



# The State of Public and Environmental Health Report for South Australia 2010–11

A report prepared pursuant to Section 44(3) of  
the *Public and Environmental Health Act 1987*

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The State of Public and Environmental Health Report is prepared annually pursuant to Section 44(3) of the *Public and Environmental Health Act 1987*

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## **PUBLIC AND ENVIRONMENTAL HEALTH COUNCIL**

150 Grenfell Street, Adelaide SA 5000  
PO Box 6, Rundle Mall, SA 5000

Telephone  
Fax

(08) 8226 7100  
(08) 8226 7102

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### **SA HEALTH**

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December 2011

Hon John Hill MP  
Minister for Health and Ageing  
Level 9, CitiCentre  
11 Hindmarsh Square  
ADELAIDE SA 5000

Dear Minister

#### **RE: STATE OF PUBLIC AND ENVIRONMENTAL HEALTH REPORT FOR SOUTH AUSTRALIA 2010–11**

Pursuant to Section 44 (3) of the *Public and Environmental Health Act (1987)* I provide you with a report on the operation of the Act and a report on the standard of public and environmental health in South Australia for the period 1 July 2010 to 30 June 2011.

This annual report again demonstrates the strength, scope and diversity of the public health functions in South Australia, including the prevention and control of communicable disease, epidemiology, environmental health, health promotion and the numerous agencies providing public health services.

A significant area of development in public health in South Australia in 2009–10 has been the review of the *Public and Environmental Health Act 1987* and the subsequent drafting of the Public Health Bill 2009. During the reporting period the *South Australian Public Health Act 2011* was passed. This new legislation seeks to ensure that the public of South

Australia has a comprehensive and systematic framework for public health protection and promotion. The new legislation aims to bring South Australia into line with international best practice in public health and put this state at the forefront of Australian legislation in this area.

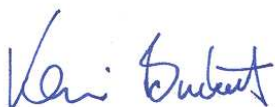
Effective public health requires effective partnerships across many different agencies, sectors and services. The most notable partnership in delivering public health services in South Australia is between SA Health and local government. Under the *Public and Environmental Health Act 1987* and the new *South Australian Public Health Act 2011* local councils are health authorities charged with the promotion of proper standards of public and environmental health in their area. Local councils consistently attain a high standard of output in this field. Their work and the public health work of the department is overseen by the Public and Environmental Health Council.

This will be the last State of Public and Environmental Health Report given that the new *South Australian Public Health Act 2011* is bringing forward a different reporting regime. The Chief Public Health Officer under the new Act is required to report on Public Health to the Minister every two years.

I would also note that the Public and Environmental Health Council will be replaced by a new South Australian Public Health Council once the new Act is commenced. I would therefore like to take this opportunity to commend to you the work of this council over the life of the 1987 Act, I believe it has well served the public health interests of South Australians.

In conclusion, I acknowledge the work of the many public health practitioners contributing to the health and wellbeing of all South Australians and I commend the State of Public and Environmental Health Report for South Australia 2010–11 to you.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Kevin Buckett', with a stylized, cursive script.

**Dr Kevin Buckett**  
**Director, Public Health and Clinical Systems**  
**Presiding Member**  
**Public & Environmental Health Council**

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## Introduction

The State of Public and Environmental Health Report is prepared annually pursuant to Section 44(3) of the *Public and Environmental Health Act 1987* (the Act). This report covers the operation of the Act during the financial year 2010–11.

This year's report again details the scope and diversity of public health activities in the state. Public health, by its nature, is a diverse and dispersed activity, involving many players both within the health system and across other areas and levels of government. While public health is primarily the mandated responsibility of several levels of government, it also works through the cooperation of private providers and the non-government and business sectors, and with the participation of the broader community.

In 2010–11 a focus has continued to be on the review of the renewal of public health legislation. The new *Safe Drinking Water Act 2011* was passed by the South Australian Parliament. This Act provides for a definition for safe drinking water, how safety can be achieved and how it can be measured. It will also formalise the existing arrangement between the Department of Health (hereafter referred to as the department) and the South Australian Water Corporation (SA Water), which provides approximately 94% of the state with drinking water, and will provide a consistent approach to management and regulation of drinking water across the state. It aims to decrease the likelihood of waterborne disease outbreaks, and increase public confidence in the safety of their water supplies by increasing transparency. The development of this Act is identified as Action 92 in the South Australian Government's plan, *Water for Good*. The Act will also support the development and implementation of a strategy to improve the quality of water provided to remote communities (Action 66).

The *South Australian Public Health Act 2011* was also passed by state parliament with bi-partisan support. This new Act received wide stakeholder support, most particularly from the local government sector, the Local Government Association and Environmental Health Australia. With the passing of this Act, the *Public and Environmental Health Act 1987* will be progressively repealed. As such this report constitutes the final State of Public and Environmental Health Report produced under the *Public and Environmental Health Act 1987*. The new Act has a provision for the production of a Chief Public Health Officer's Report every 2 years, which will continue the tradition of reporting on and highlighting the practice and activities of public health in South Australia. It will aim to be more comprehensive in its approach and be strategically aligned to a systematic public health planning function that is contained in the new Act.

## What is public health?

Public health is the organised efforts of society to keep people healthy; prevent injury, illness and premature death; and reduce health inequalities. In the broadest sense it

involves different segments of society working collectively for the good of all. It is a diverse range of services and programs that have a common focus on health protection and promotion and illness prevention. The common feature of this diversity is a focus on the determinants of health and the systematic management of these determinants. This, in conjunction with a population approach to health rather than a focus on the health of individuals, clearly delineates public health from clinical health services, which are designed to manage episodes of illness or disease in individuals.

The National Public Health Partnership, set up by the Australian Health Ministers' Advisory Council, described public health practice within the following nine core functions:<sup>1</sup>

- > assess, analyse and communicate population health needs and community expectations
- > prevent and control communicable and non-communicable diseases and injuries
- > promote and support healthy lifestyles and behaviours
- > promote, develop and support healthy public policy
- > plan, fund, manage and evaluate health gain and capacity building programs designed to achieve measurable improvements in health status
- > strengthen communities and build social capital through consultation, participation and empowerment
- > promote, develop, support and initiate actions that ensure safe and healthy environments
- > promote, develop and support healthy growth and development throughout all life stages
- > promote, develop and support actions to improve the health status of Aboriginal and Torres Strait Islander peoples and other vulnerable groups.

The public health effort in South Australia operates under various pieces of legislation, principally the *Public and Environmental Health Act 1987*, the *Food Act 2001*, the *Health Care Act 2008*, the *Controlled Substances Act 1984* and the *Tobacco Products Regulation Act 1997*. In addition, there are also many dozens of Acts of Parliament that either explicitly or implicitly contribute to preserving, protecting and promoting public health.

Public health is very much a shared responsibility, encompassing a wide range of activities and structures within health and related services—it is the combined efforts of a variety of sectors, organisations and people at all levels, both within and outside government.

In South Australia these functions are performed by a number of practitioners and agencies, including local government, medical and other health practitioners, university teaching and research activities, and regional health services in metropolitan and country regions.

Within the department the principal focus for the public health effort is in the Public Health and Clinical Coordination Division, specifically the Public Health Directorate and Communicable Disease Control Branch.

Other sections of the portfolio that contribute include the Aboriginal Health Division; Policy and Intergovernmental Relations Division; Statewide Services Strategy Division; Health Promotion Branch; Population Research Outcomes Studies Branch; Epidemiology Branch; Drug and Alcohol Service South Australia; BreastScreen SA; South Australian Dental Services; and regional community and primary healthcare services.

There is significant reform effort generated by the National Reform Agenda agreed to between federal and state governments. These reforms have complemented and are integrated into South Australia's continuing program of health reform. There are intended to be several significant reconfigurations of service within the health sector in the coming period. Throughout this reform, the public health effort will be consistently driven and reinforced, in particular by the development of new legislation.

Public health functions are also performed by other government departments and agencies including the Department of Environment and Heritage; Environment Protection Authority; Department of Families and Communities; Department for Transport, Energy and Infrastructure; Office of Recreation and Sport; Arts SA; Department of Education and Children's Services; Motor Accident Commission; Primary Industries and Resources SA; SA Water; and Zero Waste SA.

Local government has a particularly strong role in public health, with each local council mandated as a local health authority under the *Public and Environmental Health Act 1987*. Local government provides an extensive range of public and environmental health services, including food safety, school and community immunisation programs, human waste and wastewater control, business health inspections and health risk assessments.

Overseeing the work of public health in South Australia is the Public and Environmental Health Council, which is established under the provisions of the *Public and Environmental Health Act 1987*. Functions of the council include initiating and overseeing programs and activities that are designed to improve and promote public and environmental health.

## **The state of public health in South Australia**

In 2010–11 South Australians continue to be, on the whole, very healthy. We are healthier and are living longer now than we ever have before. This is no accident. It is the result of generations of effort to improve the social, economic and environmental conditions of our community. Improvements in health status are fundamentally underpinned by sound and comprehensive public health measures. But, while the picture of health in South Australia is strong and positive, avoidable and preventable inequalities

in health between different groups remain. The most dramatic illustration of avoidable and preventable ill health is that of the Aboriginal population, but other groups also suffer disproportionately. The relationship between ill health and levels of social disadvantage has been demonstrated in the South Australian context and validated in every comparable jurisdiction. This is not the responsibility of any one sphere of government, but of all governments and the wider community.

Concerted public health action on the determinants of health, most particularly through the framework of South Australia's Strategic Plan (SASP), will continue to contribute to the long-term effort to turn around these health inequalities and work towards health for all. The Health in All Policies (HiAP) approach does just that. The South Australian Government is progressively incorporating an HiAP approach across the planning and decision-making processes of SASP. This work is being undertaken as a partnership between the Department of Premier and Cabinet (Cabinet Office), the Department of Health and participating government agencies; and under the guidance of the Chief Executives Group reporting to the Executive Committee of Cabinet, which is responsible for the implementation of SASP. HiAP is an across-government approach to tackling the determinants of health. It recognises that the health and wellbeing of populations and individuals is largely determined by the social, economic and physical environments in which they live, work and play. The ability to influence these determinants tends to lie outside the direct influence of the health sector, whose role is mainly restricted to dealing with the consequences of illness.

Within the framework of SASP, HiAP works to achieve the state's targets. Incorporating a concern with health impacts and potentials into the policy development process of all sectors and agencies allows government to both address the key determinants of health in a more systematic manner and take into account the benefit of improved population health in the goals of other sectors. This HiAP approach will be further strengthened and made more systematic by the recently passed *South Australian Public Health Act 2011*, which provides a contemporary platform for public health action and establishes a legislative basis for HiAP approaches.

## Strategic direction 1: promoting healthy people, communities and environments

Public Health SA takes a population health approach that is focused on whole populations rather than on the treatment of individuals. We promote good health and prevent illness.

The Department of Health works cooperatively with other agencies and the community to promote and support healthy lifestyles and behaviours through action with individuals, families, communities and the wider society.

### Key objectives

The key objectives in promoting healthy people, communities and environments are to:

- > encourage the development of healthy public policy
- > encourage the development of built environments that support the health and wellbeing of the community
- > increase the capacity of individuals and communities to make healthy choices
- > promote screening in population-based programs.

## **South Australian Public Health Act**

The South Australian Public Health Bill was introduced into the South Australian Parliament in September 2010 after a period of extensive review and consultation. The Bill received significant stakeholder support, particularly from local government. The Bill was passed into law in June 2011 and will now undergo a systematic implementation process over the next 18 months to 2 years. This process will be developed and delivered in conjunction with the Local Government Association as well as other significant stakeholders across government, the university sector, the non-government sector and relevant professional associations, in particular Environmental Health Australia.

## **Quebec-South Australian Public Health Partnership Agreement**

During the reporting period South Australia received a visit from Dr Jean-Frederic Levesque PhD, the Director of Analysis and Evaluation of Health Systems and Services with the Quebec National Institute for Public Health. During his time in Adelaide, Dr Levesque presented to the Sansom Institute of the University of South Australia, and exchanged information and explored opportunities for ongoing collaboration with the Population Research and Outcomes Studies Unit of the University of Adelaide. He also presented to the Health Performance Council (HPC), where he illustrated the performance monitoring approach developed to oversee the Quebec health system. This presentation led to further exchanges with the Chair of HPC.

It is anticipated that Dr Levesque's visit will lead to further collaborative developments between Quebec and South Australia in the areas of population health monitoring and health system performance monitoring.

## **Improving health equity**

Health inequities are inequalities in health status that are unfair. Health inequities are significant and persistent, accumulating across the life-course and generations. They are often related to determinants that the health system, working in isolation, cannot influence but must deal with. These determinants relate to high rates of preventable injury and disease, the burden of illness and premature mortality in the population.

The Department of Health will support actions for reducing health inequities through a focus on the broad social determinants of health and to influence these positively, where possible, through planning, policy, programs and partnerships. The key objectives in improving health equity are to:

- > increase the department's capacity to monitor health inequity and promote equitable health outcomes
- > contribute to improvement of the health of Indigenous and other disadvantaged and vulnerable communities.

Equity has been built into the new *South Australian Public Health Act 2011* through the Equity Principle that states that “Decisions and actions should not, as far as is reasonably practicable, unduly or unfairly disadvantage individuals or communities and, as relevant, consideration should be given to health disparities between population groups and to strategies that can minimise or alleviate such disparities”. Equity is also recognised in the Primary Prevention Plan 2011–2016 which aims to contribute to improving health and wellbeing and reducing inequalities for South Australians and complements the more specific Aboriginal Health Care Plan 2010–2016.

In addition, a number of specific programs, discussed in more detail in this report, also address health equity, including:

- > Health in All Policies
- > Initiatives addressing Healthy eating, physical activity and healthy weight
- > OPAL (Obesity Prevention and Lifestyle)
- > The Aboriginal smoking cessation project
- > South Australian Early Intervention Pilot Program for alcohol misuse
- > The Commonwealth-funded Alternative Bowel Cancer Screening trial for Aboriginal people living in South Australia
- > The Aboriginal Dental Scheme
- > The Children’s Centres Health and Wellbeing Framework
- > Reducing lead exposure in Port Pirie The Culturally and linguistically diverse (CALD) HIV Interagency Project
- > Indigenous childhood immunisation program

## **Primary Prevention Plan 2011–2016**

### **Issues**

The Primary Prevention Plan 2011–2016 marks the next step in the development of primary health care reforms outlined in ‘South Australia’s health care plan 2007-2016 : the South Australian Government’s plan for health care over the next 10 years’. The Primary Prevention Plan sets out the South Australian Government’s commitment to support good health and reduce the conditions that contribute to poor health (Figure 1).

The Primary Prevention Plan:

- > aims to contribute to improving health and wellbeing and reducing inequalities for South Australians
- > complements the more specific Aboriginal Health Care Plan 2010–2016 and identifies many universal strategies that will also support Aboriginal health
- > describes the rationale for increasing efforts in prevention, and some of the challenges
- > outlines a framework comprising underpinning principles, evidence on good practice and enablers for action



- > prioritises the consolidation and extension of universal approaches to prevention for the whole population, and more targeted approaches as risk increases.
- > outlines the next steps for implementation and accountability.

The Primary Prevention Plan was written in consultation with a range of stakeholders and recognises the importance of working with a broad range of government and non-government partners, as well as individuals and communities, to support South Australians to lead and maintain healthy lives.

The plan includes a focus on redressing health inequities, which are inequalities in health status that are unfair. Health inequities are significant and persistent, accumulating across the life-course and generations. They are often related to determinants that the health system, working in isolation, cannot influence but must deal with, in high rates of preventable injury and disease, the burden of illness and premature mortality in the population.

The Primary Prevention Plan identifies ways in which a stronger focus on prevention can reduce the impact of these social determinants on poor health outcomes, and influence them positively, where possible, through planning, policy, programs and partnerships.

### **Outcomes**

The Plan was launched by the Minister for Health on 31 May 2011 and implementation is being progressed. Over the coming year the governance arrangement will be put in place and the short-term recommendations will be progressed.

### **Future directions**

Implement key recommendations from the Plan.

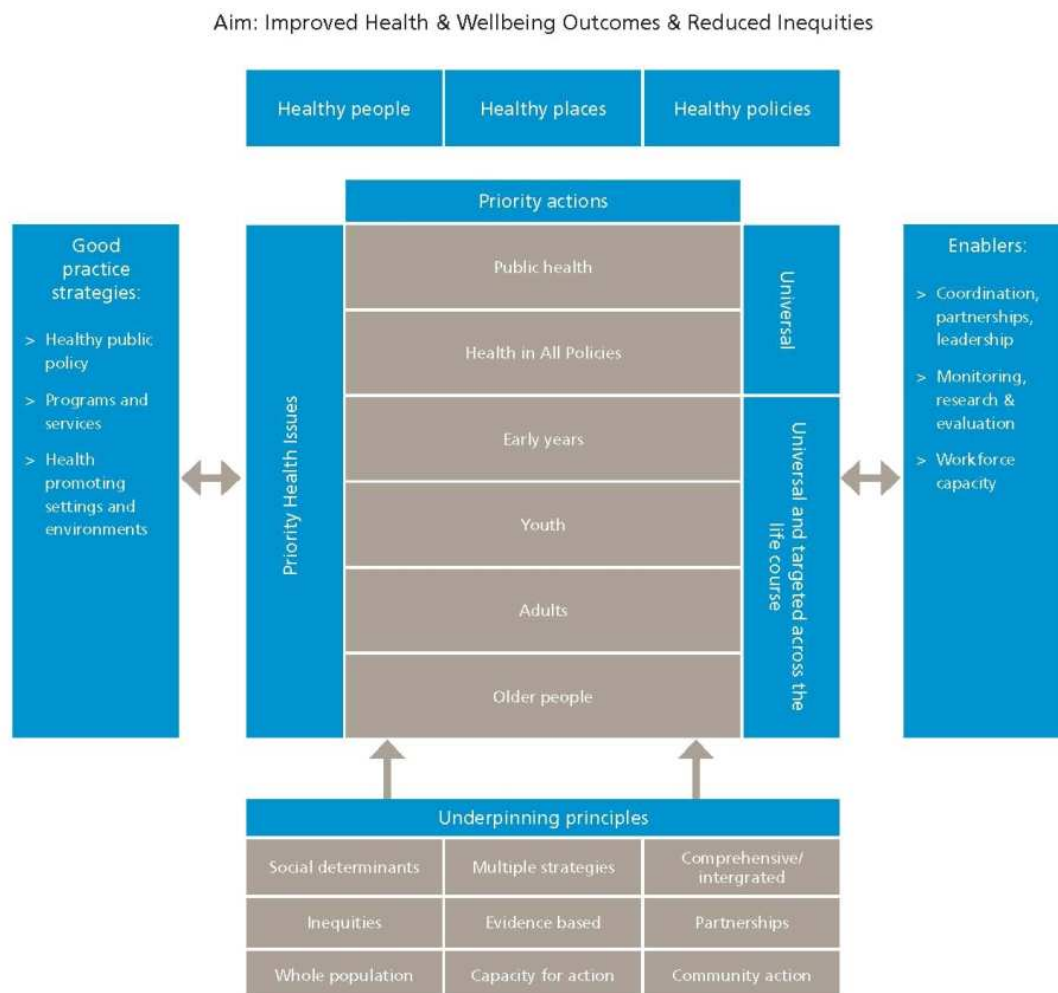


Figure 1: The Primary Prevention Plan framework

## Health in All Policies

### Issues

Health in All Policies (HiAP) is a way of working across government to encourage all sectors to consider the health impacts of their policies and practices, and at the same time it examines the contribution that a healthier population can make towards achieving the other sectors' goals.

It is based on the understanding that health and wellbeing of populations and individuals is largely determined by the social, economic and physical environments in which they live and work and play. The ability to influence these determinants tends to lie outside the direct influence of the health sector, whose role is mainly restricted to dealing with the *consequences* of illness.

### Aim

The South Australian HiAP approach has been designed to address the determinants of health through building effective partnership with other government departments. The partnerships examine policy proposals using a population health perspective, or a 'health lens'. While the health lens projects deal primarily with the determinants of health, some will also impact on specific health outcomes.

### Programs and initiatives

The Executive Committee of Cabinet's Chief's Executive Group (ExComm CEG) oversees the implementation and evaluation of South Australia's HiAP approach. The Department of Health and the Department of the Premier and Cabinet work closely together to assist the CEG to implement HiAP. Currently, work is underway on applying HiAP to eight South Australia's Strategic Plan (SASP) targets and/or policy priority areas including: Education and Early Years; Aboriginal Road Safety; Overseas Students; Active Transport; Regional Development; Earning and Learning; Regional Ageing and Employment; and Local Healthy Urban Developments.

Through the 2010–11 year, the health lens analysis (HLA) process, which was developed by applying a learning-by-doing approach to the early health lens projects, has continued to evolve. A number of contextual factors around specific policy issues led to an expansion of the range of methodologies drawn upon as part of the health lens process. Two of the newer projects and their methodologies are described here:

- > **HiAP and local government:** HiAP concepts were incorporated into the urban development work occurring in the City of Marion through the application of 'Healthy Transit-Oriented Development (TOD) Principles' to the Castle Plaza Redevelopment Plan Amendment. The Healthy TOD Principles were developed as part of the earlier TODs Health Lens project. The Castle Plaza Health Lens Analysis project reviewed

the Castle Plaza Development Plan Amendment against the TOD principles through an intensive 3-day workshop, which resulted in the development of a sustainability and wellbeing assessment framework. The outcomes of the Rapid Sustainability and Wellbeing Assessment Workshop have been incorporated into the revised Development Plan Amendment and the related work occurring within the City of Marion.

- > **HiAP and healthy weight:** The HiAP approach has typically addressed the core business of other sectors, and has involved the application of the HLA methodology to the SASP target of interest. The Healthy Weight project was the first time the HiAP approach had been applied to a Department of Health-led SASP target. During the scoping of the project, it was identified that the HLA methodology was inappropriate for the Healthy Weight target due to the large number of possible partner agencies; therefore, an alternative methodology, the desktop analysis, was applied. The outcome of the Healthy Weight Desktop Analysis was the development of a series of department- and division-specific recommendations that supported the achievement of target T2.2 Healthy Weight by facilitating cross-government collaboration between the department and other government agencies. These policy recommendations have now been incorporated into the revised Eat Well be Active Strategy 2011–2016, which has recently been approved by Cabinet.

### Outcomes

To date, seven HLA projects have been completed—Water Security; Digital Technology (Broadband) Access and Use; Regional Migrant Settlement; Transit Oriented Development through a health lens; Healthy Weight Desktop Analysis; Economic Analysis of Cycling and Walking; and Rapid Sustainability and Wellbeing Assessment Workshop. Each completed HiAP Health Lens has been or is in the process of being evaluated. The results indicate that project recommendations are being progressed, and participating agencies have found the process highly valuable.

The World Health Organization (WHO) has continued to promote South Australia's approach to HiAP, which has led to a number of international discussions and emerging country collaborations.

The Health in All Policies website ([www.sahealth.sa.gov.au/healthinallpolicies](http://www.sahealth.sa.gov.au/healthinallpolicies)) continues to be updated with key South Australian HiAP papers and documents.

### Future directions

*Transit oriented developments through a health lens*, a guide to healthy urban developments, has been approved by ExComm CEG and was tabled in Cabinet and will be launched by the Deputy Premier and Minister for Urban Development, Planning and the City of Adelaide and the Minister for Health in September 2011, and will be distributed

across state and local governments. The document was developed as part of the HiAP TODs health lens process.

The Government of South Australia, with support from WHO Geneva and the Western Pacific Region of WHO (WPRO), is hosting an HiAP Summer School in November 2011. The Summer School aims to build capacity across the region to address the social determinants of health (SDH) using the HiAP approach. The Summer School has received over 50 applications from senior policy makers and academics from a range of low-, middle- and high-income countries.

The Department of the Premier and Cabinet (DPC) is convening an Australian meeting on the SDH to consider the outcomes from the World Conference on SDH held in Rio de Janeiro in October 2011. The meeting will bring together senior decision makers from central government and the health sector with the aim of developing a national response to the Rio outcomes.

The HiAP Unit will continue to apply the HiAP health lens approach to agreed priority SASP targets.

In partnership with DPC, the HiAP Unit will apply a health lens across the recently released new SASP.

## **Healthy eating, physical activity and healthy weight**

### **Issues**

South Australia's Strategic Plan (SASP) Objective 2: Target 2.2 on healthy weight seeks to increase the proportion of South Australians 18 years of age and older with healthy weight by 10 percentage points by 2014. This reflects the major importance of obesity as a contributor to chronic disease and reduced productivity.

In addition, under the National Partnership Agreement on Preventive Health, reward payments of \$22.2 million are available subject to achievement or partial achievement of ambitious targets on fruit and vegetable consumption, physical activity and weight for adults and children; and adult smoking rates.

Around the world there is widespread recognition of the significant impact of overweight and obesity on the health and wellbeing of the population. In many countries the numbers of people in the unhealthy weight range is rising so rapidly that efforts are now focused on stemming the rate of growth or, at best, maintaining current levels across populations.

The department has led responsibility for the SASP Target 2.2 Healthy Weight. At the commencement of this target in 2006, 42.6% of adults were in the healthy weight range, with the target requiring 52% by 2014. In 2010, 38.8% of adults were in the healthy

weight range (less than in 2006), which reflects the complexities of this target. A supplementary measure relates to the weight of 4 year olds, of which 18.6% are currently overweight or obese.

### Programs and initiatives

The Eat Well Be Active Healthy Weight Strategy 2006–2010 sets the directions for action. Strategies are being undertaken in four key areas:

- > **Community education** about healthy eating, physical activity and healthy weight to assist people with practical ideas about changing their lifestyles in a sustainable way. The three key campaigns are the Measure Up campaign; the Go for 2&5® fruit and vegetable consumption campaign; and the *be active* campaign, which targets physical activity. Phase one of the Measure Up campaign raised awareness of the healthy choices that can help protect people from chronic diseases, beginning with physical activity and healthy eating. The second phase of the campaign, which commenced March 2011, Swap It, Don't Stop It, highlights the fact that 'you can lose your belly without losing out on all the things you love'. It encourages people to consider small nutrition and physical activity swaps they can make in everyday life that may benefit their health and wellbeing.
- > **Programs and services** help people make changes to lifestyles and ensure that environments make it easier to be healthy. Many obesity prevention programs funded by the department happen beyond the health sector in schools and childcare services, workplaces and communities. As an example, the Eat Well Be Active Primary Schools program is being implemented in 129 schools in 2010–2011, and 83.7% of eligible childcare centres have received Start Right Eat Right training, which educates about the provision of healthy and appropriate food.

The Do It For Life (DIFL) initiative also seeks to assist those who have risk factors for chronic disease, including smoking, poor diet/nutrition, alcohol misuse, physical inactivity and stress (SNAPS). The number of new DIFL registrations received during 2010–11 was 1355—755 from regional South Australia and 600 from metropolitan Adelaide. This number was similar to that in 2009–10 (1333). Of these, 42% were referred by GPs and 23% self-referred, with others from a variety of sources.

- > **Policy change**, where the aim is to create environments that make the healthy choice the easy choice. In 2010–11 the 'Healthy Food and Drink Choices for Staff and Visitors in SA Health Facilities' policy directive was implemented across the department. Leading by example, the directive aims to increase the availability of healthy food and drinks while restricting unhealthy choices in all food and drink outlets on departmental premises, including cafeterias, kiosks, vending machines, work-related meetings, functions and events, client education programs and fundraising.

- > **Health and planning:** opportunities to promote population health and equity are presented by new land uses, denser urban form and infrastructure investments, such as those in public transport. The department has established high-level collaborations, joint-agency activity and strategic projects with the Department of Planning & Local Government (DPLG), the Land Management Corporation (LMC) and the National Heart Foundation-aided Active Living Coalition (ALC) to ensure that urban planning policies and everyday practices positively influence the social determinants of health and wellbeing, including a focus on healthy eating and physical activity.

In 2009–10 the Project Officers based at DPLG, LMC and National Heart Foundation have provided policy and technical advice to key urban infill development projects, and advocated on key policy issues such as affordable housing, air and noise pollution mitigation, and sustainable communities. The high-level policy presence of health and wellbeing has been extended to the next level of implementation in the state government's revised Planning Policy Library.

- > **Workforce development, research and monitoring** are all important to inform and support good practice. In 2010–11 South Australia's first Physical Activity Nutrition Observatory: Research and Monitoring Alliance (PANORAMA) has been established. Funded by the department from April 2010 – March 2013, PANORAMA aims to advance the promotion of physical activity, public health nutrition (including breastfeeding) and obesity prevention through better understanding of their behavioural and environmental drivers; evidence of effective interventions; and more effective links between research, policy and implementation. The PANORAMA approach is one of strategic coordination, cooperation and capacity building.

## Outcomes

Figures 2 and 3 show this area continues to be challenging with increases in the rates of overweight and obesity for adults as shown in Figure 2 with national targets indicated. Rates for children appear to have stabilised. Similarly fruit and vegetable consumption has remained steady despite the increasing prices of these consumables; again targets are indicated. Physical activity is also showing as steady.

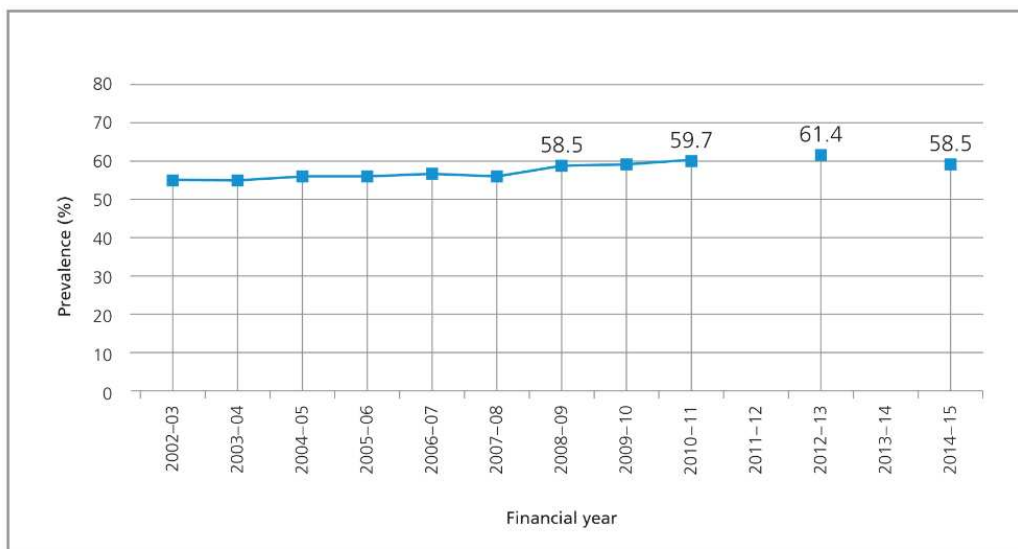


Figure 2: Unhealthy weight – adults aged 18+ years

Data source: South Australian Monitoring and Surveillance System (SAMSS), 2011

Regarding DIFL outcomes, aggregate data reports from the Community Health data information systems indicate that outcomes on key measures for those clients that complete the program remain positive. For example, using the Australian Diabetes Risk Assessment Tool (AUSDRISK), adapted for SA, risk profiles have improved, as they have for the average number of key chronic disease risk factors present. These key measures indicate that positive change is being achieved by clients who participate in the program (see Table 1).

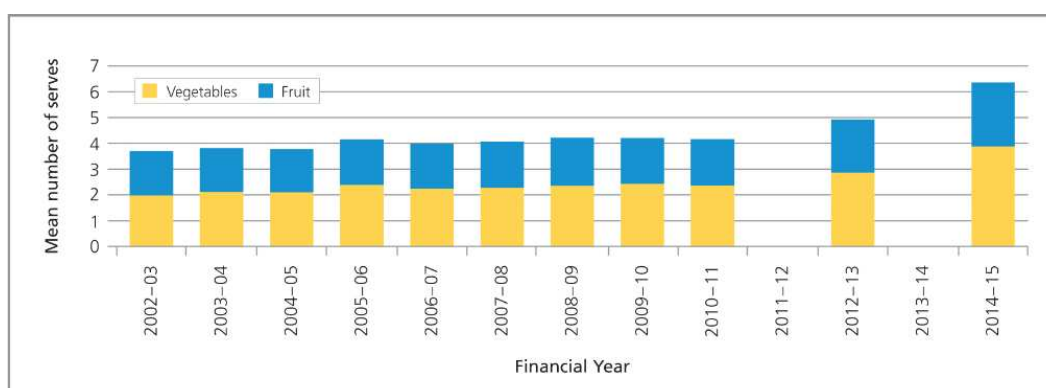


Figure 3: Increase in the number of serves of fruit and vegetables eaten by South Australian children

Data source: South Australian Monitoring and Surveillance System (SAMSS), 2011



Table 1: Key outcomes measures 2010–11 before and after the Do It For Life intervention

Do It For Life outcome measures		TOTAL
Australian Diabetes Risk Assessment Tool (AUSDRISK)	Pre-intervention	17.24
	Post-intervention	15.75
Smoking, poor nutrition, alcohol, physical inactivity and stress (SNAPS) (number)	Pre-intervention	2.49
	Post-intervention	1.61
General health – pre-intervention		
	Poor / Fair (%)	55.6
	Good / Very good (%)	44.4
General health – post-intervention		
	Poor / Fair (%)	24.1
	Good / Very good (%)	75.9

### Future directions

The next Eat Well Be Active Strategy will be released in 2011–12, identifying those strategies that need to continue as well as new directions. During 2010–11, work was undertaken to consult with other departments to identify the policy commitments they could make to support Eat Well Be Active, as well as achieving positive outcomes for their own sectors.

The Healthy Workers program, funded under the National Partnership Agreement on Preventive Health, commences in July 2011 and will be seeking interest from the business community to support the health and wellbeing of their workforce, and to contribute to improved productivity, reduced absenteeism and workforce morale. This will be complemented by support for government agencies and the Department of Health to undertake similar initiatives.

## OPAL (Obesity Prevention and Lifestyle)

### Issues

Up to 25% of children are overweight or obese. Excess weight tends to track into adulthood. Currently, 60% of adults are overweight or obese. Childhood obesity prevention is critical in contributing to better child health and to decreasing future chronic disease.

### Programs and initiatives

OPAL (Obesity Prevention and Lifestyle) is a \$40 million federal, state and local government childhood obesity prevention program and based upon EPODE, a French program that has shown encouraging results in reducing childhood obesity. OPAL is coordinated by the Health Promotion Branch, SA Health.

The aim of OPAL is 'to improve the eating and activity patterns of children through families and communities in OPAL regions, and thereby increase the proportion of 0–18 year olds in the healthy weight range'.

South Australian councils provide the setting from which OPAL is delivered in communities. Each council that commences OPAL receives \$1.1 million (staff and funding) to bring about change over a 5-year period. A total of 20 South Australian communities will participate in OPAL, which will run during 2009–17.

The ten councils participating in OPAL (to July 2011; Table 2) demonstrate a combination of greater disadvantage, higher levels of overweight and obesity, larger proportion of children and higher levels of Indigenous populations. Population sizes vary between communities and OPAL resources have been matched to the needs of each community.

Table 2

Obesity Prevention and Lifestyle (OPAL) councils, 2010–11

OPAL Councils 2010–11	
Marion	Salisbury
Mount Gambier	Charles Sturt
Onkaparinga	Copper Coast
Playford	Port Adelaide Enfield
Port Augusta	Whyalla

OPAL is implemented through communities via a series of healthy eating and physical activity-related goals and themes. OPAL teams in councils bring about change by employing a socioecological approach—that is, by systematically influencing the environments in which people live and people's behaviours.

## **Outcomes**

Achievements during 2010–11:

- > Commenced four new OPAL council teams in September 2010 (Copper Coast, Charles Sturt, Port Adelaide Enfield and Whyalla), bringing to a total of 10 OPAL councils across the state.
- > Progressed negotiations with Northern Territory Government to instigate COPAL (Childhood Obesity Prevention and Lifestyle).
- > Selected Palmerston as Northern Territory COPAL site.
- > Instigated the second and third OPAL themes: 'Give the screen a rest, active play is best' and 'Make it a fresh snack'. Themes were rolled out through communities with accompanying programs, policies, education and awareness raising.
- > Established the OPAL evaluation framework including quantitative and qualitative components.
- > Appointed Flinders University to coordinate the quantitative 8-year OPAL evaluation.

## **Future directions**

- > Commence five new OPAL councils in 2011–12, bringing to a total of 15 OPAL sites across the state.
- > Finalise service agreement with Northern Territory Government to instigate COPAL (Childhood Obesity Prevention and Lifestyle)
- > Instigate the fourth and fifth OPAL themes.
- > Commence quantitative data collection across all sites for OPAL evaluation.
- > Conduct a computer assisted telephone interviewing (CATI ) survey of communities to determine residents' awareness of and the effectiveness of the OPAL identity within OPAL sites.

## **Reducing the prevalence of smoking**

### **Issues**

Tobacco smoking remains one of the leading preventable causes of illness and death in South Australia<sup>2</sup>. Three South Australians die every day from tobacco-related illness<sup>3</sup>, and an estimated \$2.39 billion is lost to the state's economy each year in health costs and lost productivity related to smoking.<sup>2</sup>

A range of initiatives have been implemented to reduce smoking prevalence. These include providing smoking cessation services to the South Australian community through the Quitline and other targeted services, implementing a smoke-free policy throughout all South Australian health services, delivering high-quality social marketing campaigns, and

continuing enforcement activities of legislative restrictions.

### **Programs and initiatives**

#### **> South Australian Tobacco Control Strategy 2011–16**

The South Australian Tobacco Control Strategy 2011–2016 was launched on World No Tobacco Day, 31 May 2011. It has been developed to reflect priorities for tobacco control over the next 5 years, with the goal of improving the health and wellbeing of South Australians by reducing the impact of tobacco smoking. It aims to significantly increase the number of people quitting smoking while also reducing the number of people taking up smoking.

Two key targets within the strategy are to reduce smoking rates among young people aged 15–29 years to 16% and among the general population to 15% by 2016.

#### **> Aboriginal smoking cessation project**

The Tackling Smoking initiative is part of the National Partnership Agreement on Closing the Gap in Indigenous Health Outcomes. The aim of the initiative is to reduce smoking and the associated burden of tobacco-related disease among Aboriginal people in South Australia.

Drug and Alcohol Services South Australia (DASSA) is the lead agency for two of the three key programs within the Tackling Smoking initiative: expansions of both quit-smoking initiatives and social marketing campaigns. Health Protection Branch, SA Health, is the lead agency for the legislative compliance component of the initiative.

Key activities conducted through this initiative in 2010–11 included the:

- development and implementation of the Give Up Smokes For Good social marketing campaign across three regions in South Australia
- creation of an ambassadors program featuring 12 nationally and locally recognised Aboriginal people
- establishment of Tackling Smoking teams in three Aboriginal community-controlled health services
- delivery of a range of community-level health promotion strategies and cessation support activities.

#### **> Tobacco control advertising campaigns**

Mass media campaigns and targeted public education messages to prevent smoking uptake, and encourage smokers to quit smoking and ex-smokers to remain quit, are a key strategy to reduce smoking prevalence.

A suite of television advertisements were aired in 2010–11. These were the previously aired *Sponge* and *Bubblewrap*, along with three new commercials from interstate and overseas—*What's worse, cigarettes are eating you alive* and *Best intentions*. Each

advertisement was successful in raising awareness of the harms of smoking and increasing public contact with Quitline and the Quit SA website, and registering for Quit SA's text messaging support program.

The advertisements were part of a new, continuous television advertising campaign that, in conjunction with the National Tobacco Campaign, achieves the level of mass media advertising recommended by the National Preventive Health Taskforce. This level of advertising will continue throughout 2011–12.

## Outcomes

Achievements during 2010–11:

- > Smoking rates have remained stable for the past 6 years among all age groups, with the prevalence rate being 21.9% in 2004 and 20.7% in 2010 among all adults.
- > Smoking prevalence for the 15–29 years age group declined from a baseline rate of 27.9% in 2004 to 22.8% in 2010.
- > The rate of smoking among pregnant women has been steadily declining. The proportion of all South Australian pregnant women who were reported to be smokers at their first antenatal visit declined from 19.7% in 2004 to 15.9% in 2009 (Figure 4). Smoking continued to be much higher among Aboriginal women (52.2%) in 2009 than among non-Aboriginal women (14.7%).

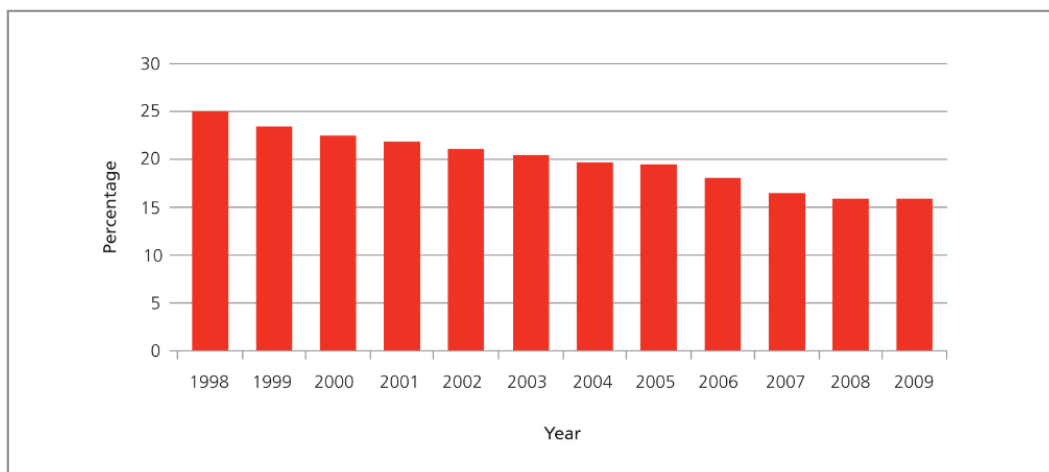


Figure 4: Prevalence of maternal smoking in South Australia, 1998–2009

## Future directions

The South Australian Tobacco Control Strategy 2011–2016 will guide South Australian tobacco control initiatives over the next year. The strategy will achieve the goal of improving the health and wellbeing of South Australians by reducing the impact of tobacco smoking, through efforts across five key areas:

- > reducing smoking prevalence by the South Australian population (aged 15 years and older)
- > closing the gap in smoking prevalence between Aboriginal people and the general population
- > focusing smoking prevalence reduction and prevention strategies on people with mental illness and socioeconomically disadvantaged groups where smoking rates are higher
- > reducing involuntary exposure to tobacco smoke
- > minimising the promotion of, and reducing access to, tobacco products by children.

To reduce the promotion of tobacco products in retail outlets, a ban on the retail display of tobacco products commences on 1 January 2012. All tobacco retailers will be required to comply with these regulations and ensure that their tobacco products are out of sight. A temporary exemption applies to prescribed specialist tobacconists until 31 December 2014.

In 2011–12 the Tackling Smoking initiative will continue to promote smoke-free and smoking prevention and cessation messages to Aboriginal people through continued social marketing activity. Cessation support will also be delivered in health services and communities. An evaluation program will continue to monitor progress across the funded period until 2013.

Mass media campaigns and targeted public education messages are a key strategy to reducing smoking prevalence. In conjunction with the National Tobacco Campaign, South Australia will support a continuous television advertising campaign to achieve the level of mass media advertising recommended by the National Preventive Health Taskforce.

DASSA is working with the Department of Education and Children's Services to pilot a smoking prevention, cessation and support initiative in two primary schools in 2012. The project will have a focus on disadvantaged and Aboriginal students and their parents.

## Reducing harmful alcohol consumption

### Issues

The recent use of alcohol (past 12 months) by those aged 14 years and older has remained relatively stable between 2001 and 2010 in both South Australia and Australia, although there has been an overall small decrease in the proportion of those consuming alcohol (from 83.1% to 81% in South Australia, and from 82.4% to 80.5% nationally).

Between 2007 and 2010, the percentage of the population drinking on a daily basis decreased significantly in Australia from 8.1% to 7.2%, mainly due to a significant decrease among males (10.8% to 9.6%). Although there was a decrease in South Australia (from 7.9% to 6%), it was not statistically significant.

Over the same period, the percentage of weekly drinkers changed little in South Australia (between 41.8% and 40.9% of the population aged 14 years and older). Nationally, the percentage of weekly drinkers decreased significantly between 2007 and 2010, from 41.3% to 39.5%.

In South Australia in 2010, males were more likely to drink alcohol daily than females (7.4% vs. 4.7%), although the percentage of daily drinkers has decreased among both groups since 2007 (11% of males and 5% of females). In addition, a larger percentage of males reported drinking on a weekly basis (47.6% vs. 34.5%).

In 2010 there was no substantial difference between the percentage of the South Australian and Australian population aged 14 years and older drinking at levels considered risky for alcohol-related harm over a lifetime: 19.3% vs. 20.1% (according to the National Health and Medical Research Council's 2009 revised *Australian guidelines to reduce health risks from drinking alcohol*).

Nineteen per cent of the South Australian population aged 14 years and older did not consume alcohol in 2010 (up from 15.7% in 2007).

Over one-third of the South Australian population (38.4%) had consumed alcohol in a pattern that placed them at risk of an alcohol-related injury from a single drinking occasion in the preceding 12 months (39.8% nationally).

In this reporting period, the South Australian Drug Strategy 2005–2010 expired; accordingly, the development of a new strategy is required to lead the South Australian Government's response to alcohol and other drug misuse issues.

### **Programs and initiatives**

#### **> South Australian Alcohol and Other Drug Strategy 2011–2016**

The development of the South Australian Alcohol and Other Drug Strategy 2011–2016 was jointly led by the Department of Health (DASSA) and South Australia Police. This involved a review of the 2005–2010 Drug Strategy and consultation with key government stakeholders to maintain a collaborative approach consistent with the harm minimisation framework provided by the National Drug Strategy 2010–2015. The strategy is currently under consideration by the South Australian Government. It contains strategies to achieve the South Australian Strategic Plan target to reduce the proportion of South Australians who drink at risky levels. It is anticipated that in September 2011 the Premier will release the updated *South Australia's strategic plan*, which will include a specific target to reduce the proportion of South Australians who drink at risky levels by 30% by 2020. This target links to the recommendations made in the 2008 National Preventative Health Task Force discussion paper, *Australia: the healthiest country by 2020*.

> **South Australian Early Intervention Pilot Program**

The South Australian Early Intervention Pilot Program (EIPP), funded under the Australian Government's National Binge Drinking Strategy and administered by DASSA in partnership with South Australia Police and the South Australian Office of Crime Statistics and Research, commenced operation in South Australia in 2010 across three metropolitan Local Service Areas. The EIPP provides early intervention opportunities for young people aged 10–17 years who are detected by police for a range of alcohol-related offences to be diverted from the juvenile justice system to health services that can conduct an assessment of their alcohol use and provide an appropriate intervention.

> **GP Plus Services funding**

In 2010–11 the South Australian Government committed substantial funds to primary prevention under the GP Plus Service Strategy. This includes funding for the Primary Prevention Strategy to Address Binge Drinking.

> **Good Sports program**

Until the end of 2010–11, DASSA managed the Good Sports program in South Australia, which has been developed to assist community sporting clubs to manage the service and consumption of alcohol responsibly, and to provide safe and healthy environments for their members, patrons and the local community.

> **'Drink too much, you're asking for trouble' intoxication awareness campaign**

DASSA's 'Drink too much, you're asking for trouble' alcohol intoxication awareness campaign aims to reduce acceptance of public drunkenness, and builds on the previous consequences-focused campaign, 'Drink too much it gets ugly'. It encourages males aged 18–39 years and females aged 18–29 years to reduce their alcohol consumption by highlighting the negative consequences that can arise from excessive alcohol consumption. The campaign consists of television commercials, radio commercials, online advertising, out-of-home advertising (in-venue and telephone booth posters), a campaign-specific website, and a presence at a variety of events.

> **Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)**

DASSA's World Health Organization (WHO) Collaborating Centre continues to be a key contributor to the development of and enhancements to the WHO Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) and associated brief intervention tool, which was established in response to the overwhelming public health burden associated with problematic substance use worldwide. The ASSIST and linked brief intervention have continued to be implemented in targeted primary healthcare settings including those accessed by young people, Aboriginal people, people with mental health issues and other high-risk groups. ASSIST aims to reduce the prevalence of risky alcohol and other drug use and associated problems. The WHO ASSIST project has developed a range of online client and clinician resources to help primary health professionals detect and manage substance use and related problems in primary and general medical care



settings. These incorporate: instructions for administering the ASSIST and brief intervention; self-help materials on specific drug information and generic self-help strategies to reduce drug use; information on injecting risk; and a feedback report card on current drug use.

## **Outcomes**

EIPP commenced operation in South Australia on 1 August 2010 across three metropolitan Local Service Areas. Since inception, 109 young people aged 10–17 years who were detected by police for a range of alcohol-related offences have been diverted through the program. Closely replicating existing protocols and infrastructure used by the Police Drug Diversion Initiative, eligible young people detected by police are diverted to an alcohol-based health intervention. Parents/carers of the diverted young person are informed about the EIPP and given information to increase their knowledge of problematic alcohol-use patterns and their consequences.

The GP Plus Service Strategy has provided \$1.125 million per year for the Primary Prevention Strategy to Address Binge Drinking. Activities have included the development of a telephone-based brief intervention service for people with moderate- or high-risk alcohol consumption; and the development of the draft South Australian Alcohol and Other Drug Strategy 2011–2016, with a focus on priority actions related to liquor licensing reforms, social marketing campaigns and workplace alcohol initiatives.

The targeting of alcohol-related harm in sporting clubs increased with the ongoing growth of the Good Sports program. As of the end of 2010–11, 415 community sporting clubs were involved in the Good Sports program in South Australia. DASSA worked together with the Australian Drug Foundation (ADF) to transition the program to ADF management from 2011–12. This transition brings the South Australian program in line with arrangements in other jurisdictions.

On 18 April 2011, the Minister for Mental Health and Substance Abuse, the Hon. John Hill MP, launched the 'Drink too much, you're asking for trouble' alcohol intoxication awareness campaign. Preliminary tracking data indicated that 90% of respondents said they saw the campaign on television, 65% of survey participants reported seeing all four television advertisements, 70% of respondents agreed that the advertisements made them think about serious consequences associated with drinking too much, and 47% agree that it is not acceptable to be drunk in public.

DASSA has developed an electronic version of the ASSIST screening and brief intervention tool, which will be available for clinicians to download. This provides decision support, automatic scoring and individualised score cards to provide feedback to clients.

### **Future directions**

The South Australian Early Intervention Pilot Program will continue to be administered by DASSA in partnership with South Australia Police. A process and outcomes evaluation is being conducted by the Office of Crime Statistics and Research. Full-time coordinators are placed at DASSA and the South Australia Police Drug and Alcohol Policy Section to provide support, training and oversight.

Future activities will include work towards reintroduction of the collection of wholesale alcohol sales data in South Australia.

In 2011–12, DASSA will develop and trial a telephone-based, manualised program for medium-risk drinkers, to be administered via the Alcohol and Drug Information Service.

DASSA's WHO Collaborating Centre, in its role as the global coordinator of ASSIST (Phase IV), is developing new components such as a module for adolescents and a briefer version of ASSIST. In addition, the centre will continue to be responsible for:

- > updating the ASSIST in WHO webpage in consultation with WHO Geneva
- > providing technical support in the development of a computerised version of ASSIST.

## **Cervical cancer screening**

### **Issues**

Cervical cancer was the 18th most common cause of cancer mortality in Australian women in 2005, accounting for 216 deaths in 2005 compared with 329 in 1991. The lifetime risk of a woman developing cervical cancer before the age of 75 years is 1 in 198.

### **Aim**

The SA Cervix Screening Program (SACSP) is a joint initiative of the state and Commonwealth governments that aims to reduce the incidence of and mortality from invasive cancer of the cervix by increasing the proportion of women who are screened at appropriate intervals, and by promoting a high quality of screening and follow-up.

### **Programs and initiatives**

Culturally appropriate Aboriginal 'well women' screening remained a key priority area, with grants being provided to government- and community-controlled health organisations.

The department's cervix screening program led a successful Pap Smear Awareness Week campaign targeting women who have not screened for 4 years or longer.

The SACSP, in collaboration with SHine SA, has introduced a Pap Smear Preceptor course, where experienced women's health nurses are able to mentor and serve as role

models to newly trained Pap smear providers. There are 11 inaugural preceptors in South Australia.

### **Outcomes**

The nationally organised approach to cervical screening has reduced the incidence of and mortality from cervical cancer, per 100 000 women, from 4.0 deaths in 1991 to 1.9 deaths in 2005. Through population screening, Pap smears have the potential to reduce up to 90% of cervical cancer, and are currently the best protection against the disease.

### **Future directions**

Maintaining the level of screening participation alongside the HPV vaccine program. There are currently 666 164 women registered on the SACSP backup record system, and 637 663 of these are South Australian women. In 2010, 163 418 smears were recorded on the system and 82 668 smears were recorded January to June 2010.

Of the smears recorded in 2010:

- > 92.64% were assessed as normal
- > 7.36% were assessed as abnormal, with:
  - 0.85% recorded as a high-grade abnormality (including cancer)
  - 0.37% recorded as a possible high-grade abnormality
  - 3.74% recorded as a low-grade abnormality
  - 2.40% recorded as unsatisfactory for assessment.

As indicated in Figure 5, the 2009–10 biennial participation rate for cervix screening for South Australian women in the target population (women aged 20–69 years) was 59.2%, representing a decrease of 1.7% from the 2008–09 rate of 60.9%.

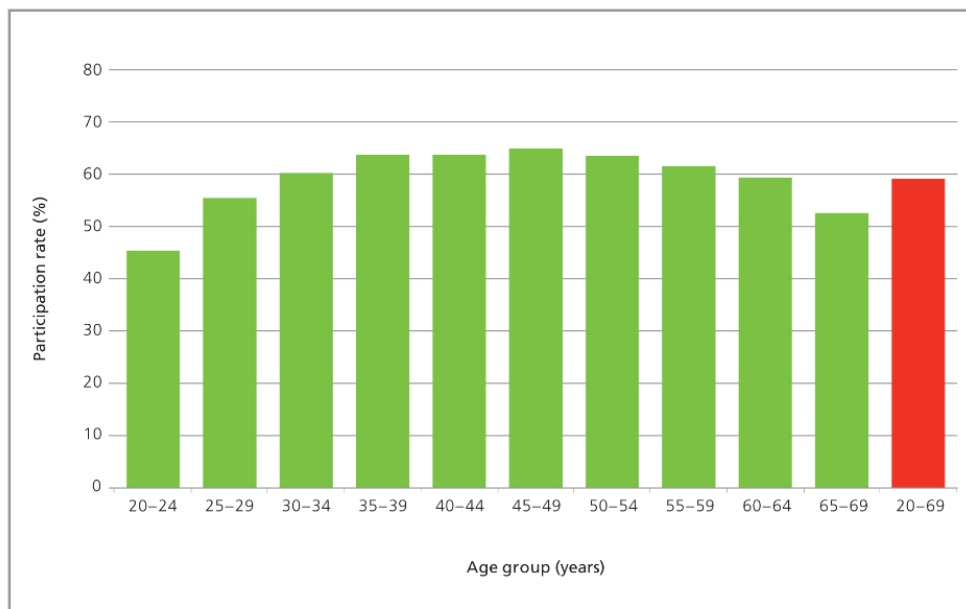


Figure 5: Biennial South Australian cervical cancer screening participation rate, 2009–10, among 20–69 year olds (excludes vault smears).

## Breast cancer screening

### Issues

For South Australian women, the lifetime risk of developing breast cancer before the age of 75 years is 1 in 11, making it the most commonly reported cancer for this population group (accounting for 28.7% of all cancers, and 16.9% of all cancer deaths in 2007). However, the chance of dying from breast cancer before the same age is much less (around 1 in 56).

Findings from a comprehensive case control evaluation published in 2007 indicates that participation in breast screening in South Australia is associated with a reduction in breast cancer mortality of between 30% and 41%. The report also suggests that there is a greater reduction in risk of breast cancer death when women attend regularly at BreastScreen SA for a screening mammogram. The study found that women who had at least three rounds of screening at least 30 months apart in the period leading up to their diagnosis reduced their risk of breast cancer death by up to 53%.

### Programs and initiatives

BreastScreen SA is the free, government-funded, statewide screening program for breast cancer. The program aims to reduce mortality and morbidity attributable to breast cancer in South Australian women through early detection using screening mammography.

Screening is primarily recommended for women aged 50–69 years without breast symptoms; however, women from the age of 40 years are eligible to attend.

BreastScreen SA data indicates that in 2009 there were 432 screen-detected breast cancers among screened women aged 40 years and older. In 2007 screen-detected breast cancers represented 36.2% of all breast cancers diagnosed for women aged 40 years and older, and 55.2% of all breast cancers diagnosed for women aged 50–69 years, in South Australia.

From 1 January 1989 to 30 June 2011 there were 1 224 810 screening mammograms provided to 275 893 individual women across South Australia by BreastScreen SA.

In 2010–11 major initiatives for BreastScreen SA included:

- > commissioning of two replacement mobile screening units, which have been in operation since September 2010 and use state-of-the-art digital screening technology
- > approval of the Digital Business Case, a state and Commonwealth government initiative to replace existing analogue infrastructure with digital technology. This funding will allow for conversion of the five fixed screening clinics and the assessment clinic, all using digital technology; Mobile Screening Unit 3 will be replaced and a new screening clinic will be established in the southern metropolitan Adelaide and Wayville areas
- > achieving 4 years' accreditation, with commendation, from the BreastScreen Australia National Quality Management Committee—the highest recognition possible
- > opening of a new digital screening clinic at GP Plus Health Care Centre Elizabeth in November 2010. This new clinic replaced the Salisbury Clinic and continues to provide free screening for women living in the northern metropolitan region.

## Outcomes

In 2010–11 a total of 74 117 screening mammograms were provided. Of these, 54 277 (73.2%) were provided at the six fixed screening clinics in the Adelaide metropolitan area and 19 840 (26.8%) were provided by the three mobile screening units. Of the total screening mammograms, 80.3% were provided to women in the target age group of 50–69 years.

BreastScreen SA recalled 1726 women to attend assessment of a screen-detected abnormality. The total recall to assessment rate for women with screen-detected abnormalities was 2.3%, which is one of the lowest recall rates in Australia. This is complemented by high cancer detection rates.

BreastScreen SA has continued to minimise waiting times from screening to assessment, with 95.1% of those women recalled for assessment in 2010–11 attending within 28 calendar days of their screening visit (exceeding national targets). Of the women screened in 2010–11, 84.1% were screened in the required time (target >90% women

screened in 28 calendar days). This is an improvement of 1.5 percentage points compared with 2009–10.

New clients represented 11.2% of all women screened in 2010–11. As at 30 June 2011, there were no overdue invitations. This is a result of the new strategies implemented in 2008 and the ability of the program to improve productivity and capacity.

### **Future directions**

BreastScreen SA will commence the roll-out of digital screening and assessment services in 2011–12, with completion due by June 2013. As well as the transition to a digital screening and assessment service, BreastScreen SA will also progress with replacement of the existing client information management system.

## **Bowel cancer screening**

### **Issues**

In Australia bowel cancer is a major cause of cancer-related deaths, especially for people aged over 50 years. In 2007 bowel cancer was one of the most commonly reported cancers, with over 14 000 cases being reported in Australia. Based on 2007 data, the risk of being diagnosed with bowel cancer before the age of 75 years was 1 in 18 for Australian males and 1 in 26 for females. This is one of the highest rates for bowel cancer in the world. Over the 5-year period 2003–07, the age-standardised incidence of bowel cancer in South Australia was 63.5 per 100 000 population, compared with the Australian incidence of 62.3 per 100 000. During the same period there were 1765 deaths from bowel cancer in South Australia.

The aim of bowel cancer screening is to find cancer or polyps early when it is easier to treat and cure.

### **Programs and initiatives**

The National Bowel Cancer Screening Program (NBCSP) commenced free bowel cancer testing for older South Australians in January 2007. The second phase of the NBCSP commenced across Australia on 1 July 2008, offering a free faecal occult blood test (FOBT) to people turning 50, 55 or 65 years of age between 1 January 2008 and 31 December 2010. This phase does not offer free rescreening to previous program participants or to the current cohort.

If a person is eligible for screening, a pre-invitation letter, followed by an invitation package that includes a free self-test FOBT kit and an information booklet, is sent by mail. FOBTs detect small amounts of blood in faeces, which may indicate the presence of abnormal growth in the bowel. The test is quick, easy and painless. It can be done at home and then sent to the program's pathology laboratory for analysis. The laboratory sends the test result to the participant, their nominated doctor and the NBCSP Register.

Medicare Australia is responsible for maintaining the NBCSP Register, including issuing pre-invitation letters, invitation packs and follow-up reminder letters, and collecting information about participation in the program and test results. The Australian Institute of Health and Welfare produces comprehensive monitoring reports for the NBCSP.

In South Australia, NBCSP Nurse Pathway Coordinators assist with assessment, scheduling and support for people with a positive FOBT who need follow-up colonoscopy services in public facilities. They also undertake education of health professionals about the NBCSP. From 1 July 2008 their role was extended to include telephone follow-up of NBCSP participants, in both the public and private sectors, with a positive FOBT participant who is not progressing through the screening pathway.

### **Outcomes**

The Commonwealth-funded Alternative Bowel Cancer Screening trial for Aboriginal people living in South Australia commenced in October 2009 and was completed in June 2011. The objective of the trial was to develop a culturally responsive model of bowel cancer screening that would increase the participation rates of Aboriginal people in FOBT screening. Four Aboriginal Health Services (including a mix of remote and metropolitan sites) participated in the trial, and an independent evaluation was conducted by a departmental Public Health Officer. A flipchart, pamphlet and DVD were collaboratively developed to assist in education and community awareness of bowel cancer screening. The evaluation found that the successes of the trial included an increase in knowledge and awareness of bowel cancer and screening among Aboriginal communities and Aboriginal Health Workers, and the demonstrable ability of Aboriginal Health Workers to deliver the trial effectively within short implementation timeframes.

During 2010–11 the Lyell McEwin Hospital undertook a Commonwealth-funded pilot of draft colonoscopy accreditation standards. The objective of the pilot was to assess the feasibility and comprehensiveness of the draft standards developed by the NBCSP Quality Working Group. The final report provided to the Commonwealth included recommendations that will increase the feasibility and practicality of data collection related to the draft colonoscopy standards.

### **Future directions**

The NBCSP will continue to offer free testing throughout 2011–14 to people turning 50, 55 or 65 years of age between January 2011 and December 2014.

The Commonwealth is reviewing the report from South Australia on the Alternative Bowel Cancer Screening trial for Aboriginal people, along with reports from other trials conducted interstate. South Australia will continue to work with the Commonwealth on any future proposals in this area.

## **Injury prevention: environmental hazards and safety initiatives**

### **Issues**

The department has been a leading advocate of enhanced community safety ever since it initiated the nation's first formal system of hospital-based injury surveillance in late 1985. From the very beginning of the effort to quantify the burden of avoidable injury on the South Australian community, it has been apparent that environmental hazards of many sorts contribute to a health problem that impacts significantly on the population.

Over the years the department has established an excellent working relationship with many parties that are keenly interested in risk management, including local, state and national government agencies. The department strives to assist public and private organisations that manage hazards in achieving best safety practice, with the aim of reducing the incidence and severity of cases. In the past, many safety interventions were successfully promoted to improve home, recreational and transport safety, as well as safety in public places. In 2010–11, significant projects included updating the national safety standards for swimming pools and playgrounds, in collaboration with other interested parties, and (see below) the continuing effort to specify unsafe infant sleep environments.

During 2010–11, some formal consulting was provided on the safe design of the Glenside redevelopment, a major project of the department. Technical and statistical advice was provided to the Department of Education and Children's Services; the Child Death and Serious Injury Review Committee; the Office of Consumer and Business Affairs; the Department for Transport, Energy and Infrastructure; the Department of Planning and Local Government; the Dog and Cat Management Board; and other agencies with a safety brief.

### **Programs and initiatives**

The major program of the year concerned unsafe infant sleep products. The objective was to reduce the risk of sudden infant death. Cots and bassinets with relatively soft sleep surfaces (mattresses) pose a significantly greater risk of suffocation than such items with relatively firm sleep surfaces. Unfortunately, no definition of 'firm enough' has been forthcoming, until now. Without such a definition, it has been difficult to confidently promote safer products or regulate against less safe products.

### **Outcomes**

The following are the 2009–10 outcomes from this key project:

- > On the basis of original research, a laboratory test was developed, and pass/fail criteria were defined, to distinguish infant sleep products that are sufficiently firm. This was a world-first achievement represented a world first in the continuing campaign to reduce the risk of infant suffocation.



- > A portable firmness gauge was invented that allowed assessment of infant products in the field, including in retail settings. This likewise represented a world-first achievement.

### **Future directions**

Future directions include the promotion of these innovations locally, nationally and internationally, to foster a heightened awareness of options for positive intervention and a uniform approach to managing the risks of non-firm infant bedding.

## **Injury prevention: falls and fall injury prevention for older people**

### **Issues**

Injuries resulting from falls are common and a major threat to the independence of older people. They can lead to disability and the need for additional services. There is increasing demand on health services such as primary health, ambulance, hospitals and rehabilitation, in part because of the ageing population.

The reduction of falls and fall-related injuries requires addressing environmental hazards, encouraging changes to people's behaviours and beliefs and, most importantly, identifying and providing care to those with physical and health issues that may predispose them to falling, or to injury or harm should they fall.

### **Programs and initiatives**

The current focus for the department is on training programs for staff in hospital, community and residential care settings to ensure that they can easily identify older adults who are at risk, and provide evidence-based services to reduce the risk. To support this work, there are directories of services and referral pathways, to locate the best service near the person. The department has also worked with consumers to develop information and messages to explain how best to improve their safety.

Governance of falls prevention activities is shared between the department and the local health networks, in partnership with clinical networks and non-government agencies.

### **Outcomes**

April—Falls Prevention Month this year—included over 100 activities for staff and consumers across the state. These help to raise awareness and reduce some of the belief that falls are an inevitable part of ageing.

The department released policy and practice guidelines for all services in April 2011. These were accompanied by processes and protocols for assessing risk, providing care to a fall-injured person, and coordinating team work to reduce repeat falls and improve services and clinical practice.

Linkages between fall prevention services, fracture clinics, and emergency and community-based services are strengthened.

A range of training opportunities for staff has included workshops, face-to face sessions, and e-learning packages and web-based information, delivered across the state. The department collaborates with the university sector in the development and delivery of training resources, the evaluation of initiatives, and research activities such as optimum ways to reduce falls among people with dementia.

### **Future directions**

To ensure that services are safe and provide high-quality care, during 2011–12 there will be ongoing implementation of the national best practice guidelines and the new Health Care Standard – Preventing Falls and Harm from Falls (Australian Commission for Safety and Quality in Health Care 2011)

## **Mental health and wellbeing**

### **Issues**

South Australia has significantly invested in promoting psychological wellbeing and building mental health literacy in the population. The *Stepping up: a social inclusion action plan for mental health reform 2007–2012* report produced by the Social Inclusion Board clearly identifies the need for additional action to combat stigma and discrimination.

### **Programs and initiatives**

The department provides funds and works in partnership with a number of community awareness and promotion services and programs, including:

- > exploring the development of an across-government action plan for workplaces that promote and protect psychological wellbeing
- > training in mental health first aid courses to build communities equipped to cope with and be involved in supporting people with a mental illness
- > building psychological wellbeing outcomes into service planning for six new Community Mental Health Centres and the GP Shared Care Program
- > the SQUARE and ASIST suicide awareness and prevention training programs to equip communities and clinicians with information, knowledge and skills.

A range of mental health initiatives target young people, including:

- > Healthy Young Minds, which aims to improve and expand child and adolescent mental health services in high-demand areas
- > the Headroom project, which aims to promote positive mental health for children and young people
- > research funded under SA Health's Strategic Health Research Program, to assist us to better understand the relationship between psychological distress and the social

determinants of health, including education, income, employment and other risk factors.

### **Outcomes**

Mental Health Week (MHW) 2010, held in October, saw a range of different activities and displays help to promote mental health awareness and information about services and programs. Mental Health Week aims to improve community awareness and knowledge of mental health and wellbeing, and seeks to reduce the stigma and discrimination often associated with experiencing a mental health problem. It promotes positive mental health and themes that aim to protect against illness and risk. The organisation of the week is a collaborative partnership by consumer groups, carer groups, non-government organisations, public mental health services and interested individuals to enhance awareness and participation. Displays and events were held in most mental health services. The Mental Health Operations Branch and the Office of the Chief Psychiatrist held a stall in Rundle Mall to promote mental health awareness.

MHW 2010 continued with the theme 'Open your mind—what you do can make a difference'. Activities included public information events as well as entertainment such as the 'Cracking Up Comedy' project. This project teaches and showcases stand-up comedy produced by individuals with lived experience of mental illness, and carers or workers from the mental health sector. The Dr Margaret Tobin Awards for Excellence in Mental Health 2010 were also announced.

### **Future directions**

Further initiatives are underway to promote mental health awareness and understanding among South Australians, as well as increase community acceptance and inclusion of people living with a mental illness.

The department will also work to increase positive representation of mental health issues by the South Australian media.

The department commenced work during 2010–11 to develop the Mental Health Destigmatisation Advertising Campaign to improve the public's understanding and perceptions of mental illness and what it means for those affected, reduce associated stigma and fear, and increase acceptance and inclusion. This advertising media campaign will commence in early 2012.

## **Child oral health improvement and increase in clinical prevention**

### **Issues**

Australia's first National Oral Health Plan 2004–2013 includes the following two underpinning themes:

- > a population health approach with a strong focus on promoting health and the prevention and early identification of oral disease
- > access to appropriate and affordable services—health promotion, prevention, early intervention and treatment.

South Australia's Oral Health Plan 2010–2017, which was launched in June 2010, outlines the following information regarding dental decay among children:

- > In 2001, South Australian children had the lowest level of dental decay in their permanent teeth when compared with other Australian states and territories. However, in recent years some of these gains have been lost and children in all socioeconomic groups are now experiencing more decay.
- > Oral diseases cause hospitalisation that could be avoided, particularly in young children with early childhood caries. In 2003–04 the most common reason for children under 15 years of age to undergo general anaesthesia in hospital in Australia was for dental extractions and restorations.

Increasing the level of clinical prevention (fluoride and fissure sealants) provided by the School Dental Service (SDS), with a focus on prevention for children considered at high risk of developing dental caries, is central to strategies to improve oral health outcomes for children in South Australia.

### **Programs and initiatives**

Since 2004 there has been gradual re-emphasis on a preventive focus—clinical training regarding preventive services such as fissure sealants and fluoride application. In particular, in early 2009 a revised service model for the South Australian SDS program was developed, with a focus on preventive services for children at high risk of developing dental caries.

Several strategies were part of the service model, including development of:

- > a standardised protocol for caries risk assessment, to be used by all clinicians across the SDS program, in which patients are categorised as high, medium or low risk based on protocol application
- > 'personalised preventive packages' of dental care for patients in each category, including an aggressive prevention approach for high-risk children; in addition, a standard follow-up interval was established for each of the risk groups
- > a small suite of core clinical key performance indicators (KPIs), again focused on preventive services for high-risk children, which staff could clearly identify and directly target with their clinical service provision decisions.

The Children's Population Oral Health Program, a screening program for preschool children involving Child and Family Health Service (CaFHS) nurses and general practitioners has been implemented since 2007 to increase early identification of dental caries.

## Outcomes

In the year ending June 2011, the level of preventive services in the SDS program had increased by 19% over the level reached in the year ending June 2010. The level of preventive services reached by the end of June 2011 was 4.5 times the level in 2002–03.

There was significant improvement in the preventively focused core clinical KPIs, with evidence that the increased preventive services were clearly targeted at medium- and high-risk children.

Following nearly 15 years of decline in children's oral health since the mid 1990s, the most recent data to the end of June 2011 demonstrates some slight improvement in key outcome indicators for children aged 6 and 12 years:

- > For 6 year olds, the proportion experiencing dental caries has decreased from 55.1% in 2008 to 52.5% in June 2011—a reduction of 2.6%.
- > For 6 year olds, there was a 5.0% reduction in the number of deciduous teeth affected by dental caries.
- > For 12 year olds, the proportion experiencing dental caries has decreased from a peak of 45.9% in 2008 to 41.7% in June 2011—a reduction of 4.2%.
- > For 12 year olds, the mean number of permanent teeth affected by dental caries is 0.93 compared with 1.05 in 2008—an 11% reduction and the lowest level since 2004.
- > For both 6 and 12 year olds, there are now fewer children with four or more teeth affected by dental caries.

The Children's Population Oral Health Program received 1541 referrals in 2010–11, and a total of 3737 referrals have been received since the program's inception.

Figures 6 and 7 illustrate the dental decay experiences for 6 year olds and 12 year olds, respectively, in South Australia for the past 20 years, and highlight the slight downward trend in recent times.

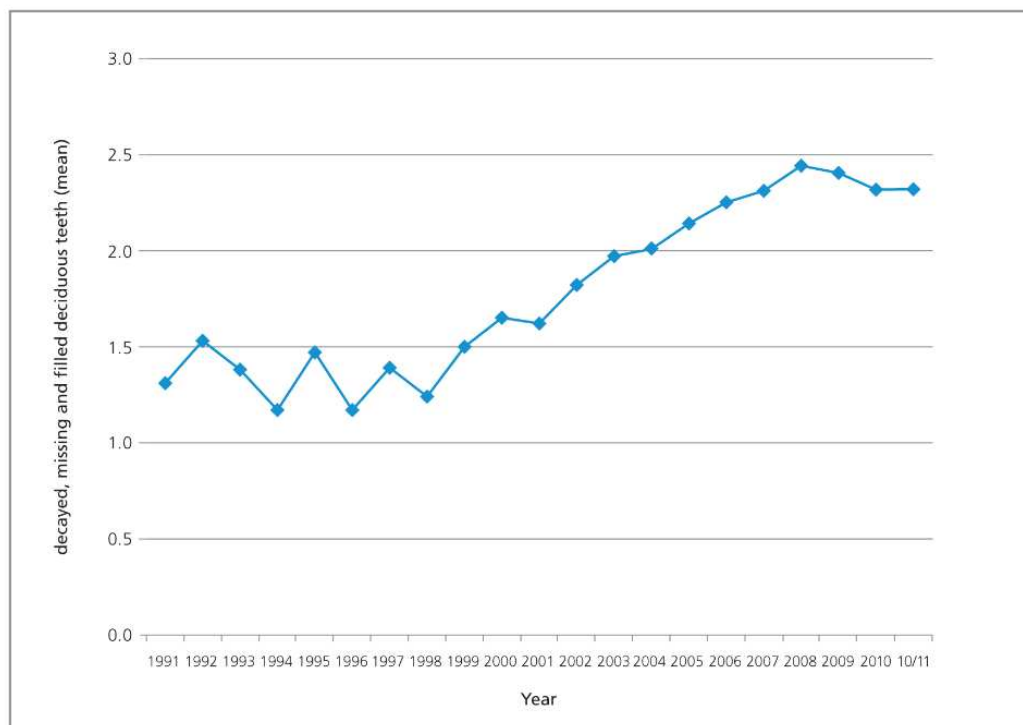


Figure 6: Dental decay experience (mean dmft) for 6 year olds in South Australia for the past 20 years

### Future directions

There is unequivocal evidence that the use of fissure sealants and topical fluoride will reduce dental caries in children if applied to the right clients. Therefore, the significant increase and focus on preventive services for high-risk clients that commenced in 2009 would be expected to have a further significant impact on dental disease levels of children in the SDS in the coming years.

It is vitally important that this focus continues and that preventive service levels continue to increase. The SA Dental Service will continue to monitor disease levels in clinics, the preventive services being providing and the targeting of high-risk children for these services. This will be done with all SDS clinicians every 3 months by the Senior Practitioners.

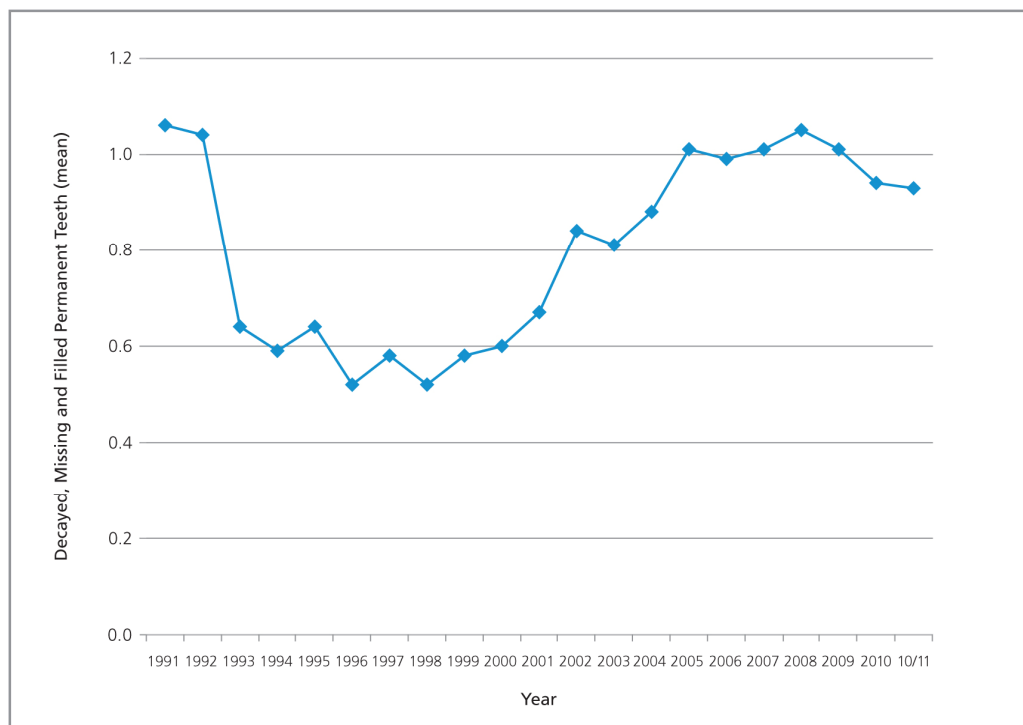


Figure 7: Dental decay experience (mean DMFT) for 12 year olds in South Australia for the past 20 years

There will also be a particular focus on 0–4 year olds at high risk of developing early childhood caries. This will be done via:

- > expansion of the Population Oral Health 'Lift the Lip' program to include childcare centres
- > specifically targeting preventive services to all these children to reduce as much as possible the development of dental disease and the consequent need for a number of them to have a general anaesthetic for their dental care.

## Aboriginal dental services

### Issues

The general and oral health of the Aboriginal and Torres Strait Islander population of South Australia is significantly worse than that of the total population. As a consequence, Aboriginal and Torres Strait Islander oral health is an important issue in the South Australian Oral Health Plan, the Aboriginal Health Care Plan and the Primary Prevention Plan.

Despite suffering poor oral health historically, only a small percentage of Aboriginal people have attended South Australian Dental Service (SADS) clinics. Effective health

promotion has the potential to play an important role in reducing oral health inequalities among Aboriginal people by increasing the acceptability of dental services, and by raising the profile of oral health as an integral part of primary health care.

### **Programs and initiatives**

The SADS has several programs that focus on access to dental services for Aboriginal people. Community dental and school dental clinics across the state provide general and emergency dental care for Aboriginal children and eligible adults.

The Aboriginal Dental Scheme works in rural areas to provide dental service through private dental practitioners. In addition, SADS works in partnership with the Aboriginal Community Controlled Health Organisation to provide dental services at Tullawon, Nganampa, Pika Wiya and Umoona Tjutagku health services.

The SA Dental Service Aboriginal Liaison Program began in 2005. The aim of the project is to improve the oral health of eligible Aboriginal and Torres Strait Islander people in South Australia by increasing the number of people accessing mainstream dental care. Eligible Aboriginal and Torres Strait Islander adults are referred for priority dental care using an established referral pathway at 14 community dental clinics—Salisbury, Noarlunga, Parks, Port Adelaide, Victor Harbor, Somerton Park, Gawler, Hindmarsh, Kangaroo Island, Riverland, Murray Bridge and Gilles Plains, extending to Pt Lincoln and Elizabeth GP Plus during 2010–11.

The Children's Population Oral Health Program integrates oral health screening and referral into general health and development checks for preschool children. Since the program's inception in 2007, 3737-children have been referred to the School Dental Service, including 1541 during 2010–11. Of these, 10% have been Aboriginal.

### **Outcomes**

Across SADS, 3877 adults received dental services in 2010–11 (Figure 8), an increase of 14% on 2009–10. Of all the clients presenting, 6.5% of community dental service clients and 2.5% of Adelaide Dental Hospital clients identify as being Indigenous.



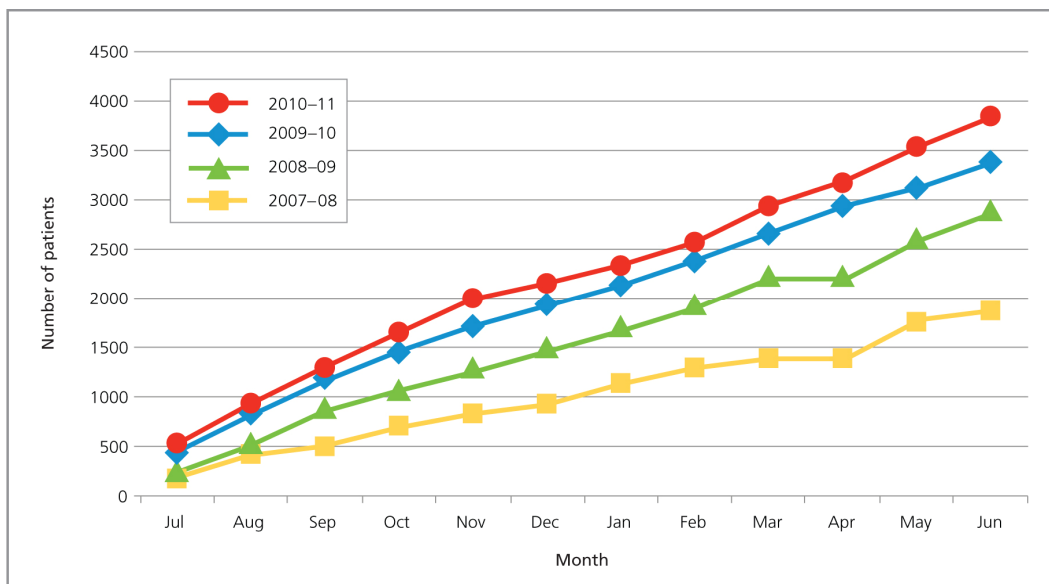


Figure 8: Cumulative number of Aboriginal adult patients across the South Australian Dental Service each year, 2007-08 to 2010-11

In 2010-11, 3565 Aboriginal children were treated, which represents an increase of 8% over the previous year (Figure 9). The percentage of School Dental Service clients who are Aboriginal is currently 4.4%, an increase in the proportion from 4.1% the previous year.

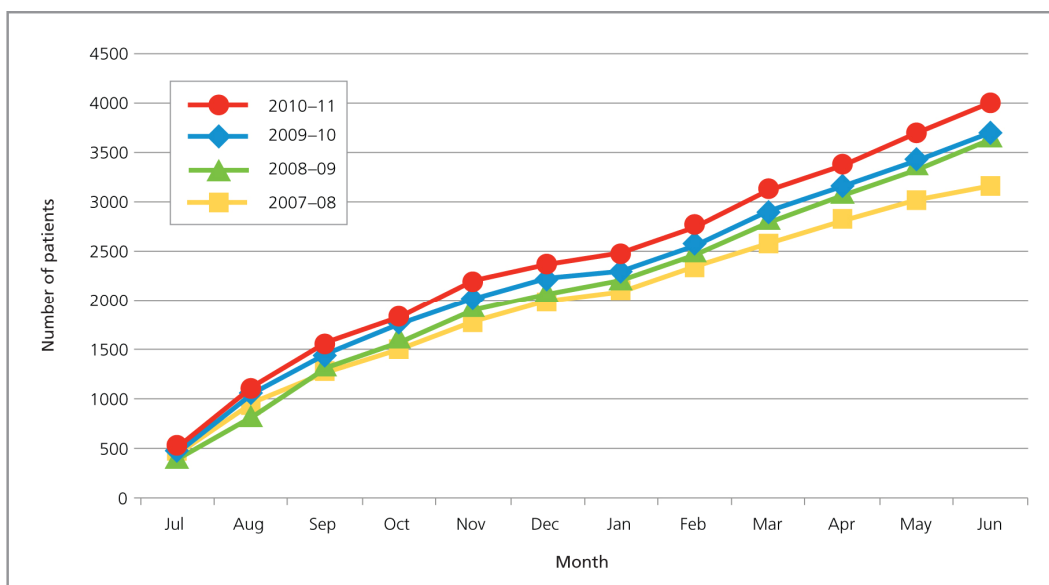


Figure 9: Cumulative number of Aboriginal child patients across the South Australian Dental Service each year, 2007-08 to 2010-11

In addition, SADS works in partnership with local Aboriginal Community Controlled Health Services to provide ongoing Aboriginal oral health programs at:

- > Yalata (Tullawon Health Service), which has a fixed dental clinic providing care to the communities of Oak Valley and Yalata
- > APY Lands (Nganampa Health Service), which is an ongoing Aboriginal oral health program; however, there were no data available at the time of reporting
- > Port Augusta (Pika Wiya Health Service), which is an ongoing Aboriginal oral health program to service communities in and around Port Augusta; 485 clients were provided with dental care in 2010–11
- > Coober Pedy (Umoona Tjutagku Health Service), which is an ongoing Aboriginal oral health program providing dental care to the Coober Pedy and Oodnadatta communities; 155 clients were provided with dental services in 2010–11.

In 2010–11 there was a 46.5% increase (1847 people received care) in the number of people treated under the Aboriginal Liaison Program compared with 2009–10 (1261 people received care). The increase is represented visually in Figure 10.

Cultural awareness training has been implemented at sites where Aboriginal Liaison projects are run.

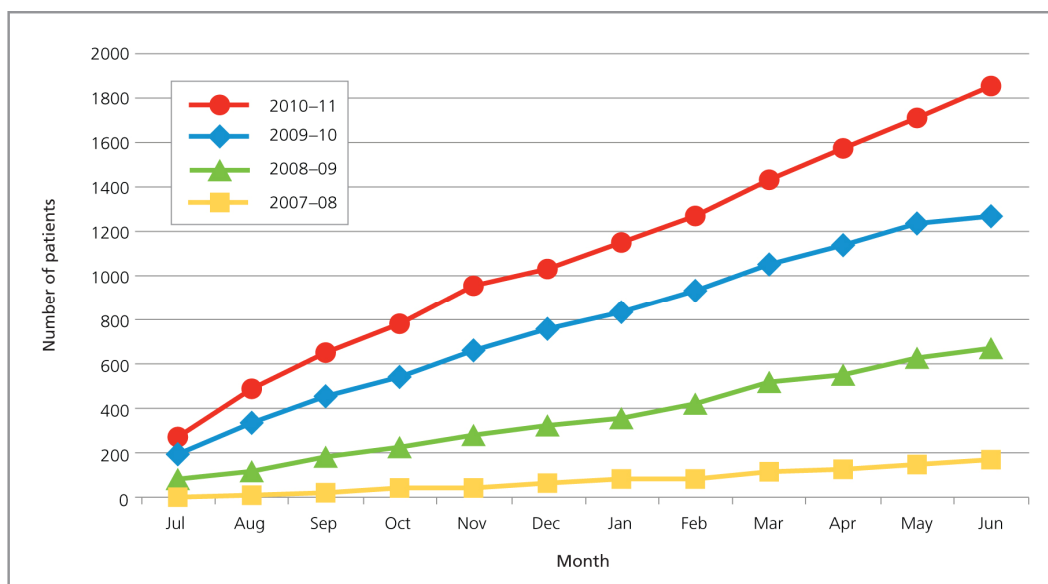


Figure 10: Cumulative number of adults receiving care each year under the Aboriginal Liaison Program, 2007–08 to 2010–11

**Future directions**

The Aboriginal Liaison Program will continue to expand across the state depending on available funds. The Children's Population Oral Health Program has a defined Aboriginal strategy to increase the number of Aboriginal preschoolers accessing dental services, and is developing a health promotion strategy focusing on Aboriginal pregnant women.

## Strategic direction 2: protecting the health of the public

The Department of Health is committed to protecting the health of South Australians by preventing, minimising and containing adverse health effects from unsafe food and water, other environmental hazards and risky behaviours.

### Key objectives

The key objectives in protecting the health of the public are to:

- > develop and administer public health legislation and policy that prevent, minimise or contain a range of environmental hazards
- > assist local government to achieve their public health legislative and policy responsibilities
- > ensure the safety and suitability of the food supply
- > prevent public harm from physical, chemical and microbial hazards in the environment.

## Children's Centres Health and Wellbeing Framework

### Issues

A Health and Wellbeing Framework was developed by the department in 2008 to support the capacity of Children's Centres to promote health of children and their families, strengthen parenting and improve access to health services, with a focus on children experiencing disadvantage.

The eight key domains of the Health and Wellbeing Framework are to:

- > strengthen child and family-friendly communities
- > maximise children's healthy eating
- > promote active play
- > increase the safety of the environment
- > promote children's self-care
- > protect child and maternal health and wellbeing
- > support and strengthen parent capacity
- > increase equitable access to health services.

Funding from the Council of Australian Governments National Partnership Agreement on Closing the Gap in Indigenous Health Outcomes is enabling specific implementation for Aboriginal children and families.

### Programs and initiatives

The Health Promotion Officers, funded through Closing the Gap funds, have been employed by the Department of Health regions in both metropolitan and country areas to work with Children's Centres on the key areas of healthy eating, physical activity and oral health. They are based at Elizabeth, Noarlunga and Port Augusta and work in their local communities to engage Aboriginal families with their local Children's Centre. In addition, they work with the Children's Centres to increase the number of culturally appropriate health promotion policies, programs and practices incorporated into Children's Centres. A 'learning circle' was established for the Health Promotion Officers and their managers to provide a forum for workers to share information and ideas, and provide support across all sites.

### Outcomes

Strong working relationships have continued to develop between SA Health, the Department of Education and Children's Services, the Department of Families and Communities, Aboriginal health and health promotion partners. Health promotion activities, policies and programs have begun to be implemented for both Aboriginal and non-Aboriginal children. Some examples include organising a Little Nunga's Health and Wellbeing Fun Day, establishing a playgroup for the Davenport community, and facilitating several cooking and healthy eating groups for parents. Evaluation of the program has commenced and it is anticipated this will provide valuable insights for future work in this area.

### **Future directions**

The project will continue to expand over the next 2 years as the number of Children's Centres continues to expand. An additional two Health Promotion Officer positions will commence in the 2011–12 financial year. The additional positions will be based at Elizabeth and part time at both Renmark and Ceduna.

## **Food policy: Monitoring compliance with the *Food Act 2001***

### **Issues**

Monitoring and surveillance is integral to ensuring a safe and healthy food supply. It is an important component of the food risk management framework and provides a mechanism by which risk management decisions can be evaluated and modified. Monitoring and surveillance provides information on compliance with current regulations, as well as identifying issues with, and surveying long-term trends in, the status of chemicals, microbes and nutrients in foods.

Monitoring and surveillance is a tool used by the department to deliver its aims, which are:

- > ensuring the safety and suitability of the food supply
- > preventing public harm from physical, chemical and microbial hazards
- > maximising the prevention of chronic disease through policy and program initiatives that address the determinants of health
- > encouraging the development of healthy public policy
- > increasing the capacity of individuals and communities to make healthy dietary choices
- > developing and administering legislation and policy that prevents, minimises or contains hazards
- > assisting local government to achieve their public health legislative and policy responsibilities.

Monitoring and surveillance also provides a level playing field for industry by ensuring that companies that comply with regulatory requirements are not disadvantaged compared with those that do not.

Activities may include:

- > analysing the level of pathogenic organisms in food
- > analysing the level of chemical contaminants in food
- > assessing the labelling and advertising of food

- > assessing the composition of foods against standards
- > auditing food processing and handling standards
- > analysing contaminant or nutrient levels and assessing trends
- > evaluating the impact of an intervention
- > providing information on which to base the establishment of new regulations/policy or the review of current regulations/policy.

### **Programs and initiatives**

Through effective planning, priority is afforded to public health issues, while ensuring that other issues of public interest and promoting health and wellbeing can be included.

To implement this approach a 5-year South Australian Food Monitoring and Surveillance Program has been established and is reviewed annually.

Monitoring and surveillance is undertaken proactively and includes:

- > surveys over a 5-year period (reported annually)
- > annual surveys
- > snapshot surveys.

Additional sampling may be required for follow-up as an integral part of corrective action where issues of concern are identified, and reactive food sampling and analysis is undertaken during the investigation of foodborne disease outbreaks. Samples may also be taken in response to complaints, as appropriate on a case-by-case basis.

Companies in South Australia are informed regarding non-complying results and are asked to take appropriate corrective action within a timeframe commensurate with the risk to public health.

### **Outcomes**

#### **Surveys conducted during 2010–11**

Table 3 summarises the surveys undertaken to monitor compliance with the *Food Act 2001*.

#### **Investigations initiated as a result of human illness reported to SA Health**

In all, 10 serious incidents involving reported illness were investigated, involving collaboration with other agencies including interstate authorities, local government and other regulatory agencies in South Australia.

A further 21 incidents were investigated, consisting of an environmental assessment (including hygiene, preparation and handling practices), environmental swabs and sampling of food and ingredients. A total of 500 microbiological samples, including

environmental swabs, food and ingredients, were tested for the presence of foodborne pathogens as part of these investigations.

Investigations aim to identify and control sources of contamination or infection and may require corrective actions, including suspension of production, isolation or recall of food from the market place.

Table 3: Surveys undertaken to monitor compliance with the *Food Act 2001* during 2010–11

Surveys over 5-year period	Number of samples	Results/conclusions
Fresh produce	80	Compliant with standard
Raw chicken	80	Minor non-compliance; ongoing surveillance
Raw eggs	80	Compliant with standard
Ready to eat meats	80	Minor non-compliance; corrective action taken
<b>Snapshot surveys</b>		
Sweet bakery products	80	Compliant with standard

### Investigations initiated as a result of surveillance activities

A further 77 issues were investigated as a result of information obtained from surveys, routine inspections and consumer complaints.

Of these issues:

- > Six serious issues were investigated that resulted in voluntary consumer level recalls.
- > Nine major investigations were conducted that resulted in the issue of warnings by the Department of Health or implementation of corrective actions by the food businesses concerned.
- > Sixty-two other investigations were conducted as a result of issues such as:
  - lack of allergen control
  - foreign matter in food
  - non-compliance with labelling standards
  - inappropriate application of best before / use-by dates to packaged food.

### Future directions

The department will continue to undertake monitoring and surveillance activities. In 2011–12 this will include continuing the 5-year Food Monitoring and Surveillance Program as



well as annual and snapshot surveys such as allergen control and food labelling compliance.

## **Food policy: Point-of-sale kilojoule labelling on menu boards**

### **Issues**

As part of the South Australian Government's approach to addressing the increasing health impacts of poor nutrition, overweight and obesity, the Hon. John Hill, Minister for Health, announced moves in March 2011 to require all major fast food retailers in South Australia to display kilojoule information on menus through amendments to the Food Regulations 2002.

### **Programs and initiatives**

Draft regulations were prepared together with a consultation paper to facilitate stakeholder input into this initiative.

The department has also participated in the development of a national approach into the display of nutrition information at the point of sale, as agreed at the December 2010 Australia New Zealand Food Regulation Ministerial Council meeting.

### **Future directions**

The outcomes of this consultation will be used to finalise the proposed amendments so that a labelling scheme can be introduced early in 2012 with a 12-month implementation phase.

## **Food policy: Working with local government**

### **Issues**

Food regulation in South Australia is a partnership between state and local government, and a Memorandum of Understanding (MOU) for the Exercise of Functions under the *Food Act 2001* clarifies the enforcement responsibilities of the parties. The MOU also includes an agreement for the department and the LGA, to establish a work plan to work together to continuously improve food safety and the effectiveness of the *Food Act 2001*.

### **Programs and initiatives**

The working group, with representatives from SA Health, local government and Environmental Health Australia, meet quarterly to review the progress of the plan and report annually to the Public and Environmental Health Council and LGA executive.

### **Outcomes**

Work commenced on 6 of the current 14 projects. The department is lead agency on two projects and co-lead on another. LGA is lead agency on the remaining three projects.

Project 1 of the work plan (Risk Classification and Inspection Frequency Project) commenced in 2010. This project has the objective to 'develop a statewide food business risk classification and inspection frequency system based on inherent risk, which sets initial and maximum and minimum inspection frequencies'.

It is proposed that:

- > A consistent risk classification system for food premises will be established under the *Food Act 2001*.
- > Different regulatory requirements may apply that are proportionate to activities undertaken at a food premises, and these requirements will be based on the risk classification allocated to those premises.

Phase 1 of this project involved interviews of selected councils about their risk classification and inspection frequency processes, which gathered valuable information.

#### **Future directions**

Work plan projects will continue to progress in collaboration with local government.

### **Food policy: Social Development Committee inquiry into 'scores on doors'**

#### **Issues**

On 23 November 2010 the South Australian Parliament passed a motion from the Hon. John Hill, Minister for Health, that the Social Development Committee (SDC) investigate and report on the merits or otherwise of schemes that provide information to the public on the results of food safety inspections and non-compliance with the *Food Act 2001*.

#### **Programs and initiatives**

The department presented evidence to the SDC in June 2011.

#### **Future directions**

The department will await the findings of the inquiry.

### **Food policy: South Australian Government submission to the Independent Review of Food Labelling Policy and Law**

#### **Issues**

The Council of Australian Governments and the Australia and New Zealand Food Regulation Ministerial Council (Ministerial Council) agreed to a comprehensive review of food labelling law and policy. The review, undertaken by an independent panel chaired by The Hon. Dr Neal Blewett AC, commenced in late 2009.

### **Programs and initiatives**

Public consultation was undertaken with the release in March 2010 of a paper seeking stakeholder input. The department coordinated the whole of the South Australian Government submission, which was submitted to the panel in 2010. During this time the panel directly approached individuals and organisations, including SA Health, for further information.

### **Outcomes**

The panel received more than 550 written submissions, and more than 550 people attended the public consultation forums. The Review Panel considered stakeholders' perspectives provided in their submissions, as well as other information gathered during the course of the review process, to inform the development of its recommendations.

On 28 January 2011 the Review Panel officially presented its final report, *Labelling Logic*, to the Chair of the Ministerial Council, and the Report –was publicly released on the same day. The department analysed the recommendations of the review and provided a brief to other government agencies in March 2011.

### **Future directions**

A national senior officials working group has been established to develop the Ministerial Council response to the review's recommendations. The department has two representatives on the working group, who have been involved in analysing and agreeing the next steps in relation to the 61 recommendations of the review. The department is also working with other agencies to prepare a whole-of-government position that can be fed into the national process. The matter will be considered by the Ministerial Council in December 2011.

## **Site contamination**

### **Issues**

In Australia, as elsewhere in the industrialised world, commercial, manufacturing and heavy industries in urban areas are often situated in close proximity to residential development. The department's Site Contamination Group provides human health risk assessments for the Environmental Protection Agency (EPA) for land that is contaminated and where the authority has identified a potential health risk may occur. The health risk assessment informs management of the land. This activity is coordinated through the joint Department of Health and EPA Site Contamination (Working) Group.

Contamination of soil and groundwater by volatile organic compounds can be a consequence of past disposal practices and/or spills and leaks from storage tanks at these sites. The Site Contamination Group's efforts in the past year have focused on understanding the health risks posed by exposure to vapours of these compounds moving through pores and cracks in soil, and migrating into overlying buildings.

## **Programs and initiatives**

In addition to responding to EPA requests for health risk assessments, the Site Contamination Group has recently provided risk assessment advice to other government stakeholders such as the Department of Further Education, Employment, Science and Technology and Housing SA.

The Site Contamination Group has been collecting soil gas and indoor air data at a public housing precinct situated adjacent to a large industrial site contaminated with the volatile organic compound trichloroethene since 2009. The findings from this research have contributed to the group's investigation of the impact of vapour intrusion in residential dwellings, and has been used to make extensive comment on the proposed draft site contamination National Environment Protection Measures.

## **Outcomes**

Advice has been provided by the department on 21 sites in the past year, with locations ranging from Victor Harbor to Tintinara in regional areas, as well as urban areas including Edwardstown, Clovelly Park, Marlestone, Campbelltown, Meadows and suburbs on the Lefevre Peninsula.

The group carried out detailed assessments of contamination health risks at Solomontown, Port Pirie, Edwardstown and Clovelly Park. The results of research at Clovelly Park have provided fundamental insights into attributes of a building that may make it prone to vapour intrusion and therefore a potentially higher risk to the health and wellbeing of present and future residents.

Key findings include the following:

- > The presence of measurable concentrations of volatile compounds under the slab of a slab-on-grade dwelling is a risk factor.
- > Rooms of a house that have services entry points such as gas, plumbing, drains and sewer through the slab present a higher risk than those with an intact slab.
- > Improper functioning of water traps associated with sewers and drains is a risk factor.
- > Lower ventilation rates associated with 'newer' slab-on-grade houses appear to be a risk factor.

These insights have been applied to risk management of potentially migratable volatile compounds from industrial sites into residential properties in Solomontown, Port Pirie and Edwardstown (Figure 11).

## **Future directions**

Impacts of former gasworks on surrounding residential areas have been identified as an ongoing issue of concern. The department and the EPA have set up a joint working group to proactively review these sites as a matter of priority.

The department has identified that, by virtue of location and building construction, there are a number of dwellings owned by Housing SA in Clovelly Park that are at high risk of vapour intrusion. The department is committed to assisting Housing SA in validating any proposed building-specific mitigation strategies to facilitate re-tenanting of impacted properties.



Figure 11: Monitoring volatile chlorinated compounds in a domestic service conduit at Clovelly Park using a Radiello® diffuse gas sampler.

## Resolving cases of severe domestic squalor and compulsive hoarding in instances where a public health risk is evident

### Issues

Cases of severe domestic squalor or compulsive hoarding can result in significant conflict with the residents of neighbouring properties. Local councils have historically been called to intervene in individual cases using the insanitary condition provision of the *Public and Environmental Health Act 1987*.

The time and resources required in attempting to deal with cases of domestic squalor and hoarding from a clean-up perspective are often very significant. Furthermore, identifying that a risk to public health exists under current legislation is not always clear, and the roles and responsibilities of the various agencies and organisations involved can be quite complex.

### **Programs and initiatives**

As a result of the assent of the *South Australian Public Health Act 2011* (the Public Health Act) on 16 June 2011, the insanitary condition provision of the *Public and Environmental Health Act 1987* will be replaced in the near future with general duty provisions requiring all people to take reasonable steps to prevent or minimise any harm to public health likely to be caused by their actions or omissions.

Under this new regime, local councils will conduct a prescribed assessment prior to issuing a notice seeking compliance with the general duty provision. Untidy or unsightly property will have to contain a demonstrable risk to public health in order for remediation powers under the *South Australian Public Health Act 2011* to be used.

This change will result in greater coordinated interagency collaboration to deal with the underlying cause of the problem behaviours, and subsequently deliver long-term solutions that better consider the overall health and wellbeing of the individuals involved. Local councils, whilst playing a significant role in maintaining public amenity and in protecting public health, do not bear sole responsibility for domestic squalor issues or their underlying causes.

### **Outcomes**

The department has developed a draft intervention model for managing cases of severe domestic squalor. The evidence-based model incorporates risk assessment tools to ensure that risks factors associated with a person's living conditions can be identified and addressed. The model relies on an interagency approach, recognising that domestic squalor and compulsive hoarding is commonly associated with some form of mental illness.

The draft intervention model will be distributed to numerous government and non-government agencies for feedback, with the aim of having a widely supported and endorsed final document published in 2012.

### **Future directions**

A public health policy may be created under the Public Health Act that could mandate the use of the intervention model in assessing cases of severe domestic squalor or compulsive hoarding, and determining the appropriate response from a public health perspective.

## Multiple chemical sensitivity

### Issues

Multiple chemical sensitivity (MCS), also known as environmental illness, chemical injury, and idiopathic environmental intolerance, is a condition where individuals report adverse reactions to numerous unrelated chemicals, such as exhaust fumes, fragrances, household chemical products, pesticides, solvents, plastics and petroleum products, often at extremely low levels. Some have associated symptoms with electromagnetic radiation. Symptoms are typically non-specific and patient-reported, and can include fatigue, headaches, fibromyalgia, anxiety, nausea, depression and dizziness. The aetiology is unclear, although there have been various postulates ranging from direct chemical interaction at the brain through to evidence of conversion reactions, anxiety and depression, and psychosomatic illness. Those with the syndrome strongly deny psychological causes.

Population data collected in 2002 and 2007 suggested that 1% of the adult population in South Australia purport to have some level of sensitivity to multiple chemicals, which justifies exploring measures to help accommodate people with MCS in the community.<sup>4</sup>

### Programs and initiatives

The department's Public Health Directorate chairs the South Australian MCS Reference Group, which provides a forum for issues to be discussed, including new and emerging research. The group also discusses proposed strategies that may help accommodate those with MCS, especially in relation to environmental matters. It is attempting to raise public awareness of the condition, with the view to encouraging strategies that reduce unnecessary exposure to environmental chemicals.

### Outcomes

With support from MCS Reference Group members, the department has developed and forwarded a No-Spray Register (NSR) policy to the LGA for consideration to disseminate to local councils. The NSR aims to assist local councils in helping to protect chemically sensitive people by applying a no-spray zone within the vicinity of their domicile, and to ensure those that are registered are notified prior to application of pesticides, allowing appropriate protective measures to be taken.

The NSR policy is accompanied by the *Guidelines for Local Government on Reducing Pesticide Exposure*, developed by the Department of Primary Industries and Resources of South Australia. This document aims at reducing the need for pesticide use for weed management.

The *MCS Hospital Guidelines*, produced by the department in 2009–10, advises hospital staff on how to provide an environment that is accessible to people with MCS and how to



reduce chemical triggers wherever possible. This document has been used by various overseas jurisdictions, being translated into at least German.

To increase community awareness, the department has developed MCS flyers directed at professional gardeners and sent them to relevant businesses listed in the South Australian Yellow Pages. In addition, the department has published MCS articles in its pest control industry newsletter, which is sent to all licensed pest control businesses in South Australia. Such information was tailored to provide a basic understanding of MCS and to advise industry on the appropriate and respectful consideration of people with MCS who may be in close proximity to chemical applications.

The reference group has now started developing MCS medical management guidelines to assist doctors with treating MCS patients, and will advise strategies for reducing chemical exposure in patients' living and clinical environments.

### **Future directions**

The department will continue to lead the MCS Reference Group in the development of strategies to help accommodate people with MCS in the community, focusing on the medical management guidelines.

## **Extreme heat**

### **Issues**

Extreme heat events experienced by South Australia since early 2008 have required the need for a coordinated response by key agencies to mitigate the effects of extreme heat on the health of the community. SA Health, the Department for Families and Community (DFC), the SA State Emergency Service (SASES) and the Bureau of Meteorology (BoM) have collectively implemented strategies to reduce morbidity and mortality and the impact of an extreme heat event on the health system.

### **Programs and initiatives**

On 29 November 2010, the Department of Health partnered with DFC, SASES and the BoM in receiving a National Winner Award at the Australian Safer Communities Awards held in Canberra. The Safer Communities Awards recognise best practice and innovation in helping to safeguard the community from significant events and build community resilience. The collaborative South Australian submission, titled *Extreme heat response*, demonstrated the range of strategies developed and implemented to raise the level of awareness of the effects of extreme heat and to assist the community in coping with the heat.



## Outcomes

The booklet *Extreme Heat Guide to Coping and Staying Healthy in the Heat* was evaluated in February 2011 with short questionnaires sent to public and private hospitals, local councils, consumers and other service providers. The responses indicated that the guide contained very useful information; and was well presented, easy to read and a good resource.

## Future directions

A revised *Extreme Heat Guide* will be available for the 2011–12 summer season, incorporating many of the suggestions received from the evaluation for improving its use and value. All extreme heat strategies will be reviewed and new material will be developed in response to community requests for more information.

The department will continue to work with other key agencies in responding to extreme heat events as they occur.

## Heat health risk factors for Adelaide

### Issues

Research published by the department examined the impact of extreme heat events on morbidity and mortality during the long and extreme heat event that occurred in Adelaide in 2009 (<http://www.ehjournal.net/content/pdf/1476-069X-10-42.pdf>). This work found associations between extreme heat episodes and effects on mental and renal heat-related conditions and cardiovascular health. During the 2009 heat event, direct heat-related health effects showed a dramatic 14-fold increase, and, in those aged 75 years and older, the increase was even higher (19%). This impact increased from 3.7% during average heat waves that occurred before 2009. This older age group was also more affected by renal-related hospital and emergency admissions. This research highlights the issue of heat health in the elderly and the importance of investigating potential risk factors for this population.

### Programs and initiatives

As a result of this research, the department initiated investigations into environmental, social and personal risk factors for the elderly to support South Australia's heat health program. A collaborative project between the department and the University of Adelaide, with seed funding from the department and SASES, was successful in obtaining Australian Research Council (ARC) funding in 2010 for a 2-year project. The research comprises focus group interviews (qualitative research) and surveys (quantitative research).

The qualitative component collected information about risk factors for the elderly from key personnel in aged care, community services, government agencies, emergency services

and a number of elderly citizens. The quantitative survey investigated barriers, attitudes and adaptive behaviours of the elderly that impact on their health and wellbeing during extreme heat. Five-hundred South Australians over the age of 65 years were interviewed using the Health Monitor telephone survey system administered by the Population Research and Outcome Studies Unit, University of Adelaide.

### **Outcomes**

Findings indicate a broad range of factors responsible for the heat susceptibility of elderly people, including age-related health decline, socioeconomic status and psychological health. Reported barriers to embracing adaptive strategies include difficulty operating air conditioners, inadequate clothing, being housebound, having to look after animals and the garden, transport limitations, power outages and 'not wanting to bother anyone'. Improving heat-health knowledge and assisting people to overcome the social, psychological and economic concerns that elderly people face are key strategies for minimising the impacts of extreme heat on morbidity and mortality.

Statistical analysis of data collected in 2011 is ongoing. Preliminary results suggest that males and people with an excellent, very good or good health status experience less health effects during extreme heat than females and those with fair or poor health. People with cardiovascular conditions and diabetes report health problems during hot weather. Behaviour that assisted in adaptation to heat includes using air conditioning and fans, reducing physical activity, increasing liquid intake, wearing lighter clothing and staying indoors.

The final results of this research will be disseminated to all parties involved in the South Australian emergency and heat health prevention network, and in peer-reviewed literature.

### **Future directions**

The department has initiated a further study resulting from a successful ARC grant in 2011, exploring the risk factors of ill health that led to mortality or severe heat-related morbidity during the 2009 extreme heat event. The case-control study will interview heat-affected cases and next-of-kin to compare individual, behavioural, socioeconomic and environmental factors with those reported by community controls. This study will provide vital information about the vulnerabilities of the South Australian community during severe heat.

## **Extreme heat health prevention—special programs**

### **Issues**

The department works together with the University of Adelaide (Public Health discipline) to study the impacts of health effects associated with extreme heat in Adelaide, and to

provide an assessment of potential risk factors associated with adverse heat-related outcomes, the knowledge of which can help to reduce risks in the future.

Work efforts have been based on the performance indicators included in the Action Plan (2007–2012) associated with 'Tackling Climate Change', South Australia's greenhouse strategy (Department of the Premier and Cabinet). The key objective for the department was Objective 2.1: Invest in research needed to manage health risks associated with climate change.

### **Programs and initiatives**

The following programs are informing this objective and have been funded or partly funded (ARC linkage grants) by the department:

> **Establishment of the risks for morbidity and mortality during averaged heatwaves (1993–2009) and during the extreme 2008 and 2009 heatwaves**

The study compared health outcomes during heatwaves with those during non-heatwave periods during the warm season. Average ambulance call-outs during the extreme 2008 and 2009 events were 10% and 16% higher, respectively, compared with 4.4% during previous heatwaves. Significant increases in health-specific hospital and emergency admissions were observed for renal morbidity in the elderly and for ischemic heart disease in the 15–64 years age group during the 2009 heatwave. Direct heat-related diagnoses (dehydration, heatstroke and sunstroke, and exposure to excessive heat) were up to 14 times higher compared with 3 times during previous heatwaves. Excess heat-related hospital admissions were estimated to be 215 and 304, respectively, for emergency presentations. Total mortality was significantly higher in 2009 only, particularly in the 15–64 years age group, with excess death during the 13 days estimated to be 32 cases. For further information, see: Nitschke et al 2011.<sup>5</sup>

> **Mortality and morbidity in metropolitan Adelaide and relevant threshold temperatures**

This study examines temperature thresholds for different health outcomes for the population of Adelaide, and quantifies the relationships between daily temperatures and health outcomes. Using relevant statistical analysis, heat thresholds provide a location-specific temperature above which mortality or morbidity increases. The identification of heat thresholds can assist in planning for extreme heat events. The heat thresholds estimated for mortality (maximum temperature (maxT) 30 °C, minimum temperature (minT) 18 °C), ambulance call-outs (maxT 28 °C, minT 18 °C) and emergency presentations (maxT 36 °C, minT 22 °C) represent mild temperatures for Adelaide summers, and it is not until temperatures reach extremes ( $\geq 40$  °C) that excess daily mortality and morbidity reach levels that would be likely to raise public health concern. The results of the study have been submitted for publication.

> **Studies currently being undertaken: elderly survey (successful ARC linkage grant 2010) and case-control study (successful ARC linkage grant 2011)**

The elderly survey uses qualitative and quantitative methods to gain knowledge on how to effectively address the needs of this vulnerable population during extreme heat events and identify the most appropriate preventive strategies.

The case-control study explores the risk factors to adverse health effects during the 2009 heatwave, focusing on the environmental, social and medical risk factors of people who have succumbed to illness during the heatwave, and compares them with community controls who survived the heatwave in good health.

## **Mosquito surveillance and control**

### **Issues**

As a result of higher than usual spring rainfall in South Australia and significant River Murray inflows from the eastern states, it was predicted that mosquito (and associated mosquito-borne disease) activity would be above average across most of the state during the 2010–11 mosquito season (September–April).

### **Programs and initiatives**

The department's sentinel bird surveillance program was continued, with the aim of providing an early warning of the presence of mosquito-borne viruses (arboviruses) capable of causing serious encephalitic human disease (Murray Valley encephalitis and Kunjin viruses). The department also conducted regular viral screening of trapped mosquitoes.

Local councils in high-risk locations were offered the opportunity to apply for Department of Health Mosquito Management Subsidy pre-approval, with the aim of ensuring that increased resources were made available to respond to increased mosquito breeding. The department's Globe Derby Mosquito Management Program resulted in regular treatment of known mosquito breeding habitats in the salt marsh adjacent to Globe Derby Park.

### **Outcomes**

The season resulted in the highest ever notifications on record in South Australia for human arbovirus infection (in particular, Ross River virus). Two cases of Murray Valley encephalitis virus were notified in South Australia (the first, probable, locally acquired cases since 1974), with one resulting in the death of a 27-year-old male from the Mid Murray.

Sindbis virus, Edge Hill virus and Kunjin virus were detected in trapped mosquitoes, and Murray Valley encephalitis virus and Kunjin virus were detected in sentinel birds, during the season.

Local government expenditure on mosquito surveillance and control doubled compared with previous years. Expenditure on the department's Fight the Bite arbovirus prevention campaign was quadrupled.

Basic surveillance was scheduled to be maintained throughout winter 2011, to assist in predicting potential activity early in the 2011–12 season.

### **Future directions**

Work has commenced with Rural Solutions SA (a commercial consulting unit within Primary Industries and Resources SA) to develop a contingency plan for managing future outbreaks of mosquito-borne disease.

Amendments will be made to the local government mosquito management subsidy, to provide improved reporting and better use of available funding.

## **Reducing lead exposure in Port Pirie**

### **Issues**

The Port Pirie community is exposed to lead as a consequence of ongoing lead smelting along with a legacy of more than 120 years of smelting in the city. High lead levels can have serious health and environmental consequences. It is imperative that lead contamination and high blood lead levels resulting from exposure be addressed, to protect both the health and wellbeing of residents, particularly children, but also the sustainability of Port Pirie. The National Health and Medical Research Council (NHMRC) recommends that all Australians have a blood lead level below 10 micrograms per decilitre ( $\mu\text{g}/\text{dL}$ ), and that the exposure of children and women (before and during pregnancy and while breastfeeding) to lead should be as low as possible.

In Port Pirie, lead exposure, absorption into the body and subsequent blood lead levels are determined by multiple interacting factors, including lead bioavailability, the frequency and concentration of lead smelter emissions, meteorology, age, housing standards and location. Currently, 26% of children living in Port Pirie under the age of 5 years have a maximum blood lead level above 10  $\mu\text{g}/\text{dL}$  (Figure 12).

### **Programs and initiatives**

The department continued its participation in the Tenby10 partnership together with the EPA, Port Pirie Regional Council and the Nyrstar smelter. The initiative concluded at the end of 2010. Although the Tenby10 goal to have '*...at least 95% of children living in Port Pirie aged under 5 years with a blood lead level of less than 10  $\mu\text{g}/\text{dL}$  by the end of 2010*' was not reached, there was a 24% improvement in the number of children with blood lead levels under 10  $\mu\text{g}/\text{dL}$  over the duration of the Tenby10 program. All parties remain committed to reducing children's blood lead levels in Port Pirie to ensure that the NHMRC recommendation is achieved in the near future.

The Nyrstar smelter has continued community exposure-reduction actions in 2011 under a new initiative named 'Ten for them'. The department maintains its public health lead program implemented through the Port Pirie Environmental Health Centre. The research component of the program, conducted by the department's Port Pirie Lead Investigation Group, continued investigations into lead exposure pathways to provide a robust evidence-base for strategic planning, decision making and policy making for Port Pirie.

The group continued to analyse and report children's blood lead level results and monitor the quality assurance of the Environmental Health Centre's community blood-screening program.

### Outcomes

Figure 12 shows continuing improvement in children's blood lead levels since 2004–05. The rate of improvement in the number of children with lead levels under 10 µg/dL appears to have resumed an encouraging increase, recovering from the previous 12 months when a slower rate of improvement was observed. However, the magnitude of this improvement should be interpreted cautiously because of the slower rate of improvement observed in 2009–10 and a decrease in the overall number of children tested this year compared with previous years.

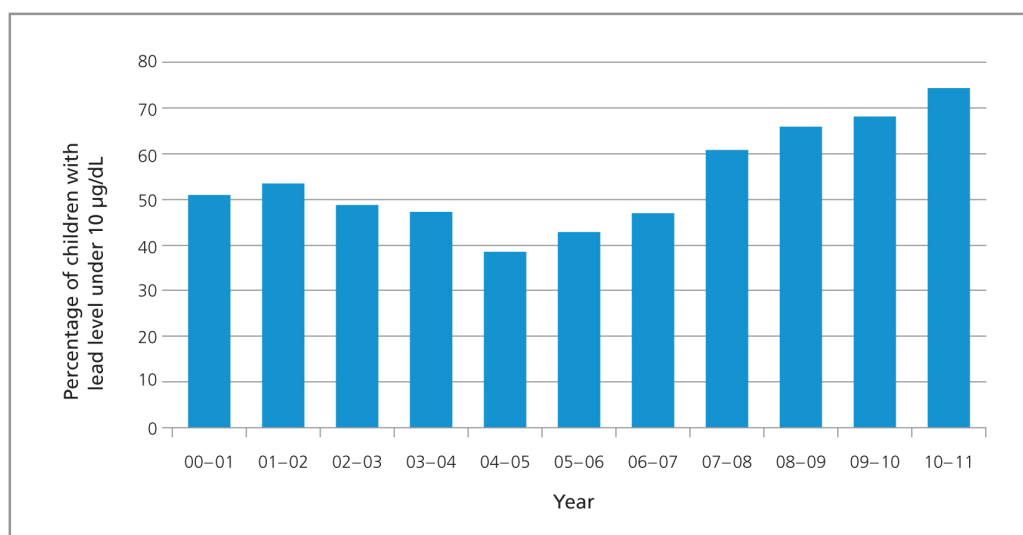


Figure 12: Port Pirie children's blood lead levels from 2000–01 to 2010–11

*Note:* Data used for this graph are children's *maximum* blood lead test results, which represent the worst outcome a child experienced and do not include surrogate maternal blood lead test results. Therefore, this graph cannot be compared with data in quarterly Department of Health Technical Papers, which use methodology based on the *most recent* blood lead test results and include surrogate data using maternal blood lead test results.

The number of children tested in 2010–11 with blood lead levels equal to or above 20 µg/dL has markedly decreased (n = 19) compared with the previous year (n = 38).

The department's research examining the recontamination rate in outdoor (soils) and indoor (including flat surfaces, air and carpets) environments has continued. Data has now been collected for 18 months and the project is intended to continue for at least another 3 years. This will ensure that the department has a sufficiently large dataset to enable accurate estimation of the potential for recontamination in Port Pirie as smelter emissions reduce.

A risk assessment has been completed to determine if ingesting non-commercial chicken eggs produced in Port Pirie (i.e. eggs laid by backyard chickens) poses a health risk. The assessment also involved investigating the effectiveness of remediation actions on egg lead concentrations. The health risk from ingesting contaminated eggs was significantly reduced by remediation actions in chicken enclosures, but a low level of lead remained in eggs. The department is continuing to work on a community-wide communication strategy to mitigate this avoidable source of lead ingestion for children and pregnant women.

Preliminary work was undertaken to determine an appropriate and consistent sampling methodology for soil surveying in Port Pirie. Once established, this methodology will be used to conduct an extensive soil survey, measuring soil lead levels throughout the city to inform future remediation strategies.

### **Future directions**

The Port Pirie Lead Investigation Group will continue to report children's blood lead levels and monitor quality assurance results to ensure that the integrity of the department's community blood screening program is maintained. The group will continue to monitor community lead-in-air levels measured by the EPA and the Nyrstar smelter to assess reductions in smelter emissions.

Recontamination of outdoor and indoor environments with lead will continue to be studied over the next few years. Interim results are enhancing the understanding of recontamination in Port Pirie under current levels of smelter emissions. This research will inform future planning and development of remediation strategies for the city once smelter emissions have sufficiently reduced.

A comprehensive soil survey of Port Pirie will commence in 2011–12. The survey aims to provide baseline soil lead levels across the entire city, which will be of critical importance in understanding the distribution of lead over the area and will assist with targeting effective remediation strategies in the future.

The group will continue to gather information on new approaches to soil monitoring and remediation from around the world, including developments in measuring bioavailability and bioaccessibility of lead. Advances in these areas will be assessed to determine if they are appropriate for incorporation into the department's health risk assessments and remediation options for contaminated areas.

## Safe drinking water

### Issues

Safe drinking water is a fundamental requirement for supporting and maintaining healthy communities. Communities have a right to expect that their drinking water supplies are safe, and that there are systems in place to ensure that this right is maintained and their health is protected. The importance of safe drinking water has been reinforced in recent years following the drought and new challenges that have been emerging with drought recovery. It has also increased scrutiny on both the quantity and quality of drinking water supplies.

Drinking water is currently regulated under the *Food Act 2001* and, although this Act requires that drinking water is fit for use, it does not specify how this is to be achieved or measured. The *Safe Drinking Water Act 2011* provides a definition for safe drinking water, how safety can be achieved and how it can be measured. It will also formalise the existing arrangement between the department and the South Australian Water Corporation (SA Water), which provides approximately 94% of the state with drinking water, and will provide a consistent approach to management and regulation of drinking water across the state. It aims to decrease the likelihood of waterborne disease outbreaks, and increase public confidence in the safety of their water supplies by increasing transparency. The development of this Act is identified as Action 92 in the South Australian Government's plan, Water for Good. The Act will also support the development and implementation of a strategy to improve the quality of water provided to remote communities (Action 66).

### Programs and initiatives

The department aims to ensure that the safety of drinking water is protected. This was achieved through:

- > developing of the *Safe Drinking Water Act 2011*, which includes mechanisms for assuring and measuring the safety of drinking water supplies
- > continuing to work cooperatively with all drinking water providers, in particular SA Water as South Australia's major provider, to monitor and respond to potential risks to public health
- > undertaking appropriate remedial actions to limit health risks to the community in the event of elevated source water contamination, treatment failure or non-compliance of drinking water with health guidelines.



## Outcomes

### ***Safe Drinking Water Act 2011***

The Safe Drinking Water Bill and accompanying explanatory paper were released for public consultation for 2 months between July and September 2010. Consultation included meetings and correspondence with a wide range of stakeholders from both country and metropolitan areas. Information sessions held in metropolitan Adelaide and regional South Australia were attended by a large range of water suppliers as well as stakeholders such as Environmental Health Officers. The response to the Bill was consistently positive and no substantive changes to the principles and structure of the Bill were recommended. Amendments were included to:

- > enable definition (by regulation) of the types of premises that can choose exemption from the legislation where rainwater is supplied
- > strengthen consultation with local government.

The draft Bill was introduced into Parliament in March 2011 and was enacted in May 2011 without change. An implementation plan has been developed to enable the Act to become operational. This will include the development of regulations and supporting guidance and resources. Consultation will continue with stakeholders, including drinking water providers and local government, throughout this process.

### **Water quality**

Water quality in drinking water supplies is monitored through two mechanisms—regular reporting and incident reporting.

The data presented in Tables 4 and 5 indicate that a high quality of drinking water was provided to the South Australian population in 2010–11, with at least 99.41% compliance with health-related parameters. In the metropolitan area 99.96%, and in rural areas 99.94%, of samples of water from customers' taps were free of *E. coli*. There were similar results for the Australian Drinking Water Guidelines parameters (microbiological and chemical); however, a higher than usual number of chemical exceedances was reported in country areas, largely due to challenging source water from the River Murray.

Table 4: Customer tap water samples free from *E. coli*, South Australia, 2010–11

	2006–07	2007–08	2008–09	2009–10	2010–11
Metropolitan	100%	100%	99.96%	100%	99.96%
Country	99.9%	99.8%	99.95%	99.99%	99.94%

Table 5: Percentage of water samples compliant with Australian Drinking Water Guidelines health parameters (microbiological and chemical), South Australia, 2010–11

	2006–07	2007–08	2008–09	2009–10	2010–11
Metropolitan	99.9%	100%	99.98%	100%	99.97%
Country	99.9%	99.6%	99.8%	99.63%	99.41%

Incident reporting is required in accord with the Water/Wastewater Incident Notification and Communication Protocol (the protocol). The protocol, initially developed in 1998–99, provides the basis for interagency communication of incidents, and includes a process for Ministerial and public communication where necessary. Incidents are categorised under the protocol as Priority Type 1, Type 1 or Type 2:

- > **Priority Type 1** incidents are those that are likely to cause serious risk to human or environmental health if immediate appropriate intervention is not taken. These incidents are likely to require immediate interagency meetings to consider responses and possible issuing of public advice.
- > **Type 1** incidents are those that, without appropriate intervention, could cause serious risk to human health, and could cause or threaten to cause serious or material environmental harm.
- > **Type 2** incidents are those that, without appropriate intervention, represent a low risk to human health, and cause or could cause low-impact or restricted environmental harm.

The protocol is subject to annual review and a revised version was issued during the reporting period. A number of amendments were made, including the addition of criteria relating to the Adelaide desalination plant and the detection of potentially human-infectious *Cryptosporidium hominis*.

Table 6 (source water—before treatment) and Table 7 (drinking water—after treatment) provide summaries of water incidents in 2010–11 and previous years. There was a significant increase in the number of incidents reported in this period; however, many of these were due to the challenging River Murray source water (see the ‘Drought Recovery’ section for further details). In addition, the protocol is reviewed each financial year and, since 2006, there has been an increase in the number of Type 1 and Type 2 criteria (e.g. introduction of blue-green algae in source water). This increase is reflected in the increasing number of incidents over the years.

Table 6: Source water incidents reported (before treatment), South Australia, 2010–11

Year	Priority Type 1*	Type 1	Type 2
2006–07	–	14	26
2007–08	–	35	48
2008–09	–	33	59
2009–10	2	31	100
2010–11	–	34	95

\* Priority Type 1 incidents were introduced in May 2009

Table 7: Drinking water incidents reported (after treatment), South Australia, 2010–11

Year	Priority Type 1*	Type 1	Type 2
2006–07		28	9
2007–08		47	11
2008–09		59	16
2009–10	7	57	35
2010–11	5	77	77

\* Priority Type 1 incidents were introduced in May 2009.

Water quality incidents notified during the reporting period related to detections of non-viable *Cryptosporidium* and *Giardia* in filtered drinking water. These are viewed as significant events because the safety of drinking water relies on the effectiveness of filtration plants removing these organisms. Detections included the following:

- > non-viable *Giardia* from the Happy Valley Water Treatment Plant (WTP) in August 2010
- > non-viable *Cryptosporidium* from the Hope Valley WTP in August 2010 and March 2011
- > non-viable *Cryptosporidium* and *Giardia* from the Tailem Bend WTP in March 2011
- > *Giardia* from the Murray Bridge WTP in May 2011.

On each occasion, the operation of the treatment plant, including filtration and disinfection, was investigated. No faults in plant operation or disinfection were detected and follow-up samples were clear.

### Future directions

The department will develop regulations under the *Safe Drinking Water Act 2011* over the next 12–18 months leading to proclamation of the Act. To assist water providers to

comply with the requirements of the Act, a number of templates and guidance documents will be prepared. Guidance will also be provided for local councils in the administration and enforcement of the Act.

## Drought recovery

### Issues

Following the end of the 'millennium drought' in 2009, South Australia entered drought recovery. Higher than usual rains were experienced in the last reporting period, with the wettest spring on record followed by the third wettest summer on record (after the summers of 1973–74 and 1975–76). Flows through the River Murray increased significantly throughout the reporting period. This resulted in a number of issues, including highly variable water quality, which initially involved high turbidity and colour associated with water flowing from the Darling River. This was followed by elevated concentrations of organic material associated with 'blackwater' events. These events were caused by the flushing of accumulated vegetation from wetlands that had dried or become disconnected from the river during the drought.

The high turbidity posed challenges to filtration, while the elevated concentrations of organic material greatly increased both chlorine and chloramine demand and the production of disinfection by-products.

In the latter half of the year there was also an increasing rate of detection of *Cryptosporidium* and *Giardia*, particularly in the lower reaches of the River Murray. It is likely that this is related to impacts of the drought on physical characteristics on the River Murray floodplain.

### Programs and initiatives

In response to increased floodwater and the blackwater events, SA Water increased monitoring frequency at 25 sample locations throughout the river. A number of approaches were implemented to deal with the challenges of maintaining chlorine and chloramine residuals while containing increased formation of disinfection by-products. This is consistent with the recommendations of the Australian Drinking Water Guidelines. These approaches had to be adjusted throughout the year to respond to variations in river water quality. Measures included constant monitoring and adjustment of chlorine and chloramine doses, use of booster chlorinators, and decreasing storage tank levels to decrease contact times.

Additional monitoring was undertaken in response to the increased frequency of *Cryptosporidium* and *Giardia*.

## Outcomes

Although drought recovery led to a number of substantial challenges to the provision of drinking water from the River Murray, safety was maintained throughout the year.

A public health information sheet, *Health Information for Food-affected Communities*, was released following flooding to provide information to flood-affected communities along the river. This included information about private drinking water supplies such as bores or rainwater tanks that may have been affected by localised flooding.

## Future directions

The range of water quality issues associated with drought recovery is expected to reduce over the next reporting period. Monitoring will continue and the appropriate actions and responses will be implemented where impacts are detected.

## Fluoridation

### Issues

Fluoridation of drinking water supplies has been recognised as an effective and safe means of preventing dental caries, and is supported by health authorities worldwide, including the World Health Organization and Australia's National Health and Medical Research Council. South Australia's Oral Health Plan 2010–2017 identifies that water fluoridation is the most cost-effective population health measure to prevent dental decay, and the largest benefit is observed in disadvantaged populations.

In 2007 the South Australian Government announced that a fluoridation plant was going to be constructed at Mount Gambier to help protect dental health. Construction on the plant began in late 2009 and was completed in mid 2010. The plant began fluoridating the town's water supply in October 2010.

### Programs and initiatives

The department continued to work collaboratively with SA Water during the construction and commissioning of the fluoridation plant throughout the reporting period. The department and SA Water jointly developed the *Fluoridation Factsheet: Mount Gambier Fluoridation Project* for distribution to residents in Mount Gambier prior to the plant being turned on. The department continued to provide information to residents and other interested parties before and after commissioning of the plant.

## Outcomes

A webpage providing fluoridation facts with links to reviews and other resources was developed and a number responses were provided to media enquires regarding fluoridation.

### **Future directions**

The department continues to support fluoridation of water supplies as an effective way to prevent dental caries in the South Australian community. Monitoring of the latest international and Australian research on fluoridation will be continued, and advice will be provided to the general public and water suppliers as required.

## **Wastewater management**

### **Issues**

Over 400 000 South Australians rely on onsite wastewater systems or community wastewater management schemes not operated by SA Water.

The Wastewater Management Section (WMS) of the department administers the Public and Environmental Health (Waste Control) Regulations 2010 and, in association with local government, is the relevant authority for all matters relating to all non-SA Water wastewater collection, treatment and recycling systems.

Climate change projections and water shortages have resulted in an increasing interest from persons connected to SA Water schemes to recycle their wastewater onsite, generating a number of referrals to the WMS for advice and approval of individual systems. Local councils have also become interested in, and have allocated significant funds to, recycling technologies.

As a result, the WMS has assessed and approved a number of recycled water products for the South Australian market as well as several large water recycling schemes.

### **Programs and initiatives**

To assist in the future rollout of new legislation, a number of training seminars were held in 2011 focusing on local government. This will also involve industry and the public in 2011–12.

In association with the Local Government Association (LGA), a review of the *Community Wastewater Management System Guidelines* has also been instigated. This document covers the design and installation of infrastructure in non-SA water areas. This project will continue into 2012.

The WMS has also assisted in the assessment of new treatment technologies being undertaken by Flinders University and the LGA. This project encompasses producing different wastewater treatment system designs to reduce carbon footprints.

### **Outcomes**

During 2010–11, 90 installation and 13 product approvals were carried out, which included assessment of:

- > extensions to existing wastewater drainage systems, including septic tank effluent disposal schemes and private sewer systems
- > new treatment plants for community systems and mine sites
- > recycled water reuse schemes
- > onsite wastewater treatment systems.

As part of their regulatory role, the WMS assessed and approved the Tea Tree Gully and Mount Barker recycled water plants, which will produce 1100 megalitres of high-quality recycled water for industrial and municipal uses in those areas.

### **Future directions**

With the advent of the *South Australian Public Health Act 2011*, a new set of wastewater regulations will be introduced that will provide for the use of new and innovative technologies, and streamline administration procedures to assist the public and industry.

In 2011–12 the WMS will seek to retain South Australia's leading role in recycled water reuse by:

- > implementing the new legislation and reviewing its performance
- > continuing to provide advice and support for local government, the water industry and the public.

### Strategic direction 3: preventing communicable and other acute and chronic diseases

The Department of Health is committed to preventing, minimising and containing adverse health effects from communicable diseases and disease outbreaks. We play a role in acute disease prevention; and we contribute to the prevention of chronic disease by identifying factors that contribute to poor health, and modifying, reducing or eliminating them.

#### **Key objective**

The key objective in preventing communicable and other acute and chronic diseases is to maximise the prevention of chronic disease through policy and program initiatives that address the determinants of health.



## Notifiable diseases surveillance and Investigation

### Issues

The Disease Surveillance and Investigation Section (DSIS) contributes to the department's vision to obtain the best health for South Australians through:

- > monitoring and controlling notifiable communicable diseases in the state
- > improving the overall wellbeing of Aboriginal South Australians by describing the burden of disease and informing health promotion initiatives
- > improving links to partner agencies for the investigation of disease and the collection of specific data.

### Programs and initiatives

Ongoing activities were to monitor, investigate, control and report notifiable communicable diseases in South Australia.

### Outcomes

Statewide surveillance was conducted for notifiable diseases, enabling analysis of health data and the initiation of specific public health actions to prevent the further spread of disease.

Partnerships were continued with agencies, providing additional expertise and authorities for investigations, including OzFoodNet, Environmental Health branches, Biosecurity SA, SA Pathology and Environmental Health Officers from local government.

### Summary

Between 1 July 2010 and 30 June 2011, the DSIS collected 19 398 reports of notifiable diseases, compared with 21 299 in the previous reporting period. Among these, 11 789 (61%) were notifications of respiratory disease and 3336 (17%) were for gastrointestinal disease.

An overall decrease in respiratory diseases was noted; however, the previous reporting period included the influenza A H1N1 pandemic in 2009. Pertussis cases continued to be reported at higher than expected numbers, with 6563 cases, compared with the 3-year average of 3142 cases/year for the period 2007–10.

An increase in enteric notifiable diseases was observed during the reporting period. There were 963 cases of salmonellosis reported, compared with the 3-year average of 656 cases/year for the period 2007–10. Reports of *Campylobacter* infections also increased within this period, with 2101 cases reported, compared with the 3-year average of 1838 cases/year for the period 2007–10.

Residential facilities, especially for the aged, accounted for 57 outbreaks requiring disease control measures. Most of these were due to a viral agent, for example norovirus, rotavirus. Eight childcare facilities reported gastroenteritis outbreaks during this period.

Investigation and control activities included:

- > 1 case of measles
- > 6563 pertussis cases
- > 5266 cases of influenza
- > 3 hepatitis A cases
- > 29 cases of Shiga-toxin producing *E. coli* infection
- > 22 cases of invasive meningococcal disease
- > 7 cases of mumps
- > 9 typhoid cases and 2 paratyphoid cases
- > 8 cases of Q fever
- > a cluster of cryptosporidiosis cases linked to swimming pools.

In partnership with OzFoodNet, DSIS investigated 10 outbreaks of gastrointestinal illness that were known or suspected to be foodborne during the period July 2010 to June 2011. Four of these outbreaks were associated with bakeries and two with restaurants.

In addition, 19 clusters of illness were investigated, of which 17 were *Salmonella* clusters. Hypothesis-generating interviews were conducted with the majority of cases, but no common food source could be identified.

### **Selected disease surveillance and investigation activities**

#### **> *Salmonella***

Salmonellosis is an infection of the bowel caused by *Salmonella* bacteria. There are thousands of serotypes of *Salmonella* and they occur in many domestic and wild animals and birds, sometimes causing illness. *Salmonella* infection usually results from ingestion of the bacteria from contaminated food, water or hands. People may become infected if they transfer animal faeces containing *Salmonella* bacteria from their hands to their mouths. Person-to-person spread may occur when hands, objects or food become contaminated with faeces from people who are infected.

Between 1 July 2010 and 30 June 2011, 963 cases of salmonellosis were notified, compared with 625 in the previous corresponding period (Figure 13). Cases comprised 474 males and 489 females, with high numbers of notifications (172 cases; 18%)

received in those less than 5 years of age. Investigations have been unable to determine the reason for the overall increase in cases. The outbreak investigation of *Salmonella typhimurium* phage type 9 related to bakeries (detailed below) would contribute to some of this increase.

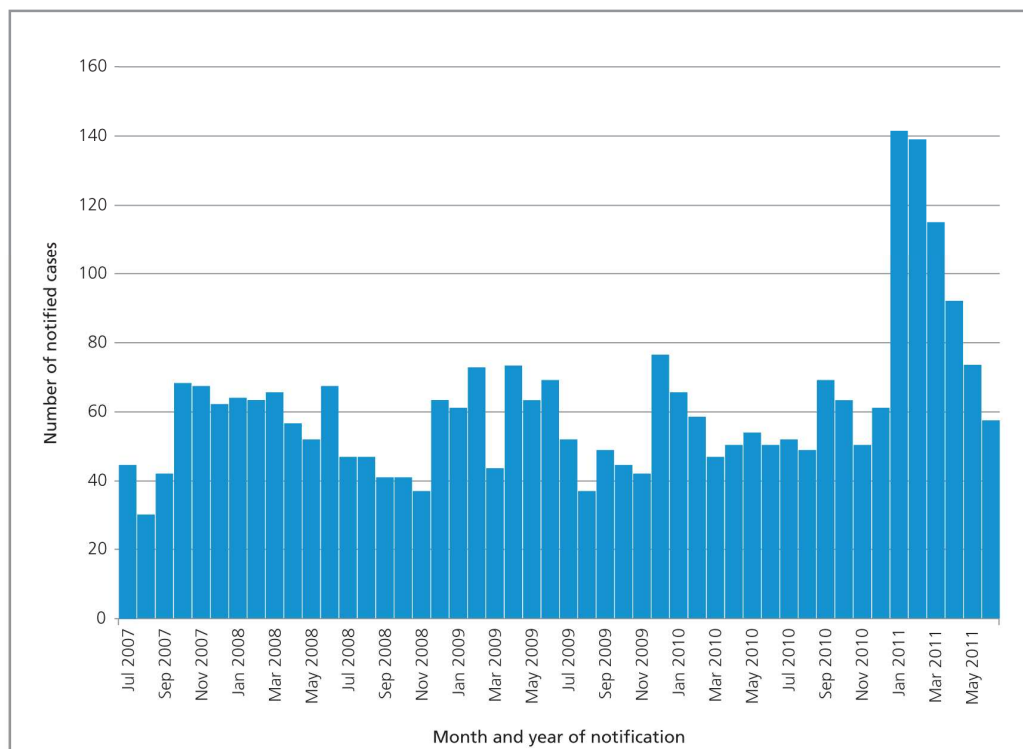


Figure 13: Notified cases of *Salmonella* infection, South Australia, 1 July 2007 – 30 June 2011

#### > **Outbreak investigation of *Salmonella typhimurium* phage type 9 in bakeries**

In late January 2011, the Communicable Disease Control Branch was notified of a sharp increase in the number of *Salmonella typhimurium* phage type 9 isolates by the Australian Salmonella Reference Centre. A hypothesis-generating investigation found that custard-filled bakery items were frequently eaten food items. A case control study was then conducted, and two items were significantly associated with illness. The food items were custard berliners (OR 55.9; 95% CI 11.1–282.1) and cannoli (OR 16.8; 95% CI 1.8–157.2). Information from the interviews and the case control study indicated that these products were from two different bakeries.

Bakery A made the custard berliners. A total of 43 cases reported eating this product and 19 (44%) of these people were hospitalised. The business voluntarily ceased production and distribution of custard berliners. Extensive samples of product, raw materials and environmental swabs were collected. All samples were negative for *Salmonella*.

Since bakery A discontinued manufacture of this product, no new cases have identified an association with the bakery.

Bakery B made the cannoli, which is a deep-fried pastry filled with custard. A total of 15 people reported eating cannoli in their incubation period and three (20%) required hospitalisation. The business voluntarily ceased production and distribution of cannoli. Extensive samples of products, raw materials and environmental swabs were collected. All samples from on-site tests were negative for *Salmonella*, while a small number of product samples taken from retail outlets tested positive for *Salmonella typhimurium* phage type 9.

Bakery B has undergone an intensive return to production schedule involving the sampling of 193 products over a 5-month period. All samples were negative for *Salmonella*, and no new cases have identified an association with this bakery since its return to production.

## > Influenza

Influenza is usually an acute respiratory disease that is more common in winter. Seasonal influenza places extra demands on healthcare resources, including hospitalisation for severe disease. The public health impact can be broad because influenza viruses are spread by droplets generated when those infected cough and sneeze. Annual vaccination protects against currently circulating strains of influenza.

DSIS conducts syndromic influenza surveillance by collating datasets from both laboratory (SA Pathology) and clinical (Australian Sentinel Practice Research Network; hospital emergency departments) sources to describe influenza-like disease in South Australia. Additionally, influenza was designated a notifiable disease under the *Public and Environmental Health Act 1987* in May 2008.

Between 1 July 2010 and 30 June 2011, 5266 cases of influenza were notified. Of these, 859 cases were attributed to influenza B virus, 4367 were typed as influenza A, and a further 3648 were typed as influenza A H1N1 2009. There was a similar distribution of cases in both sexes; however, there were a high number of cases (38%) under 15 years of age.

## > Pertussis

Pertussis, commonly known as whooping cough, is caused by *Bordetella pertussis* and remains a common community infection more than 40 years since a vaccine was first introduced in South Australia. An escalation of pertussis cases since 2004 continued until late in 2006. Some of this increase is now thought to reflect changes in laboratory testing, and some reported cases may have reflected past, rather than current, infection. However, increased numbers of pertussis have again been recorded since September 2008 (Figure 14). A more modern molecular test now in common use in laboratories distinguishes between past and current infection.

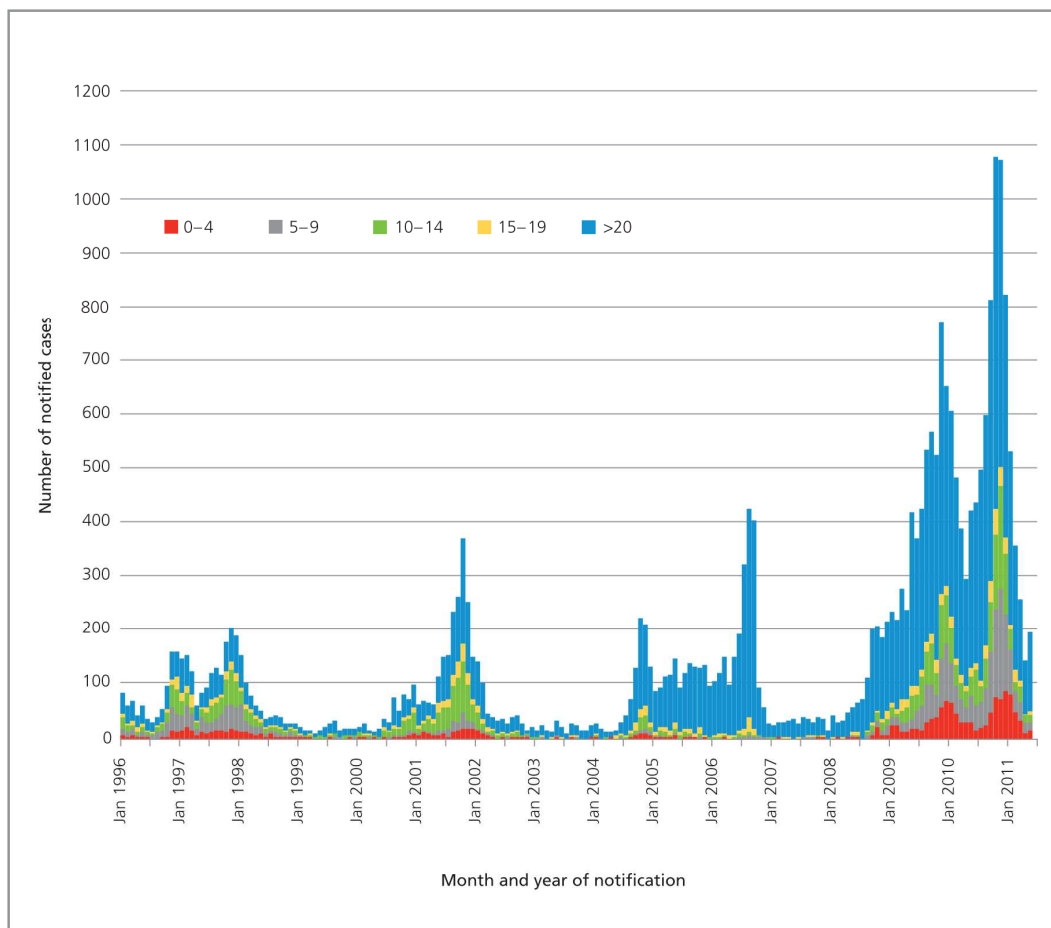


Figure 14: Notification of pertussis cases in South Australia by age group (years), 1996–2011

Note: This figure demonstrates the impact of herd immunity on the temporal frequency of pertussis cases; with decreases first in the 5–9 then 10–14 and, latterly, 0–4 years age groups. The apparent increase in incidence in 2009 is, in part, due to the sensitivity of molecular tests.

Between 1 July 2010 and 30 June 2011, 6563 cases of pertussis were notified, compared with 6122 in the previous corresponding period. Cases comprised 2769 males and 3794 females; and 2217 (34%) cases were aged under 15 years. Cases were geographically dispersed across South Australia.

> **Projects and research undertaken**

OzFoodNet is a network of epidemiologists around Australia who conduct enhanced surveillance for foodborne diseases. Throughout this reporting period, the South Australian OzFoodNet team conducted a study on campylobacteriosis and a culturally specific food project.

> ***Campylobacter* study**

Campylobacteriosis is the most commonly notified bacterial gastrointestinal infection in South Australia and Australia-wide. Advances in molecular subtyping methods have enabled further classification of *Campylobacter* isolates. Campylobacteriosis cases in South Australia were gradually declining between 2007 and 2010; however, an increase was noted from August 2010 and it has been continuing into 2011. The aim of this project was to generate hypotheses regarding potential sources of campylobacteriosis in South Australia. From May to July 2011, a selection of people diagnosed with *Campylobacter* infection were interviewed with a hypothesis-generating survey, and their specimens were analysed using molecular subtyping techniques. The results will be compared against their food and exposure histories.

> **Culturally specific food project**

OzFoodNet uses a standard questionnaire to interview people with infections of *Salmonella* and *Campylobacter*. It focuses on the environmental factors and foods that people were eating before they became ill, in an attempt to identify the source of their illness. The current questionnaire does not contain food lists that reflect the cultural diversity of the Australian population. A project was undertaken to identify raw ingredients that are commonly used at home for a wide variety of cultural groups. The project has identified a list of key ingredients used by different cultural groups and how those food ingredients are prepared. This information is being used to help OzFoodNet better understand possible foodborne disease risks across the community.

**Future directions**

DSIS will continue to monitor, investigate and control notifiable communicable diseases in South Australia. Its aim is to:

- > provide ongoing intelligence on communicable and notifiable diseases and conditions
- > contribute to informing policy

- > drive intervention and prevention
- > guide health promotion activities
- > support and undertaking research
- > develop knowledge.

## Service initiatives supporting HIV and hepatitis C prevention, treatment and support

### Programs and initiatives

#### > **Culturally and linguistically diverse (CALD) HIV Interagency Project**

One of the key objectives of the South Australian HIV Action Plan 2009–2012 is to reduce the rising rates of HIV among people from culturally and linguistically diverse (CALD) backgrounds in South Australia.

The department established the CALD HIV Interagency Project (CHIP) in 2010 to address this objective of the Action Plan. A Coordinating Committee was established to oversee the project and plan and deliver a coordinated response to HIV prevention in CALD communities.

As part of the project, a workshop was held in April 2011 entitled 'Building the evidence on HIV prevention in CALD population'. The workshop was designed to provide direction on priority actions for HIV prevention in South Australian CALD communities. It was highly successful, with over 70 attendees from a range of key stakeholder groups. The CHIP Committee is continuing to develop a set of agreed priority actions and implementation plan to direct future prevention efforts in this area.

#### > **National summit on placing others at risk**

The department hosted a national summit in February 2011 with delegates who work in the area of managing people with HIV whose behaviours place others at risk for HIV transmission. Delegates from all jurisdictions throughout Australia came together to extend their knowledge and understanding of the issues in this area of work. Topics covered at the summit included HIV, crime and law, jurisdictional differences, confidentiality, case studies, cultural diversity, complex cases / challenging behaviours, and networking and support. The summit provided delegates with opportunities for networking and the sharing of experiences and lessons learned with their interstate colleagues.

### > **Mid-term stocktakes of the Hepatitis C and HIV action plans**

The South Australian Hepatitis C Action Plan 2009–2012 and the South Australian HIV Action Plan 2009–2012 both include a requirement to undertake a mid-term stocktake in 2010–11; this was done by HIV/HCV Policy and Programs in early 2011.

This process involved collaboration with the HIV and Hepatitis C sectors to develop an environmental scan documenting changes in each sector since the release of the action plans, an assessment of progress against each action plan activity to date, and consultation workshops with key stakeholders from both sectors to identify which areas are on track and which require additional effort to ensure completion, and to define emerging issues. The mid-term stocktakes are designed to inform implementation of the action plans in the final half of their terms.

## **Infection control**

### **Issues**

Infection associated with health care contributes to poor outcomes for patients, and is responsible for additional costs to the healthcare system through increased length of hospital stay and additional treatment and investigation. Increasing the pool of antibiotic-resistant organisms also contributes to poorer outcomes for patients who develop infections in the community, as they become harder to treat.

Compliance with established infection control procedures, especially the continued improvement in practising hand hygiene, remains an important strategy in minimising healthcare-associated infection (HAI). The World Health Organization has identified this as a major problem in healthcare facilities worldwide, and has adopted hand hygiene compliance as its first global patient safety challenge—‘clean care is safer care’. The department has also identified this as a priority area for action in South Australia, and all acute care hospitals are expected to participate in the national initiative being run by Hand Hygiene Australia.

The potential emergence of new pathogens of significance in hospital patients is being carefully monitored, both locally and nationally; an example is the so-called ‘hypervirulent’ strains of *Clostridium difficile*, which causes a severe form of gastroenteritis. These organisms have the potential to spread widely in health facilities if infection control practices are allowed to lapse. Control of this particular pathogen relies on thorough and effective cleaning of the healthcare environment, as well as promotion of responsible antibiotic prescribing.

Reduction of HAI is a priority area for the Australian Commission on Safety and Quality in Health Care, and the implementation of national reporting of HAI has led to increased focus on reporting at a local level. In addition, promotion of appropriate antibiotic



prescribing is one of the major strategies to limit the development and spread of antibiotic-resistant microorganisms. The Infection Control Service of the Communicable Disease Control Branch actively monitors the incidence of HAI and antimicrobial usage at a statewide level.

## **Programs and initiatives**

### **> Hand hygiene**

A focus on hand hygiene continues to be a priority across the state, with the Hand Hygiene Australia Program being well established throughout the acute care facilities. The department has developed a suite of tools to facilitate implementation of the hand hygiene program throughout the state, and South Australia now has its own hand hygiene policy directive, guidelines, implementation tools and centralised auditor training program. These initiatives have contributed to the improved compliance results. The department also successfully continues to run the community directed 'Wash, Wipe, Cover...don't infect another' initiative in parallel with the national program.

### **> Educational programs**

The Infection Control Service continues to provide up-to-date information and training in infection prevention for healthcare professionals. The well-established link nurse education program provides ongoing targeted infection prevention and control education for those nurses with infection control as part of their portfolio. This program has been expanded to include nurses working in the non-acute health sector. Several educational forums for healthcare workers in acute care, as well as non-acute, mental health and other community settings, have been facilitated and are now well established to discuss issues specific to their setting.

### **> Department of Health Infection Control Guidelines**

The Australian Guidelines for the Prevention and Control of Infection in Healthcare were released during 2010. The department state guidelines are being reviewed and updated to reflect the national best practice guidelines. Associated fact sheets and guidance tools are also being developed, where required, for local implementation.

### **> Healthcare-associated infection (HAI) surveillance**

The department has developed, and is currently implementing, a new central HAI surveillance database that will allow for more timely review and reporting of existing statewide HAI data as well as identified areas of future surveillance (e.g. surgical site infection and central intravenous line-associated bloodstream infection). The system provides for the automatic upload of data received electronically from participating hospitals.

> **Antimicrobial stewardship**

Antimicrobial stewardship is the term applied to strategies designed to improve the quality of antibiotic prescribing in healthcare settings. The South Australian Expert Advisory Group on Antimicrobial Resistance continues to produce standardised statewide guidelines for appropriate antibiotic prescribing in hospitals. This advisory group also reviews results of the antibiotic usage surveillance program run by the department, and formulates recommendations for the appropriate use of antibiotics in South Australian hospitals, dependent on findings of this program.

> **Cleaning standards for hospitals**

The department is continuing to develop the Department of Health Cleaning Standards for Hospitals, detailing the minimum level of cleaning that should apply to all state hospitals and associated satellite health units. The standards will be accompanied by an implementation guide, and a system of external auditing by departmental staff will be developed.

## **Outcomes**

The Hand Hygiene Australia initiative continues to expand in South Australia, with nearly 300 nurses from public and private facilities across the state having received training in auditing against the '5 moments for hand hygiene' national audit tool. All 26 Department of Health metropolitan and larger country acute care hospitals submit data three times per year to the national program. More importantly, the state overall compliance rate has shown a steady improvement over time and is now equal to the national average.

Two education sessions to update and train link nurses were held in 2010–11. Uptake of the program continues to increase, with over 90 participants attending these 1- and 2-day programs. Pre- and post-attendance assessment showed a significant increase in knowledge of infection prevention and control practices.

Continuous surveillance has shown that South Australian rates of HAI are comparable with or, in some cases, below those reported by other jurisdictions. For example, the state rate of bloodstream infection caused by *Staphylococcus aureus* is well below the national maximum target rate. To date, South Australia has not detected any cases of 'hypervirulent' *Clostridium difficile*. Surveillance data also indicate that, although there has been emergence of vancomycin-resistant enterococci (VRE) in the larger public hospitals, the extent of the problem has been largely contained in the past 2 years.

A guideline for the safe and appropriate use of aminoglycoside antibiotics was developed by the Advisory Group on Antimicrobial Resistance and is available on the departmental website for all clinicians to use. Surveillance of antimicrobial usage patterns in South Australian hospitals continues to provide a means of monitoring the effects of interventions aimed at minimising inappropriate antibiotic use.

Draft Department of Health Cleaning Standards for Hospitals have been prepared, and are about to be piloted in several South Australian public hospitals. A system of internal and external auditing is currently under development, and will be phased in once the standards are finalised and implemented.

A response plan for the potential emergence of 'hypervirulent' *Clostridium difficile* disease in South Australian healthcare settings has been developed. At this time, after careful consideration, there are no plans to make this a notifiable disease.

### **Future directions**

The department will continue to work towards embedding current programs into the clinical culture of South Australian hospitals. Hand hygiene needs to maintain a high profile to ensure that compliance rates continue to improve. The department will continue to maintain the auditor training program and collect data on a statewide basis for submission to the Hand Hygiene Australia national monitoring program.

The department will progress the implementation of new targeted areas of surveillance in alignment with the Australian Commission on Safety and Quality in Health Care's HAI reduction strategy. These will include a focus on preventable surgical site infection and central intravenous line-associated infection, particularly in high-risk patients such as those in intensive care units.

In 2011–12 the standards that detail the minimum level of cleaning for all state hospitals and associated satellite health units will be released to relevant stakeholders for comment. The standards will be accompanied by an implementation guide and a system of external auditing by departmental staff.

Guidelines for surgical antibiotic prophylaxis are to be finalised, after relevant consultative processes, and uploaded to the departmental website. Work will continue on updating the state infection control guidelines and associated implementation tools and fact sheets for health professionals and the general public.

## **Pandemic influenza**

### **Issues**

The World Health Organization (WHO) announced on 10 August 2010 that the world was no longer experiencing an influenza pandemic and had moved into the post-pandemic period. Australia continued to stay in the 'PROTECT' phase until 1 December 2010, when it then moved to the 'ALERT' phase, following the pandemic virus behaving more like seasonal influenza.

Along with other states and territories, South Australia continued to experience cases of pandemic (H1N1) 2009, although the notifications no longer presented as a significant health issue for the South Australian public and the health system.

### **Programs and initiatives**

Following notification by the WHO of cessation of the pandemic, no new work was undertaken relating to pandemic influenza.

### **Outcomes**

The Department of Health Operational Plan for Pandemic Influenza has been rewritten in light of knowledge gained from pandemic (H1N1) 2009 and the lessons learned from the outbreak. The June 2011 version aligns with the Australian Health Management Plan for Pandemic Influenza (AHMPPI), which was updated in December 2009. SA Health's plan details the health and medical strategies to be employed in response to a pandemic. The Pandemic Influenza Support Plan June 2011 to the Human Disease Hazard Plan has been similarly updated.

The department contributed to the review of Australia's health sector response to the 2009 pandemic, commencing in the latter part of 2010. The final report on the response is expected to be available to the public on the Commonwealth Department of Health and Ageing website ([flupandemic.gov.au](http://flupandemic.gov.au)) in late October 2011.

### **Future directions**

The State Pandemic Influenza Working Group is to be dissolved following the end of the H1N1 outbreak, and any issues relating to pandemic influenza will be addressed as they arise by the new group to be established, the State Human Disease Committee.

The Emergency Management Unit will continue to respond to, and work with, the Commonwealth and the states and territories on matter related to pandemic influenza.

## **Immunisation**

### **Issues**

The department works collaboratively with public immunisation providers within local government and community health settings, as well as private immunisation providers within general practice, private hospitals and aged care settings, to provide a high-quality immunisation program for all South Australians.

In the period 1 July 2010 to 30 June 2011, the department distributed a total of 822 177 doses of vaccine for all vaccination programs.

## Programs and initiatives

### > **New parents pertussis vaccination program**

South Australia offered a funded adult pertussis vaccination program for parents and grandparents of children less than 6 months of age who held healthcare or pensioner concession cards from late September 2009. This program ceased on 31 December 2010, with approximately 10 000 doses distributed at a cost of \$250 000.

## Outcomes

### > **Childhood immunisation program**

In 2010–11 South Australia continued to maintain high immunisation rates for children aged 12 months of age and 2 years of age. As recorded on the Australian Childhood Immunisation Register (ACIR) at June 2011:

- 90.5% of children aged 12–15 months are fully immunised, compared with 91.6% at the same time last year, which is a decrease of 1.1%
- 92.4% of children aged 24–27 months are fully immunised, compared with 92.4% at the same time last year
- 87% of children aged 60–63 months are fully immunised, compared with 86.7% at the same time last year, an increase of 0.3%.

Despite the slight increase in coverage for this group, it still remains below the national average of 89%.

### > **Healthcare worker influenza program**

In 2010–11 a total of 31 073 doses of influenza vaccine were distributed for the healthcare worker program in all public-sector healthcare facilities. This is 6000 doses greater than the previous year. The coverage rate in the healthcare worker program increased from 53.5% in June 2010 to 54.22% in June 2011.

### > **School immunisation program**

Commonwealth-funded vaccines are offered to high school students annually through a program delivered by local government and community health services. South Australia has the highest vaccine coverage rates in Australia for this age group. In 2010, 78% of Year 9 students received a booster for diphtheria, tetanus and whooping cough, which is the same as in the previous year; 78% of Year 8 students were fully immunised for hepatitis B, an increase of 13% from the previous year; 74% of Year 8 female students were fully immunised for HPV, a 12% increase from the previous year; and 44% of Year 8 students received a dose of varicella vaccine, an increase of 2% from the previous year. The low uptake of this vaccine is due to the high number of individuals who have natural

immunity through previous exposure to the chickenpox virus. This information is accurate as at 30 September 2011.

#### **> Indigenous childhood immunisation program**

As recorded on ACIR at June 30 2011, 75.7% of Indigenous children were fully vaccinated by 12 months of age. However, by the time they turn 2 years of age, this increases to 89%, which is a 3% decrease from the previous year. This indicates that, although there is high uptake of the childhood vaccines, there is a delay in Indigenous children receiving their vaccines on time, which places them at risk during the period they are not fully vaccinated.

The coverage rate of children at 5 years of age is only 79%, but increases to 84% by the time they turn 6 years of age, indicating a delay in receiving the 4 year old booster vaccinations.

#### **Future directions**

Education of immunisation providers and the community continues to be a key strategy to raise awareness and maintain quality immunisation services for all South Australians. The low 4 year old vaccine coverage rates continue to be a priority for the department, and it has developed a coordinated approach to improve uptake through the release of a promotional campaign, 'Big Help for Little Adventurers', targeting this group.

The healthcare worker influenza program is a priority for the department, and there is continued focus on the development of strategies aimed to improve uptake of vaccines recommended for this group.

The department will continue to work collaboratively with local council immunisation providers, Divisions of General Practice and the ACIR Field Officer during 2011–12 to improve timeliness of vaccination in the childhood immunisation program, and improve coverage in the adolescent vaccination program.

### **Communicable disease surveillance and investigation: Specialist Services**

#### **Issues**

Specialist Services provide public health medical advice in-hours and after-hours, and epidemiological and health promotion advice, to a range of internal and external customers.

During 2010-11, Specialist Services undertook a range of projects, including development of policy of public health responses to specific diseases, and of a statewide acute rheumatic fever and rheumatic heart disease prevention and control program.

## Programs and initiatives

During 2010–11 Specialist Services:

- > developed a draft departmental policy to improve and monitor healthcare worker immunisation
- > progressed the development of a South Australian Rheumatic Heart Disease (SA RHD) Control Program, including establishment of the SA RHD Advisory Group
- > developed a public health response to increased arbovirus infections in humans (Ross River virus, Barmah Forest virus and Murray Valley encephalitis virus), in collaboration with Health Protection Programs and Biosecurity SA, through the Zoonoses Working Group
- > continued implementation of the public health response to increased pertussis infections
- > developed an interim *Clostridium difficile* response plan in collaboration with other departmental stakeholders
- > developed and piloted tools to conduct online surveys for outbreak investigations
- > analysed 11 years of South Australian data on Shiga-toxin-producing *Escherichia coli* (STEC) infection
- > provided ongoing supervision and support for postgraduate and undergraduate students on placement with the Communicable Disease Control Branch (CDCB), including a Master of Applied Epidemiology scholar and an Australian Faculty of Public Health Medicine specialist trainee.

## Outcomes

Specialist Services achieved the following outcomes:

- > prepared the draft Health Care Worker Immunisation Policy Directive by working with various stakeholders across the department and consulting widely with external stakeholders
- > provided intensified public health responses (Fight the Bite) and enhanced arbovirus surveillance, including sentinel bird surveillance, following increased mosquito numbers, increased notifications of Ross River and Barmah Forest viruses and two human cases of Murray Valley encephalitis virus infection (the first in South Australia for 35 years)
- > organised and contributed to the Intersectoral Zoonoses Workshop in December 2010, involving a range of departmental stakeholders as well as representatives from Biosecurity SA and the Australian Quarantine Inspection Service
- > together with SA Health's Health Protection Branch, Communication Division and the Master Builders Association, assisted with the coordination of a short television

segment (*Building Ideas*, Channel 9) on how consumers can protect their homes against mosquitoes, and reduce their risk of nuisance biting and potential mosquito-borne disease

- > prepared for the 2011 influenza season through input and review of national and state influenza surveillance systems
- > updated content for the departmental influenza website
- > continued work towards the establishment of an SA RHD Control Program in the state through establishment of the SA RHD Program Advisory Group, and commencement of strategies to support best practice diagnosis and management of acute rheumatic fever and rheumatic heart disease
- > developed a strategy in response the 2009–11 pertussis epidemic in South Australia and contributed to a review of the Pertussis Series of National Guidelines
- > developed a response plan for *Clostridium difficile*-associated disease, in collaboration with SA Pathology
- > coordinated whole-of-CDCB presence at the National Aborigines and Islanders Day Observance Committee (NAIDOC) Week Family Fun Day held on 9 July 2010, and provided information to Aboriginal families and their communities on hand washing, immunisation, seasonal influenza, Hepatitis C, body piercing and tattooing
- > successfully piloted the use of online surveys for outbreak investigations and reported on the outcome in the peer-reviewed literature
- > contributed to a national review of the epidemiology of Shiga-toxin-producing *Escherichia coli* infection in Australia
- > continued supervision and support for Public Health Medicine Registrars and the Masters of Applied Epidemiology scholar, as well as supporting several public health and medical students on short-term placements with CDCB
- > contributed to peer-reviewed journal articles on a range of communicable disease and immunisation-related topics.

### Future directions

The department will aim to:

- > contribute to the effective implementation of the new *South Australian Public Health Act 2011*
- > contribute towards the effective implementation of the Health Care Worker Immunisation Policy Directive once it is finalised and approved
- > collaborate with partners to prepare for an expected seasonal increase in arbovirus infections in 2011–12, including the development of health promotion resources and roll-out of a media campaign



- > collaborate with partners in organising a second Zoonoses Workshop during 2012
- > conduct a process evaluation of implementation of the Policy for the Control of Tuberculosis in South Australian Health Services
- > contribute to further development of the SA RHD Control Program
- > continue to provide support and supervision for Public Health Medicine Registrars and public health and medical students on placement with CDCB.

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