### **CHAPTER SIX** PUBLIC HEALTH IN ACTION 2020-2022

Chapter Six highlights statewide and local level public health initiatives that have been implemented during the 2020-2022 period. They provide key examples of public health in action but are not exhaustive of the work done at many levels to protect and promote the health of South Australians. The examples chosen are aligned with the priorities, actions and emerging issues described by the State Public Health Plan.

The State Public Health Plan 2019-2024 identifies actions across four priority areas: PROMOTE, PROTECT, PREVENT, PROGRESS.



#### Build stronger communities and healthier environments.

Health promotion fosters good health and prevents disease, disability and premature death through individual, community, institutional and system strategies. It targets health knowledge, attitudes, skills and behaviour.

Health promotion actions in the State Public Health Plan are focused on:

- > developing public health policy to support healthier communities and sustainable environments for all
- > engaging with and empowering communities, in particular Aboriginal communities, with a focus on place-based responses
- > developing promotion, prevention and intervention strategies to strengthen health and wellbeing.



#### Protect against public and environmental health risks and respond to climate change

Healthy and safe living environments are essential for public health. Healthy environments mean that we have improved food safety, safe air and water quality. Healthy and safe communities are the result of foundational public health services delivered by state and local government who work together to maintain the infrastructure and systems that protect the community against public and environmental health risks.

Health protection actions in the State Public Health Plan are focused on:

- > leadership, coordination, collaboration and innovation
- > ensuring that public health legislative objectives and obligations are met
- > protecting the health and safety of individuals and the community through developing effective public and environmental health programs, monitoring and responses.

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Preventable chronic and communicable diseases threaten our health, mental wellbeing and the productivity and vitality of our communities. Most illness and deaths in Australia are caused by chronic conditions, placing a high burden on individuals, their families and the health system. South Australia's Aboriginal population has a higher prevalence of chronic disease and develop chronic disease earlier in life which is completely unacceptable in a developed country such as Australia.

Health prevention actions in the State Public Health Plan are focused on:

- > developing evidence-based policies and programs to prevent chronic disease
- > promoting uptake of screening
- > maintaining high levels of vaccination for preventable disease
- > partnering with local communities to reduce risk factors for chronic disease
- > increasing awareness of the implications for the community and environment of antimicrobial resistance
- > developing and implementing priority plans for communicable disease prevention and response
- > monitoring and acting to reduce preventable injury (including road traffic injury) through strong policy and regulation.

### PROGRESS

#### Strengthen the systems that support public health and wellbeing

Strengthening partnerships and collaborative efforts across the health system and across government, non-government, business and community will result in a planned and consistent approach to addressing public health issues. It is essential that systems are in place to ensure that public health planning, policies and interventions are evidence-based and informed by data. Appropriate governance and strong workforce capacity are also key to achieving improved public health and wellbeing in our communities.

Health progress actions in the State Public Health Plan are focused on:

- > using a "Health in All Policies" approach across government and non-government
- > strengthening partnerships with local government and the development of key Public Health Partner Authorities
- > ensuring all public health action is informed by true engagement and co-design with Aboriginal communities
- > utilising data and surveillance systems to inform policy and service delivery decision-making
- > prioritising evaluation, research, reporting and public health communication.



Aboriginal based principles of self-determination, cultural strength capability and the mantra 'Don't plan about Us, without Us' – led by trusted Aboriginal staff – set the foundation for SA Health's COVID-19 response to regional and remote Aboriginal communities.

The nature of Aboriginal social structures, communal and intergenerational households meant that general statewide public health and social restrictions did not have the same level of impact on disease transmission as in non-Aboriginal settings. Following the opening of the state's borders in November 2021, Accommodation Support Centres (ASC) were set up in several metropolitan and targeted regional sites for the purpose of reducing the transmission of infection and impact of COVID-19 on Aboriginal people and their communities. A direction under the *Emergency Management Act 2004* (SA) came into effect on 18 February 2022 that required people who tested positive for COVID-19 and close contacts to isolate or quarantine, including in an ASC, as directed by an authorised officer.

Sites operated under standard guidelines and legislation, however the operating model of each centre was tailored to the client groups served. ASCs, particularly in regional South Australia, had their services designed in close consultation with local Aboriginal communities, Community Councils and Aboriginal Community Controlled Health Organisations. Discharge supports for Aboriginal people and families who had come from remote areas or within at-risk regional communities to isolate or quarantine were available from ASCs through a return to Country process (facilitated by the State Control Centre – Health, and the Department of Human Services).

During this period, senior Aboriginal staff from across government mobilised to the Communicable Disease Control Branch to support contact tracing efforts in Aboriginal communities. In January 2022, the Flinders and Upper North Local Health Network (FUNLHN) inducted 12 Aboriginal people to establish the nation's first all Aboriginal contact tracing team, which was invaluable given the additional stresses of flooding in the northern parts of the state that restricted transport north of Port Augusta.

In March 2023, the FUNLHN COVID-19 Aboriginal Contact Tracing Team and COVID-19 Aboriginal and Vulnerable Response Team were recognised for their work as a winner in the "Excellence in service delivery": emergency response (Team) category of the South Australian Premier's Excellence Awards.

# ADDRESSING

Children living in the Northern Adelaide Local Health Network (NALHN) catchment are among the most disadvantaged in Australia. While there are agencies available to assist to break the cycle of disadvantage, access can be difficult for many families. Disadvantage encompasses social, financial, employment and educational challenges. There is strong evidence that socioeconomic disadvantage leads to a range of poorer health outcomes.

There are stark geographic differences in levels of advantage in South Australia. Families of more than two children living in the City of Playford have twice the amount of disadvantage, compared to families that live in Unley with the same family structure. In addition, the 2021 Australian Early Development Census (AEDC) showed a deterioration in outcomes for young children compared to the 2018 census. Of the children in South Australia identified as being developmentally vulnerable on one or more domains in 2021, approximately 50% lived in the northern part of metropolitan Adelaide<sup>180</sup>.

Early intervention support is critical in the disruption of disadvantage but is hidden behind complex care pathways and fragmented systems that many families and providers are unable to navigate. Others are not even aware of these services. High demand and long waiting lists affect multiple government and non-government early childhood development agencies in the North. If we do nothing, this challenge will become worse over time. NALHN has the fastest growing metropolitan populations, which is set to reach 456,000 by 2030 (up from 418,000 currently). Of this population, 25% will be 0 to 17 years old by 2030.

In response to this, NALHN is acting to 'reset' the future of children via early access to appropriate screening and intervention. This is key to breaking cycles of disadvantage, so children that live in the north can grow and develop as happy and healthy as possible.

PROMOTE

PROTECT

PREVENT

PROGRESS

NALHN hosted The Children in the North (CinTN) Provocation Workshop in October 2022. Featuring expert speakers and panellists, the workshop highlighted not just the population need but the fact that, despite many government and non-government agencies working in the area, disadvantage is getting worse. The workshop was attended by over one hundred people, with state and local government, non-government and educational agencies committed to improving the health and wellbeing of children and families.

Following the workshop, a CinTN Alliance was created chaired by Helen Connolly, South Australian Commissioner for Children and Young People. The alliance is supported by senior executives from across government and underpinned with stewardship from Jackie Bray, Head of the Early Years (Department for Education South Australia).

The CinTH Alliance is exploring an approach to government that is fully coordinated, looking at new ways of working to ensure children and families in the north receive the services they need, when they need them and in an environment they access, so the children and families can thrive and reach their full potential.



### AGED CARE COVID-19 PUBLIC HEALTH RESPONSE

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Following the opening of South Australia's borders in late 2021, the SA Health Residential Aged Care Facilities (RACF) outbreak response team and the Office for Ageing Well collaborated with stakeholders to respond to increased COVID-19 outbreaks in RACFs due to the first Omicron wave.

Prior to this time, few providers had experienced significant outbreaks due to the success of South Australia's COVID-19 elimination strategy.

Public health advice and recommendations to the aged care sector aimed to improve the uptake of vaccines and antiviral treatment among residents, avoid deterioration in residents' health conditions, and promote evidence-based infection prevention and control (IPC) practices. SA Health developed education resources and delivered IPC and PPE training to improve IPC knowledge across the sector.

Education and training has been critical to the public health response to COVID-19 in aged care. SA Health conducted 146 face-to-face and 23 virtual personal and protective equipment (PPE) education sessions between July 2020 and April 2022. Particulate filter respirator (PFR) fit checking virtual education for the safe and correct use of PFRs was developed and delivered to 188 RACFs. Lessons learnt through the COVID-19 response in aged care have led to a focus in public health on capability building in RACFs to enable self-management of COVID-19 outbreaks in facilities.

Efforts have expanded through a program that aims to build preparedness and enhance outbreak planning for infectious disease risk for COVID-19 and other infectious disease. The program delivers facilitated workshops to providers and incorporates a scenario discussion to provide context and challenge assumptions in planning. This encourages providers to consider current outbreak management planning strategies and incorporate learnings from the COVID-19 pandemic, which are flexible and adaptive to all communicable disease outbreaks.



### AIR QUALITY IN SOUTH AUSTRALIA 2020-2021

There is increasing evidence that even relatively low levels of air pollution can have adverse effects on the population's health. Air pollution is linked to cardiovascular, respiratory, developmental, reproductive, and mental health issues globally and in Australia. Any improvement in air quality will result in improved health outcomes and reduce burden on healthcare systems.

Key air pollutants noted for their associations with effects on human health are fine particulate matter, nitrogen dioxide, ozone, carbon monoxide, lead, complex aerosols (such as traffic-related pollution) and pollen allergens. Fine particulate matter includes particles with diameter of less than 2.5 and 10 micrometres (denoted PM2.5 and PM10 respectively) that are easily inhaled.

While on average in South Australia air quality is relatively good, localised air pollution issues exist due to industrial activities, road traffic density, and domestic wood burning. In addition, extreme weather events such as dust storms and bushfires as well as heatwaves and high pollen count days can cause significant strain on healthcare systems. Poor air quality is linked to increases in ambulance call-outs and hospital presentations.

The National Environment Protection (Ambient Air Quality) Measure (NEPM) provides the standards and a framework for setting the standards in Australia<sup>181</sup>. The Chief Public Health Officer's Report 2018-20 air quality section provides more detail of how standards are set in Australia and explains the health effects<sup>182</sup>. Air quality is measured regularly in South Australia by the Environment Protection Authority (EPA). When requested, SA Health works with the EPA to address health implications related to air quality investigations.

Figure 36 shows the graph of PM2.5 annual mean concentrations from metropolitan Adelaide and from some NSW air quality monitoring stations from 2015 onwards (2022 data are not yet available).

PM2.5 is produced mainly through anthropogenic (human caused) combustion processes, such as vehicle-related emissions, industrial combustion, domestic wood burning, as well as bushfires. PM2.5 levels have been going down in all metropolitan monitoring stations in South Australia (CBD, Le Fevre, and North Haven). PM2.5 is not measured in regional areas. A gradual reduction in PM2.5 has also been observed in NSW and other jurisdictions in Australia. Recent PM2.5 reduction can be attributed to reduced road traffic due to COVID-19 restrictions and the wide adoption of working from home, as well as improvements of the national carpool to less polluting vehicles over time, and improvements in PM2.5 emissions from industries. It is envisaged that the increase in use of electric cars will

further improve this measure. This paves the way to reduce the current standard for annual mean PM2.5 (8  $\mu$ g/m3) to 7  $\mu$ g/m3 at a national level and thus lower the impact of air quality on health Australia-wide. This reduction is also a goal that had been legislated during the particulate matter variation (NEPM 2016) for the year 2025.

While daily PM2.5 standards ( $25 \mu g/m3$ ) were rarely exceeded, higher levels were recorded during wintertime in some locations due to wood combustion smoke, especially in the Adelaide Hills. Bushfire related smoke is a cause of very high PM2.5 levels and exceedances of the standard.

Figure 37 shows the annual mean trajectory (2015-2021) of PM10 in metropolitan Adelaide (CBD, Le Fevre, North Haven, Christies Beach), the regions (Port Pirie, Whyalla), and from three NSW stations. Unlike PM2.5, there is relatively high levels of PM10 in South Australia. PM10 is emitted through various natural and anthropogenic sources. The recorded PM10 in SA is most likely due to regional dust from arid lands, local industries, construction and road dust. The frequency of exceedances over the last seven years including 2020-2021 are shown in Figure 38. From late 2017 and well into 2020 South Australia recorded very low average annual rainfall leading to higher levels of dust brought from arid regions of the state. Parts of Riverland, mid-North, remote arid areas as well as Whyalla and Port Pirie experienced historical low average annual rainfall in 2019<sup>183</sup>.

Dusts originating from arid land masses in South Australia is hard to ameliorate. Large-scale re-vegetation projects and more green public spaces could have significant local benefits. Industrially generated dust contributions to the overall PM10 levels can be reduced through stricter control measures.

Up-to-date air quality monitoring data is published on the South Australian EPA website for use by the general community. The EPA uses the quality rating developed by the enHealth national collaboration<sup>184</sup>.



#### Figure 36: Annual mean PM2.5 levels from 2015-2021 in Metropolitan Adelaide and in NSW



Figure 37: Annual mean PM10 levels from 2015-2021 in Metropolitan Adelaide, Regions and NSW







### AND THE DEVELOPMENT OF A ONE HEALTH STATEWIDE ACTION PLAN

Antimicrobial resistance (AMR) is an increasing global threat to public health, driven by over or inappropriate use of antimicrobial drugs such as antibiotics and antifungals. AMR occurs when bacteria or other microbes become resistant to the medicines designed to kill them. Infections caused by resistant organisms are more likely to result in poorer patient outcomes, such as increased length of hospital stay and increased risk of death.

In 2022, the South Australian Antimicrobial Resistance Action Plan (SAAMRAP) steering committee was established to develop the first South Australian AMR Action Plan. The multi-sector SAAMRAP steering committee is taking a 'One Health' approach to identify key priority areas within South Australia to be addressed in the action plan. Ensuring appropriate use of antimicrobials in the human and animal health sectors, as well as the environmental, food and water sectors, aligns with the objectives of Australia's National Antimicrobial Resistance Strategy – 2020 and Beyond.

#### Surveillance of antimicrobial usage and consumption during the COVID-19 pandemic

Antimicrobial stewardship includes the range of actions and policies aimed at ensuring safe and responsible prescribing, use and disposal of antimicrobials.

Surveillance of antimicrobial use is an essential tool to support antimicrobial stewardship, by identifying inappropriate prescribing or unexpected trends in use. The Antimicrobial Programs team based in the Communicable Disease Control Branch of the Department for Health and Wellbeing manages and administers the National Antimicrobial Utilisation Surveillance Program (NAUSP). NAUSP collects, monitors, and reports on the use of antimicrobials in Australian public and private hospitals and healthcare facilities.

During the peak of the COVID-19 pandemic, concerns were raised internationally regarding increased use of broad-spectrum antibiotics and the potential impact on antimicrobial resistance.

Persons with bacterial pneumonia that is acquired in either community or hospital settings may have similar symptoms to patients presenting with COVID-19. Additionally, patients hospitalised with COVID-19 may be at increased risk of developing bacterial infections requiring antibacterial treatment, particularly patients admitted to intensive care units and patients on mechanical ventilation.

While no substantial peak in usage occurred concurrently with the COVID-19 cases reported in South Australia, the use of these broad-spectrum antibacterials appears to be slowly trending upwards. The average monthly use in critical care units in 2022 was 4% higher than in 2019. There was, however, a notable reduction in use during 2021 when interventions were in place to reduce the spread of respiratory infections in the community. Usage increased again when South Australia opened the border and patients with severe symptoms of COVID-19 were admitted to critical care. Antibacterials with a broader spectrum of activity (those that kill a wider range of bacteria) are more likely to drive AMR and also have more serious adverse side effects in patients.

A limitation of NAUSP data is that distribution of antimicrobials dispensed from hospital pharmacy is used as a surrogate measure for actual consumption, therefore it is not clear if the increasing use is associated with complications of COVID-19 or other infections. An important focus of antimicrobial stewardship teams is to support the optimal selection of empirical antibacterial therapies and rapidly de-escalate and cease antibacterial treatment as soon as possible to limit the risk of antimicrobial resistance.

Australia's national AMR strategy recognises that managing the risks of AMR is a national priority and acknowledges that all jurisdictions are required to coordinate action across all sectors. Adequate resourcing and statewide governance is required to achieve comprehensive cross-sector action.





The national COVID-19 pandemic strategy in Australia aimed to flatten the epidemic curve and protect the health care system from being overwhelmed until effective vaccines were available. As noted elsewhere in this report, South Australia successfully eliminated the virus through contact tracing, public health and social measure and state border closures. As soon as vaccines were available it was critical to vaccinate the entire adult population as quickly as possible to allow a planned opening of state borders, returning to unhindered travel into and out of the state.

Whilst large state-run mass vaccination clinics provided COVID-19 vaccination to many South Australians, to ensure equity and access to all members of the community, including vulnerable and at-risk population groups, bespoke vaccination services, communications strategies and activities were developed and implemented.

A COVID-19 Stakeholder Engagement Team was established by the Department for Health and Wellbeing, which worked collaboratively with the Australian Government, local health networks, local government, GPs, employer groups, pharmacies and private immunisation service providers, to support vaccination of target populations in their geographical areas.

Success of these activities relied on strategic communications, followed by targeted individualised services that either facilitated transport to available services or brought the service to the community, via a vaccination van or community vaccination days. Wellbeing SA undertook outreach work with targeted communities to establish their readiness for these individualised services. Once their specific needs had been identified, the Stakeholder Engagement team worked with vaccination providers to attend the site.

Some of these activities included promotional days, such as the Super Walk-In Weekend, Super Retail Weekend, 'Schoolies' Education Booth at Victor Harbor and Community Vaccination Days and the Primary Schools Program. Mobile Vaccination Vans were also used for various components of the program.

Local health network clinics were targeted to remote locations across the Eyre Peninsula, Kangaroo Island and regional upper northern areas of South Australia. These clinics provided support for specific groups such as health workers, inpatients, homelessness services, Aboriginal people and culturally and linguistically diverse communities. A third-party mobile vaccination team was engaged to deliver a unique mobile service. 'MobiVax' utilised a motorhome with marquees and set up short-term services at a wide range of sites targeting communities with lower vaccination rates. The MobiVax program delivered 7,685 vaccinations at over 124 clinics, travelling approximately 12,000 kilometres through metropolitan Adelaide and nearby regional areas such as Freeling, Two Wells, Virginia, Murray Bridge and Gawler.

Vulnerable populations, such as those accessing mental health, drug and alcohol and homelessness services were visited by the Mobile Vaccination Clinics. The program worked to develop a range of delivery models to ensure that COVID-19 vaccinations were accessible to all South Australians.

Lessons learned from establishing these bespoke COVID-19 vaccination programs has demonstrated how an equity and accessibility lens can be applied when developing vaccination programs for other new communicable diseases such as mpox and Japanese encephalitis virus in South Australia.





In 2020-2022, South Australia experienced an unprecedented rise in infectious syphilis cases, while a global outbreak of mpox (formerly known as monkeypox) also presented challenges.

In response to the global mpox outbreak, swift action was taken to prepare the health system to detect and respond to local outbreaks, and to ensure that South Australians most vulnerable to mpox could access a safe and effective vaccine and were informed regarding other prevention strategies.

PROTECT

PREVENT

Meanwhile, infectious syphilis is re-emerging as a public health threat. Over the past decade, increases in infectious syphilis cases have been reported among men who have sex with men and among Aboriginal people. Since 2021, significant increases have also been reported among non-Aboriginal heterosexual men and women.

With increasing incidence, historically rare but severe complications related to syphilis infection, including hospital admission, are becoming more frequent. This trend is expected to continue.

There is particular concern regarding increasing infections among women of reproductive age given the impacts of congenital syphilis. Congenital syphilis (a sentinel public health event) occurs when syphilis remains untreated in pregnancy and is transmitted from mother to baby, and is associated with high rates of premature delivery, infant mortality and morbidity including severe, permanent disability.

Cases of neurosyphilis (infections of the central nervous system by the bacterium that causes syphilis) are also on the rise, and can lead to loss of vision or hearing, palsies, meningitis, dementia, and other severe neurological complications. **108** THE CHIEF PUBLIC HEALTH OFFICER'S REPORT The state's response to this public health issue is guided by the South Australian Syphilis Outbreak Response Plan and delivered through partnerships between government and non-government agencies, clinicians and researchers. In line with rapidly evolving syphilis epidemiology, this document is routinely updated.

There is no vaccine against syphilis and condoms are only partially protective. Additionally, infections are often asymptomatic. This means that there are critical steps to improving public health outcomes, including prevention of disease progression and onward transmission. This includes:

- > Regular sexual health checks for all sexually active people, including comprehensive testing for all sexually transmissible infections (STI).
- > Reducing the time from acquisition of an STI to treatment and partner notification (contact tracing).

The South Australian public health response to STIs is aligned with these fundamental principles. However, continued escalation of epidemics strongly suggests that these activities have been only partially successful, and that scale up is required to place greater downward pressure on transmission, mitigate the escalating disease burden associated with these infections, and to improve sexual health outcomes more broadly.



### INNOVATION IN PUBLIC HEALTH IT SYSTEMS

When the COVID-19 pandemic reached South Australia in 2020, the scale of notifiable disease reporting was unprecedented. Manual paper-based systems were unable to cope, and significant innovation in the digital space was needed to provide agile systems to facilitate data collection, analysis and reporting, which in turn ensured the provision of a timely public health response to the increasing threat.

Increasing case numbers and uncertainty surrounding the impact of COVID-19 highlighted the need to implement sensitive and enhanced surveillance practices on a broad scale. Agile IT systems were required to support the collection, integration and interpretation of data that ultimately assisted public health experts to implement appropriate and acceptable public health measures.

At the onset of COVID-19 in 2020, the Communicable Disease Control Branch (CDCB) manually phoned cases to inform them of their diagnosis, provide public health advice and undertake detailed source investigation and case interviews. This gold standard data and intelligence gathering was time consuming and required manual data entry and interpretation.

As COVID-19 case numbers increased to hundreds, and later thousands per day, CDCB needed to rapidly upscale systems to support increasing case numbers and improve the timeliness of risk interpretation and response to the areas of greatest public health need. Following the introduction of SMS messaging of test results by pathology laboratories, an automated case survey was designed and developed by CDCB and distributed by SMS. The back-end technology allowed users to fill out the survey, automatically populating data into the systems. Specialised outbreak teams used this functionality to triage, monitor and respond to COVID-19 cases throughout the community, prioritising high-risk settings.

As the system continually evolved and improved, cases were able to enter details of household contacts enabling close contacts to be automatically integrated into the system, triggering SMS messaging and the provision of public health advice. This revolutionised the automation of data linkage between cases, close contacts and transmission chains, significantly improving the timeliness and efficiency of public health action and reporting.

Case and contact communication surged beyond previous capabilities, with systems working day and night to send over seven million SMS messages since the beginning of the pandemic. This messaging has been critical in informing cases and contacts of public health requirements and providing advice on accessing clinical care.

The innovative survey process expanded upon this one-way communication channel, allowing hundreds of thousands of COVID-19 positive cases to self-report data. This assisted CDCB to continue to monitor COVID-19 epidemiology, while freeing up resources to be directed to vulnerable and high-risk settings such as aged care, health care settings, disability, corrections and remote Aboriginal communities. Further rapid system development and innovation was undertaken with the establishment of a system of online reporting of rapid antigen test (RAT) results, including SMS messaging of public health advice.

These innovative system developments continue to support COVID-19 epidemiological surveillance and public health outcomes and have paved the way for the modernisation of the public health system in South Australia.





### Japanese encephalitis virus (JEV) is a rare mosquito-borne disease that until 2022 was not known to be present in mainland Australia, except for the tip of Cape York.

On 12 February 2022, four unexplained cases of encephalitis (inflammation of the brain) were reported to SA Health's Communicable Disease Control Branch. These were later found to be due to JEV. On 3 March 2022, the first Japanese encephalitis (JE) human case was reported from Queensland. These represented the first locally acquired JE cases detected since 1998 on the Australian mainland and spread of JEV into previously unaffected areas. On 4 March 2022, the situation was declared a Communicable Disease Incident of National Significance.

The detection of JEV in humans and animals in South Australia in the first few months of 2022 was matched by detections in New South Wales, Victoria, Queensland and the Northern Territory. It led to a coordinated response, including enhanced surveillance, communication campaigns for the public and industry, and a vaccination program.

As of 30 June 2022, nine locally acquired JE cases (confirmed and probable) had been notified to SA Health. Most of the cases reported travelling to regional South Australia and the River Murray area during their exposure period, and one to New South Wales. Confirming a suspected diagnosis of JEV can be complicated. A look-back of human encephalitis cases treated in public hospitals in 2021-22 was completed, with no further cases identified. Serosurveillance among the human population was being developed at the end of this reporting period, with preliminary results to be reported by mid-2023.

While the majority of JEV infections are asymptomatic or have mild symptoms, it may lead to severe disease including encephalitis on very rare occasions (less than 1% of cases) and be fatal. Tragically, two of the nine South Australian cases died due to JE illness.

Vaccination is considered the most effective method to limit human disease. A vaccination campaign was rolled out for people at highest risk of exposure to JEV from late March 2022, including people working or living at piggeries, working with mosquitoes for surveillance and control, and laboratory personnel. Vaccine availability limited the extent of vaccination programs in Australia in response to JEV detections, but vaccination programs may be expanded in coming years in response to the evolving situation.

Reducing the chances of being bitten by mosquitos is an equally important prevention strategy for JEV and other mosquito borne viruses. Interventions include vector control activities to remove potential mosquito breeding sites, reduce vector populations and minimise individual exposures. Public education regarding vaccination and mosquito prevention was intensified including the active 'Fight the Bite' campaign for the general community, which includes information about the importance of individual protection against mosquito bites. Mosquito bite prevention is important as there are other mosquito-borne diseases spread in South Australia for which there is no vaccine available such as Ross River virus, Barmah Forest virus and West Nile virus (Kunjin variant).

The detection of JEV in humans and animals led to a coordinated response to determine the distribution of the virus, ongoing human and animal risk and to implement control measures. A "One Health" approach was adopted interconnecting human and animal surveillance systems. Reporting and decision-making was coordinated by the Arbovirus Response Cross Agency Group. "One Health" surveillance activities included mosquito trapping and testing at sites of interest; sentinel surveillance of chicken flocks in the Murraylands and Coorong; sensitisation of veterinarians, farmers and piggery workers about recognising JEV presentations among animals, and the importance of testing of suspect animals; and educating medical practitioners to recognise JEV presentations among humans.

JEV is a disease of significant public health importance. The origin and route of transmission of the JEV outbreak remains under investigation, however, it is plausible that the large amounts of rain and flooding supporting nomadic bird life and mosquito breeding across eastern Australia in 2020-21, due to La Niña weather patterns, was a strong contributor. Multiple factors including climate, impact the emergence and re-emergence of zoonotic diseases by providing new opportunities for diseases to pass to humans. Future outbreaks will continue to require an integrated "One Health" approach to ensure a coordinated response across human and animal health.





### MINISTER FOR HEALTH AND WELLBEING EXCELLENCE IN PUBLIC HEALTH AWARDS

As the public health authorities for their areas under the *South Australian Public Health Act* (2011), local councils have a mandate for protecting and promoting public health in their communities. They lead local public health planning and action for their local areas and advocate for their communities.

The annual Minister for Health and Wellbeing Excellence in Public Health Awards recognise council initiatives that respond to public health risks and build resilience, celebrating the vital role of local governments in keeping their communities safe, healthy and thriving.

Councils across South Australia are invited to submit nominations for the awards in two categories – regional and metropolitan, with additional scope for the awarding of commendations to also recognise significant achievements. Winners receive a trophy and cash prize to build on public health action in their areas.

#### The 2022 metropolitan winner was the City of Port Adelaide Enfield for 'Food Security -COVID Recovery - supporting people on low income'

This project was part of the City of Port Adelaide and Enfield's COVID Recovery Program. It was set up to ensure that residents on low and no income could safely access healthy food locally, to feed themselves and their families. The co-designed project was developed with volunteer and council commitment to building local food security. Its chief beneficiaries were single women and their families, and people at risk through COVID, social disadvantage and isolation.

#### The 2022 regional winner was Naracoorte Lucindale Council for its 'Naracoorte Lucindale Wellbeing Program'

Established by Naracoorte Lucindale Council in partnership with Wellbeing SA, the Wellbeing Program aimed to support community wellbeing and resilience in response to COVID-19. The program delivered a suite of evidence-led initiatives for positive behavioural change and a better-connected community. It is an example of public health partnering between local government and state agencies to benefit local communities.

'Highly Commended' certificates are awarded for meritorious contributions to public health outcomes by local councils. These councils 'punch above their weight' in projects to deliver better health and wellbeing through public health planning. In 2022, three councils received commendations from the Minister for Health and Wellbeing:

- > The City of Tea Tree Gully for Compassionate Communities –co-designed and co-developed end-oflife preparation program aimed at building community awareness and better end-of-life planning, particularly for vulnerable residents.
- The City of Unley for Design-athon School Competition – a wellbeing and engagement initiative to ensure that young people lead innovation and advice to council on key local issues such as mental health.
- Yorke Peninsula Council for its Community Nutrition and Wellbeing Partnership – a population nutrition and food security event delivered through the council's longstanding partnership with Flinders University.





### MOSQUITO-BORNE VIRUS SURVEILLANCE

Mosquito and mosquito-borne virus surveillance provides an early warning of the presence of the viruses known to cause mosquito-borne disease. This informs activities to reduce mosquito breeding opportunities in high-risk locations and advise the public and visitors to South Australia of the risks and how to protect themselves from mosquito-borne disease. It is a multi-agency collaborative effort involving the work of a broad range of stakeholders.

Adult mosquito surveillance is undertaken by public health authorities and researchers worldwide. In South Australia, SA Health and many local councils conduct routine mosquito trapping throughout the peak mosquito season, which usually spans the months of September to April.

During the mosquito season, SA Health undertakes weekly adult mosquito surveillance as part of the Northern Adelaide mosquito surveillance program. Historically, seven River Murray councils have undertaken monthly trapping at strategically selected high arbovirus risk locations. The viral detections from these trapped mosquitoes are shown in are shown in Table 9.

SA Health provides subsidy funding, training, and equipment, including encephalitis vector surveillance traps produced by SA Health to local councils to support the implementation of local mosquito management programs.

In response to the detection of Japanese encephalitis virus (JEV) in south-eastern Australia in January 2022, the Australian Government provided funding of \$2.7 million to South Australia to support the surveillance and control (where the area has confirmed JEV is present) of JEV mosquito vectors outside of infected premises, over the period of 18 April 2022 to 30 June 2023. In addition to the arbovirus and mosquito surveillance program in South Australia, the Sentinel Chicken Surveillance Program monitors for flaviviruses in the environment before the presentation of human cases. Chickens are a good indicator of mosquito-borne disease risk to the community as they readily produce antibodies to arboviruses once infected, without developing symptoms.

As part of this program, six sentinel chicken flocks have been established along the River Murray in South Australia, in Paringa, Loxton, Qualco, Murray Bridge, Meningie, and Swan Reach. Each flock contains five chickens that have blood samples collected by local vets throughout the mosquito season, according to a schedule determined by Heath Protection Programs. For the 2021-22 mosquito season, testing commenced in October 2021 and concluded in April 2022.

Chicken blood samples were sent to NSW Health Pathology, Westmead Hospital monthly and tested for Murray Valley encephalitis virus (MVEV) and West Nile virus Kunjin variant (WNV/KUN) antibodies. In response to the JEV outbreak, chicken bleeding frequency was increased from monthly to weekly during February 2022 and screening was expanded to include testing for JEV antibodies. Viable samples from bleeds undertaken earlier in the season were also retrospectively tested for JEV (see Table 10 for sampling results).

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#### Table 7: Viral detection from trapped mosquito July 2020 to June 2022

Arbovirus/ Council area	Date trapped	JEV	MVEV	RRV	BFV	WNV/KUN	ΚΟΚΥ
Salisbury	Mar-22			1			
Mid Murray	Mar-22	1					
Alexandria	Mar-22			1			
Renmark Paringa	Feb-22						1
Loxton Walkerie	Jan-22			1			
Coorong	Feb-21				1		

#### Table 8: Viral antibody detections from sentinel Chickens February 2020 to May 2022

Collection Date	Flock	Tags	MVEV	WNV/KUN	JEV
17/12/2020	Meningie	Olive	Positive	Positive	Not Tested
18/02/2022	Meningie	Black	Positive	Negative	Negative
		Blue	Positive	Negative	Negative
		Orange	Positive	Negative	Negative
28/02/2022	Meningie	Black	Positive	Negative	Positive
		Blue	Positive	Negative	Negative
		Orange	Positive	Negative	Positive
29/03/2022	Murray Bridge	Green	Negative	Negative	Positive
30/03/2022		Black	Positive	Negative	Positive
	Meningie	Blue	Positive	Negative	Negative
		Orange	Positive	Negative	Positive
05/04/2022	Murray Bridge	Green	Negative	Negative	Positive
19/04/2022	Murray Bridge	Green	Negative	Negative	Positive
03/05/2022	Murray Bridge	Green	Negative	Negative	Positive

Acronyms and Abbreviations: BFV Barmah Forest virus; JEV Japanese encephalitis virus; KOKV Kokobera virus; MVEV Murray Valley encephalitis virus; RRV Ross River virus; WNV/KUN West Nile virus Kunjin variant



### NATIONAL OUTBREAK OF VIBRIO PARAHAEMOLYTICUS

Vibrio parahaemolyticus (Vibrio) is a naturally occurring marine organism that can cause gastrointestinal illness in people, commonly after consumption of raw seafood. A national outbreak investigation of Vibrio was initiated in November 2021, with identified links to South Australian grown oysters. Controls were put in place to address the outbreak and for ongoing management of oyster production in South Australia.

During the outbreak, 268 Vibrio cases were reported, affecting residents in every jurisdiction across Australia. Approximately 38 million oysters are produced per year in South Australia. Approximately 25% production is established from the Coffin Bay oyster growing region, which equates to 9.6 million oysters per year. Because Coffin Bay oysters are part of the export market, unfortunately cases were also identified in several international countries.

Cases were interviewed and asked about foods eaten in the week before they became unwell. Nationally, 206 cases were interviewed and 97% reported consumption of oysters in the week before their illness, including 92% that ate raw oysters. Cases reported eating oysters from restaurants, on oyster tours, and at home after purchasing from seafood retailers, supermarkets, market stalls and direct from oyster farms. Whilst no deaths were reported, 13% of cases were hospitalised for their illness. The supply chain is complex – oysters can go from a farmer through to a broker, to wholesaler who distributes to retail and food services. Brokers and processors received stock from multiple growers and often from different growing regions making traceback complicated. Processors often store processed (shucked) oysters from multiple suppliers on the same day.

Trace back investigations to determine the source of oysters consumed by cases were conducted by local government environmental health officers, and food safety and primary produce regulatory authorities. Oysters from case households, retail premises and from growers underwent microbiological testing. The investigation firmly established links between cases and consumption of oysters grown in Coffin Bay. Oyster samples from the Coffin Bay growing region, collected in South Australia, Queensland, Victoria and Western Australia, tested positive for Vibrio. The same genomic strain of Vibrio was obtained from unwell cases and oyster samples. The Department of Primary Industries and Regions (PIRSA) closed Coffin Bay oyster growing areas for harvesting in November 2021. All accredited oyster growers have implemented a Vibrio control program which requires:

- > oysters to be placed under active refrigeration within 7 hours of harvest
- > oysters be 10°C or less than within 24 hours of harvest
- > oysters be dispatched and transported at 10°C or less
- > enhanced traceability by including the harvest date, area and aquaculture licence number on an invoice.

A national recall of raw pacific Coffin Bay oysters occurred on 19 November 2021, conducted via Emergency Orders under the Food Act 2001. Media alerts were distributed, and Food Standards Australia New Zealand (FSANZ) published details about the recall and actions being taken across Australia. In addition, this outbreak required Notification to the World Health Organization under International Health Regulations (2005) on 19 November 2021. Cases reduced across Australia in late November 2021 after the oyster recall and controls implemented by growers. After sampling by PIRSA in oyster growing zones in South Australia with no detections of Vibrio, and implementation of Vibrio control programs, Emergency Orders were lifted from growers in late December 2021 and early 2022.

The investigation was successfully managed as a result of existing partnerships between teams within SA Health, across South Australian Government departments and established national networks. These partnerships will enable South Australia to be better prepared to respond to future outbreaks.

This outbreak had enormous impacts on an important local industry, resulting in reputational damage, financial loss including laying off workers. Outbreaks of Vibrio parahaemolyticus occurring in other parts of the world have been linked to higher seawater temperatures<sup>185</sup>. It is possible that the outbreak in South Australia could be associated with climate change-associated seawater warming.



PUBLIC HEALTH EMERGENCY MANAGEMENT PLAN

### With the frequency and magnitude of disasters intensifying, due to the impact of climate change – bushfires, floods and pandemics are expected to be an increasingly major public health problem for South Australia.

SA Health has a legislative obligation to prepare for and respond to public health incidents and emergencies and adopts an all-agency and all-hazards approach to incident management across the prevention, preparedness, response and recovery phases, all of which are outlined in the Public Health Emergency Management Plan (PHEMP).

The PHEMP has been written in accordance with the *South Australian Public Health Act 2011* to ensure adequate preparation for public health emergencies in this State, including strategies for the containment of public health emergencies, response and recovery and recognises local government as an authority to manage local public health incidents and assist the state during larger incidents.

The revision of the PHEMP commenced in early 2022 as an opportunity to capture lessons learned from local government Environmental Health Officers (EHO) response to COVID-19, and to further foster the partnership between EHOs and SA Health in response to public health disasters.

A local government PHEMP reference group was established, and throughout a six-month period, reviewed the document to include and recognise the role of EHOs in assisting SA Health in the prevention, preparedness, response and recovery phases of disasters. EHOs have a unique set of skills and knowledge that are significant in protecting and supporting public health during disasters. This skill set includes:

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- > a thorough understanding of legislation and regulations
- > the ability to conduct human health risk assessment and implement effective risk-control measures
- > enforcement, communication and education skills
- > a significant understanding of their own local communities.

The PHEMP identifies critical aspects of environmental health management during a disaster including the provision of safe drinking water, emergency sanitation, waste disposal, food safety, vector and pest control and the assessment of the risk of epidemics.

It is essential that EHOs are equipped with the necessary skills and training to work in a disaster setting and can work cooperatively with other government and non-government agencies. Considering this, implementation of the PHEMP by the Department will be undertaken as part of a broader program of work with local government to enhance public health disaster management arrangements, including relationship building and sector engagement throughout the state. Structuring EHO capacity around existing resources strengthens existing protocols and develops professionals with a transferable skill set with the expertise to support a public health response to any disaster.



Rheumatic heart disease (RHD) is a disease of poverty and deprivation that disproportionately affects Aboriginal people, who live with one of the highest per capita burdens of RHD in the world. This is despite Australia being a highly developed nation. RHD is considered imminently preventable.

Acute rheumatic fever (ARF) is an illness following an autoimmune response to a group A streptococcal infection. It is an inflammatory disease that can affect many connective tissues, especially the heart, joints, skin or brain. It is most common in children aged five to 14 years. RHD is caused by damage to the heart valves because of one or more ARF episodes and can result in cardiac failure.

Aboriginal people live with ARF and RHD at rates 60 times higher than non-Aboriginal people. The median age of death for Aboriginal people with RHD is 50 years old and is often preceded by significant breathlessness, fatigue and difficulty with daily life activities.

The South Australian RHD Control Program has been operating since 2012 to reduce morbidity and mortality associated with RHD through monitoring and improving delivery of secondary prophylaxis (preventive antibiotics), enhancing coordination of care, delivering educational activities and increasing ARF and RHD case detection and surveillance activities.

Between 2020 and 2022, the Program delivered over 200 training sessions including statewide workshops.

Good adherence to secondary prophylaxis was maintained and strong relationships continued with the Aboriginal primary health care services, tertiary hospitals and other stakeholders such as SA Dental and the Primary Health Networks.

The South Australian RHD Register contains data on all confirmed cases of ARF and RHD notified in South Australia. There are currently 514 people on the register, with 87% identifying as Aboriginal, and nearly two thirds of people are under the age of 35 years. In the two-year period from July 2020 to June 2022, there were 52 cases of ARF diagnosed in South Australians - 97% of these were in people who identify as Aboriginal.

Reducing exposure to group A streptococcal infections and improving adherence to antibacterial prophylaxis to reduce progression of disease are important prevention strategies. However, the inequity of RHD can only be removed through system and infrastructure changes which address poverty, inadequate housing and insufficient access to effective healthcare. Collaboration and commitment from multiple government sectors is crucial if the required changes are to be successfully implemented.



Public health risks associated with the harmful and illicit use of prescription drugs (dependence, misuse and diversion) across South Australia are an increasing concern to health practitioners and members of the public. South Australia's Real-Time Prescription Monitoring system, ScriptCheckSA, aims to reduce the risk of death caused by preventable overdose from prescription drugs.

ScriptCheckSA provides prescribers and pharmacists with real-time information about their patient's use of potentially harmful prescription drugs (monitored drugs) to allow them to make safer and more informed clinical decisions about their patient's treatment.

Developed in consultation with key medical and pharmacy stakeholders, ScriptCheckSA alerts doctors and pharmacists in real-time if a patient has met certain high-risk criteria.

For example, if the patient has received monitored drug prescriptions from four or more prescribers, received high doses of opioid prescriptions, or supplies of high-risk drug combinations.

Since being introduced in early 2021, SA Health has observed a 2.5% reduction in the number of patients prescribed opioids over the reporting period – 71,529 in May 2021 compared to 69,756 in June 2022 (Figure 39). ScriptCheckSA has alerted prescribers of patients on medium to high doses of opioids (doses greater than 50mg and 100mg respectively of daily morphine equivalence) at an increasing incidence over the reporting period (Figure 40).

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PREVENT

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The strong correlation between the increasing number of alerts in ScriptCheckSA (Figure 40) and the reduction in the number of patients prescribed opioids (Figure 39) suggests that the mandatory requirement to check ScriptCheckSA when prescribing and dispensing monitored drugs is fulfilling its purpose of reducing the potential risk of harm to the South Australian public.







Figure 40: Number of alerts triggered for patients on medium and high doses of opioids

### SEROPREVALENCE PROGRAMS

### The reported number of COVID-19 cases underestimates the true number of people who have been infected with the virus due to reduced testing activity in the population and asymptomatic infections.

Seroprevalence studies are helpful in providing alternative estimates of the prevalence of past COVID-19 infection or vaccination in the population. COVID-19 serosurveys measure antibodies to SARS-CoV-2 in blood samples collected for other medical reasons from the population. There are two kinds of antibodies measured: anti-nucleocapsid antibody, which indicates natural infection with SARS-CoV-2, and anti-spike antibody, which indicates either vaccination and/or natural infection<sup>186</sup>.

South Australia has taken part in two national COVID-19 seroprevalence programs since 2020. The first is the Australian COVID-19 Serosurveillance Network<sup>187</sup>, led by the National Centre for Immunisation Research and Surveillance (NCIRS) and the Kirby Institute.

From June to August 2020, a large national survey was undertaken, finding extremely low seroprevalence in the population<sup>188</sup>.

The next series of serological surveys were undertaken in 2022 across Australia among blood donors. By September 2022, three rounds of the surveys were conducted. In the first round in early March 2022, the prevalence of anti-spike

antibodies in blood donors in South Australia was 98.5%, reflecting a high vaccine coverage, and anti-nucleocapsid antibodies prevalence of 10%, suggesting that one in ten South Australian adults had been infected with COVID-19<sup>189</sup>. In the second round in June 2022, the prevalence of spike antibodies was 99.5%, and the anti-nucleocapsid antibodies increased to 42%. The results of the third round, conducted from August to September 2022, were not received in the reporting period.

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South Australia also participated in the Paediatric SARS-CoV-2 serosurvey 2022<sup>190</sup>. In this survey, blood samples were collected from 8 June 2022 to 31 August 2022 in children aged 0-19 years who were undergoing an anaesthetic procedure. Results were not received in the reporting period.

Seroprevalence programs are being conducted for other infectious diseases. South Australia participated in the NCIRS-led Japanese encephalitis virus (JEV) Serosurveillance Program in 2022<sup>191</sup>, a seroprevalence study to determine how many people have been exposed to JEV to inform control efforts. The findings from this survey are yet to be finalised but will be instrumental in assessing adequacy of vaccination coverage for our state based on geography of known infections and risk.



### STRENGTHENING PRIMARY CARE MANAGEMENT OF SKIN CANCER (CANCER)

In 2018, melanoma was the fourth most commonly diagnosed cancer in Australia after breast and prostate cancer, with an age-standardised incidence rate of 54.1 per 100,000 persons<sup>192</sup>.

It is recognised that general practitioners (GP) can play an important role in identifying higher risk moles and making appropriate referrals.

In April 2021, Wellbeing SA's Secondary Prevention Branch funded the Australasian College of Dermatologists to deliver dermascopy training for up to 70 GPs. The aim of this training is to strengthen primary care management of skin cancers, thereby ensuring people with higher risk moles receive timely interventions while also avoiding unnecessary interventions, cost and travel for people with lower risk moles. The training was oversubscribed within 10 days of advertising, with 116 GPs on the waiting list. Due to the high level of interest, the Secondary Prevention Branch offered a second round of training in 2022 for an additional 90 places. As part of this initiative and to reduce the barriers to accessing dermatoscopes, which are crucial in the early detection of skin cancers, Cancer Council SA funded the purchase of dermatoscopes, supported in part by Wellbeing SA, which were provided to GPs who completed the training. Cancer Council SA established a process for allocating dermatoscopes to priority participants, factoring in the socioeconomic profile of the patient group served by the practice and also undertook evaluation of the outcomes for dermatoscope recipients.

As part of a multi-strategy approach and collaboration with Cancer Council SA under the Public Health Partner Authority Agreement, this initiative will play an important role in reducing the overall large burden of skin cancer on the health system.



## SOUTH AUSTRALIA

Suicides are preventable deaths with broad impacts on individuals, families and the community. Surveillance of deaths by suicide is a valuable evidence base to inform policy and population-level suicide prevention responses.

Partnering with the South Australian Coroner's Court, the Office of the Chief Psychiatrist and the Australian Institute of Health and Welfare's National Suicide and Self-Harm Monitoring Project – Wellbeing SA launched the South Australian Suicide Registry (SASR) in January 2022. The SASR operates under the *Suicide Prevention Act 2022* and the Suicide Prevention Regulations 2022.

The SASR now includes four years of population level surveillance of deaths by suicide in South Australia. The data are being used to inform policy and other public health responses including timely targeted prevention, intervention and postvention programs. Data are also being used to facilitate the early identification of suicide clusters based on descriptive epidemiology (person, place and time).

Wellbeing SA in partnership with the Chief Psychiatrist and the Chief Public Health Officer, continues to develop a best practice model to detect and respond to sentinel events and clusters.



### WELLBEING INDEX FOR SOUTH AUSTRALIA

Wellbeing SA was tasked with developing a Wellbeing Index for South Australia (the Index) across a 12-month period in 2021-22. The purpose of the Index was identified in Wellbeing SA's Strategic Plan as 'enabling the measurement of the collaborative and collective impact from all partners on wellbeing outcomes' for South Australians.

The scope of the Index content was informed by the focus of the agency's work in supporting health and wellbeing through a public health lens (specifically health promotion and illness prevention). The scope also reflected a broad interpretation of wellbeing (physical, mental, social/ community and cultural domains) and acknowledgement of the importance of the determinants of health (wellbeing).

As an initial step, Wellbeing SA commissioned a review of the literature in 2020 to summarise national and international wellbeing measurement initiatives. An early decision was that the development of a composite/ aggregate index, with an overall wellbeing score calculated through standardising and weighting various indicators, was a complex process that would not be possible within the time constraints. Instead, the Index would identify and then monitor individual indicators of wellbeing over time.

Wellbeing SA invited representatives of Public Health Partner Authority agencies (established under the *South Australian Public Health Act 2011*), along with additional representatives from other South Australian Government agencies, universities and non-government organisations to two workshops. These workshops (and subsequent liaison with subject matter experts) guided decisions about the purpose, scope, principles for development and structure (August 2021) and then the indicators, their measures and potential data (February 2022) for the Index.

The first version of the Wellbeing Index for South Australia was launched in June 2022 on the Wellbeing SA website. It will be reviewed annually. The development of indicators for the Aboriginal cultural wellbeing domain required more time to ensure it was developed in partnership with Aboriginal and Torres Strait Islander stakeholders and will be completed in 2023.

The Index is being used to communicate the importance and the breadth of wellbeing addressed by the various health promotion and public policy actors in South Australia. As the lead agency, Wellbeing SA is using the Index to form part of the performance measurement for its health promotion functions. Wellbeing SA will work with its partners to report on progress annually, and this presents an ongoing opportunity to bring focus to the importance of these broad measures of wellbeing.



### SA LEADING THE WAY IN PREVENTING WILD MUSHROOM POISONING

The risk of South Australian fatalities or liver transplants caused by the accidental ingestion of Death Cap mushroom (Amanita phalloides) has increased since the first sightings in the Adelaide Hills in 2011. There have been increasing reports of these mushrooms growing in public areas and wider interest in foraging for wild foods.

A partnership established between SA Health and the State Herbarium, Department for Environment and Water (DEW) in April 2021 has expanded the capacity to reduce fatality risk and improve outcomes for South Australian victims of wild mushroom poisoning.

Through this partnership, SA Health can now provide local expert mycologist mushroom identification for cases of suspected accidental Death Cap mushroom ingestion to support medical management. DEW provides this 24/7 service to SA Health from April to August each year, which is the usual mushroom growth season. This service has led to a reduction in preventing unnecessary emergency department attendances, potential hospital admissions, diagnostics and regional patient transfers in 2021.

The 2022 season started unusually early with Death Caps sighted in the Adelaide Hills in January. In May, a poisoning victim who benefitted from this service through a shorter hospital stay and mushroom-specific clinical management assisted with public engagement and awareness by speaking to the media about her experience. At the start of each growth season, SA Health delivers an intensive media and social media campaign to raise awareness of the risk of severe illness and fatality from eating Death Caps and other toxic species. This campaign consistently performs well with a high social media reach of more than 100,000 each year.

With the early start to the 2022 season, the campaign was intensified and new ways to communicate were developed including the recruitment of South Australian vets to help distribute the mushroom warning, and translation of warnings into 36 key languages spoken in South Australian culturally and linguistically diverse (CALD) communities. The 2022 campaign focused strongly on notifying CALD communities of the translated materials, through national and local networks and partnerships including local government, Kidsafe SA, multicultural associations and national food council and regulators.

The translated materials were designed for national use and have been used by health agencies in other jurisdictions. In the first two months of the campaign, the translated resources were accessed over 500 times including viewers from Philippines, Austria, Canada and Indonesia. The top five language resources accessed were Arabic, Burmese, Khmer, Nepali and Chinese.

#### POISONOUS WILD MUSHROOMS

> Dangerous wild mushrooms usually appear after the first good autumn rains

> They can be found in many places, including bushland, forests, public parks, playgrounds, school ovals, farm paddocks and closer to home in your own garden in lawn, compost, mulch or straw.

1

- > Keep a close eye on your children and pets when you are outside because mushrooms are easy to reach and can look interesting to eat.
- > People who have lived overseas should be aware that poisonous mushrooms in Australia can look like edible mushrooms found in other countries.
- > Death cap mushrooms are the most dangerous and can cause fatal liver damage. Cooking or peeling doesn't remove the poison. The Death cap grows with oak, hazel, and chestnut trees, but lethal mushrooms can grow anywhere. The only mushrooms safe to eat are ones you buy from a reliable greengrocer or supermarket.
- If someone accidentally eats a wild mushroom, don't wait for symptoms to start call the Poisons Information Centre on 13 11 26 and follow their advice. Anyone who becomes ill after eating a wild mushroom should seek urgent medical attention. In an emergency, always call triple zero (000).

#### Symptoms of wild mushroom poisoning include:

- > Violent stomach cramps
- > Abdominal pain
- > Vomiting
- > Nausea
- > Diarrhoea
- Symptoms usually start 3-6 hours after eating a mushroom and can last up to 3 days. The most dangerous mushrooms can have delayed symptoms

that can start up to 24 hours after eating.

www.sahealth.sa.gov.au/mushroompoisoning



#### 有毒的野蘑菇



olified / 简体中文

- > 第一场秋雨之后, 通常会有危险的野生蘑菇出现。
- > 它们可以在很多地方被找到,包括灌木丛、森林、公园、游乐场和学校操场、农场地和家附近的 草坪、堆肥、覆盖丛或稻草中。
- > 当您在室外时,请密切注意您的孩子和宠物,因为蘑菇是很容易采摘,吃起来也是很有味道的。
- > 在海外生活过的人必须注意, 澳大利亚的毒蘑菇可能看起来很象其他国家的食用蘑菇。
- > 死帽蘑菇是最危险的,可导致致命的肝损伤。烹煮或剥皮并不能去除毒性。死帽蘑菇长在橡树、 棒树和栗树上,但致命的蘑菇可以在任何地方生长。唯一可以安全食用的蘑菇是您从可靠的 蔬菜水果商或超市那里购买的蘑菇。
- > 如果有人不小心吃了野蘑菇,不要等待出现症状,请立即拨打有毒物信息中心的电话 13 11 26, 并听从他们的建议。
- 食用野生蘑菇后生病的任何人都应寻求紧急医疗救助。

紧急情况下,请拨打三个零 (000)。

#### 野生蘑菇中毒的症状包括:

- > 剧烈的胃痉挛
- > 腹痛 > 呕吐
- > 恶心
- > 腹泻
- 症状通常在食用蘑菇后3-6小时开始出现,可持续长达3天。

最危险的蘑菇可能会在进食后24小时才延迟出现症状。

www.sahealth.sa.gov.au/mushroompoisoning



