western Victoria PHN outside of Ballarat and Geelong (Australian Government Department of Health, Districts of Workforce Shortage data, last accessed 17th of October 2016). Consultations with the Great South Coast and Wimmera Grampians Community Councils confirmed it is difficult to recruit and/or access psychiatrists in the western regions of the Western Victoria PHN.

There is a shortage of specialists in ophthalmology as well as obstetrics and gynaecology in all Statistical Area Level 3 regions in the Western Victoria PHN outside of Ballarat, Geelong, and parts of the Warrnambool – Otway Ranges region (Australian Government Department of Health, Districts of Workforce Shortage data, last accessed 17th of October 2016).

There is a shortage of specialists in general surgery in most local areas outside of Ararat and Stawell, Ballarat, Geelong, and parts of the Warrnambool – Otway Ranges region (Australian Government Department of Health, Districts of Workforce Shortage data, last accessed 17th of October 2016).

### Service coordination and communication

**Current communication practices do not always support optimal service coordination.**

The need to improve health service coordination and communication was a prominent theme to emerge from the rural service provider and community consultations. It was also raised as an issue by the Wimmera Grampians Community Council. Particular barriers to optimal care coordination included limited access to, and/or inconsistent utilisation of clinical management and secure messaging platforms, a lack of compatibility between different software packages, and the absence of clear and comprehensive directories of available health services.

Some of these observations appear to accord with findings from the Australian Bureau of Statistics (ABS) Patient Experience Survey 2013-14 concerning the coordination of care. For example, amongst persons in the Western Victoria PHN who received care from three or more health professionals, 65.456 per cent reported a health professional helped to coordinate their care. This is one of the lowest rates reported amongst PHNs (26th overall). Furthermore, when receiving care from three or more professionals, 15.391 per cent of people in the Western Victoria PHN reported experiencing “issues caused by lack of communication between health professionals” (17th highest amongst the 30 PHNs for which data is available) (ABS, 2015).
### Aboriginal and Torres Strait Islander health – Indigenous Health Checks (MBS Item 715)

| Low usage rate for Indigenous Health Checks, particularly in the former Barwon Medicare Local region. | In 2013-14, the Indigenous Health Check (Medicare Benefits Schedule item 715) usage rate (the number of Indigenous Health Checks billed to Medicare expressed as a percentage of the estimated Indigenous population) in the Western Victoria PHN was 15.4 per cent. This lagged the overall Australian usage rate of 21.3 per cent. Amongst the three Medicare Local regions now comprising the Western Victoria PHN, the highest Indigenous Health Check usage rate was recorded in the Great South Coast region (26.7 per cent), and the lowest in the Barwon region (5.7 per cent). This was also the case in the 2011-12 and 2012-13 periods (Australian Institute of Health and Welfare [AIHW], 2016. Indigenous health check (MBS 715) data tool. Canberra: AIHW. Accessed 24th of October 2016). |

### Digital health – My Health Record

| The proportion of the Western Victoria PHN population registered with My Health Record is higher than that seen across Victoria, however most people in the Western Victoria PHN have not yet registered. | As of the 25th of September 2016, 87,331 persons in the Western Victoria PHN had registered with My Health Record (My Health Record statistics by Primary Health Network, September 2016. Accessed from the Department of Health PHN data website), or about 14.5 per cent of the population (based on 2014 estimated residential population figures presented in: Australian Bureau of Statistics [ABS], 2016. National Regional Profiles, 2010-14. Canberra: ABS). By way of comparison, 779,214 consumers in Victoria had registered with My Health Record (My Health Record statistics by Primary Health Network, September 2016. Accessed from the Department of Health PHN data website), which equates to about 13.3 per cent of the statewide population (based on 2014 estimated residential population figures presented in: ABS, 2016. National Regional Profiles, 2010-14. Canberra: ABS). |

### Digital health – telehealth

| There are several practical barriers to the provision of telehealth services. | The potential for telehealth to facilitate greater access to health services was a recurrent theme in the rural service provider and community consultations. However, practical issues such as limited internet access and difficulties arranging telehealth consultations with second and third parties, such as specialist consultants, act as barriers to the utilisation of telehealth services. |

### Access to services – transport

| Distance to health services, the cost of travel, and limited public transport options hinder access to health services. | Transport was raised as an issue in almost all rural service provider and community consultations, as well as consultations held with the Western Victoria PHN Community Councils. It was noted that often there are limited public transport options and connections within and between settlements in Western Victoria. This acts as barrier to service access, as does the distances health consumers sometimes need to travel to access services, which consumes both time and money. This is a particular issue for health consumers travelling to Melbourne or larger regional centres such as Ballarat |
### Access to services – transport

Data compiled in the Victorian Department of Health 2013 Local government area profiles (based on data prepared by the Modelling, GIS and Planning Products Unit using ArcGIS, data from the ABS 2012 ERP, and 2013 transport location data from the then Department of Transport) and by the Public Health Information and Development Unit (PHIDU) based on Australian Bureau of Statistics (ABS) 2011 Census of Population and Housing data (dwellings without a motor vehicle) lends support to concerns expressed during consultations. For example, the proportion of dwellings without a motor vehicle is higher than that reported for Victoria excluding Greater Melbourne (6.5 per cent) in eight local government areas in the Western Victoria PHN catchment, including the City of Ballarat (7.8 per cent), Northern Grampians Shire and Rural City of Ararat (both 7.7 per cent) (compiled by PHIDU based on ABS Census of Population and Housing 2011).