The South Australian Population Health Survey is an important statewide survey which collects data using cross-sectional telephone surveys of South Australians on a monthly basis. Anyone with access to a phone can participate in the survey. In one year, around 7,000 South Australians are interviewed about their health and wellbeing.

Data are collected on overall health status, health service utilisation, chronic conditions, cancer prevention, disability and carers, risk factors (biomedical, protective and behavioural), food security, mental health, wellbeing and disadvantage and inequity. Data from this survey inform a major component of this biennial Chief Public Health Officer's Report.

The Population Health Survey is complimented by subscriber survey modules, where government and non-government organisations may submit a module(s) of questions to be included in a survey. Subscribers to the survey modules may be able to be provided with:

- prevalence or incidence data on new or emerging population health issues
- information which identifies target groups for interventions and campaigns
- information on the aetiology of specific health problems
- information on the acceptability and uptake of new initiatives and programs
- information for the evaluation of health interventions and programs.

For more information about the new South Australian Population Health Survey System, visit the SA Health website.
A report prepared pursuant to Section 23 of the South Australian Public Health Act 2011

SA Health has made every effort to ensure that the information provided in this report is up to date at the time of publication and does not accept responsibility for any errors or omissions.

Data within this report are accurate as to the date gathered, however data, comparisons and trends are subject to change over time.

Aboriginal is used respectfully in this report as an all-encompassing term for Aboriginal, Torres Strait Islander people, health and culture. The term Torres Strait Islander is specifically used in position titles and titles of publications and programs.

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Table of figures

Figure 1: South Australian Public Health Indicator Framework ................................................. 8
Figure 2: Proportion of South Australian adults aged ≥18 years reporting good or better self-assessed health status, good subjective wellbeing and psychological distress by Socioeconomic Index for Areas ................................................................. 12
Figure 3: Proportion of South Australian adults aged ≥18 years reporting chronic conditions by Socioeconomic Index for Areas .................................................................................. 13
Figure 4: Proportion of South Australians reporting the top five risk factors for burden of disease by age ................................................................. 15
Figure 5: Trend of top six leading causes of death, South Australia .............................................. 18
Figure 6: Top ten leading causes of total disease burden for South Australia compared with Australia .................................................................................. 19
Figure 7: Proportion of South Australian adults aged ≥18 years reporting the top five risk factors for burden of disease by Socioeconomic Index for Areas .................................................................................. 20
Figure 8: Proportion of South Australians aged ≥15 years reporting consuming soft drink per day and mean soft drink consumption per day ........................................................................ 21
Figure 9: Proportion of Aboriginal and non-Aboriginal people reporting daily smoking, by states and territories .................................................................................. 21
Figure 10: Proportion of South Australian adults aged ≥18 years who reported a body mass index classified as overweight or obese by lowest and highest Socioeconomic Index for Areas .................................................................................. 23
Figure 11: Proportion of South Australian children aged ≥5 to 17 years who reported a body mass index classified as overweight or obese and by lowest and highest Socioeconomic Index for Areas .................................................................................. 24
Figure 12: Proportion of South Australian children aged one to 17 years reporting consuming soft drink per day and mean soft drink consumption per day ........................................................................ 25
Figure 13: Proportion of South Australians aged 15 years and over who drank at levels that put them at risk or injury or disease over a life time .................................................................................. 26
Figure 14: Proportion of South Australians aged ≥18 years not meeting national physical activity guideline by Socioeconomic Index for Areas .................................................................................. 27
Figure 15: Proportion of South Australian children aged five to 17 years not meeting the national physical activity guideline by Socioeconomic Index for Areas .................................................................................. 27
Figure 16: Proportion of South Australian children aged five to 15 years reporting more than two hours screen time per day .................................................................................. 28
Figure 17: Proportion of South Australians aged ≤18 years reporting high blood pressure .................................................................................. 29
Figure 18: Proportion of South Australian adults aged ≤18 years reporting food insecurity .................................................................................. 35
Figure 19: Top five responses from people aged ≤18 years when asked ‘what were the benefits of spending time in nature?’ .................................................................................. 37
Figure 20: PM10 annual exposure in South Australia compared to interstate cities .................................................................................. 42
Figure 21: PM2.5 annual exposure in South Australia compared to interstate cities .................................................................................. 43
Figure 22: Notifications of Salmonella Havana, by week of illness onset, South Australia .................................................................................. 45
Figure 23: People tested for blood borne viruses in South Australian prisons as a proportion of admissions by reporting period .................................................................................. 54
Figure 24: People commencing treatment for hepatitis C in South Australian prisons by treatment type and 12 month reporting period .................................................................................. 55
Figure 25: Mean decayed or missing or filled teeth of 12 year old children attending the South Australian School Dental Service .................................................................................. 55
Figure 26: Infection rates caused by multi-resistant Gram-negative bacilli and extended-spectrum beta-lactamase and aggregated rates of carbapenem usage in five South Australian hospitals and national comparator hospitals over an 11 year period .................................................................................. 58
Figure 27: Proportion of South Australians aged ≥18 years reporting diabetes .................................................................................. 60
Figure 28: Top 10 notifiable infectious diseases reported in South Australia .................................................................................. 61
Acknowledgements

We acknowledge and respect the traditional custodians of country throughout South Australia and acknowledge the deep feelings of attachment and relationship they have to their ancestral lands.

This report has been prepared by the Knowledge Translation and Strategy Unit, Prevention and Population Health Branch, SA Health. The Chief Medical Officer and Chief Public Health Officer, Professor Paddy Phillips, together with the staff from the Knowledge Translation and Strategy Unit, wish to acknowledge that this report would not have been possible without the contribution and advice from many people from SA Health, other sectors, government departments, local councils and the communities they serve, the Local Government Association of South Australia and other organisations from across South Australia and Australia.

How the report is structured

The Chief Public Health Officer’s Report is comprised of three interlinked components:

> **The Report** – Highlights the wide spectrum of actions that impact public health and healthcare – from acting on the determinants of health at the earliest level of prevention through to specific actions designed to address prevention and remediation of identified health threats; through to dealing with the preventable burden of diseases and injuries once they have occurred.

> **The Data Compendium** – Throughout the report there are indicators at a glance, containing links to the statistical tables, figures and maps which are held in the Chief Public Health Officer’s Data Compendium. This compendium also provides definitions, terminology and further information on data sources and analysis.

> **The Compendium of Case Studies, Research and Achievements** – Summaries of some case studies and feature stories are highlighted in the report. This compendium showcases these in full, demonstrating the breadth of public health action in South Australia. A full list of case study titles within each section links you to this compendium.
October 2018

Hon Stephen Wade
Minister for Health and Wellbeing
Level 9, CitiCentre
11 Hindmarsh Square
ADELAIDE SA 5000

Dear Minister


Pursuant to Section 23 of the South Australian Public Health Act 2011, (the Act) I provide you with this report on the key public health trends, activities and indicators in South Australia; the implementation of the State Public Health Plan and the administration of the South Australian Public Health Act 2011.

This report describes the state of public health for South Australia including the protection of health, prevention and control of communicable disease and non-communicable disease, the promotion of wellbeing and risk factors to population health and wellbeing.

I acknowledge the work of the many public health practitioners contributing to the health and wellbeing of all South Australians and I commend the ‘Promote, Protect, Prevent’ – The Chief Public Health Officer’s Report 2016-2018 to you.

Yours sincerely,

Professor Paddy Phillips
Chief Medical Officer and Chief Public Health Officer
Presiding Member
South Australian Public Health Council
MESSAGE FROM THE CHIEF PUBLIC HEALTH OFFICER

South Australians experience good health and wellbeing. We have one of the safest and most advanced health systems in the world. Most of us can expect to live into our ninth decade with a happy, healthy and high quality of life.

But, this is not the same for all of us, all the time.

Many factors combine to affect our health and wellbeing. Whether we are healthy or not is often determined by our circumstances and our environment. To a large extent, factors such as where we live, the state of our environment, income and education level, and relationships with friends and family have considerable impacts on our health and wellbeing. Other factors such as access to health services are also important. These are the underlying determinants of our health and wellbeing.

For example, in general, people who experience poorer social or economic circumstances are at greater risk of poor health, have higher rates of illness, disability and death, and live shorter lives than those who have more advantaged circumstances. This is very important. It reflects how critical the determinants of our health are on health outcomes. To emphasise the social gradient impact on health, this Report (wherever possible) provides information through an ‘equity’ lens.

This reporting period presents significant achievements in public health.

> We see that while smoking prevalence can fluctuate on a year-to-year basis, a general downward trend was evident over time for all groups and notably, South Australia has one of the lowest daily smoking rates among Aboriginal adults aged 18 years and over in Australia.
> In addition, 16% of South Australians aged 15 years and over reported drinking at levels that put them at risk of disease or injury over a lifetime, this is a significant decrease since 2011.
> South Australia has the highest participation rates in Australia for the national bowel cancer screening, breast screening and cervical screening programs.
> In 2017, the South Australian Public Health Indicator Framework was released. This highly consulted framework provides us with a solid scaffolding to be able track how we are progressing now and into the future.
> Strengthened partnerships in public health action have delivered exciting initiatives and actions, many have arisen from the State Public Health Plan and local council’s regional public health plans, with several showcased throughout this report.

We have achieved much, but we cannot afford to be complacent.

South Australia, not unlike the rest of Australia, faces significant public health challenges, for example:

> Chronic conditions, mental illness and disorders and injuries continue to dominate our disease burden and Aboriginal people experience a higher rate of burden of disease than non-Aboriginal people across nearly all disease groups.
> The number of deaths from dementia and Alzheimer’s disease in South Australia has increased 84% over the past decade and nearly equals ischaemic heart disease as the leading cause of death. In South Australia the burden of dementia is higher than other jurisdictions.
> The proportion of South Australian adults who report being overweight or obese continues to increase and are the highest prevalence rates to date. In 2017 to 2018, for those who are the most disadvantaged, the proportion of adults who are obese in South Australia is now 37.5%. Furthermore, the proportion of South Australian adults reporting diabetes continues to increase and at the highest prevalence rates to date.
> Few South Australians of all ages meet physical activity guidelines and nearly one quarter of South Australian children exceed the recommended amount of sedentary screen-based activity.
> Chlamydia, a completely preventable disease, remains the second highest notifiable infectious disease in South Australia.
> With nearly 37,000 notifications, 2017 saw the highest numbers of influenza notifications reported to date.
We need to rethink how we achieve and maintain good health and wellbeing.

This is very different thinking to how we treat illness and disease and manage hospitals.

We know that the onset of many chronic conditions happens as we age. Risk factors, such as unhealthy weight and insufficient activity, also increase as we get older. Almost one-third of the overall disease burden could be prevented by reducing exposure to modifiable risk factors.

Therefore, if we can reorientate our thinking from what to do when we get sick, to optimising and maintaining health when we are well, to prevent us from getting sick in the first place, we can make considerable impact on the quality of life for everyone and, as a bonus by-product, considerable impact on the future demand on our hospitals.

We must start to think of our health and wellbeing within a prevention framework and build on our partnerships to:

- Provide supportive environments for healthy ageing for all South Australians and, fundamentally, start working on healthy ageing in early childhood.
- Provide environments to enable access to a healthy diet, regular physical activity and time for rest and sleep.
- Provide an enhanced focus on looking after each other, encouraging community connectedness and supportive, caring neighbourhoods and look after our mental health and wellbeing.
- Maintain and continue our vaccination coverage across the population, to bring an end to serious vaccine preventable diseases (such as measles and whooping cough).
- Continue the ongoing efforts to maintain clean water, air, earth and safe food which are critical in keeping all South Australians healthy.

The South Australian Public Health Act 2011 provides us with the ‘legislative infrastructure’ and mandate to do this. Enacted through the State Public Health Plan, we are starting to make inroads into building the prevention framework required to enable concerted action to address the public health and wellbeing challenges we face.

By continuing to work together we can look forward for optimal health, happiness and wellbeing for all South Australians in generations to come.

Professor Paddy Phillips
Chief Medical Officer and Chief Public Health Officer
‘An indicator will never completely capture the richness and complexity of a system’

The Chief Public Health Officer’s Report 2016-2018 and the Data Compendium have been framed on the South Australian Public Health Indicator Framework. This framework was developed following a wide consultation process for the purpose of monitoring the health and wellbeing of South Australians. It conceptually describes and identifies a range of information required to assess the scope and state of public health as articulated in the South Australian Public Health Act 2011.

Figure 1: South Australian Public Health Indicator Framework

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Figure 1: South Australian Public Health Indicator Framework

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1 Pencheon, D. The good indicators guide: understanding how to use and choose indicators. 2008, Association of public health observatories: Warwick UK.
The framework comprises process, short term (often referred to as ‘impact’) and long term (outcome) indicators. For most cases outcomes (long term) from public health action take substantial time to realise. For this reason, it is important to monitor progress against the process and impact indicators which, over time, will contribute to achieving the long term outcomes. As underlying principles, and whenever possible, measures are examined for indicators according to:

- disadvantage or inequity of health outcomes
- the health status of Aboriginal people
- small geographic areas for planning purposes.

What is missing?

Although, the South Australian Public Health Indicator Framework represents a wide scope of public health in South Australia, it does not cover all aspects of public health action and outcomes. Not every element of public health, undertaken by every relevant agency, can be included. This reflects the need for a manageable number of indicators in the framework.

The scope of the indicator framework does not include measures of:

- access to health services – which is often included as one determinant for health outcomes
- the contribution of partnerships (for example the South Australian government’s Health in All Policies approach or the mechanism of Public Health Partnership Authorities).

The indicator framework has also been devised based on input from public health stakeholders rather than driven by what data currently exist. This means data for measures of these indicators may be:

- available – but not at a level of geographic detail needed, not for specific (sub)populations of interest and/or not in a timely manner – shown as PM (Proxy Measure) in this report
- unavailable – shown as NDA (No Data Available) in this report.

The South Australian Population Health Survey

The South Australian Population Health Survey is an important statewide survey which collects data using cross-sectional telephone surveys of South Australians on a monthly basis. Anyone with access to a phone can participate in the survey. In one year, around 7,000 South Australians are interviewed about their health and wellbeing.

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- information on the acceptability and uptake of new initiatives and programs
- information for the evaluation of health interventions and programs.

For more information about the new South Australian Population Health Survey System, visit the SA Health website.
CHAPTER ONE
THE STATE OF PUBLIC HEALTH

This chapter covers the key public health trends, activities and indicators in South Australia for the reporting period July 2016 to June 2018.
Our mental health is also a fundamental state of our wellbeing. One indication of the mental health and wellbeing of a population is provided by measuring levels of psychological distress using the Kessler Psychological Distress Scale. On average, around 11% of South Australians report psychological distress each year. Reporting psychological distress varies between Socioeconomic Index for Areas – ranging from 14% for the most disadvantaged to 8% for those most advantaged.

When it comes down to the crunch, our wellbeing and quality of life is what health is all about!

Every aspect of our life influences our state of wellbeing and every aspect is interrelated. For example, a job provides not just money but purpose, goals, friendships and a sense of belonging. Some factors also make up for the lack of others; for example, a good marriage can compensate for a lack of friendships, while religious beliefs may help some people come to terms with physical illness.2

Our health is a state of wellbeing. It reflects the complex interactions of genetics, lifestyle and environment. Generally, our health depends on two things: determinants (factors that influence health) and interventions (actions taken to improve health, and the resources required for these interventions).

Measuring wellbeing in a population is difficult because the interpretation of ‘wellbeing’ can be quite subjective. On average, though, most South Australians report good wellbeing, good quality of life and report their health status as ‘good’ or ‘better’. However, the most disadvantaged populations are significantly less likely to report good wellbeing (73.2%) compared to the most advantaged (89.2%).

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Better Health Channel - Department of Health & Human Services, State Government of Victoria, Australia
Figure 2: Proportion of South Australian adults aged ≥18 years reporting good or better self-assessed health status, good subjective wellbeing and psychological distress by Socioeconomic Index for Areas, July 2016 to March 2018

Data source: South Australian Monitoring and Surveillance System

Five Ways to Wellbeing in Nature

Whilst most people know the simple things they can do to protect their physical health, people are less likely to know what they could do regularly to protect their mental health.

The 5 Ways to Wellbeing in Nature Campaign uses simple language and uplifting and inspiring visuals to demonstrate ways that every South Australian can look after their mental health and wellbeing, and the positive mental health benefits of spending more time in or with nature. As life becomes busier, people are becoming more and more stressed in their daily lives.

The campaign has been developed and promoted in partnership with a broad range of stakeholders and partners in the mental health and environment sectors and in particular, the Mental Health Commission and South Australia’s Suicide Prevention Networks.

The five ways are evidence based and universally applicable activities:

> connect,
> be active,
> take notice,
> keep learning, and
> give.
Inequality, disadvantage and economic mobility are related concepts that each affects health and wellbeing in different ways.

> Inequality affects people’s wellbeing through their values and preferences in relation to the societal distribution of resources as well as their expectations about acceptable living standards.

> Disadvantage (including poverty) directly impacts on wellbeing by limiting people’s ability to achieve the life outcomes they value.

> Economic mobility is an important indicator of the extent of, and access to, opportunities for people to improve their economic situation. Like the rest of the Australian population, there is clear evidence that health and illness are not distributed equally within the South Australian population. Variations in health status generally follow a gradient, with overall health tending to improve with socio-economic position. The gradient in health can also be seen in differing rates for many health risk factors; in the prevalence of many chronic diseases and conditions. In general, people from poorer social or economic circumstances in South Australia are at greater risk of poor health, have higher rates of illness, disability and death, and live shorter lives than those who are more advantaged.

---

Monitoring the demographics of South Australia’s population helps to understand health status across the population and to better prepare for the issues and demands of population change on health care. Indicators about our age, where we live, population growth and decline and cultural diversity have direct implications for priorities in service delivery and programs in preventing illness and improving health outcomes.

## Our demographic profile

### Indicators at a glance

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data Compendium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>&gt; The estimated resident population of South Australia at 31 December 2017 was 1,728,100 people. &lt;br&gt; &gt; Our population growth rate of 0.6% is below the national rate of 1.6% and is the second smallest of all states and territories. &lt;br&gt; &gt; Our rural and regional population growth rate is 0.2%.</td>
</tr>
<tr>
<td>Age</td>
<td>&gt; At June 2016, South Australia had a median age of 40.3 years. This was the second highest of all states and territories, behind Tasmania at 42.0 years.</td>
</tr>
<tr>
<td>Births and fertility rates</td>
<td>&gt; In 2016, there were 19,772 births in South Australia. &lt;br&gt; &gt; In 2016, the fertility rate in South Australia was 1.79.</td>
</tr>
<tr>
<td>Aboriginal population</td>
<td>&gt; The estimated resident population of Aboriginal people in South Australia is 42,265 people. This represents 2.5% of the total South Australian population. &lt;br&gt; &gt; The median age of Aboriginal people was 22.8 years.</td>
</tr>
<tr>
<td>Family composition</td>
<td>&gt; 27.9% of South Australian dwellings have one resident compared with 24.3% across Australia. &lt;br&gt; &gt; 35.3% of South Australian dwellings have two residents compared with 34.0% across Australia.</td>
</tr>
<tr>
<td>Cultural and linguistic diversity</td>
<td>&gt; 51.8% of South Australians had both parents born in Australia and 30.6% of people had both parents born overseas. &lt;br&gt; &gt; 78.2% of South Australians only spoke English at home. Other languages spoken at home included Italian 1.7%, Mandarin 1.7%, Greek 1.4%, Vietnamese 1.1% and Cantonese 0.6%.</td>
</tr>
<tr>
<td>Remoteness and population density</td>
<td>&gt; The majority of South Australia is considered to be very remote. The majority of regional and rural towns are considered to be within inner and outer regional Australia, the towns of Port Lincoln and Roxby Downs are considered to be remote and Ceduna and Coober Pedy are in very remote Australia. &lt;br&gt; &gt; South Australia’s density is 1.62 people per kilometre, which is ranked sixth most populated state in Australia. South Australia is one of the least densely populated states in the world.</td>
</tr>
</tbody>
</table>
Supportive environments for healthy ageing are now critical

With a median age of 40 years, South Australia has the second oldest population of all states and territories. By 2061 our median age is projected to increase whereby 50% of our population will be aged 50 years and over

The implications for our health and wellbeing as well as the impact on health services and our health workforce (which are now noticeable) will worsen exponentially if we do not pay attention to the preventable chronic diseases that develop as we age.

Risk factors such as unhealthy weight, insufficient physical activity and high blood pressure are more prevalent as we age. These risk factors combined contribute to a large proportion of the preventable burden of diseases in our population (such as diabetes, some cancers, cardiac and chronic respiratory diseases) and inevitably through to completely preventable hospital admissions.

A statewide focus on healthy ageing by providing the supportive environments to address these risk factors is now critical. Fundamentally, healthy ageing needs to start in childhood.

Figure 4: Proportion of South Australians reporting the top five risk factors for burden of disease by age 2016-2018

Data sources: South Australian Monitoring and Surveillance System, *Age groups for lifetime alcohol risk are 15-29, 30-49, 50-59, and 60+

Health promotion and supportive environments

Preventing disease and illness is fundamental to public health. Health promotion activities play a key role in helping people to stay healthy and prevent disease and illness by making it easier for our communities to choose healthy behaviours. Effective health promotion requires action across a range of sectors, such as education, environment, employment, as well as in health.

Working in the different settings that people live, learn, work and play allows programs and services to be targeted to specific groups, modified to suit the specific audience and can improve access.

Communities provide a wide range of opportunities for health promotion initiatives with the ability to target different segments of the population in collaboration with a variety of other organisations and stakeholders.

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4 Australian Bureau of Statistics - 3222.0 - Population Projections, Australia, 2012 (base) to 2101
Community Foodies

The Community Foodies program supports disadvantaged or vulnerable adults and their families to improve their nutrition knowledge and behaviours focusing on four key messages:

> eat more fruit and vegetables
> eat more whole (unprocessed) food
> drink more (tap) water
> eat breakfast every day.

The program is provided by UnitingCare Wesley Bowden with funds contributed from SA Health. UnitingCare Wesley Bowden uses trained peer volunteers to provide services across South Australia. Supporting UnitingCare Wesley Bowden in this work are local councils and other non-government organisations who engage Community Foodies to support their vulnerable clients.

Over the 2016 to 2018 period Community Foodies has been available in up to 15 locations across metropolitan Adelaide and from Mount Gambier to Roxby Downs. Approximately 500 separate sessions have been delivered and attended by more than 5,000 people.
The global measures

Indicators at a glance

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data Compendium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy</td>
<td>&gt; In 2016, life expectancy at birth for South Australian males was 80.4 years and for South Australian females, 84.5 years.</td>
</tr>
<tr>
<td></td>
<td>&gt; Australia-wide and for people born in the years 2010 to 2012, the total life expectancy of Aboriginal males was 69.1 years and for Aboriginal females was 73.7 years.</td>
</tr>
<tr>
<td>Standardised death rate</td>
<td>&gt; The standardised death rate gradually decreased over the period of 2006 (6.4 per 1,000) to 2017 in South Australia, and was 5.6 per 1,000 standard population for both years 2016 and 2017.</td>
</tr>
<tr>
<td>Causes of death</td>
<td>&gt; In 2017, the leading cause of death for South Australian males was ischaemic heart disease.</td>
</tr>
<tr>
<td></td>
<td>&gt; In 2017, the leading cause of death for South Australian females was dementia and Alzheimer disease.</td>
</tr>
<tr>
<td>Potentially avoidable deaths</td>
<td>&gt; In 2014 to 2016, the potentially avoidable deaths (age-standardised) were 102 and 119 per 100,000 people for Adelaide and country South Australia respectively, decreased slightly compared to 104 and 120 per 100,000 people for Adelaide and country South Australia respectively in 2013 to 2015.</td>
</tr>
<tr>
<td>Perinatal mortality</td>
<td>&gt; In 2016, the perinatal mortality rate for all birth (livebirths of any gestation and stillbirths of at least 400g birthweight/20 weeks gestation) was 8.7 per 1000 births in South Australia.</td>
</tr>
<tr>
<td>Low birthweight</td>
<td>&gt; In 2016, the percentage of low birthweight babies born in South Australia (&lt;2,500g) was 7.7%.</td>
</tr>
<tr>
<td></td>
<td>&gt; In 2016, the proportion of low birthweight babies was 15.0% among babies of Aboriginal women compared with 7.4% among babies of non-Aboriginal women.</td>
</tr>
</tbody>
</table>

Information about life expectancy and death rates and what we die from are vital measures of a population's health.

**Life expectancy is increasing**

Life expectancy is the most commonly used measure to describe population health and reflects the overall mortality level of a population. Life expectancy measures how long, on average, a person is expected to live based on current age and sex-specific death rates. In summarising mortality patterns, life expectancy is often expressed as the number of years of life a person born today is expected to live.

In South Australia our life expectancy continues to increase with life expectancy in 2016 for males at 80.4 years and life expectancy for females at 84.4 years.

Life expectancy at birth data by Aboriginal status are not available for South Australia. However, the national Aboriginal life expectancy compared to the total is provided here to give an indication of the gap between the populations. Australia-wide, the total life expectancy of Aboriginal males (69.1 years) and females (73.7 years) born in the years 2010-2012 is more than a decade lower than for all persons.

**Causes of death are changing**

Examining death patterns can help explain differences and changes in health status, evaluate health strategies, and guide planning and policy-making.

In 2017, there were 14,052 deaths in South Australia (7,090 males and 6,962 females). The leading cause of death was ischaemic heart disease (1,542 deaths), accounting for 11% of all deaths. While remaining the leading cause of death, the number of deaths from ischaemic heart disease has been steadily declining over the past decade. Dementia, including Alzheimer’s disease, is the second leading cause of death (1,530 deaths) accounting for 10.9% of all deaths and the leading cause of death for females. The number of deaths from dementia and Alzheimer’s disease has increased 84% over the past decade.

Cerebrovascular diseases (6.0%), cancer of the trachea, bronchus and lung (5.0%), chronic lower respiratory diseases (4.9%) and diabetes (3.2%) complete the top six leading causes of death. In total, the top six leading causes accounted for more 40% of all deaths in South Australia registered in 2017.

5 ABS, 3302.0.55.003 - Life Tables for Aboriginal and Torres Strait Islander Australians, 2010-2012
Table 1: Top ten underlying causes of deaths in South Australia, 2017

<table>
<thead>
<tr>
<th>Underlying causes of death and international classifications of diseases (ICD) code</th>
<th>Number</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Males</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ischaemic heart disease (I20-I25)</td>
<td>855</td>
<td>1</td>
</tr>
<tr>
<td>Dementia and Alzheimer disease (F01, F03, G30)</td>
<td>548</td>
<td>2</td>
</tr>
<tr>
<td>Malignant neoplasm of trachea, bronchus and lung (C33, C34)</td>
<td>414</td>
<td>3</td>
</tr>
<tr>
<td>Chronic lower respiratory diseases (J40-J47)</td>
<td>361</td>
<td>4</td>
</tr>
<tr>
<td>Cerebrovascular disease (I60-I69)</td>
<td>342</td>
<td>5</td>
</tr>
<tr>
<td>Malignant neoplasm of lymphoid, haematopoietic and related tissue (C81-C96)</td>
<td>266</td>
<td>6</td>
</tr>
<tr>
<td>Malignant neoplasm of prostate (C61)</td>
<td>266</td>
<td>7</td>
</tr>
<tr>
<td>Malignant neoplasm of colon, sigmoid, rectum and anus (C18-C21)</td>
<td>238</td>
<td>8</td>
</tr>
<tr>
<td>Diabetes (E10-E14)</td>
<td>219</td>
<td>9</td>
</tr>
<tr>
<td>Influenza and pneumonia (J10-J18)</td>
<td>181</td>
<td>10</td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dementia and Alzheimer disease (F01, F03, G30)</td>
<td>982</td>
<td>1</td>
</tr>
<tr>
<td>Ischaemic heart disease (I20-I25)</td>
<td>687</td>
<td>2</td>
</tr>
<tr>
<td>Cerebrovascular disease (I60-I69)</td>
<td>472</td>
<td>3</td>
</tr>
<tr>
<td>Chronic lower respiratory diseases (J40-J47)</td>
<td>323</td>
<td>4</td>
</tr>
<tr>
<td>Malignant neoplasm of trachea, bronchus and lung (C33, C34)</td>
<td>290</td>
<td>5</td>
</tr>
<tr>
<td>Malignant neoplasm of female breast (C50)</td>
<td>238</td>
<td>6</td>
</tr>
<tr>
<td>Diabetes (E10-E14)</td>
<td>238</td>
<td>7</td>
</tr>
<tr>
<td>Influenza and pneumonia (J10-J18)</td>
<td>221</td>
<td>8</td>
</tr>
<tr>
<td>Malignant neoplasm of colon, sigmoid, rectum and anus (C18-C21)</td>
<td>195</td>
<td>9</td>
</tr>
<tr>
<td>Malignant neoplasm of lymphoid, haematopoietic and related tissue (C81-C96)</td>
<td>182</td>
<td>10</td>
</tr>
</tbody>
</table>

Figure 5: Trend of top six leading causes of death, South Australia, 2008-2017

Data Source: ABS 3303.0 Cause of death, Australia 2017
Burden of disease is the impact of a disease or injury on an individual or a population. Burden of disease analysis quantifies the gap between a population’s actual health and an ‘ideal’ level of health – that is, every individual living in full health to the maximum possible lifespan – for all diseases at the same time.

Figure 6: Top 10 leading causes of total disease burden for South Australia compared with Australia, 2011

Data Source: Australian Burden of Disease Study. COPD=Chronic Obstructive Pulmonary Disease

Disease burden in South Australia are unchanged from the previous reporting period

Chronic conditions, mental illness and injuries continue to dominate South Australia’s disease burden.

The five disease groups causing the most burden were cancer, cardiovascular diseases, mental and substance use disorders, musculoskeletal conditions, and injuries; together accounting for 66% of the total burden in Australia, and 67% of the total burden in South Australia. Across nearly all disease groups, Aboriginal Australians experienced a higher rate of burden of disease than non-Aboriginal Australians.

South Australia had a slightly higher rate of age standardised total burden of disease (201.2 p/1,000 population) than the Australian rate (189.9 p/1,000 population). Individual diseases causing the greatest burden of disease in South Australia were coronary heart disease (8.2%) followed by dementia (4.1%). The contribution of dementia to the burden of disease in South Australia was higher than for any other jurisdiction.

Fatal burden is a measure of years lost due to dying prematurely and is important information for health planning and policy development. In Australia, fatal burden was 55% higher in the lowest socioeconomic group compared with the highest group in 2015.


A focus on the risk factors causing the most burden

Risk factors are attributes, characteristics or exposures that increase the likelihood of a person developing a disease or health disorder. Behavioural risk factors are those that individuals have the most ability to modify. Biomedical risk factors are bodily states that are often influenced by behavioural risk factors.

The Australian Burden of Disease Study 2011 found the single leading risks factors contributing to disease burden were:
- tobacco use (accounting for 9.0% of the total burden)
- high body mass index (BMI) 7.0%
- alcohol use (5.1%)
- physical inactivity (5.0%)
- high blood pressure (4.9%).

Almost one-third of the overall disease burden could be prevented by reducing exposure to these and other modifiable risk factors.

One risk factor can have an impact on many different diseases and ultimately health outcomes. Many diseases have common risk factors, and can also be risk factors for each other. Understanding the diversity of these complex relationships is important.

For example, overweight and obesity was responsible for 53% of diabetes burden, 45% of osteoarthritis burden and 38% of chronic kidney disease burden in 2011. An estimated 22% of breast cancer burden in females was due to overweight and obesity. All the risk factors combined (the joint effect) contributed greatly to the burden for endocrine disorders [including diabetes] (96%), cardiovascular diseases (69%), injuries (30%), kidney & urinary diseases (42%) and cancer (44%).

**Tobacco use**

Tobacco smoking is the single most important preventable cause of ill health and death in Australia. Tobacco smoke contains over 7,000 chemicals, of which over 70 cause cancer.

While smoking prevalence can fluctuate on a year-to-year basis, a general downward trend was evident over time for all groups. There was no statistically significant change in smoking rates from 2016 to 2017. The proportion of South Australians living in the lowest Socioeconomic Index for Areas quintiles (most disadvantaged) who reported smoking daily, weekly or less than weekly in 2017 was 24.0%.

**Figure 8: Proportion of South Australians aged ≥15 years reporting smoking daily, weekly or less than weekly, 2017**

![Graph showing the proportion of South Australians aged ≥15 years reporting smoking daily, weekly or less than weekly, 2007 to 2017. The graph shows a general downward trend over time. The data is presented in a table below the graph.]

<table>
<thead>
<tr>
<th>Year</th>
<th>Most disadvantaged</th>
<th>15-29 years</th>
<th>All South Australians</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>26.3</td>
<td>23.0</td>
<td>20.1</td>
</tr>
<tr>
<td>2008</td>
<td>28.6</td>
<td>23.4</td>
<td>19.5</td>
</tr>
<tr>
<td>2009</td>
<td>27.2</td>
<td>21.6</td>
<td>20.7</td>
</tr>
<tr>
<td>2010</td>
<td>28.2</td>
<td>22.9</td>
<td>20.5</td>
</tr>
<tr>
<td>2011</td>
<td>23.9</td>
<td>17.6</td>
<td>17.6</td>
</tr>
<tr>
<td>2012</td>
<td>25.1</td>
<td>18.2</td>
<td>16.7</td>
</tr>
<tr>
<td>2013</td>
<td>27.1</td>
<td>19.5</td>
<td>19.4</td>
</tr>
<tr>
<td>2014</td>
<td>20.1</td>
<td>14.8</td>
<td>15.7</td>
</tr>
<tr>
<td>2015</td>
<td>24.3</td>
<td>16.9</td>
<td>15.7</td>
</tr>
<tr>
<td>2016</td>
<td>21.6</td>
<td>12.3</td>
<td>14.9</td>
</tr>
<tr>
<td>2017</td>
<td>24.0</td>
<td>14.7</td>
<td>16.5</td>
</tr>
</tbody>
</table>

Data source: Health Omnibus Survey, Drugs and Alcohol Services South Australia

South Australia experienced the largest percentage point decrease over time of all the states and territories in Australia, and currently has one of the lowest daily smoking rates among Aboriginal adults aged 18 years and over in Australia.

**Figure 9: Proportion of Aboriginal and non-Aboriginal people reporting daily smoking by states and territories, 2014-2015**

![Graph showing the proportion of Aboriginal and non-Aboriginal people reporting daily smoking by states and territories, 2014-2015. The graph is divided into two categories: Aboriginal and Non-Aboriginal. The data is presented in a table below the graph.]

<table>
<thead>
<tr>
<th>State</th>
<th>Aboriginal</th>
<th>Non-Aboriginal</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>39.6</td>
<td>13.9</td>
</tr>
<tr>
<td>VIC</td>
<td>39.8</td>
<td>14.0</td>
</tr>
<tr>
<td>QLD</td>
<td>40.5</td>
<td>16.0</td>
</tr>
<tr>
<td>SA</td>
<td>38.2</td>
<td>13.4</td>
</tr>
<tr>
<td>WA</td>
<td>43.1</td>
<td>14.0</td>
</tr>
<tr>
<td>TAS</td>
<td>37.6</td>
<td>19.0</td>
</tr>
<tr>
<td>NT</td>
<td>43.9</td>
<td>18.4</td>
</tr>
<tr>
<td>ACT</td>
<td>35.7</td>
<td>11.9</td>
</tr>
<tr>
<td>AUST</td>
<td>40.6</td>
<td>14.5</td>
</tr>
</tbody>
</table>

Data source: 4714.0 National Aboriginal and Torres Strait Islander Social Survey, Australia, 2014–15
Exposure to passive tobacco smoke

In 2017, 66.4% of the South Australian population reported that they had been exposed to someone else’s cigarette smoking in the past two weeks, which was a significant increase from 2016 (63.0%)10.

In 2016 and 2017, the most common location for reporting being exposed to passive smoke in the last two weeks was building entrances, followed by outdoor seating at hotels/bars and outdoor entertainment areas.

Tobacco control

The supply and use of tobacco requires control to ensure that the risk of smoking uptake by younger people is reduced and that smoking is ‘de-normalised’ in the broader community, through supporting existing smokers to quit.

The SA Health, Health Protection Operations Unit:

> inspects tobacco retailers to ensure that sales to minors and display restrictions are observed
> supports local government to implement smoke-free areas through the authorisation of council officers to enforce requirements
> in conjunction with South Australia Police, SA Health monitors and implements measures to control emergent trends in smoking such as shisha bars, particularly ensuring smoking does not occur in enclosed spaces.

Over 2016 to 2018:

> of the 1,961 licenced retailers in South Australia 1,134 inspections were conducted
> 59 local government officers were authorised in South Australia to enforce smoking bans in seven council areas including significant areas of hospitality, entertainment and tourist precincts in the Greater Adelaide region and coastal beaches including Glenelg
> 97% of the 259 tobacco retailers tested complied with sales to minors laws
> 17 shisha bars were inspected over 40 times between 2016 to 2018, resulting in three expiation notices being issued and multiple directives to make changes to improve compliance with smoking laws particularly regarding the incidence of smoking in enclosed areas.

There has been an increase in regulated smoke-free areas, such as covered transport waiting areas and near children’s playgrounds. Local communities have been empowered to create designated smoke-free areas and events, which have included Henley Square, Bowden Town Square, Royal Adelaide Show and Moseley Square, Glenelg.

Smoke-free Henley Square and Bowden Town Square

Legislation under the Tobacco Products Regulation Act 1997 enables local councils and other incorporated bodies to apply to the Minister for Health and Wellbeing to have outdoor areas or events in their area declared smoke-free.

The City of Charles Sturt decided to commence this process for Henley Square in 2016 and in 2017 for the Bowden Town Square recognising that declaring the areas smoke-free would contribute to improved public health and increase the comfort and enjoyment of the areas. Survey results showed a high level of community support with over 80% of respondents saying they would be more likely to visit these spaces if they were smoke-free.

The City of Charles Sturt conducted a significant community education and media campaign to ensure that the community was aware of the smoke-free status of these areas. While authorised officers have the ability to issue expiations for breaches of the smoke-free areas, the council takes an educative and awareness raising approach to enforcement which is working well.

Photo courtesy City of Charles Sturt

Unhealthy weight

Overweight and obesity is a major public health issue in Australia. Australia’s measured obesity rate now ranks fifth among Organisation for Economic Co-Operation and Development countries\(^{11}\).

Overweight and obesity result from a sustained energy imbalance in the body, when energy intake from eating and drinking is greater than energy used through physical activity. It is influenced by a complex interplay of individual, environmental and societal factors.

Excess weight is a major risk factor for cardiovascular disease, type 2 diabetes, some musculoskeletal conditions and some cancers. As the level of excess weight increases, so does the risk of developing these conditions. In addition, being overweight can hinder the ability to control or manage chronic conditions\(^{12}\).

The combined burden of disease related to diet and unhealthy weight are now greater than that posed by tobacco smoking\(^{13}\).

Not unlike the rest of Australia, the proportion of South Australian adults who are classified as overweight or obese has increased.

> In 2017 to 2018, 56.6% of South Australian adults reported a body mass index classified as being overweight or obese, this is the highest proportion recorded in South Australia.

> Furthermore, 73% of South Australians are overweight or obese are from the lowest quintile (most disadvantaged) in the Socioeconomic Index for Areas. This has increased from 49.7% in 2002 to 2003.

Figure 10: Proportion of South Australian adults aged ≥18 years who reported a body mass index classified as overweight or obese by lowest and highest Socioeconomic Index for Areas, 2002-2003 to 2017-2018

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\(^{13}\) Tipping the Scales – Australian Obesity Prevention Consensus, www.opc.org.au/tippingthescales Obesity Policy Coalition 2017
Unhealthy weight in children

Childhood obesity is reaching alarming proportions in many countries, including Australia, and poses an urgent and serious challenge. Obesity can affect a child’s immediate health, educational attainment and quality of life. Children with obesity are very likely to remain obese as adults and are at risk of chronic illness\(^\text{14}\).

In 2016 to 2017, the proportion of children aged five to 17 years who reported a body mass index classified as overweight or obese was 26.4%, and this has remained relatively stable over the last 10 years.

> In 2016 to 2017, overweight and obesity in children is consistently reported as higher in the most disadvantaged population (33.7%) and this is more than double than that reported in the most advantaged population (14.6%).

![Figure 11: Proportion of South Australian children aged ≥5 to 17 years who reported a body mass index classified as overweight or obese and by lowest and highest Socioeconomic Index for Areas, 2002-2003 to 2016-2017](image)

Data source: South Australian Monitoring and Surveillance System

Healthy diet

The food and beverages we eat and drink (our diet) play an important role in our overall health and wellbeing. Diets that provide insufficient or excessive amounts of energy or nutrients can result in ill health. Health conditions that are often affected by our diet include coronary heart disease, stroke, high blood pressure, some forms of cancer and type 2 diabetes\(^\text{15}\).

Sugar sweetened drinks

The Australian dietary guidelines recommend that drinks containing sugar such as sugar sweetened ‘soft’ drinks, fruit drinks and energy drink be limited, and especially for children.

> In 2017 to 2018, 5% of South Australian children aged one to 17 years reported consuming soft drinks which has decreased over time from 23.5% in 2007 to 2008.

> Of those children reporting drinking soft drink, the mean consumption per day in 2017 to 2018 was just over half a litre, which has increased from a mean of 324 millilitres per day in 2007 to 2008.

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What is a healthy diet?

The National Health and Medical Research Council’s Australian Dietary Guidelines (2013) recommend consumption of a wide variety of nutritious food. Essential nutrients for good health are found in varying amounts in different food groups. Variety in a diet maximises the possibility of getting enough essential nutrients. The guidelines recommend adults, adolescents, and children should:

1. Be physically active, and choose amounts of nutritious food and drinks to meet energy needs.

2. Drink plenty of water, and enjoy a wide variety of nutritious foods from the 5 food groups every day, including:
   - plenty of vegetables, including different types and colours, and legumes/beans
   - fruit
   - grain (cereal) foods, mostly wholegrain and/or high fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa, and barley
   - lean meats and poultry, fish, eggs, tofu, nuts, seeds, and legumes/beans
   - milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under two).

3. Limit intake of foods containing saturated fat, added salt, added sugars, and alcohol.

4. Encourage, support, and promote breastfeeding.

5. Care for their food and prepare and store it safely.

Each guideline is considered to be equally important for effective public health outcomes.

For more information on the Australian Dietary Guidelines, go to the Eat for Health website at: www.eatforhealth.gov.au
Alcohol

In 2017, 16% of South Australians aged 15 years and over reported drinking at levels that put them at risk of disease or injury over a lifetime, a significant decrease since 2011 (19%).

- Lifetime risky drinking decreased significantly for men between 2011 (29%) and 2017 (24%).
- Lifetime risky drinking significantly decreased for women between 2014 (12%) and 2015 (9%) and remained stable in 2016 and 2017.

> In 2017, adults aged 40 to 49 years were most likely to report drinking at risky levels over a lifetime (22%), followed by those aged 50 to 59 years (20%).
> There were significant decreases in lifetime risk between 2011 and 2017 for those aged 15 to 19 (from 15% to 3.7%), 20 to 29 (from 24% to 14%), and 30 to 39 (from 21% to 14%) years.

Figure 13: Proportion of South Australians aged 15 years and over who drank at levels that put them at risk or injury or disease over a life time, 2011-2017

Data Source: Health Omnibus Survey, Drugs and Alcohol Services South Australia

Physical activity

Participating in regular physical activity and limiting the amount of time being sedentary can have significant health benefits – it reduces the risk of chronic conditions and other disease risk factors such as overweight and obesity, and also improves social and emotional health and wellbeing. While there are many opportunities to be physically active every day, our social, environmental and cultural context – as well as the settings in which we live, work and play – are important determinants of physical activity participation.\(^\text{16}\)

Figure 14: Proportion of South Australians aged ≥18 years not meeting national physical activity guideline by Socioeconomic Index for Areas, July 2016 to March 2018

![Graph showing proportion of South Australians not meeting physical activity guideline by Socioeconomic Index for Areas.]

Data source: South Australian Monitoring and Surveillance System.  
Physical Activity = % of respondents who DID NOT report at least 150 minutes of moderate intensity physical activity per week

Like the rest of Australians:

> few South Australians of all ages meet the physical activity guideline  
> participation rates in physical activity varied across socioeconomic groups  
> those in the highest socioeconomic group were more likely to meet the physical activity guideline, compared with those in the lowest socioeconomic group.

Physical activity in children

Participating in regular physical activity from an early age has proven benefits for the physical and mental development of young children. It is associated with better cardiorespiratory and musculoskeletal fitness, motor and cognitive development, psychosocial and emotional regulation and better overall quality of life.\(^\text{18}\)

Figure 15: Proportion of South Australian children aged five to 17 years not meeting the national physical activity guideline by Socioeconomic Index for Areas, July 2016 to March 2017

![Graph showing proportion of South Australian children not meeting physical activity guideline by Socioeconomic Index for Areas.]

Data Source: South Australian Monitoring and Surveillance System.  
Physical Activity = % of respondents who DID NOT report at least 60 minutes of at least moderate intensity physical activity per day

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18 Tremblay MS, Chaput J-P, Adamo KB, Aubert S, Barnes JD, Choquette L et al. 2017. Canadian 24-Hour Movement Guidelines for the Early Years (0–4 years): an integration of physical activity, sedentary behaviour, and sleep. BMC Public Health 17(Suppl. 5):874.
Sedentary screen based activity

Our children are spending more time than ever before sitting or lying down (known as sedentary behaviour), often because they’re using electronic media. All children spend time sitting at school, doing homework and reading. But it’s important to strike a balance and to find more opportunities for them to move. The Australian Government recommends that children aged five to 12 should spend no more than two hours a day in front of a screen for entertainment, including television, seated electronic games, portable electronic devices or computers.¹⁹

Figure 16: Proportion of South Australian children aged five to 15 years reporting more than two hours screen time per day, 2002-2003 to 2017-2018

Data Source: South Australian Monitoring and Surveillance System

> Nearly one quarter of South Australian children exceed the recommended amount of sedentary screen-based activity. Boys were more likely to exceed the recommended amount of sedentary screen-based activity.

> Children in the lowest socioeconomic groups were more likely to report more than two hours screen time per day.

Secombe Street Reserve Project: free or low cost sport and physical activity City of Playford

Cost is a significant barrier to participation in organised sport for people on low incomes, and this impacts upon physical activity levels.

The City of Playford has a 15% higher rate of physical inactivity than the Adelaide metropolitan average. Utilising sport as the vehicle, the Secombe Street Reserve Project worked within the local socio-economic environment to impact upon public amenity, social inclusion, and equity.

The City of Playford partnered with the Roger Rasheed Sports Foundation and local construction company ‘BluBuilt’ to bring the Secombe Street Reserve Project to fruition, including sport and recreation infrastructure enabling diverse sporting activities, playspace and other facilities for community use.

Council engagement with the community was essential to the project’s success and sustainability, building ownership of the site proposal, and support for activation strategies, including free coaching clinics, introduced at the site in July 2016. These clinics provide local children with exposure from an early age to sports facilities and equipment in their local community and opportunities to influence ongoing programming and site usage has also increased dramatically outside of clinic times.

The Secombe Street Reserve Project has has transformed a neglected and underutilised physical space into a well-used community sport and recreation resource for the Playford community, now and into the future.

How active should we be?

Australia’s Physical Activity and Sedentary Behaviour Guidelines recommend children aged five to 12 and young people aged 13 to 17 accumulate at least 60 minutes of moderate to vigorous intensity physical activity every day, and limit use of electronic media for entertainment to no more than two hours a day.

For adults aged 18 to 64, the guidelines recommend being active on most, preferably all days of the week, and accumulating 150 to 300 minutes of moderate intensity physical activity, 75 to 150 minutes of vigorous physical activity, or an equivalent combination of moderate and vigorous activities, each week. The guidelines also recommend minimising time spent sitting, and breaking up long periods of sitting as often as possible.

For healthy older Australians, the Department of Health’s Physical Activity Recommendations for Older Australians (65 years and older) advise that older Australians be physically active for 30 minutes every day.


High blood pressure

High blood pressure – also known as hypertension – is a major risk factor for chronic diseases including stroke, coronary heart disease, heart failure and chronic kidney disease. The risk factors for high blood pressure include poor diet (particularly a high salt intake), obesity, excessive alcohol consumption and insufficient physical activity. High blood pressure can be controlled with lifestyle measures and medication to reduce the risk of chronic disease20.

Like the rest of Australia, South Australia has seen the proportion of adults reporting high blood pressure increase over time. > In 2017-2018, 22.8% of South Australian adults reported high blood pressure which has increased from 18% in 2003-2004.

This section highlights some examples of action addressing the determinants of health at a statewide and local level.

Many factors combine to affect the health of individuals and communities. Whether people are healthy or not is determined by their circumstances and environment. To a large extent, factors such as where they live, the state of their environment, genetics, their income and education level, and their relationships with friends and family all have considerable impacts on health.

The determinants of health include the social, economic, physical and natural environment as well as individual characteristics and behaviours. Determinants of health act through complex and multidirectional pathways.

### Indicators at a glance

<table>
<thead>
<tr>
<th>Data Compendium</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social and economic environment</strong></td>
</tr>
</tbody>
</table>
| Income | > In 2015 to 2016, the average equivalised disposable household income in South Australia was $909 per week, and was similar as in 2013 to 2014 ($906), but was lower than the national average of $1,009 per week for 2015 to 2016.  
  > Households in the highest income quintile received 39% of total income in 2015 to 2016, compared to households in the lowest quintile that received just 8% of total income. The pattern has remained relatively stable over the past two decades. |
| Employment | > The seasonally adjusted unemployment rates in South Australia ranged from 6.4 to 7.3% in 2016, 5.7 to 7.1% in 2017, and below 6.0% since March 2018.  
  > The unemployment rate for South Australia aged 15 to 24 years old fluctuated and reached peak of 18.7% in May 2017, and stayed under 12.5% since March 2018, and was 12.0% in July 2018. |
| Education | > In 2017, the proportion of South Australians attaining at least one non-school qualification increased to 62.3% in 2017 from 53.2% in 2004 and is the lowest among all States.  
  > The proportion of Aboriginal and Torres Strait Islander people with a non-school qualification increased from 32% in 2008 to 47% in 2014. |
| Housing | > The proportion of low income rental households in South Australia spending more than 30% of their gross income on housing costs increased to 39.4% in 2015 to 2016 from 33.2% in 2013 to 2014, and it was 22.4% in 2007 to 2008. |

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21 World Health Organization, Health Impact Assessment, the Determinates of Health: http://www.who.int/hia/evidence/doh/en/
## Indicators at a glance

<table>
<thead>
<tr>
<th>Social and economic environment</th>
<th>Data Compendium</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Early childhood development</strong></td>
<td>&gt; In 2015, 12.2% of children were considered developmentally vulnerable on two or more domains, which was the third highest rate in Australia behind the Northern Territory and Queensland.</td>
</tr>
</tbody>
</table>
| **Social connectedness** | > In 2017 to 2018, 98.6% of South Australian adults reported having someone in their life whom they feel cares about them.  
> In 2017 to 2018, 77.5% of South Australian adults reported they believed that people in their neighbourhood trust each other. |
| **Contribution of carers** | > Of the 242,400 South Australian that were identified as carers in 2015, 74,800 (30.9% compared to 31.7% national figure) were identified as primary carers. The average age of primary carers was 56.0 years with 48.3 years for other carers, older than the Australia national averages which were 54.5 years and 48.2 years respectively. |
| **Health literacy** | NDA |

<table>
<thead>
<tr>
<th>Built environments</th>
<th>Data Compendium</th>
</tr>
</thead>
</table>
| **Public infrastructure** | > PM – In the 2016-2017 financial year, local government across South Australia spent $323.9million on supporting recreation infrastructure (including parks and gardens, indoor and outdoor sports facilities, swimming centres, community centres and halls) plus $114.8million on library services. Note: the data are for operating expenses only and data were unavailable from two local government area22.  
> PM – In the 2016-2017 financial year, local government across South Australia spent $87.1million on footpaths and kerbing. |
| **Active transport** | > The estimated metropolitan public transport patronage in 2015 to 2016 was 8.0% of total public transport and car use. The total patronage on the public transport system decreased by 0.1% for the 2016-2017 financial year.  
> In South Australia, the most common methods of travel to work in 2016 for employed people were: car, as driver 66.0%, car, as passenger 4.6% and worked at home 4.4%. Other common responses were bus 4.0% and walked only 2.8%. On the day, 7.2% of employed people used public transport (train, bus, ferry, tram/light rail) as at least one of their methods of travel to work and 72.3% used car (either as driver or as passenger).  
> The cycling participation rate in the last week was 14.0% in South Australia in 2017, which declined 2.4% from 2015 (16.6%), and is slightly below the Australia average for 2017 (15.5%). |
| **Food environments** | > 100% of food services (those with 20 or more sites in SA or 50 or more sites nationally where there is a minimum of five sites in SA) were compliant with legislated menu labelling requirements, per chain. |
| **Smoke free public spaces** | > In 2017, 66.4% of the South Australian population reported that they had been exposed to someone else’s cigarette smoking in the past two weeks, which was a significant increase from 2016 (63%). |

<table>
<thead>
<tr>
<th>Natural environments</th>
<th>Data Compendium</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality green public space</strong></td>
<td>NDA</td>
</tr>
<tr>
<td><strong>Streetscapes</strong></td>
<td>NDA</td>
</tr>
<tr>
<td><strong>Tree canopy</strong></td>
<td>NDA</td>
</tr>
</tbody>
</table>

22 Local Government Audit Commission 2016-17
## Indicators at a glance

<table>
<thead>
<tr>
<th>Safe environments</th>
<th>Data Compendium</th>
</tr>
</thead>
</table>
| Safety            | > In 2017 to 2018, 93.7% of South Australian adults reported that they see their neighbourhoods as safe places.  
> In 2017 to 2018, 97.9% of South Australian adults reported they feel safe in their own homes all or most of the time. |
| Injury prevention | > The age-standardised rates of potentially preventable hospitalisation in 2015 to 2016 were 2,638 and 2,906 per 100,000 people for Adelaide and country SA respective, which accounted for 36.4% and 30.4% of potentially preventable hospitalisations that are same day.  
> There were 189,834 hospital separations from July 2016 and June 2018 in South Australia, and accidents accounted for 52.0% and complications of medical and surgical care accounted for 39.2%.  
> SA Trauma Registry recorded 494 and 519 trauma cases in 2016 and 2017 respectively. In 2017, transport accident accounted more than half of the records (53.4%), followed by falls (29.9%). |
| Poisoning prevention | > The total number of calls to the Poisons information Centre from SA residents reduced 13% in 2017 compared to 2016.  
> Calls were similar in 2016 and 2017 for adults (45-46%) children (54-55%), or whether the callers were advised to staying home (60-61%) or seeking medical attention at GP or hospital (39-40%). |

## Case studies at a glance

**Compendium of Case Studies, Research and Achievements**

- Aboriginal environmental health programs
- Alternative transport: A beneficial aim for Adelaide
- Addressing food security and nutrition – City of Playford
- Baby Sling and Carriers Safety campaign
- Local liveability and safety: The City of Charles Sturt 40 km/h area speed limit project for local streets
- Connection to Country for Aboriginal Health and Wellbeing
- Coorong District Council: Coorong Healthy Highways initiative
- DeadlyKidsSA achievements
- The Tech Savvy Seniors SA Project
- ‘Feeling Hot Hot Hot! at Onkaparinga and Marion
- Healthy Kids Menu – D3 Challenge
- Healthy Parks Healthy People SA
- Health in All Policies at local government level: The Littlehampton and Blakiston Neighbourhood Plan
- Heat health intervention: an evaluation of the extreme heat warning for metropolitan Adelaide
- Improving individual and household food security outcomes in South Australia
- Public Health Partnership with SACOSS to tackle inequities
- Quality Green Open Space project
- Regional morbidity and mortality during heatwaves in South Australia
- Smoke-free Henley Square and Bowden Town Square
- Secombe Street Reserve Project: free or low cost sport and physical activity City of Playford
- Targeting health and social vulnerability to heat events with urban heat mapping
- The Summer Festival – City of West Torrens
Working on the determinants of health in partnership

The interconnectedness between the determinants of health requires strong and effective action by governments and societies. Health in All Policies offers us ways to confront major 21st century challenges to health and wellbeing.23

The South Australian Health in All Policies program

The Health in All Policies initiative makes clear the need to incorporate health concerns into all avenues of public administration and planning – reminding us that human wellbeing is not a matter for the health sector alone. Working across government, Health in All Policies has been at the forefront of healthy public policy making and delivery in a variety of areas, including urban planning, transport, maintaining the natural environment and action on obesity.

In 2017, South Australia’s Health in All Policies approach celebrated its 10 year anniversary. Policy-makers from across the government and non-government sectors shared their experiences of Health in All Policies practice on a global stage at the Adelaide International Health in All Policies Conference, co-hosted with the World Health Organization. The 150 delegates endorsed the Second Adelaide Statement on Health in All Policies, committing to build on Health in All Policies practice to advance the United Nations Sustainable Development Goals.

Mount Barker District Council, a fast-growing peri-urban area in the Adelaide Hills, is implementing initiatives to establish the foundational infrastructure for healthy communities and to strengthen community wellbeing. Strategic local area planning for small townships of Littlehampton and Blakiston showcases councils’ approach to addressing key determinants of health through its core business functions.

The Littlehampton and Blakiston Neighbourhood Plan was developed in response to community concerns about the quality of the public realm in the main street, heavy traffic, pedestrian safety, and access to public open space in the local area. The plan involves a range of projects to update and improve the public realm, encourage use of rejuvenated public space, boost walkability, active travel and leisure. It addresses the challenge of developing main streets (which have been traditionally been dominated by cars) for a people-centric future.

The Neighbourhood Plan is a Health in All Policies approach in the Local Government context, incorporating a number of strategies to improve community health and wellbeing, that strategically link areas not traditionally recognised for delivering ‘public health’ value, in addition the plan responds to public health priorities in the Southern and Hills Regional Public Health Plan “Wellbeing in our Community” (2015).

The plan has already delivered local level open space and will deliver new pedestrian crossings, walking/cycle routes and dedicated trails, redevelopment of the main street, and public realm renewal into the future. Local improvements will make it easier to move about, improve village character and facilitate quality development and provide places for people, support community life and protect the things that the community values24.

23 Outcome Statement from the 2017 International Conference Health in All Policies: Progressing the Sustainable Development Goals, World Health Organization and Government of South Australia, 2017

24
Why is social connectedness important for health and wellbeing?

Evidence of the possible health benefits of social connectedness is increasing.

Being part of a community can have a positive effect on mental health and emotional wellbeing. Community involvement provides a sense of belonging and social connectedness. It can also offer extra meaning and purpose to everyday life.

Building and cultivating social connections benefit both individuals and communities. People with extensive and strong support networks tend to have:

- better physical health through lower rates of unhealthy behaviours (such as smoking, drinking, and an inactive lifestyle)
- a lower prevalence of mental illnesses
- more job opportunities.

Social support is also important for buffering the effects of an adverse event or stressful life circumstance. Research shows that belonging to social groups and networks is just as important a predictor of health as diet and exercise.

**A focus on digital inclusion**

The online world is now a central part of modern life. Engaging with information and communications technology facilitates access to social networks, information and services that improve personal wellbeing and give people greater control over their lives.

Digital inclusion is about providing all Australians with access to digital infrastructure, services and products; and increasing confidence and ability to maximise their use and value. We know that the least frequent users of information and communications technology in South Australia include people living in regional and remote areas and that lack of access and use can exacerbate the cycle of disadvantage experienced in regional communities.

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**The Tech Savvy Seniors SA Project**

The funding and delivery of library services by councils is a significant, local-level social inclusion strategy, with associated health benefits. Libraries support health and wellbeing by promoting greater social connectedness and lifelong learning. There are approximately 90 public libraries in South Australia owned and operated by local councils.

In 2017, Tech Savvy Seniors, a joint initiative of the Office for the Ageing, Libraries Board of South Australia, Telstra, and Service SA, commenced digital literacy training in participating public libraries in SA, with the goals of increasing participation and confidence of seniors to actively participate in the digital community.

The SA pilot of Tech Savvy Seniors ran for six months across the Riverland region – identified via the 2017 Australian Digital Inclusion Index as an area for significant digital inclusion improvement. The pilot delivered 232 training sessions to 877 individuals across five library sites. It was run free of charge, and each participating council nominated suitable library staff to deliver group training sessions for seniors in the community. The group sessions were underpinned by a one-on-one technology assistance program whereby members of the community could book time with a library staff member or volunteer to explore a device or digital application. Libraries were provided with resources including guidelines, communication tools and an evaluation framework to help with the delivery of the program.

Immediate and sustained benefits of the program were reported by participants. These included greater confidence and skills in technology use and increased frequency of technology use, strengthened family relationships and community engagement, broadening information and social networks, and greater access to goods and services (including government services).

This digital literacy training program has been run or is ready to commence across multiple councils areas across regional SA, including Mount Gambier, Kingston, Murray Bridge, Bordertown, Naracoorte, Millicent, Mid Murray Mannum and Morgan, Port Lincoln, Port Pirie, Port MacDonnell, Whyalla, the Copper Coast – Kadina, Wallaroo, Moonta and Port Augusta. By May 2018 nearly 2,000 training places had been provided, with continuing positive digital and social inclusion results.

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Access to affordable and nutritious food – a focus on food security

Food security is a recognised public health issue. Like the rest of Australia, around one in 25 South Australians (4%) experiences food insecurity each year.

Individual and household food security is defined as the ability to acquire safe, appropriate and nutritious food on a regular basis, and using socially acceptable means, to live an active and healthy life. People may experience temporary periods of food insecurity in response to crisis; however, many people experience food insecurity as an ongoing (chronic) issue.

A variety of determinants can cause or perpetuate food insecurity, affecting the ability of a person to afford, store and prepare food. The factors that sustain food insecurity in the long-term are complex; however, in general, people living in poverty are at greater risk of food insecurity. Low income, housing affordability, chronic ill health, and high living costs are all determinants of both poverty and food insecurity.

Strong social, food and health policies and interventions are required to give everyone in South Australia the chance to enjoy healthy, sustainable and affordable food.

Figure 18: Proportion of South Australian adults aged ≤18 years reporting food insecurity, July 2007 to March 2018

Data Source: South Australian Monitoring and Surveillance System

27 Food insecurity in Australia: Implications for general practitioners, November 2015, Australian Family Physician Royal Australian College of General Practitioners

28 Improving individual and household food security outcomes in South Australia, Discussion Paper 2017, Government of South Australia
Improving individual and household food security outcomes in South Australia

Improving the food security and nutritional intake is a key theme under the Public Health Partnership Agreement with the Department of Human Services. As part of this agreement, a joint food relief research project undertaken found that the average time an individual accesses emergency food relief services is seven years, indicating this is a chronic, not acute, problem. The report also concluded that there was scope for food relief services to improve the nutritional quality of the food provided, and to support those accessing the services to learn about healthy eating, shopping, and cooking.

In response to the findings of the research report, a food relief sector engagement project was held to address food insecurity and build a shared vision for a charitable food system in South Australia. By engaging with key stakeholders such as Foodbank, UnitingCare Wesley Bowden, and the South Australian Council of Social Service, the project found that:

1. Food relief is an invaluable service for South Australians in need, both in crisis situations and for those chronically food insecure.
2. Chronic food insecurity is commonly due to people simply not having enough money.
3. Food relief clients are less likely to be able to access safe, nutritious, and culturally appropriate food.
4. Many small organisations provide food relief across South Australia and coordination and collaboration could help this network have a greater impact on food insecurity.

Food relief also needs to link to opportunities and services that provide a pathway out of food insecurity. Sector-wide standards for best practice are required, as are resources to help meet growing demand. The Department for Health and Wellbeing and the Department for Human Services are now working to develop a road map for implementing the recommendations. For further information refer: [http://dhs.sa.gov.au/services/community-services/affordable-living](http://dhs.sa.gov.au/services/community-services/affordable-living).

City of Playford: Addressing food security and nutrition

Health and wellbeing are central to the City of Playford’s vision for its community, as reflected in its Strategic Plan, Public Health Plan, Walking and Cycling Strategy, and large range of initiatives to promote good health and social connectedness. The council-run Playford Food Co-operatives (Food Co-ops) is part of the council’s comprehensive approach to healthy eating. It provides low-cost, essential groceries for people on low incomes, items packed down into smaller quantities and meal packs, and it responds to the key barriers of cost and access to local, quality fresh food for residents.

The Food Co-ops are open to the whole community ensuring that everyone has local access to healthy, low cost food and groceries and Food Co-op members receive a 5% dividend on purchases accrued for use.

The council’s 2014 review of the program indicated several changes to increase nutritional value, increase appeal and improve sales to the community. Less healthy options were removed, and new meals trialled via in-store taste testing and trial meal kits. The meal packs were redeveloped to meet nutrition criteria and extensive re-branding and marketing of Easy Meals was implemented. Easy Meals contain a recipe and all ingredients needed to make that meal.

Easy Meals are simple to create and (serving four people for $10.00 or less) allow budget family meal-planning while meeting strict criteria for total kilojoules, saturated fat and sodium. Since the redevelopment and rebranding commenced, 28 Easy Meals are now available and average monthly sales of meal kits have increased by 43%.

The City of Playford initiative demonstrates successful community-level action to build sustainable, healthy approaches to food justice.
A focus on the connections between our natural environment and our wellbeing

The health of our population is intrinsically linked to the state (or health) of our natural environment – the air we breathe, the water we drink and bathe in, and the soils our food grow in. It can be positively and negatively affected by human intervention and impact. It, in turn, can positively and negatively affect people and their physical and mental health. For example, green spaces and density are both good for health outcomes when designed well. Green infrastructure is a term that describes the network of green spaces and water systems that deliver multiple environmental, economic and social values and benefits to urban settlements. Green infrastructure includes parks and reserves, backyards and gardens, waterways and wetlands, streets and transport corridors, pathways and greenways, squares and plazas, roof gardens and living walls, sports fields and cemeteries.

The links between the natural environment and our health are intrinsic. A recent survey undertaken by the Department of Environment and Water and the Department of Health and Wellbeing asked South Australians: ‘What do you think are the benefits of spending time in nature?’, the highest response acknowledged the [mental] health benefits.

Figure 19: Top five responses from people aged ≤18 years when asked ‘what were the benefits of spending time in nature?’ 2018


Note Multiple responses allowed.

The Quality Green Open Space project

Making urban areas greener is recognised as an important public health issue providing multiple benefits including improved physical activity, mental health, social, cultural, environmental and biodiversity outcomes. For example, planting trees in parks, gardens or streets can have many benefits:
>
- help to cool cities
- filter air pollution
- provide habitat for some animals
- make people happier
- encourage walking.

The Quality Green Open Space project aims to have a shared understanding of the value of quality green open space and identify strategies for preserving green open space in the context of a changing urban environment. Many partners are involved, recognising the many sectors involved in the design, development and long-term management of green open space. The Australian Institute of Landscape Architects, SA Chapter are facilitating the development of design principles which advocate for early integration and collaboration between design, planning and governance of Quality Green Public Open Spaces. These principles respond to the multiple benefits which green spaces can provide including promoting health and wellbeing, supporting biodiversity, and mitigating the effects of climate change.

Discussions are also continuing for Green Infrastructure and Water Sensitive Urban Design principles to be incorporated in new development through changes to the planning system.

Climate change

The climate and changing/extreme weather events also impact on our health and wellbeing. Extreme weather events are classified as unusual weather events or phenomena that are at the extremes of a ‘typical’ historical distribution, such as violent storms, exceptionally high levels of rainfall, and heat waves or droughts that are longer or hotter than is typical. For example - extended heatwaves can also cause serious damage to our health, ecosystems, agriculture, businesses, infrastructure and communities. Impacts include compromised infrastructure, pressure on energy supplies, bush-fire risk, and disruption to transport networks and schools.

Few in the community are aware that heatwaves kill more people than any other natural disaster, with the highest death-rates and hospital admissions amongst the elderly, homeless, those with pre-existing medical conditions and the very young.

Targeting health and social vulnerability to heat events with urban heat mapping

The Cities of Charles Sturt, West Torrens, and Port Adelaide Enfield are implementing the Adapt West Climate Change Adaptation Plan so that communities, environment, businesses and industries of the Western Adelaide Region remain productive, connected and strong and can respond positively to the challenges and opportunities presented by a changing climate.

Partnerships with the Department for Environment and Water, Adelaide and Mount Lofty Ranges Natural Resource Management Board and the Coast Protection Board recently funded the AdaptWest regional coordinator to deliver on several priorities outlined in this plan. The AdaptWest Urban Heat Mapping initiative is one of the strategies.

Urban heat mapping provides evidence of where heat accumulates in the urban environment can be used to drive policy and funding decisions across multiple tiers of government regarding:
>
- emergency response planning: for local government and the health system (hospitals, ambulance services)
- investigating and responding to heat islands at individual lot level (including private homes), devising cooling strategies, tree preservation, plantings, energy use, water sensitive urban design
- communication for multiple stakeholder engagement including the incidence of both heat and cooling pockets through to heat mapping as a communications tool for enabling stakeholders to see evidence of different street treatments, green infrastructure or materials choice
- action to retrofit the urban environment, especially through water sensitive urban design, greening and cooling the environment
- longer term adaptation planning through:
  - planning system (State and local government), built environment and higher density living, design, retrofitting and development for cooling the public realm, urban forestry approaches, tree preservation and canopy protection, development planning to address tree loss, water sensitive urban design, built environment materials selection
  - other sectors, such as the housing sector – retrofitting homes for ageing in place, public housing passive design for energy efficiencies, the aged care sector and the energy sector.
AdaptWest has sought support from the Natural Disaster Resiliency Program to inform and protect vulnerable members of the community and to plan for the climate warming future. By correlating pockets of social vulnerability against heat islands in the environment, the urban heat mapping project can enable:
>
> strategic targeting of social vulnerability in extreme heat events
> better funding and planning decisions in relation to water sensitive urban design, targeted tree planting, and tree preservation
> better understanding of the impacts of urban heat on health and wellbeing.

Urban heat maps have been completed for Resilient South and AdaptWest, with Resilient East, Resilient Hills and Coast and Adapting Northern Adelaide also in progress. The Department for Water and Environment aims to have heat mapping for the entire Adelaide metropolitan area available online in October 2018 with significant benefits including economies of scale by monitoring under one process to make an entire picture available for metropolitan Adelaide.

**Feeling Hot Hot Hot! at Onkaparinga and Marion**

Engaging community members in an empowering, interactive conversation about preparing for heatwaves is part of broader regional commitments to preparing for climate change.

A heatwave hypothetical, ‘Feeling Hot Hot Hot! Dealing with Heat-waves in Southern Adelaide’ was held at the Marion Cultural Centre on 7 February 2018, to build community knowledge and capacity for responding to heat-waves, and to foster strong working relationships across organisations in southern Adelaide to respond to climate change.

Attendees learned about the impacts of extreme heat – including impacts on schools, business, transport and energy networks, councils and hospitals, and highlighted the importance of sustainable housing and design, urban forests and water sensitive urban design for cooling cities.

The event highlighted the work of many organisations that are working together to plan for and manage heatwaves, the strong, effective partnerships already in place and the role of different organisations in responding to extreme heat. The theme of volunteers and connected communities was explored to support those most ‘at risk’, with discussion about heat refuges in council buildings, services such as Telecross REDi and the importance of hydration and reduced exposure.

This joint initiative was delivered under a highly sustainable model that is integrated into ongoing council business via the City of Onkaparinga’s participation in Resilient South, a partnership between southern Adelaide councils (Cities of Holdfast Bay, Marion, Mitcham and Onkaparinga) and the Government of South Australia. Resilient South partners have worked together since 2011 to strengthen the region and build resilience to climate change.
Safe environments – a focus on injury prevention

Injury is a leading cause of mortality, morbidity and permanent disability that affects the quality of life of injured people and their families. Injury has a major, but often preventable, impact on South Australia’s health. It affects South Australians of all ages and leaves many with serious disability or long-term conditions.

Local liveability and safety: The City of Charles Sturt 40 km/h area speed limit project for local streets

The 40 km/h area speed limit project for local streets in the City of Charles Sturt is a council-led initiative to address ongoing community road safety concerns. Between 2010 and 2015 there were 487 casualty crashes and 1,500 property crashes on the local roads in the City of Charles Sturt.

The project was conceived in late 2015 in response to continued community requests for traffic management that provided an alternative to physical controls. Collaboration between council and residents identified the level of support and any underlying road-related issues driving decisions to install lower speed limits in a particular area. The project involved installation of speed limit signs at access points to selected local areas bounded by major traffic routes and other significant features, such as rail lines or geographical boundaries.

The project was delivered in nine 40 km/h areas within the council, in addition to the four existing 40 km/h areas. The project is part of council’s commitment to meeting the State Government’s objective of reducing crashes by 30% by 2020. Delivery in three more adjoining suburbs is under review by the State Government.

The project has already had an impact on the community with decreases of 79% and 29% of total crashes in the Woodville West and Bowden areas respectively.

Benefits will grow as more council areas have local speed limits reduced. The low cost of signs means that improvements render a very high cost benefit ratio. The project also helps to identify locations that still require physical works to address unacceptable safety and amenity issues.

The 40 km/h area speed limit project for local streets was implemented on a smaller, more targeted scale, however the City of Charles Sturt has approached the neighbouring councils of Port Adelaide Enfield and West Torrens, to work together to lower speed limits in suburbs that are shared between multiple road authorities.

Baby Sling and Carriers Safety campaign

Since 2010, there have been three infant deaths in South Australia associated with the use of baby slings31. Babies can be at risk of suffocation if baby slings and carriers are not used correctly or if the wrong size or type is used. Falls can also be a concern. There are no safety standards in Australia for baby slings, yet they are a widely used consumer product. Many parents purchase baby slings and carriers over the internet and there are conflicting instructions online about their safe use. An intensive campaign was established in South Australia in late 2017 to address these issues. It was important to ensure parents and caregivers have access to reliable information to help understand and recognise the possible risks, and how to use baby slings and carriers safely.

Working closely alongside Kidsafe SA and other stakeholders, a number of campaign products were developed to promote the key messages on the safe selection and use of baby slings and carriers. Key to the campaign was a safety video with clear depictions of the types of slings available, signs of baby distress and easily understandable information on safe use.

The video received successful traction on Facebook, along with the other campaign messages, reaching over 5,700 people. The key messages incorporated were the widely-recognised “TICKS” guidelines for safe sling use, and the “Visible and KissableTM” memory aid (that means... CHIN UP, FACE VISIBLE, NOSE AND MOUTH FREE). The campaign also advised on specific populations at risk of harm, including babies less than four months of age and premature infants.

Providing safer physical and social environments for children, including raising awareness about the risk factors and impacts of child injuries is critical as many childhood injuries are preventable. Preventable injuries are higher amongst children compared with other age groups32.

The partnership with Kidsafe SA highlights collaborative public health action and strengthens the development of prevention strategies to respond to emerging public health risks and trends.

32 Visible and Kissable is a trademark of BCIA, registered in the USA.
This section highlights some examples of action happening to address the fundamental requirements for good health at a statewide and at the local level.

**Indicators at a glance**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data Compendium</th>
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<tbody>
<tr>
<td>Water</td>
<td>&gt; In 2016 to 2017, there were two Priority Type 1, 48 Type 1 and 159 Type 2 incident notifications reported against the interagency Water/Wastewater Incident Notification and Communication Protocol, South Australia.</td>
</tr>
<tr>
<td>Air</td>
<td>&gt; Levels of PM10 in South Australia (Whyalla, Port Pirie and Adelaide) are tracking under 20 µg/m³, the goal for 2025.</td>
</tr>
<tr>
<td>Food</td>
<td>&gt; In 2016 to 2017, there were 32 food safety investigations affecting South Australian residents with four SA based food recalls.</td>
</tr>
<tr>
<td>Animals / pests</td>
<td>&gt; Over the last five years, the frequency of dog related incidents requiring hospitalisation has increased by more than 85%, 230 admissions in 2011 to 2012 to 417 admissions in 2016 to 2017, with an increase of more than 30% in 2016 to 2017 from 2015 to 2016 (340 admissions).</td>
</tr>
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</table>
| Chemical          | > The average blood lead level (geometric mean) of the children tested in 2017 is 4.5 µg/dL. This average has increased by 0.2 µg/dL when compared to the same reporting period last year.  
> The average blood lead level (geometric mean) of children aged 24 months tested in 2017 is 5.6 µg/dL, which has increased by 0.2 µg/dL compared to the same reporting period last year. |

**Case studies at a glance**

**Compendium of Case Studies, Research and Achievements**

- Air quality
- Alexandrina wastewater - sustaining and improving public and environmental health protection
- Lead paint awareness campaign
- Mosquito control and arbovirus prevention
- Protection against environmental hazards - per- and polyfluoroalkyl substances (PFAS)
- *Salmonella* Havana
A focus on safe, clean air

Good air quality is important for our health. Air becomes polluted when it contains gases, particles, dust or fumes in amounts considered harmful to humans and animals or damaging to plants and natural materials. A large body of research worldwide has shown that air pollutants can cause cancer and impact cardiovascular and respiratory health (particularly asthma).

Australia has national air quality standards, known as the National Environment Protection Measure for Ambient Air Quality. These standards set the acceptable levels of key pollutants, which are monitored at 75 sites across all states and territories. Despite enforced standards, adverse health impacts from air pollution cannot be totally prevented.

The air pollutants for which standards are set are:

- particulate matter (PM) with a diameter of 10 microns and less (PM10), and
- particulate matter (PM) with a diameter of 2.5 microns and less (PM2.5).

Nitrogen dioxide (NO₂), ozone (O₃) and sulphur dioxide (SO₂) have been targeted due to their universal nature and are emitted during industrial, transport, domestic and bushfire-related combustion.

Figure 19 shows that annual levels of PM10 in South Australia (Whyalla, Port Pirie and Adelaide) are tracking under 20 µg/m³, the goal for 2025.

Figure 20 shows the annual levels for PM2.5 in 2015 have recently increased in all cities, mostly due to a change in the measurement method which is reportedly more accurate. Increases in wood smoke, motor vehicle exhaust, weather inversions in winter and bushfire-related smoke in summer may also be part of the problem.
Figure 21: PM2.5 annual exposure in South Australia compared to interstate cities

Data source: South Australian Environment Protection Authority
The investigation into this outbreak was successfully managed as a result of partnerships established between multiple teams within SA Health, across the state and across the nation, namely:

> SA Health
  - Food and Controlled Drugs Branch
  - Communicable Diseases Control Branch
  - Media and Communications Branch
  - Legal Governance and Insurance Services
> local government council environmental health officers
> other State Government departments
  - Biosecurity SA, Department of Primary Industries and Regions South Australia
  - Food & Environmental Laboratory, SA Pathology
  - Salmonella Reference Laboratory, SA Pathology
> National Food Investigation Networks
  - National Food Incident Response Protocol – food regulators
  - OzFoodNet – epidemiologists.

A critical part of any outbreak investigation is to find the balance between protecting the health of the public, as the main aim, and ensuring there is solid evidence to prove the source of an outbreak. This requires significant involvement of several areas within SA Health to discuss the risks and to also establish a clear message to be communicated to the public. Media releases and social media included recommendations for the public to not eat these sprouts, return them to the place of purchase for refund or throw them away.

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**Safe food**

Access to safe food is fundamental to health. It is declared unsafe when its contamination is likely to physically harm a person who consumes it. Some food is contaminated through exposure to microbes, chemicals, biotoxins and other pollutants in the air, water or soil. Contamination can also occur when foods are not correctly handled before consumption, such as during production, packaging and preparation.

**Salmonella Havana**

During June 2018, an increase in *Salmonella* Havana notifications were detected through routine surveillance by the Communicable Disease Control Branch. No increase in cases was noted in any other Australian states. Human infections with *Salmonella* Havana are relatively infrequent in Australia and no previous outbreaks have been attributed to *Salmonella* Havana in Australia. Internationally, only one other outbreak was reported – a 1998 report from the United States of America which linked *Salmonella* Havana to alfalfa sprouts.

A total of 31 cases of *Salmonella* Havana were reported between 1 June 2018 and 9 July 2018. Cases were from both rural South Australia (17 cases) and metropolitan Adelaide (14 cases). The median age of cases was 65 years and 11 cases were hospitalised.

Initial interviewing of cases by trained Communicable Disease Control Branch staff was conducted using a hypothesis generating questionnaire. Interviews identified that several people had eaten at a particular food service business, and a higher than expected number of people reported they had consumed alfalfa sprouts during their incubation period.

Trace back investigation by local council environmental health officers identified sprouts as a frequently used ingredient in meals consumed by cases at the food service. Further trace back and sampling was also completed by local council environmental health officers from other food service businesses and retail grocers implicated by cases. Investigations were conducted at alfalfa sprout producers by SA Health in conjunction with Biosecurity SA, Department of Primary Industries and Regions South Australia (who are the regulators of the primary producers).

Samples of alfalfa sprouts collected from retail grocers and an alfalfa sprout producer tested positive for *Salmonella* Havana. An epidemiological study was completed and supported alfalfa sprouts as the most likely source of the outbreak. A recall on the implicated brand of alfalfa sprouts was undertaken. Several follow-up inspections of the producer were conducted by the Food and Controlled Drugs Branch and Department of Primary Industries and Regions South Australia.
Figure 22: Notifications of Salmonella Havana by week of illness onset, South Australia, 1 January 2018 to 30 August 2018

Data source: SA Health’s Communicable Disease Control Branch notifiable disease dataset.
Pest management

A pest is any animal or plant which has a harmful effect on humans, their food or their living conditions. Pests include animals which:

- carry disease-causing micro-organisms and parasites, for example, mosquitoes which carry Ross River virus and Murray Valley encephalitis
- damage stored food, for example, rats and mice may eat grain in silos, rice or biscuits in shops and homes and contaminate this food with their faeces (droppings) and urine
- bite people, for example, bed bugs (so called because they often bite people in their beds) are very difficult and expensive to control. Their bites cause irritation to those bitten and, like mosquito bites, can become infected if scratched.

There are thousands of different kinds of pests which are harmful to humans. The great majority of these are types of insect.

Mosquito control and arbovirus prevention

Ross River virus and Barmah Forest virus are endemic in many parts of South Australia. These viruses are spread from animals to humans by mosquitoes and infection can result in flu-like symptoms, headache, muscle aches, swelling, pain, and stiffness of the joints. Occasionally, large outbreaks of disease caused by these viruses occur in South Australia. SA Health has several programs in place to reduce the incidence of mosquito borne disease in South Australia.

South Australian mosquito subsidy program

Since the summer of 2000 to 2001, SA Health has operated a subsidy program to assist local councils with their mosquito management activities, including surveillance and control, on public land (including crown land) within their jurisdictions. The subsidy program retrospectively funds up to half of the costs of mosquito management undertaken by or on behalf of any South Australian local council on public land with most funding directed towards larval and adult mosquito surveillance.

Globe Derby Park mosquito management program

Since 2010, SA Health has coordinated an ongoing proactive mosquito management program in a small area of intertidal salt marsh adjacent Globe Derby Park. The program aims to reduce the adult mosquito population within Globe Derby Park, by disrupting larval development and preventing the subsequent emergence of adult mosquitoes within the treatment site. During the 2017 to 2018 mosquito season, two trials of mosquito larvicides were undertaken by fixed wing aircraft in the intertidal salt marsh adjacent to Globe Derby Park. The success of these trials has resulted in the ongoing replacement of the ground based management program.

The South Australian sentinel chicken surveillance program

Sentinel chicken surveillance programs are used nationally and internationally to monitor for viruses which can cause serious mosquito borne diseases. In South Australia, the viruses of concern are Murray Valley encephalitis virus and Kunjin virus. The South Australian Sentinel Chicken Surveillance Program consists of six backyard flocks of five chickens located in the Murraylands and Riverland regions, who are tested monthly from October to April each year. The blood samples are sent to New South Wales for testing for Murray Valley encephalitis virus and Kunjin virus antibodies, which if present indicate that the chicken has been bitten by a mosquito carrying the virus. No seroconversions for Murray Valley encephalitis virus and Kunjin virus have been recorded to date.
Protection against chemical hazards

Chemicals are used and provide benefits every day in Australia. While many chemicals in use are of low concern, some chemicals may be harmful to the environment and human health if not managed appropriately. All the processes in the lifecycle of a chemical—from production through use, transport, storage, disposal and recovery—can lead to exposure of the environment. Sound management of chemicals prevents, reduces or minimises the harmful effects of chemicals on the environment and human health over the chemical's whole lifecycle. Sound management involves policy development and best practice regulation including risk assessment, risk management, assurance, monitoring, and evaluation.

Exposure to lead from sources such as lead paint poses a significant health risk. There is no safe level of lead exposure and the risk of health effects is highest for unborn babies, infants and children. Paint containing lead was used in many Australian homes prior to 1970s. Although the use of lead in paint was reduced during the 1970 to 1990s, there is still likely to be many homes that contain lead paint. Use of lead paint continued, although at lower concentrations during this period, but more importantly, older homes usually have not had their old lead based paints removed.

The increasing popularity of DIY renovations of old houses is increasing the public health risk of exposure to lead as people remove old paint and renovate homes. Following an unfortunate incident of a South Australian a toddler who was hospitalised for exposure to high levels of lead from lead paint because of a DIY home renovation, SA Health carried out a lead paint awareness campaign from 22 to 28 October 2017.

Repainting or renovating? Be lead paint aware.

- Get your home TESTED
- Use experienced CONTRACTOR
- Use SAFEST possible methods and wear personal PROTECTIVE equipment
- CLEAN thoroughly
- Dispose of waste SAFELY

Pregnant women, children and pets must KEEP AWAY from renovations for safety.

Coinciding with the International Lead Poisoning Prevention Week (an initiative of the Global Alliance to Eliminate Lead Paint), the main message of the campaign was “Be lead paint aware”. A lead paint awareness poster, an infographic and a short video featuring the family of the toddler who had been affected by lead paint exposure were developed. These resources featured on SA Health’s Facebook page during International Lead Poisoning Prevention Week and were included on the SA Health webpage on lead paint.

Following on from the 2017 campaign, SA Health explored other avenues to further promote lead paint awareness for the second half of 2018 and 2019. This included a piece in the Channel 9 Building Ideas Program raising awareness of lead paint in older homes (aired 19 August 2018). Plans are in place to increase lead paint awareness within local councils by continuing to distribute posters.

38 Paint containing more than 0.1% (100 ppm) lead is banned in Australia.
This section highlights some examples of action working on preventing chronic and communicable diseases at a statewide and local level.

### Indicators at a glance

<table>
<thead>
<tr>
<th>Biomedical risk factors</th>
<th>Data Compendium</th>
</tr>
</thead>
</table>
| Unhealthy weight        | > In 2017 to 2018, 56.6% of South Australian adults reported a body mass index classified as being overweight or obese, this is the highest self-reported proportion in South Australia.  
> In 2016 to 2017, the proportion of children aged five to 17 years who reported a body mass index classified as overweight or obese was 26.4%, and this has remained relatively stable over the last 10 years. |
| High blood pressure     | > In 2017 to 2018, 22.8% of South Australians reported high blood pressure which has increased from 18% in 2003 to 2004. |
| High blood cholesterol  | > In 2017 to 2018, 17.5% of South Australians reported high cholesterol which has increased from 13.8% in 2003 to 2004. |

<table>
<thead>
<tr>
<th>Behavioural risk factors</th>
<th>Data Compendium</th>
</tr>
</thead>
</table>
| Tobacco smoking          | > In 2017, 16.5% of people aged 15 years and over and 14.3% of young people aged 15 to 29 years smoked.  
> Smoking rates among school children at are an all-time low with 3% of secondary students aged 12 to 17 years smoking in the past week. |
| Risky alcohol consumption| > In 2017, 16% of South Australians aged 15 years and over reported drinking at levels that put them at risk of disease or injury over a lifetime, a significant decrease since 2011 (19%). |
| Illicit drug use         | > In 2016, 15.9% of adults aged ≥14 years reported recent illicit use of any drug. |
| Discretionary food and drink consumption | > In 2017 to 2018, 13.6% of South Australian adults reported consuming soft drink daily, with a mean consumption of 546 millilitres per day.  
> In 2017 to 2018, 5% of South Australian children (one to 17 years) reported consuming soft drink daily, with a mean consumption of 509.1 millilitres per day. |
| Sedentary behaviours     | > In 2017 to 2018, 23% of South Australian children (five to 15 years) reported more than two hours of screen time per day. |
| Sun exposure             | > **PM** – In 2015, almost 35% of South Australian adults indicated they had been sunburnt that summer and almost 60% reported they do not check their skin for spots that may be skin cancer. |
### Protective factors

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data Compendium</th>
</tr>
</thead>
</table>
| Immunisation | The percentage of children fully immunised in South Australia aged 12 months to 63 months was 93.1% and 93.8% in 2016 and 2017 respectively. These rates are slightly lower than the national coverage rates, which were 93.2% in 2016 and 94.0% in 2017.  
> The immunisation coverage rates for Aboriginal children fully immunised at five years old in South Australia were 94.3% and 94.2% in 2016 and 2017 respectively, and were slightly lower than the national averages (95.2% in 2016 and 96.2% in 2017).  
> The human papillomavirus vaccination coverage rates at all three dose for children turning 15 years old in South Australia gradually increased from 2012 to 2016 for both males and females, and the levels were similar to national rates. |
| Sexually transmitted disease / blood borne virus | In 2016, the hepatitis C notification rate per 100,000 population in South Australia was 32.6 compared to a rate of 49.9 in Australia.  
> In 2017, 236 South Australian adults reported injecting with a syringe, with 82% of those reporting not reusing someone else’s used syringe.  
> Human immunodeficiency virus (HIV) antibody prevalence among people who have been injecting drugs remained low and stable nationally, ranging from 0% to 3.1% over the period 2013 to 2017. South Australia was zero from 2013 to 2016, and increased to 10% in 2017 (n=1 out of 10 tested). |
| Health care associated infection | Overall hand hygiene compliance in South Australian hospitals was 81% and 80% for 2016 and 2017 respectively.  
> The aggregate rate of methicillin-resistant Staphylococcus aureus (MRSA) acquisition for all contributing hospitals has decreased to 1.6 per 10,000 bed-days in 2017 from 1.7 per 10,000 bed-days in 2016. |
| Fruit and vegetable consumption | In 2017 to 2018, children and adults reported consuming 2 and 2.3 means serves of vegetables per day which did not meet the recommended vegetable daily consumption guidelines of five serves per day. |
| Breast feeding | NDA |
| Sufficient physical activity | In 2017 to 2018, 44.6% of South Australian adults reported at least 150 minutes of moderate activity per week.  
> In 2017 to 2018, 35.7% of South Australian children reported at least 60 minutes of moderate to vigorous activity every day. |
| Sufficient sleep | In 2017 to 2018, 62.3% of South Australian adults’ report meeting sleep duration guidelines.  
> In 2017 to 2018, 76.8% of South Australian children (two to 17 years) report meeting sleep duration guidelines. |
| Cancer screening | In 2015 to 2016, 47% of South Australians aged 50 to 74 years old participated in the National Bowel Cancer Screening Program, which was the highest participation rate in Australia.  
> The age-standardised participation rate for women 50 to 74 years old for breast cancer screening in South Australia was 57.6% and 58.8% in 2014 to 2015 and 2015 to 2016 respectively, which were the highest participation rates for both periods in Australia.  
> The age-standardised participation rate for women aged 20 to 69 years for cervical cancer was 58.9% and 57.7% in 2014 to 2015 and 2015 to 2016 respectively, which were the highest participation rates for both periods in Australia. |
**Case studies at a glance**

**Compendium of Case Studies, Research and Achievements**

- Cancer screening
- Infection control and preparedness for outbreaks of winter illness (influenza)
- Pre-exposure prophylaxis for human immunodeficiency virus (HIV): a biomedical prevention strategy available to South Australians at risk of HIV
- Responses to meningococcal W disease in South Australia: 2016 to 2018
- South Australian Prisoner Blood Borne Virus Prevention Action Plan 2017-2020
- School Dental Service – implementation of the Hall technique
- The South Australian Expert Advisory Group on Antimicrobial Resistance (SAAGAR): 10 years’ progress and challenges
- Using surveillance of infections and antimicrobial usage to combat antibiotic resistance

**Supporting primary health care**

Primary health care is integral to public health as it often provides the first point of call in managing illness and controlling disease in individuals but offers opportunities to help prevent illness and disease and promote good health and wellbeing.

Primary health care is generally considered to be the first level of health care provided in the community. The main providers of primary health care are general practitioners, but also include, pharmacists, practice nurses, dentists, and other allied health, such as Aboriginal health workers, physiotherapists and dietitians.

It is estimated that almost 87% of the population attended a general practitioner in 2015 to 2016. Of those who visited a general practitioner, the average number of visits were around seven²⁹.

General practitioners and practice nurses play a big role in public health through immunisation programs, screening for early signs of disease such as cervix screening and helping to prevent illness by monitoring and managing risk factors for disease, such as high blood pressure, weight and smoking.

**A focus on immunisation**

Immunisation is one of the best ways to protect the community against certain diseases with various immunisation programs.

Immunisation is a simple, safe and highly effective way of protecting children and adults from harmful vaccine preventable diseases before they come into contact with them. It is estimated that vaccinations currently save up to three million lives worldwide each year. The benefits of immunisation far outweigh the risks from the diseases they prevent.

For many vaccine preventable diseases, when a large percentage of the population are immunised against a specific disease, it becomes harder for that disease to spread if enough people in the community are immunised, the infection can no longer be spread from person to person and for some diseases, can die out altogether. Herd immunity is not applicable to all vaccine preventable diseases (e.g. tetanus) and some will not be able to die out altogether as there are other non-human hosts or environmental reservoirs.

Immunisation uses the body’s natural defence mechanism – the immune response. When a person is vaccinated, their body produces an immune response in the same way their body would after exposure to a disease, but without the person suffering symptoms of the disease. When a person comes in contact with that disease in the future, their immune system will respond fast enough to either prevent the person developing the disease or lessen the severity of the disease if it occurs.

Responses to meningococcal W disease in South Australia: 2016 to 2018

Meningococcal disease is a serious infection caused by the bacterium Neisseria meningitidis (often called the meningococcus). There are 13 known serogroups of meningococcus, with five serogroups causing most cases of disease in Australia: A, B, C, W and Y. The meningococcus is carried, usually harmlessly, in the nose and throat of around 10-20% of the population (carriers), with higher carriage in some specific groups. The meningococcus is spread when an infected person (patient or carrier) talks, coughs or sneezes small droplets containing infectious agents into the air and is also spread by close contact with nose or throat secretions.

The meningococcus causes non-invasive disease such as conjunctivitis and invasive disease such as meningitis and septicaemia. In Australia, 5 to 10% of people with invasive meningococcal disease die, despite rapid treatment. In survivors, there is significant morbidity associated with invasive meningococcal disease with up to 40% of cases developing necrosis of the skin and gangrene of the limbs requiring extensive skin grafting and amputation, and others having permanent neurological deficits.

Nationally the number of invasive meningococcal disease cases and overall risk remains low; however, since 2013, serogroup meningococcal W and more recently serogroup meningococcal Y have emerged as significant causes of invasive meningococcal disease. While cases of meningococcal W are more common in adults, there has recently been an observed increase in cases in children aged less than 10 years since 2015.

> Ceduna meningococcal W vaccination program

From December 2016 to February 2017 three cases of meningococcal W in children (aged two to 12 years) were notified in the Ceduna area, with two cases of invasive meningococcal disease and one case of conjunctivitis. Close contacts of all three cases were given antibiotic clearance and 301 people received vaccination. A community-wide vaccination program against meningococcal W for all people living in Ceduna, Thevenard, Denial Bay, Koonibba, Smoky Bay, Yalata, Oak Valley, Scotdesco and Penong was implemented.

From 6 March 2017 through to 30 June 2017, multiple clinics, Aboriginal health services, local government and non-government agencies were involved in delivering the program. Beginning at the Ceduna Town Hall for two weeks, the program continued at Penong Town Hall (including Scotdesco), Koonibba Clinic, Smoky Bay Community Club, Tullawon Health Clinic (Yalata), Oak Valley Health Clinic, Ceduna Koonibba Aboriginal Health Centre, and Ceduna Medical Practice.

By the end of June 2017, approximately 3,600 people were vaccinated. The estimated population in the affected area was approximately 4,000 to 4,500 people, representing population vaccination coverage of an estimated 80% to 90%. Although minor expected reactions occurred, there were no serious adverse events following vaccination.

No further cases had been reported in the 12 months after the vaccination program.

> APY Lands meningococcal W vaccination program

The Anangu Pitjantjatjara Yankunytjatjara Lands (APY Lands) Meningococcal W Vaccination Program was a time limited vaccination program against meningococcal serogroup W that commenced in October 2017 initially offered to all people two months of age to 19 years of age and eventually expanded to all people resident on the APY Lands in the far north of South Australia.

The program was implemented in response to three cases of invasive meningococcal disease in Aboriginal residents of the APY Lands in September 2017 and was also prompted by an increase in preceding months of meningococcal infection caused by serogroup W in the broader central Australia region. The wider outbreak was declared by the Communicable Disease Network of Australia as a Communicable Disease Incident of National Significance and was closed by the Communicable Disease Network of Australia on 7 March 2018. The last case associated with the outbreak was diagnosed in late December 2017.

In conjunction with Nganampa Health Council, the Aboriginal Community Controlled Health Service on the APY Lands, SA Health offered a meningococcal W vaccination program (using available meningococcal ACWY vaccines) on the APY Lands from October 2017 to the end of September 2018. This required delivery of vaccine always maintained between two and eight degrees Celsius to seven clinics across the APY Lands, an undertaking which was achieved in major part through collaboration with the Northern Territory Department of Health to leverage existing distribution mechanisms through Alice Springs Hospital Pharmacy.

As of the end of August 2018, 3,510 doses of meningococcal ACWY vaccine have been distributed to the clinics on the APY Lands for the purposes of the program, resulting in an estimated coverage of 96% for those defined as ‘current’ residents of the APY Lands (those who reside on the APY Lands for 6 months or more of each year), noting that children and very young infants required multiple (two to three) doses depending on age.

As of August 2018, there have been no further cases of meningococcal W notified in residents of the APY Lands.

In cases in children aged less than 10 years since 2015. While cases of meningococcal W are more common in adults, there has recently been an observed increase in cases in children aged less than 10 years since 2015.> Ceduna meningococcal W vaccination program

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As of August 2018, there have been no further cases of meningococcal W notified in residents of the APY Lands.
Aboriginal meningococcal W immunisation program

Subsequent to the Ceduna and APY Lands programs, and on the basis of geographical proximity, cultural/family ties between Aboriginal people living in these areas and other rural/remote regions of South Australia, SA Health expanded the ACWY program for all Aboriginal people aged 12 months of age to 19 years of age living in the Eyre and Far North, and Flinders and Upper North regions of South Australia.

The Aboriginal meningococcal W immunisation program was planned as a time limited and focussed once-off vaccination program (from February 2018 to December 2018) against meningococcal W, targeting an estimated total eligible cohort of 3,822 people.

This program is ongoing, and final coverage data will be reported as part of the evaluation of the program.

Note - during the period of this program rollout, meningococcal ACWY vaccine was introduced onto the national immunisation program (NIP) schedule for all children at 12 months of age further enhancing coverage against meningococcal W.
Prevention of blood borne viruses – a focus on hepatitis C, hepatitis B and human immunodeficiency virus

South Australian Prisoner Blood Borne Virus Prevention Action Plan 2017-2020

The prevalence of blood borne viruses is disproportionately high in Australian custodial settings, with hepatitis C, hepatitis B and human immunodeficiency virus prevalence estimated to be 30 to 40, three to four, and two times higher than in the broader community respectively\(^\text{40}\).

In South Australia an estimated 886 people living with hepatitis C were admitted to a correctional facility in 2016, constituting 9% of the state’s overall hepatitis C epidemic\(^\text{41, 42, 43}\). This is indicative of the correlation between injecting drug use and hepatitis C infection, and disproportionate incarceration of people who inject drugs. In 2016, 46% of Australian prison entrants surveyed reported having injected drugs, 63% of whom had injected in the past month\(^\text{44}\).

In addition, the significant prevalence of hepatitis C in prisons is reflective of transmission of hepatitis C within prisons predominately attributed to sharing injecting equipment, and presents a risk to prisoners, the prison workforce and the wider community once infected prisoners are released.

Incarceration represents an opportunity to engage highly marginalised and high risk populations into health services. Prisons are identified as priority settings for achievement of Australian elimination goals for hepatitis C, hepatitis B and human immunodeficiency virus.

The Department for Correctional Services and the Department for Health and Wellbeing established a joint departmental project steering committee in 2015 to translate the evidence-base for this public health issue into a strategic framework, the nation’s first South Australian Prisoner Blood Borne Virus Prevention Action Plan 2017-2020.

Several key successes have been identified through monitoring implementation of this action plan, including:

**Prisoner blood borne virus education and workforce development for staff working in correctional settings**

- Prisoner and prison workforce education programs drive demand for blood borne virus prevention, testing, management, care and support. From July to December 2017, Hepatitis SA engaged with 449 correctional officers and 389 prisoners, almost double the number of prisoners engaged during the corresponding period in 2015.
- With support from Department for Correctional Services, Ilbijerri Theatre Company will provide hepatitis C education at two prisons in 2018.


\(^\text{41}\) Blood borne virus testing data provided by South Australian Prison Health Service, July 2018


Testing, vaccination, treatment, care and support of prisoners living with blood borne viruses

> SA Prison Health Service audited blood borne virus testing and seroprevalence across all SA prisons to inform targeted strategy and resource allocation and implemented various innovative clinical models to enhance linkage to care for prisoners.

> Relationships Australia SA provided case management and counselling support to 30 prisoners living with blood borne viruses from July to December 2017.

Evidence-based harm reduction strategies

> Enablers and barriers toward implementing all blood borne virus harm reduction strategies available to the wider SA community in prison settings are being investigated by Department for Correctional Services and Department for Health and Wellbeing.

Ex-prisoners are at increased risk of death, particularly immediately post-release, often due to drug-related causes. Drug and Alcohol Services SA is working in partnership with SA Prison Health Service, Hepatitis SA and related stakeholders to enhance linkage to blood borne virus harm reduction, prevention services and care post-release.

Governance and partnerships

> With governance structures established, partnerships between Department for Correctional Services, Department for Health and Wellbeing and other stakeholders continue to strengthen through collaboration to implement the action plan.

Figure 23: People tested for blood borne viruses in South Australian prisons as a proportion of admissions by reporting period

![Graph showing proportions of admissions tested for Hepatitis B, Hepatitis C, and HIV from July 2014 to June 2015 and July to December 2017.]

Data Source – Blood borne virus testing data provided by South Australian Prison Health Service, March 2018


Note: Blood borne virus testing data provided by South Australian Prison Health Service, March 2018


Note: Hepatitis C treatment uptake data provided by South Australian Prison Health Service, July 2018
Protecting our oral health

Oral health is influenced by a range of factors, but the fundamental determinants are socio-economic, environmental, lifestyle and individual factors such as genetics. In addition, access to care and services, attendance patterns, health literacy and attitudes towards oral health and disease all impact on oral health.

Despite advances in health care, dental disease is now one of the leading causes of preventable hospital admissions in Australia and South Australia.

The National Child Oral Health Survey 2012-2014 found 42% of children aged five to 10 years had experienced decay in their primary (baby) teeth and 27% had untreated decay in their primary teeth, potentially due to the increased consumption of sugary food and drinks and the increased consumption of bottled non-fluoridated water.

Data source: South Australian Dental Services yearbook, annual, state
School Dental Service – implementation of the Hall technique

Since the introduction of the Hall technique across the School Dental Service, approximately 600 stainless steel crowns are placed per month using the Hall technique. The number of children waiting for care under general anaesthesia within the public dental system has fallen from over 1,000 children with an average wait-time of more than 12 months to less than 400 children waiting on average three months for care (July 2018).

The Hall technique does not require local anaesthesia or the use of a dental drill to manage dental decay in primary molar teeth and enables relatively quick and easy treatment of decay compared to the traditional method of restoring teeth. The introduction of the Hall technique has reduced the difficulty of providing care to children, resulting in increased compliance with treatment and improved outcomes for all concerned; dental practitioner, dental assistant and the parent or carer.

Since the introduction of the Hall technique, a significant number of these children have been successfully treated and have avoided the need for a general anaesthetic. Minimising the traumatic experiences traditionally associated with dental care will reduce avoidance of regular dental check-ups and potentially increase the uptake of preventative care.

Clinical trials have shown the Hall technique has better clinical outcomes than traditional fillings placed in primary molars and reduces the need for retreatment and or further restorative care.

Since the introduction of the Hall technique in February 2017, the School Dental Service has seen a significant change in treatment of primary molars, from direct restorations to Hall Crown restoration. In 2016, 81% of primary molars were restored with direct restorations, compared to 2018 where only 33% of primary molars were restored with direct restorations and 67% were restored with stainless crowns, the majority of which were Hall Crowns (70%).

The table below shows the breakdown by restoration type for primary molars during the first four months of 2016 and a comparison with the same period in 2018.

<table>
<thead>
<tr>
<th>Surfaces Restored</th>
<th>2016 Jan - Apr</th>
<th>2018 Jan - Apr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1401 (29%)</td>
<td>626 (14%)</td>
</tr>
<tr>
<td>2</td>
<td>2222 (47%)</td>
<td>846 (18%)</td>
</tr>
<tr>
<td>3</td>
<td>145 (3%)</td>
<td>50 (1%)</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>SSC*</td>
<td>987 (21%)</td>
<td>943 (20%)</td>
</tr>
<tr>
<td>Hall</td>
<td>0</td>
<td>2157 (47%)</td>
</tr>
<tr>
<td>Total</td>
<td>4751</td>
<td>4623</td>
</tr>
</tbody>
</table>

* SSC= stainless steel crowns

In 2018, the Hall technique was allocated an item code and fee under the federally funded Child Dental Benefits Schedule, further supporting its use within the dental profession. Successful implementation by the School Dental Service shows how a novel technique can fundamentally alter the way care is provided and improve not only patient outcomes, but the day to day practice of clinical teams and the use of health resources.
Understanding antibiotic resistance – a serious public health issue

Antimicrobial resistance has been recognised as a real threat worldwide and the World Health Organization is predicting it to result in more than 10 million additional deaths by 2050. Australia’s consumption of antibiotics is among the highest in the developed world46. Antibiotic resistant bacteria can spread from person to person in the community, from the environment or from patient to patient in hospital and can occur as a direct result of antibiotic treatment. The increasing consumption of antibiotics is driven by several factors, such as:

- the increased use of invasive medical treatments
- the use of immune suppressive agents in the treatment of cancer
- more complex surgical procedures
- an ageing population with lowered immunity to infection
- consumption of antibiotics present in the food chain47.

There are a growing number of bacteria, known as multi-resistant organisms, which are resistant to treatment with common antibiotics. The antibiotic-resistant bacteria that cause the most problems for patients in health care facilities are:

- methicillin-resistant Staphylococcus aureus (MRSA)
- vancomycin-resistant enterococci (VRE)
- multi-resistant Gram-negative bacilli (MRGN).

A growing list of infections – such as pneumonia, tuberculosis, sepsis (bloodstream infection), gonorrhoea, and foodborne diseases – are becoming harder, and sometimes impossible, to treat as antibiotics become less effective48.

The control of the impact of multi-resistant organisms on the health of South Australians involves health professionals and the public understanding the problem and working together. By having access to several data sources, public health officials can partner with hospital governance, doctors, pharmacists and nurses to develop strategies to minimise the threat of multi-resistant organisms to the wellbeing of South Australian population.

49 The Australian Commission on Safety and Quality in Health Care provides funding for the development and coordination of NAUSP and analyses of NAUSP data and related reports NAUSP for the AURA Surveillance System.
Figure 26 shows the usage rates of an antibiotic class known as carbapenems. These antibiotics are required to treat serious infections and as a broad spectrum antibiotic in seriously ill patients.

Figure 26: Infection rates caused by multi-resistant Gram-negative bacilli and extended-spectrum beta-lactamase and aggregated rates of carbapenem usage in five South Australian hospitals and national comparator hospitals over an 11 year period.

In South Australia, rates of usage of carbapenems increased between 2007 and 2012, in a similar fashion to multi-resistant organisms. After 2012 usage plateaued whilst infections with multi-resistant organisms continued to increase. The plateau in carbapenem usage may be partly explained by the increase in the regulation of the use of broad-spectrum antibiotics. However, since 2015 infection rates have plateaued whilst carbapenem usage rates have increased. Two plausible explanations are that, firstly, higher doses of these antibiotics are now sometimes needed to effectively combat illness, and secondly, carbapenems may be used to treat infections caused by organisms other than multi-resistant Gram-negative bacilli and extended-spectrum beta-lactamase.
## The prevalence of selected preventable disease, injury and disability in South Australia

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data Compendium</th>
</tr>
</thead>
</table>
| Reduced prevalence of preventable chronic conditions                       | > 8.2% of South Australians aged ≥18 years report having cardiovascular disease – relatively unchanged since 2002 to 2003.  
> 5.2% of South Australians aged ≥18 years report having chronic obstructive pulmonary disease.  
> 9.3% of South Australians aged ≥18 years report having diabetes.  
> 14.7% of South Australians aged ≥18 years report having asthma.  
> 5.3% of South Australians aged ≥18 years report having osteoporosis and prevalence increases with age.  
> 22.1% of South Australians aged ≥18 years report having arthritis and prevalence increases with age. |
| Reduced incidence of preventable injury/ disability/dental caries          | > The total number of hospital separations by injury in South Australia in 2017 to 2018 was 88,750 and was decreased when compared to 101,884 in 2016 to 2017.  
> The proportion of adult population reporting a physical, mental or emotional disability was 23.3% and 23.9% in 2016 to 2017 and 2017 to 2018 respectively.  
> The mean 12-year-old decay or missing or filled teeth of South Australian children attending SA School Dental Service was 0.76 3 in 2017, decreased slightly compared to 0.795 in 2016. |
| Reduced incidence of preventable communicable diseases                     | > The incidence of notifiable communicable disease in South Australia was 30,357 and 47,040 in 2016 to 2017 and 2017 to 2018 respectively.  
> The top 10 diseases notified were influenza, chlamydia trachomatis, varicella virus, campylobacter, pertussis, salmonella, gonorrhoea, rotavirus, Shiga-toxin producing Escherichia coli and Shigella in 2017 to 2018. They made up 96% of all notifications, with influenza making up 48% on its own.  
> The rates of seven out of the top 10 diseases increased in 2017 when compared to 2016, except for campylobacter, pertussis and salmonella, which decreased in 2017. |

### Diabetes

**The proportion of South Australian adults aged 18 years and over reporting diabetes has increased from 6.6% in 2002-03 to 9.3% in 2017 to 2018.**

Diabetes is a chronic condition marked by high levels of sugar (glucose) in the blood. It is caused by the body being unable to produce insulin (a hormone made by the pancreas to control blood glucose levels) or to use insulin effectively, or both. The main types of diabetes are:

> type 1 diabetes – an autoimmune disease that usually has an onset in childhood or early adulthood  
> type 2 diabetes – the most common form of diabetes, generally having a later onset. It is largely preventable and is often associated with lifestyle factors such as insufficient physical activity, unhealthy diet and obesity.  
> gestational diabetes – when higher than normal blood glucose is diagnosed for the first time during pregnancy.

Risk is also associated with genetic and family-related factors.

Diabetes was the 12th leading cause of disease burden in 2011, responsible for 2.3% of the total direct burden of disease and injury in Australia. If the health loss from both diabetes and other diseases for which diabetes is a risk factor is considered, the burden due to diabetes almost doubles.

Aboriginal people are around four times as likely to have type 2 diabetes prevalence, hospitalisation and death rates as non-Aboriginal Australians.
Figure 27: Proportion of South Australians aged ≥18 years reporting diabetes, 2002-2003 to 2017-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>All</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002/03</td>
<td>6.6</td>
<td>6.3</td>
<td>6.5</td>
</tr>
<tr>
<td>2003/04</td>
<td>6.5</td>
<td>6.4</td>
<td>6.6</td>
</tr>
<tr>
<td>2004/05</td>
<td>6.5</td>
<td>6.7</td>
<td>6.6</td>
</tr>
<tr>
<td>2005/06</td>
<td>6.5</td>
<td>7.4</td>
<td>7.5</td>
</tr>
<tr>
<td>2006/07</td>
<td>6.6</td>
<td>7.3</td>
<td>6.8</td>
</tr>
<tr>
<td>2007/08</td>
<td>7.3</td>
<td>7.4</td>
<td>6.9</td>
</tr>
<tr>
<td>2008/09</td>
<td>7.9</td>
<td>8.2</td>
<td>6.8</td>
</tr>
<tr>
<td>2009/10</td>
<td>8.3</td>
<td>8.5</td>
<td>7.0</td>
</tr>
<tr>
<td>2010/11</td>
<td>7.8</td>
<td>8.4</td>
<td>7.5</td>
</tr>
<tr>
<td>2011/12</td>
<td>8.4</td>
<td>8.6</td>
<td>8.5</td>
</tr>
<tr>
<td>2012/13</td>
<td>8.4</td>
<td>8.6</td>
<td>8.9</td>
</tr>
<tr>
<td>2013/14</td>
<td>8.9</td>
<td>9.2</td>
<td>8.9</td>
</tr>
<tr>
<td>2014/15</td>
<td>9.2</td>
<td>9.7</td>
<td>10.2</td>
</tr>
<tr>
<td>2015/16</td>
<td>8.5</td>
<td>9.7</td>
<td>10.7</td>
</tr>
<tr>
<td>2016/17</td>
<td>9.7</td>
<td>10.2</td>
<td>9.9</td>
</tr>
<tr>
<td>2017/18</td>
<td>9.3</td>
<td>10.7</td>
<td>9.9</td>
</tr>
</tbody>
</table>

Data source: South Australian Monitoring and Surveillance System.
Influenza

For the period July 2016 to June 2018 there were 77,097 notifiable infectious diseases recorded in South Australia. The top 10 notifiable infectious diseases for the reporting period July 2016 to June 2018 are shown in Figure 28. These 10 diseases made up 97% of all notifications, with influenza making up 48% on its own.

**Figure 28: Top 10 notifiable infectious diseases reported in South Australia, July 2016 to June 2018**

- Influenza
- Chlamydia trachomatis
- Varicella virus
- Campylobacter
- Pertussis
- Salmonella
- Gonorrhoea
- Rotavirus
- STEC*
- Shigella

**Data Source:** Communicable Disease Control Branch, SA Health

*STEC= Shiga-toxin producing Escherichia coli.

2017 saw the highest numbers of influenza notifications reported to date.

> Influenza, commonly known as the flu, is a highly contagious infection of the nose, throat and lungs caused by the influenza A or B (or rarely C) viruses.
> In South Australia, influenza is most common in the winter months.
> Influenza causes a spectrum of illness from asymptomatic infection to fatal pneumonia (primary viral or secondary bacterial). Severe disease is more common in pregnancy, people aged over 65 years and in people with underlying chronic disease.

> Vaccination against influenza has the primary aim of reducing severe influenza. The influenza vaccine is recommended for any person six months of age and over who wishes to reduce the likelihood of becoming ill with seasonal influenza. Due to changes in circulating strains and waning immunity, and to minimise the chance of developing influenza, vaccination is required each year.
CHAPTER TWO
ADMINISTERING THE SOUTH AUSTRALIAN PUBLIC HEALTH ACT 2011

This chapter reports on the implementation of the State Public Health Plan and the administration of the South Australian Public Health Act 2011 for the period July 2016 to June 2018.
The legislative framework for public health

<table>
<thead>
<tr>
<th>Full title</th>
<th>Precis of changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Australia Food Regulations 2017</td>
<td>Review of South Australia Food Regulations 2002 due to sunset provisions. Additional changes were made to inspection fee limits for food businesses and definition of ‘game meat’ to align with national definitions.</td>
</tr>
<tr>
<td>South Australia Gene Technology Regulations 2017</td>
<td>Regulations were reviewed to incorporate changes made to Commonwealth Gene Technology Regulations in line with the national gene technology scheme and supporting consistency for operators.</td>
</tr>
<tr>
<td>South Australian Community Wastewater Management System (CWMS) Design Criteria</td>
<td>The Community Wastewater Management Systems Design Criteria replaces the joint Local Government Association/Department for Health and Wellbeing document “Septic Tank Effluent Drainage Scheme (STEDs) Design Criteria”. It has undergone public consultation and is due to be released in the fourth quarter of 2018. The new document provides a basis for designs specific to South Australian conditions and has been updated to reflect significant changes in the industry.</td>
</tr>
<tr>
<td>South Australian On-site Wastewater Systems Code</td>
<td>Review of the On-site Wastewater Systems Code has been undertaken as a number of stakeholders including local government, system designers and the Department for Health and Wellbeing recognised that the document needed to provide better clarity and guidance. Surveys were undertaken in 2018 to determine the scope of changes and the revised document is scheduled to be released for public consultation prior to publication in 2019.</td>
</tr>
<tr>
<td>Code of Practice for the Provision of Facilities for Sanitation and Personal Hygiene</td>
<td>The code has been developed to assist the relevant authorities charged with the administration of the South Australian Public Health Act 2011, to ensure sufficient facilities are available for the maintenance of adequate standards of sanitation and personal hygiene within their area. During the reporting period the code was reviewed at the request of the Minister for Health and Wellbeing and updated to incorporate more stringent requirements for the installation, signage and management of sharps disposal facilities in community settings. The code has been updated to reflect contemporary public health standards in relation to the management of public toilet facilities and to remove outdated legislative references.</td>
</tr>
<tr>
<td>Controlled Substances (Pesticides) Regulations 2017</td>
<td>Remaking of regulation with minor administrative changes.</td>
</tr>
<tr>
<td>Controlled Substances Act 1984, amended by the Controlled Substances (Miscellaneous) Amendment Bill 2016</td>
<td>The amendment made three technical amendments to the Controlled Substances Act 1984 that clarify requirements for users and reduce regulatory burden on businesses by simplifying and contributing to nationally consistent regulation of poisons.</td>
</tr>
<tr>
<td>Controlled Substances (Poisons) Regulations 2011</td>
<td>The amendments removed the requirement to be retrained every three years for the purposes of administration of a vaccine. Regulation 22 was amended to add an exemption category for the purposes of section 18A(1) of the South Australian Public Health Act 2011 which requires an authority in relation to prescribing or supply a drug of dependence. It allows a new patient to be prescribed drugs of dependence for five days without an authority if a patient of a hospital and new to the drug of dependence program.</td>
</tr>
<tr>
<td>Controlled Substances (Poppy Cultivation) Regulations 2016</td>
<td>Provides for the legal cultivation of alkaloid poppies in South Australia, to be managed by Chief Executive of Department of Primary Industries and Regions South Australia. This required amending the Controlled Substances Act 1984 (insertion of Part 4A) drafting new regulations and amendment of the Controlled Drugs, Precursors and Plants Regulations. (Note this Regulation is managed by Department of Primary Industries and Regions South Australia not the Minister for Health and Wellbeing.)</td>
</tr>
<tr>
<td>Controlled Substances (Pesticides) (Fees) Variation Regulations 2017</td>
<td>Fees for licences are adjusted according to the annual adjustment of Government fees and charges.</td>
</tr>
<tr>
<td>Guideline for reporting on Regional Public Health Plans, 1 July 2016 – 30 June 2018</td>
<td>Revision of discretionary reporting template for all councils, pursuant to Section 52 of the South Australian Public Health Act 2011.</td>
</tr>
<tr>
<td>Health Care (Reporting of Cancer) Variation Regulations 2017</td>
<td>New items for reporting include stage at diagnosis, non-malignant brain and central nervous system tumours and in situ tumours.</td>
</tr>
</tbody>
</table>
South Australian public health planning system

The South Australian Public Health Act 2011 and its regulations address both contemporary public health issues as well as the fundamental and enduring public health concerns and is part of a range of public health legislation designed to protect and promote the health of South Australians. Sections 50, 51 and 52 of the South Australian Public Health Act 2011 describe a system for public health planning and reporting comprised of the State Public Health Plan and regional public health plans.

State Public Health Plan

The review of the 2013 State Public Health Plan occurred from October 2017 to February 2018, involving a wide range of stakeholders. As well as being a legislative requirement, the review provided an opportunity to reflect on the achievements of public health planning since the implementation of the South Australian Public Health Act 2011 and gather feedback about the 2013 plan, to identify changes for the next plan.

The review showed that the 2013 State Public Health Plan was successful in setting the strategic direction for public health action in the State and developed a strong foundation from which much had been achieved. Implementation of the 2013 plan resulted in both an increased profile and understanding of public health and wellbeing and the establishment of strong foundational structures.

The State Public Health Plan 2019-2024 has been developed after consultation with hundreds of public health partners and community members. Its vision is for a healthy, liveable and connected community for all South Australians. As the second State Public Health Plan, it builds on the strong foundation and achievements of the inaugural plan and has the objects and principles of the South Australian Public Health Act 2011 at its core. To achieve the vision of the State Public Health Plan 2019-2024, coordinated action will be required across four priorities: promote, protect, prevent and progress public health and wellbeing.

Regional public health plans

As public health authorities for their areas, and as their communities’ leaders, influencers, and advocates, councils act as partners in administration of the South Australian Public Health Act 2011.

Coordinated State and regional public health planning is a central plank of the public health system, and the South Australian Public Health Act 2011 requires local councils to prepare and maintain regional public health plans for their areas. Thirty one regional public health plans have been developed, with 20 councils choosing to plan alone and 48 councils choosing to plan regionally, in groups ranging in size from two to eight councils. As the legislation requires all councils to review their regional public health plan at least once in every five years, all are due to review current plans during 2018 to 2020.

The South Australian Public Health Act 2011 also requires that councils provide biannual reports on implementation of regional public health plans. This helps to build shared understandings of councils’ achievements in regional public health planning, shared State and local alignments, key partnerships in delivering public health benefits, and key issues in regional and local implementation.

The 2016 to 2018 reporting cycle demonstrates the continuing breadth and depth of council action to protect and promote health and wellbeing, the scope of council commitment to addressing upstream determinants and population vulnerabilities, and key local and regional partnerships. Councils also identified a range of emerging issues in implementation during the 2016 to 2018 reporting cycle.

The second State Public Health Plan incorporates issues emerging from regional public health plans and provides continuity with the first State Public Health Plan. The introduction of a stronger strategic focus on systems and enablers in the second State Public Health Plan is intended to support the local government mandate for building capacity for, and coordination of, public health action.

Local government leadership, innovation and excellence in public health planning is recognised and celebrated through the annual Minister for Health and Wellbeing - Excellence in Public Health Awards.

Partnerships to improve population health and wellbeing

Over 2016 to 2018, SA Health continued to support local and State governments and the non-government sector in the evolution and engagement of instruments enabling unique partnerships to progress public health in our State.
Public Health Partner Authorities

The *South Australian Public Health Act 2011* acknowledges the critical role of partnerships, through the partnership principle. Section 51 introduces Public Health Partner Authorities.

A Public Health Partner Authority is an organisation that has agreed to collaborate and consult with SA Health and/or local government in public health planning or actions that lead to improved population health and wellbeing, and/or help to reduce health disparities between population groups.

Public Health Partner Authorities are formal partnerships once they have been gazetted by the Minister for Health and Wellbeing.

Ten Public Health Partner Authorities have been formally established between 2014 and 2018 and examples of outcomes achieved from these partnerships are shown below.

<table>
<thead>
<tr>
<th>Public Health Partner Authority</th>
<th>Outcomes to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Australian Council of Social Services</td>
<td>Joint Policy Statement between the South Australian Council of Social Services and Department of Health and Wellbeing: A shared vision for improved community health and wellbeing. The initial agreement has been extended to 2022.</td>
</tr>
<tr>
<td>Department of Planning, Transport and Infrastructure</td>
<td>Strengthened focus on healthy neighbourhoods in the updated 30 Year Plan for Greater Adelaide. Contribution to State planning policies on healthy and liveable neighbourhoods, including a draft State Planning Policy on Quality Open Space and development of 10 principles of quality open spaces. Joint commissioning of research and the development of planning tools on quality green public open space.</td>
</tr>
<tr>
<td>Biosecurity SA</td>
<td>Knowledge sharing to provide a strengthened response to minimising risks from the potential harm of diseases transmissible from animals to humans (One Health). A new five-year agreement building on the initial partnership, maintaining the collaborative effort to enhance a One Health approach.</td>
</tr>
<tr>
<td>The University of South Australia (The Hawke Institute)</td>
<td>The Rural Ageing and Rural Suicide Prevention Research Project was conducted and identified the needs and local strategies for rural suicide prevention for older farmers. Enabling of links to South Australia’s Ageing Plan and priority area 3 of the State’s economic priorities.</td>
</tr>
<tr>
<td>South Australian Health and Medical Research Institute : Wellbeing and Resilience Centre</td>
<td>Development of strategic steering group to direct implementation of the agreement.</td>
</tr>
<tr>
<td>Kidsafe SA</td>
<td>A joint public awareness campaign about the dangers of button batteries in 2016, including associated media and publication of information resources for parents and carers on the SA Health and Kidsafe SA websites.</td>
</tr>
<tr>
<td>Renewal SA</td>
<td>Progressed the development of Quality Green Public Open Space criteria and tool/s to support the uptake of quality elements for green public open spaces.</td>
</tr>
<tr>
<td>Safework SA</td>
<td>Co-funded a Senior Project Officer position to develop evidence based recommendations for adopting an integrated approach to work health, safety and wellbeing in South Australia. SafeWorkSA committed to prioritising physical and mental health and wellbeing across their work with all businesses, including a strategic health, safety and wellbeing outcome in all SafeWorkSA Industry Action Plans.</td>
</tr>
</tbody>
</table>
In addition, partnerships with the Alcohol and Drug Foundation and Don Dunstan Foundation have recently been gazetted. By becoming Public Health Partner Authorities, the Alcohol and Drug Foundation and Don Dunstan Foundation have formally agreed to participate in public health planning undertaken by the State Government and local councils leading to integrated approaches for improved population health.

Many positive outcomes have resulted from the Public Health Partner Authorities established since 2014. SA Health is currently working to extend the Public Health Partner Authority model to enable agencies that have a localised or regional mandate to also become Public Health Partner Authorities.

Several government and non-government agencies are in discussions with the Department for Health and Wellbeing, exploring the opportunity of becoming Public Health Partner Authorities, while others have indicated their interest in further exploring the benefits of this formalised partnership. Public Health Partner Authorities will continue to support positive health and wellbeing outcomes for South Australians.

**Partnerships supporting local councils**

Over the reporting period, the Department for Health and Wellbeing and the Local Government Association collaborated to:

> ensure that all local councils were provided with practical support in the development and delivery of their regional public health planning requirements. Support included consultation, guidance and resources supporting reporting, grant funding, monitoring and measurement, and preparation for forthcoming reviews of regional public health plans

> deliver successive Public Health Weeks, promoting the crucial but often unseen role of public health in the everyday lives of South Australians

> deliver Public Health Short Courses to support understanding of and consistency in, administration of the *South Australian Public Health Act 2011*, and worked together to improve linkages between local councils and the non-government sector.

The Local Government Association’s public health website pages are a key source of information on public health for the sector. These were accessed by council staff an average of 40 times per month, including 617 discrete views of the (now online) Public Health Short Course.
The South Australian Population Health Survey is an important statewide survey which collects data using cross-sectional telephone surveys of South Australians on a monthly basis. Anyone with access to a phone can participate in the survey. In one year, around 7,000 South Australians are interviewed about their health and wellbeing.

Data are collected on overall health status, health service utilisation, chronic conditions, cancer prevention, disability and carers, risk factors (biomedical, protective and behavioural), food security, mental health, wellbeing and disadvantage and inequity. Data from this survey inform a major component of this biennial Chief Public Health Officer’s Report.

The Population Health Survey is complimented by subscriber survey modules, where government and non-government organisations may submit a module(s) of questions to be included in a survey. Subscribers to the survey modules may be able to be provided with:

- prevalence or incidence data on new or emerging population health issues
- information which identifies target groups for interventions and campaigns
- information on the aetiology of specific health problems
- information on the acceptability and uptake of new initiatives and programs
- information for the evaluation of health interventions and programs.

For more information about the new South Australian Population Health Survey System, visit the SA Health website.

For more information
sahealth.sa.gov.au/PublicHealthReport