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## **COVID-19 Australia: Epidemiology Report 27**

Fortnightly reporting period ending 11 October 2020

COVID-19 National Incident Room Surveillance Team

# Communicable Diseases Intelligence

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# COVID-19 Australia: Epidemiology Report 27

Fortnightly reporting period ending 11 October 2020

COVID-19 National Incident Room Surveillance Team

## Summary

Nationally, there was a continuing downward trend in notifications of COVID-19. The daily average number of cases for this reporting period was 14 compared to an average of 23 cases per day in the previous fortnight. There were 192 cases of COVID-19 and 23 deaths this fortnight, bringing the cumulative case count to 27,344 and 898 deaths. While the majority of cases in this reporting period were from Victoria (60%; 116/192), there continues to be a decrease in cases in this state resulting from public health interventions. During this fortnight, 66% (127/192) of all cases were reported as locally acquired, with the majority reported from Victoria (108/127). The highest proportion of overseas-acquired cases was reported in New South Wales (75%; 38/51), followed by Western Australia (22%; 11/51). Although testing rates declined, they remain high overall at 9.2 tests per week per 1,000 persons. There was variability in the testing rate by jurisdiction, with testing rates depending on the epidemic context. The overall positivity rate for the reporting period was 0.05%, with Victoria reporting a positivity rate of 0.08% for this reporting period. In all other jurisdictions the positivity rate was  $\leq 0.06\%$ .

Keywords: SARS-CoV-2; novel coronavirus; 2019-nCoV; coronavirus disease 2019; COVID-19; acute respiratory disease; epidemiology; Australia

## Introduction

Coronavirus disease 19 (COVID-19), caused by the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was first identified in humans in Wuhan, China, in December 2019. Subsequently, the disease spread rapidly, leading to a global pandemic.<sup>1</sup> The predominant modes of transmission for COVID-19 are through direct or close contact with an infected person via respiratory droplets, or indirectly via contact with contaminated fomites.<sup>2</sup> The median incubation period of COVID-19 is 5–6 days, ranging from 1–14 days.<sup>3,4</sup> The infectious period remains uncertain; however, it has recently been estimated to be from 48 hours before symptoms develop until two weeks from symptom onset.<sup>3,5</sup> The predominant symptoms reported in COVID-19 cases are cough, sore throat, fatigue, runny nose and fever.<sup>6</sup> The majority of cases recover from the disease without clinical inter-

vention; however, approximately 20% of cases result in more severe outcomes, such as shortness of breath and pneumonia, necessitating hospitalisation and the requirement of additional oxygen or ventilation.<sup>7,8</sup> Severe or fatal outcomes are generally more common among elderly cases or those with comorbid conditions.<sup>8</sup>

The epidemiology of COVID-19 in Australia has continued to evolve since cases were first detected in the country in late January 2020. This report provides an overview of the Australian COVID-19 epidemic, and compiles data from a variety of sources to describe cases and clusters, testing patterns, disease severity, public health response measures and the international situation. The report addresses indicators listed in the Australian National Disease Surveillance Plan for COVID-19,<sup>4</sup> which describes a national approach for disease surveillance for COVID-19 and its causative agent, SARS-CoV-2.

## Data sources

### Notifications to health departments

The majority of data presented in this report were derived from the National Notifiable Diseases Surveillance System (NNDSS). COVID-19 is a notifiable disease under public health legislation in all states and territories and is listed on the National Notifiable Diseases List under the *National Health Security Act (2007)*. Accordingly, all jurisdictions reported confirmed and probable cases of COVID-19 through the NNDSS. The national case definition for surveillance is available in the COVID-19 Series of National Guidelines.<sup>9</sup> Due to the dynamic nature of the NNDSS, numbers presented in this report may be subject to revision and may vary from numbers previously reported and from case notifications released by states and territories. Case numbers for the most recent dates of illness onset may be subject to revision, due to reporting delays. Data for the current report were extracted from the NNDSS on 13 October 2020 for notifications received up to 11 October 2020. Data for COVID-19 deaths were extracted from daily notifications from state and territory health departments to the National Incident Room received up to 11 October 2020.

### Acute respiratory illness

We report data from surveillance systems that monitor trends in the number of people reporting symptoms of mild respiratory illnesses in the community and in primary care settings. These systems gathered information from across Australia and include the online FluTracking syndromic surveillance system,<sup>10</sup> the Commonwealth General Practice (GP) Respiratory Clinics, and the Australian Sentinel Practice Research Network (ASPREN) and Victorian Sentinel Practice Influenza Network (VicSPIN) GP sentinel surveillance systems. These systems capture data on any respiratory illness experienced by participants, including pathogens such as SARS-CoV-2.

## Hospitalisations

To present data on severity of COVID-19, we included data on hospitalisations and intensive care unit (ICU) admissions provided from two sentinel surveillance systems: Influenza Complications Alert Network (FluCAN)<sup>11</sup> and the Short Period Incidence Study of Severe Acute Respiratory Infection Study (SPRINT-SARI).<sup>12</sup> FluCAN is a real-time hospital sentinel surveillance system for acute respiratory disease requiring hospitalisation. Established to monitor for seasonal influenza, FluCAN was modified to include surveillance for COVID-19. Participating sites collected detailed clinical and laboratory information from all hospitalised patients with a confirmed diagnosis of COVID-19. SPRINT-SARI is a sentinel system that collects detailed data on the characteristics and outcomes of and interventions for patients admitted to ICUs or High Dependency Units with COVID-19 at participating sites across Australia. Data on severity is presented in the report each month, rather than on a fortnightly basis.

### Viral genomics

The Global Initiative on Sharing All Influenza Data (GISAID) is an international virus sequence database that provides open access to SARS-CoV-2 genomic data.<sup>13</sup> Phylogenetic analyses are publicly available through the Nextstrain platform, which uses virus sequence data from GISAID to track the global evolution and spread of SARS-CoV-2.<sup>14</sup>

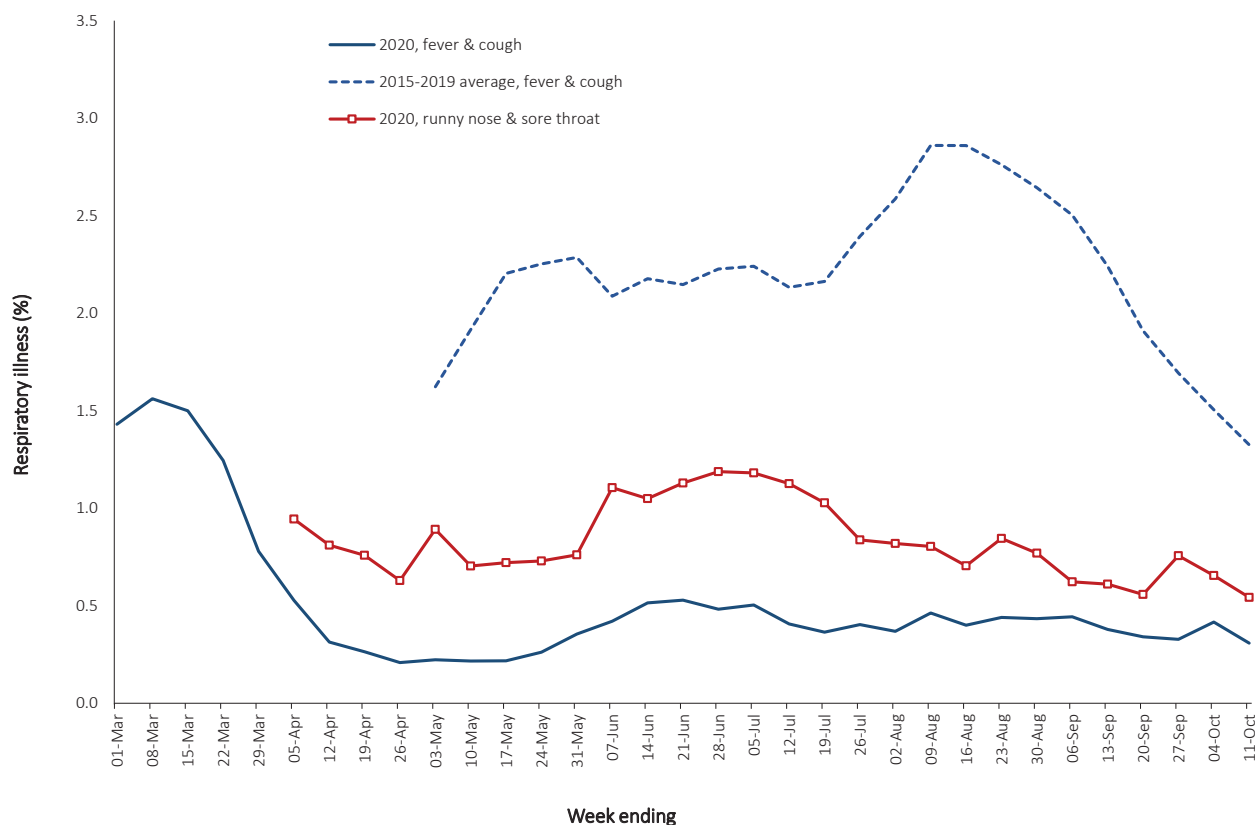
### Testing data

Aggregated testing data were reported daily to the National Incident Room by jurisdictions. Testing data by demographic breakdown were also reported on a weekly basis by jurisdictions.

### Denominators

We used population data from the Australian Bureau of Statistics (ABS) Estimated Resident Population (as at 30 December 2019) to estimate rates of infection by jurisdiction, age group, sex and Indigenous status.

**Figure 1. Weekly trends in respiratory illness amongst FluTracking survey participants (age-standardised) compared to the average of the previous five years, Australia, 1 March to 11 October 2020<sup>a</sup>**



a In previous years, FluTracking was activated during the main Influenza season from May to October. In 2020, FluTracking commenced 10 weeks early to capture data for COVID-19. Data on runny nose and sore throat were only collected systematically after 29 March 2020, therefore a historical average for this symptom profile is unavailable.

## International

All data reported in the international section were extracted from the World Health Organization (WHO) Dashboard on 12 October 2020 unless otherwise specified.<sup>15</sup>

## Activity

### Acute respiratory illness

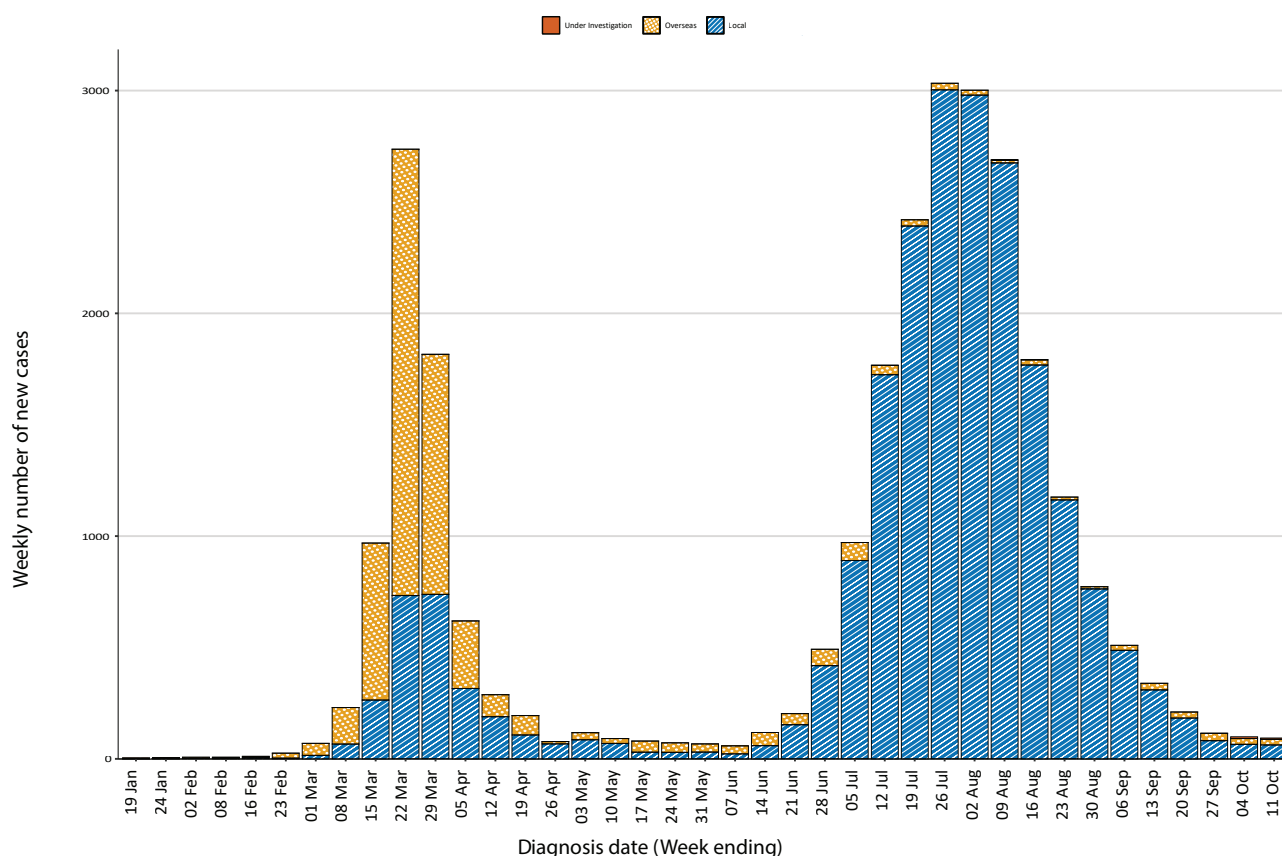
*(FluTracking and Commonwealth Respiratory Clinics)*

Based on self-reported FluTracking data, fever and cough in the community continues to be low nationally, four-fold lower than the historical average for this time of year (Figure 1). Runny nose and sore throat symptoms in the community remained stable across this reporting period.

Acute respiratory illness was highest in those 0–9 and 30–39 years of age, based on both self-reported FluTracking data and presentations to Commonwealth Respiratory Clinics. Females reported respiratory illness more frequently than males. Rates of fever and cough by jurisdiction were generally similar to the rates reported in the previous fortnight, ranging from 1.0/1,000 FluTracking participants in Victoria to 4.9/1,000 participants in Western Australia.

FluTracking data indicate that 48% of those in the community with ‘fever and cough’ and 24% of those with ‘runny nose and sore throat’ were tested for SARS-CoV-2. Testing rates varied by jurisdiction, being lowest in Western Australia and the Northern Territory and highest in New South Wales and Victoria. It is important to acknowledge that there may be legitimate reasons why people did not get tested, including

Figure 2. COVID-19 notified cases by source of acquisition and diagnosis date, Australia, week ending 11 October 2020 (Source: NNDSS)



barriers to accessing testing. Symptoms reported to FluTracking were not specific to COVID-19 and may also be due to chronic diseases.

During the fortnight, there were 30,352 assessments at Commonwealth Respiratory Clinics with > 95% tested for SARS-CoV-2. The positivity of SARS-CoV-2 tests in these Clinics was 0.02% for this reporting period, which is consistent with previous reporting periods.

In patients experiencing influenza-like illness in the last fortnight and tested through the ASPREN and VicSPIN GP sentinel surveillance systems, the most frequent respiratory viruses detected were rhinoviruses.

The rate of self-reported fever and cough among Aboriginal and Torres Strait Islander peoples over the reporting fortnight was 2.5 times that observed in all other participants based on FluTracking data, which is consistent with trends observed in previous weeks.

Rates of respiratory illness in health care worker populations were similar to those observed in the wider community, based on FluTracking data.

Based on all presentations to Commonwealth Respiratory Clinics to date, the principal symptoms reported in COVID-19 cases were cough, sore throat, tiredness, runny nose, and fever.

#### Transmission trends of confirmed COVID-19 (NNDSS and jurisdictional reporting to NIR)

As at 11 October 2020, there were 27,344 COVID-19 cases including 898 deaths reported nationally, with two distinct peaks in March and July (Figure 2). In the current reporting period, there were 192 cases and 23 deaths reported. On average, 14 cases were notified each day over this reporting period, a decrease from the average of 23 cases reported per day over the previous reporting period. The majority of cases diagnosed this fortnight were from Victoria (60%; 116/192), followed by New South Wales (30%; 58/192).

**Table 1. COVID-19 notifications by jurisdiction and source of acquisition, Australia, 28 September–11 October 2020**

Source	NSW	Vic	Qld	WA	SA	Tas	NT	ACT	Australia
Overseas	38	0	2	11	0	0	0	0	51
Local — source known	13	98	0	0	0	0	0	0	111
Local — source unknown	6	10	0	0	0	0	0	0	16
Under investigation	1	8	1	0	4	0	0	0	14
<b>Total</b>	<b>58</b>	<b>116</b>	<b>3</b>	<b>11</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>192</b>

**Table 2. Locally-acquired COVID-19 case numbers and rates per 100,000 population by jurisdiction and reporting period, Australia, 11 October 2020**

Jurisdiction	Reporting period 28 September – 11 October		Cumulative cases	
	Number of cases	Rate per 100,000 population	Number of cases	Rate per 100,000 population
NSW	20	0.2	1,921	23.8
Vic	116	1.8	19,308	292.8
Qld	1	0	301	5.9
WA	0	0	98	3.7
SA	4	0.2	155	8.8
Tas	0	0	149	27.9
NT	0	0	6	2.4
ACT	0	0	29	6.8
<b>Australia</b>	<b>141</b>	<b>0.6</b>	<b>21,967</b>	<b>86.6</b>

**Table 3. COVID-19 notifications by Aboriginal and Torres Strait Islander status by jurisdiction, source of acquisition and remoteness classification, Australia, 11 October 2020**

	Locally-acquired				Interstate acquired	Overseas acquired	Unknown <sup>a</sup>	Total
	Major Cities of Australia	Inner Regional Australia	Outer Regional Australia	Remote / Very Remote Australia				
Aboriginal and Torres Strait Islander <sup>b</sup>	88	15	6	1	4	31	1	146
Non-Indigenous	20,291	903	220	20	154	5,355	221	27,229

a Includes 29 Non-Indigenous cases classified as overseas residents who were diagnosed in Australia, 221 Non-Indigenous cases and one Aboriginal and Torres Strait Islander case with an unknown remoteness classification.

b Excludes 1 probable Aboriginal and Torres Strait Islander case.

Figure 3. Cumulative COVID-19 cases, by age group and sex, Australia, 23 January 2020 to 11 October 2020

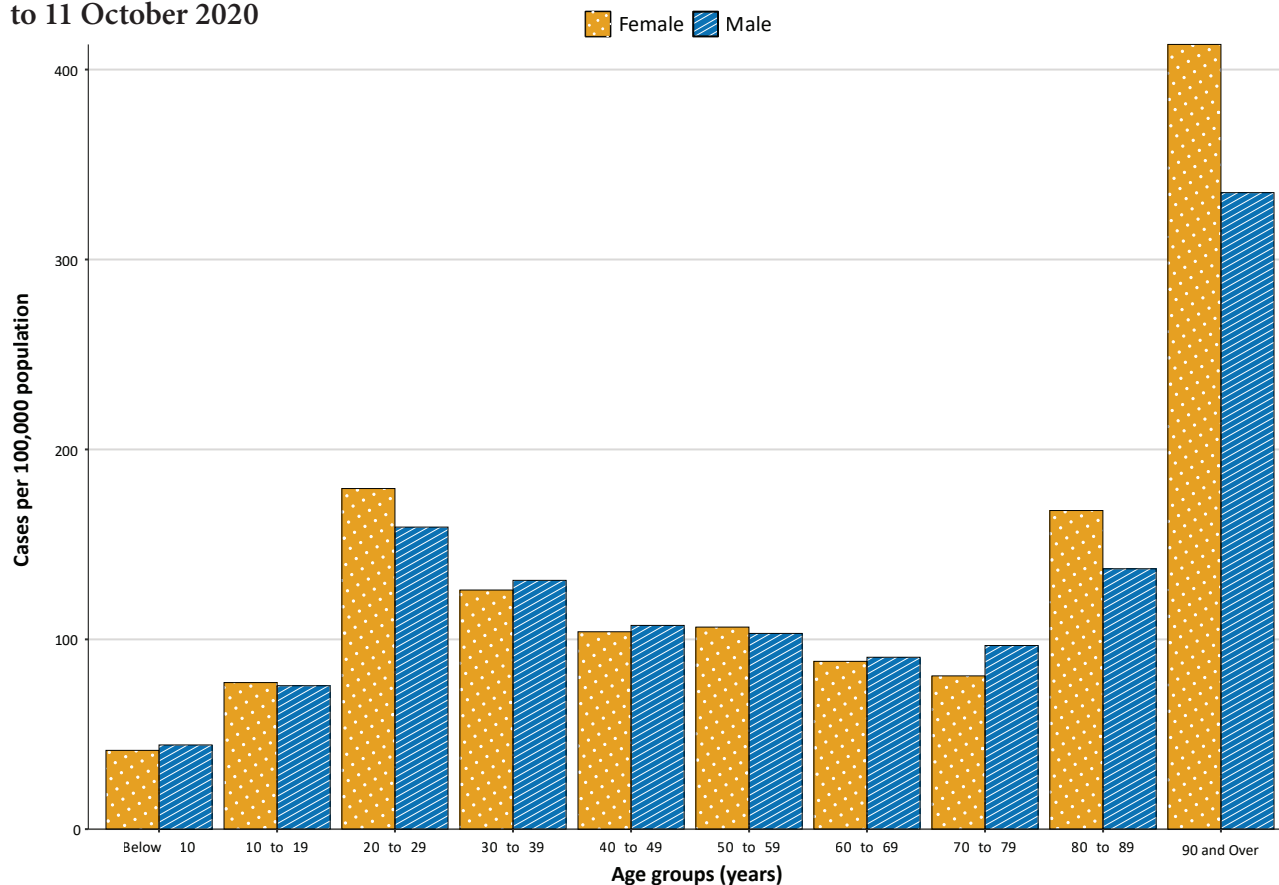
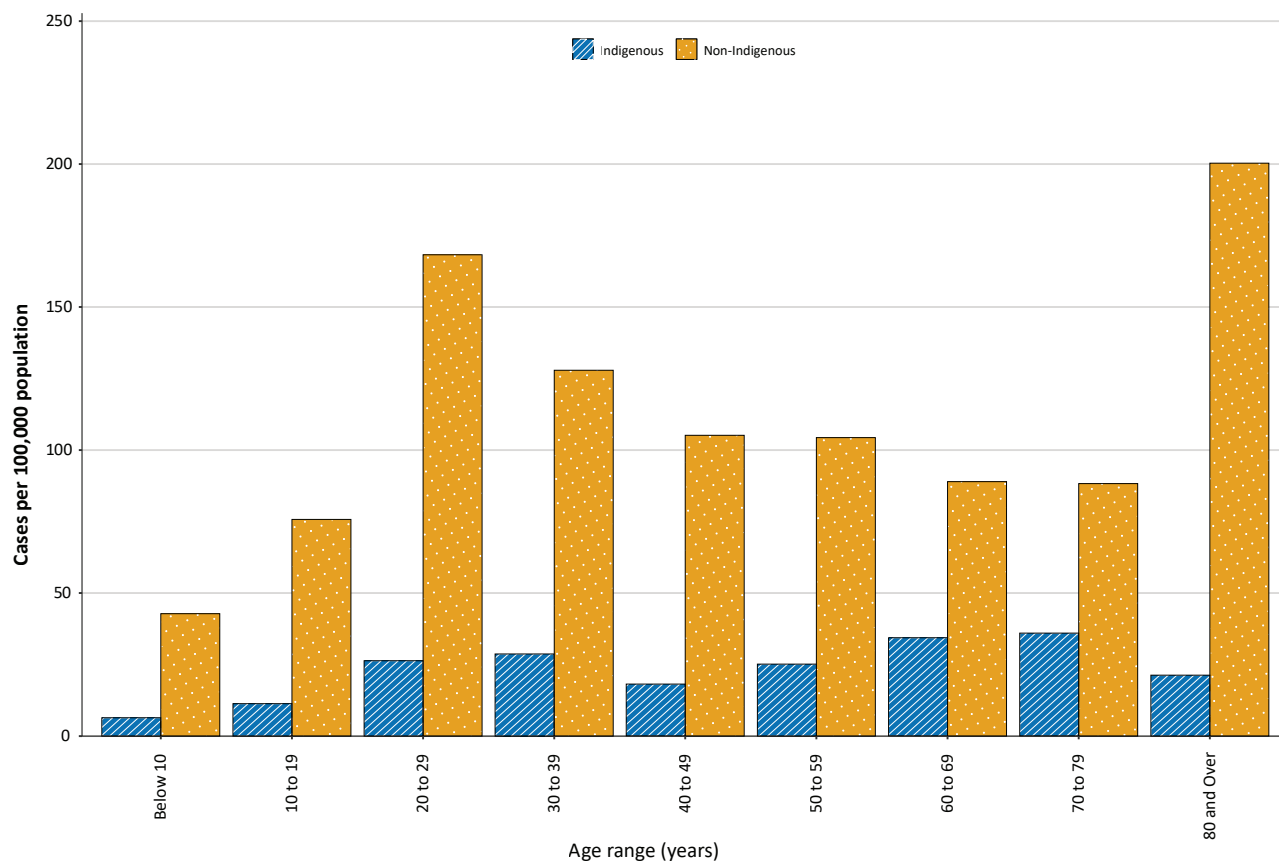


Figure 4. National COVID-19 notification rate per 100,000 population by age group, Aboriginal and Torres Strait Islander persons and Non-Indigenous persons, Australia, 23 January 2020 to 11 October 2020



A small number of cases were reported in Western Australia (11), South Australia (4) and Queensland (3). No new cases were reported in Tasmania, the Northern Territory or the Australian Capital Territory.

### Source of acquisition

(*NNDSS*)

In this reporting period, 66% (127/192) of all cases were reported as locally acquired. The source of acquisition for 13% (16/127) of these cases could not be identified, which is higher than the previous reporting period (5%; 17/264). In total, 7% (14/192) of cases reported this fortnight were under investigation at the time of reporting and 27% (51/192) were reported as overseas acquired (Table 1).

In the current reporting period, the majority of overseas-acquired cases were reported in New South Wales (75%; 38/51), followed by Western Australia (22%; 11/51). A further 15 cases in Western Australia were acquired at sea among freight ship workers. The higher number of overseas-acquired cases reported in New South Wales reflects the number of returned travellers managed there. Victoria had the highest proportion of locally-acquired cases with known source (88%; 98/111) and locally-acquired cases with unknown source (63%; 10/16).

Nationally, there were 0.6 locally-acquired cases per 100,000 population in this reporting period, compared to 1.0 per 100,000 population in the previous period (Table 2). The rate of locally-acquired cases in Victoria decreased to 1.8 per 100,000 population, from 3.9 per 100,000 population in the previous period.

Cumulatively, the infection rate to date for all locally-acquired cases was highest in Victoria with 292.8 infections per 100,000 population. The rate of infection in Tasmania was 27.9 infections per 100,000 population, largely as a result of an outbreak in North West Tasmanian hospitals in April 2020. Tasmania reported their most recent case in the fortnight ending 16 August 2020. That case was associated with interstate travel.

### Demographic features

(*NNDSS*)

In this reporting period, the largest number of cases occurred in those aged 20–29 years (39 cases). For all notifications to date, the highest rate of infection was in those aged  $\geq 90$  years old with a rate of 387.3 per 100,000 population (Appendix A, Table A.1). Children aged 0–9 years old had the lowest rate of infection (43.0 cases per 100,000 population), despite comparable testing rates to other age groups.

Cumulatively, the male to female rate ratio was approximately 1:1 in most age groups, except in the 20–29 years age group and those aged  $\geq 80$  years old where rates were higher among females (Figure 3). The largest difference in cumulative rates was in the  $\geq 90$  years age group, where the cumulative rate among males was 335.2 cases per 100,000 population and among females 413.3 cases per 100,000 population (Appendix A, Table A.1).

Since the beginning of the epidemic in Australia, the median age of all cases was 37 years old (interquartile range, IQR: 25–57) which has not changed since the beginning of August. Prior to 1 June 2020, COVID-19 cases were slightly older with a median age of 46 years old (IQR: 29–62), associated with a high proportion of cases having a recent travel history or acquisition on a cruise ship. In cases reported after 1 June 2020, the median age was 35 years (IQR: 23–53) reflecting transmission in the community and across a range of settings, especially in Victoria. The median age of cases in this reporting fortnight was 32 years (IQR: 19–46).

### Aboriginal and Torres Strait Islander persons

(*NNDSS*)

There have been 146 cases of COVID-19 notified in Aboriginal and Torres Strait Islander persons since the beginning of the epidemic. This represents approximately 0.5% of all confirmed cases. There were no cases among Aboriginal and Torres Strait Islander persons in the past four weeks. Table 3 compares the remoteness of cases

**Table 4. State and territory changes to COVID-19 restrictions, Australia, 28 September to 11 October 2020**

Jurisdiction	Summary of changes to COVID-19 restrictions
New South Wales	From 2 October, boarding school students permitted to cross the NSW-Victorian border and travel restrictions for Lord Howe Island lifted. <sup>21</sup>
Victoria	No further easing of restrictions during this reporting period. <sup>22</sup>
Queensland	From 1 October the following restrictions were eased: <sup>23</sup> <ul style="list-style-type: none"> <li>• Stage 4 of the Queensland Roadmap came into effect</li> <li>• Queensland border zone no longer exists, New South Wales border zone extended</li> <li>• Up to 1000 people permitted at outdoor events</li> <li>• Density restrictions reduced to two square metres for outdoor venues</li> <li>• Up to 75% seating capacity at outdoor stadiums and amphitheatres</li> </ul>
Western Australia	No further easing of restrictions during this reporting period. <sup>24</sup>
South Australia	From 3 October 2020, minor easing of restrictions to permit dancing at events and standing consumption of food outdoors. <sup>25</sup> From 8 October 2020, the Cross Border Community buffer with Victoria extended to 70km. <sup>25</sup>
Tasmania	No further easing of restrictions during this reporting period. <sup>26</sup>
Australian Capital Territory	From 9 October the following restrictions were eased: <sup>27</sup> <ul style="list-style-type: none"> <li>• Up to 200 permitted at all gatherings</li> <li>• Up to 50% capacity permitted in cinemas, large indoor seating (up to 1000) and stadiums</li> <li>• Workplaces may commence returning to work</li> </ul>
Northern Territory	No further easing of restrictions during this reporting period. <sup>28</sup>

in Aboriginal and Torres Strait Islander persons with those in the Non-Indigenous population. No new overseas-acquired cases have been reported among Aboriginal and Torres Strait Islander persons since the end of August.

The median age of COVID-19 cases in Aboriginal and Torres Strait Islander persons was 31 years (IQR: 21–48), which was younger than for Non-Indigenous cases where the median age was 37 years (IQR: 25–57).

The notification rate across all age groups was higher in Non-Indigenous persons than in Aboriginal and Torres Strait Islander persons (Figure 4). The age-standardised notification rate ratio was 0.2, indicating that the Aboriginal and Torres Strait Islander population generally

had a lower COVID-19 case rate than the Non-Indigenous population after accounting for differences in age structure. Amongst Aboriginal and Torres Strait Islander cases, the highest notification rate was in those aged 70–79 years (36.0 cases per 100,000 population), followed by the 60–69 years age group (34.4 cases per 100,000 population). Similar to Non-Indigenous cases, children aged 0–9 years had the lowest notification rate for Aboriginal and Torres Strait Islander cases (6.4 cases per 100,000 population).

**Figure 5. COVID-19 notifications in Australia by week of diagnosis and jurisdiction to 11 October 2020 with timing of key public health measures**

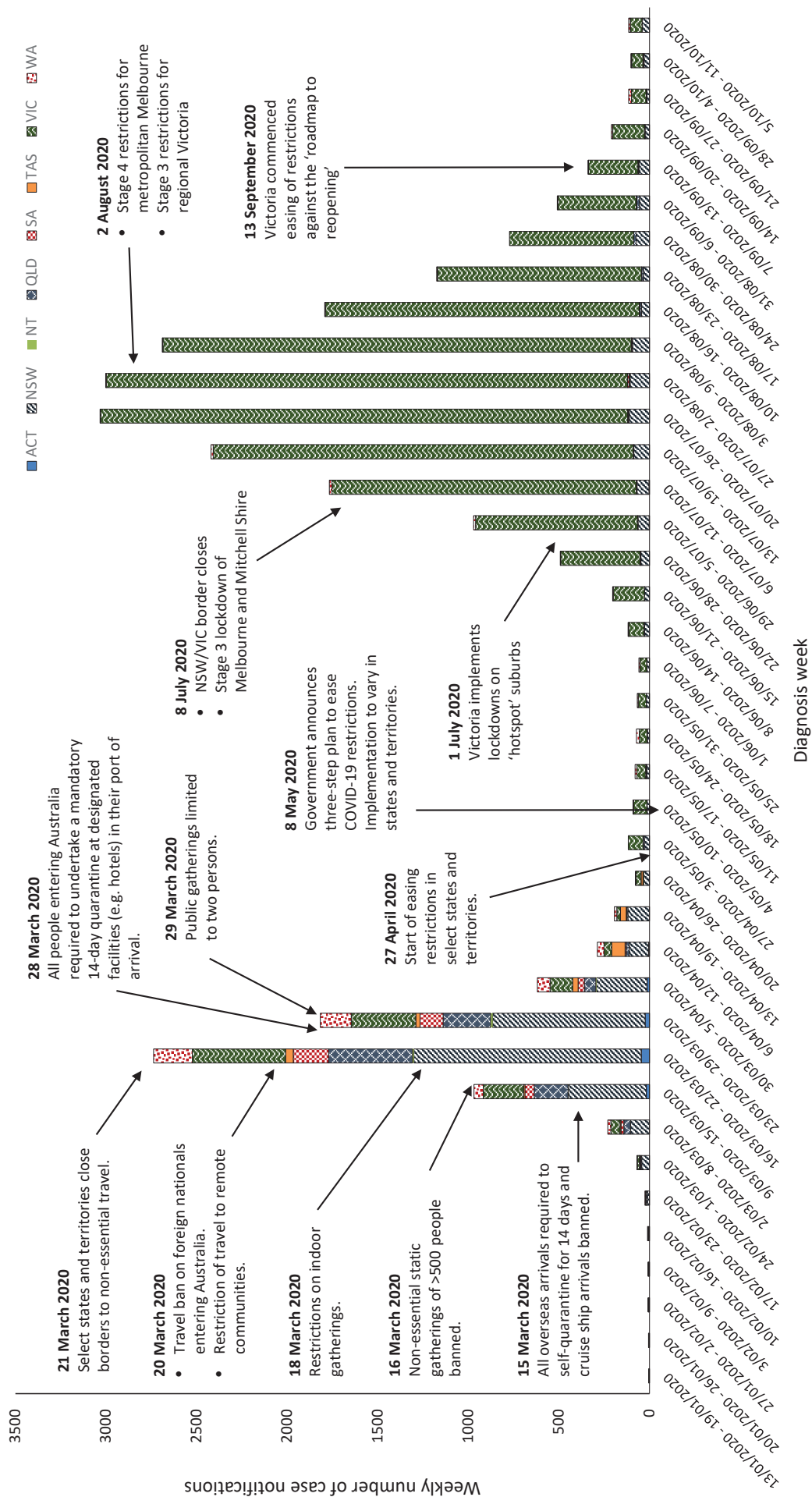
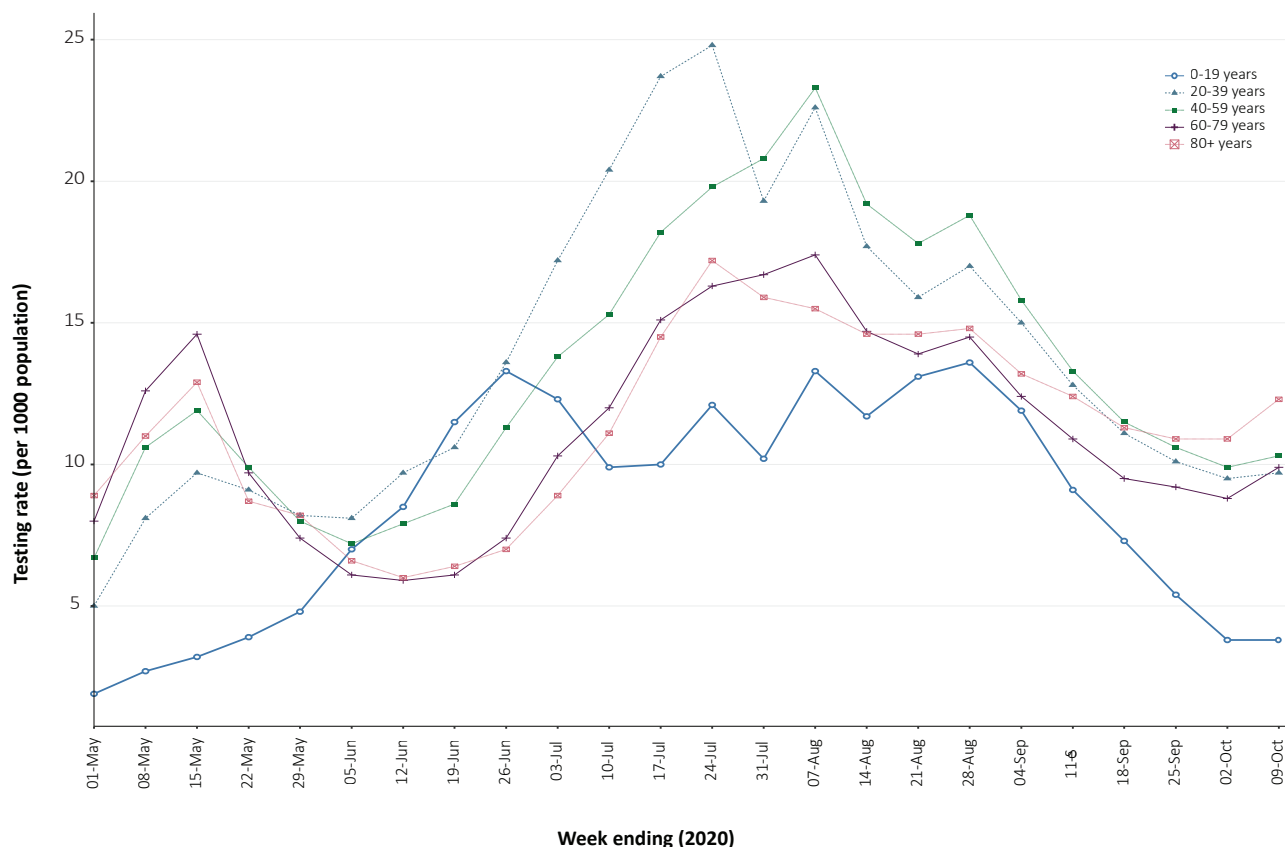


Table 5. Diagnostic tests performed, by jurisdiction, Australia, 11 October 2020

Jurisdiction	Tests performed 14–27 September			Tests performed 28 September – 11 October			Cumulative tests performed to 11 October		
	N	Positivity (%)	Per 100,000 population <sup>a</sup>	N	Positivity (%)	Per 100,000 population <sup>a</sup>	N	Positivity (%)	Per 100,000 population <sup>a</sup>
NSW	191,554	0.03	2,369	139,135	0.04	1,721	2,811,527	0.15	34,773
Vic	173,216	0.18	2,627	178,697	0.08	2,710	2,840,686	0.71	43,081
Qld	75,066	0.01	1,474	59,609	0.01	1,171	1,157,573	0.10	22,731
WA	38,793	0.01	1,480	35,681	0.02	1,361	497,477	0.10	18,974
SA	32,888	0.05	1,877	32,128	0.06	1,833	442,299	0.16	25,241
Tas	7,152	0.00	1,338	6,466	0.00	1,210	108,745	0.21	20,341
NT	5,526	0.00	2,245	4,868	0.00	1,978	51,346	0.06	20,864
ACT	5,938	0.00	1,393	5,304	0.00	1,245	98,458	0.11	23,104
<b>Australia</b>	<b>530,133</b>	<b>0.08</b>	<b>2,091</b>	<b>461,888</b>	<b>0.05</b>	<b>1,822</b>	<b>8,008,111</b>	<b>0.34</b>	<b>31,581</b>

<sup>a</sup> Population data based on Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP) as at 30 December 2019.

Figure 6. SARS-CoV-2 polymerase chain reaction (PCR) testing rates per 1,000 population per week by age group, Australia, 1 May to 9 October 2020 <sup>a,b</sup>



a Data provided by jurisdictions to the National Incident Room (NIR) weekly.

b The jurisdictions reporting each week (i.e. the denominator population) may vary.

## Clusters and outbreaks

(State and territory reporting)

Nationally, for the fortnight ending 11 October 2020, there was a total of 24 open outbreaks where a new epidemiologically-linked case was identified in the previous 14 days. Of these, 19 (79%) were reported in Victoria, three (13%) in New South Wales, one (4%) in Queensland and one (4%) in Western Australia. Outbreaks were reported most frequently from residential aged care settings (9), followed by hospitals (4), workplaces (4) and healthcare facilities (2). Outbreaks varied in size, with the largest outbreak encompassing 260 cases in a residential aged care facility.

As at 11 October 2020, there have been 4,280 cases of COVID-19 associated with 218 residential aged care facilities, with 3,577 recoveries and 677 deaths. 2,050 of these cases occurred in aged

care residents, with the remaining 2,230 cases occurring in care staff. The Commonwealth has actively supported services with reported incidents and outbreaks of COVID-19 providing access to personal protective equipment and additional staffing resources where required. Advice and guidelines have been provided to aged care services, including the release of an outbreak management guide.<sup>16,17</sup>

## Virology

(GISAID)

At the time of this report, there were 11,887 SARS-CoV-2 genome sequences available from Australian cases on the global sequence repository, GISAID.<sup>13</sup> These sequences were dispersed throughout the global lineages, reflecting multiple concurrent introductions into Australia.<sup>1,18,19</sup> Recent Australian SARS-CoV-2 sequences from the last month include 127 collected from

Victoria and 11 from New South Wales. Most of these sequences from the last month belong to the B.1.1.25 lineage, reflecting ongoing local transmission of this lineage.

## Public health response measures

Since COVID-19 first emerged internationally, Australia has implemented public health measures informed by the disease's epidemiology (Figure 5). On 8 May, the Australian Government announced a three-step framework for easing COVID-19 restrictions. Building on this framework, on 4 September, the Australian Government announced a plan to develop a 'Roadmap for Recovery' to reopen by Christmas.<sup>20</sup> States and territories ease restrictions at their own pace depending on the local public health and epidemiological situation (Table 4). During the current reporting period, New South Wales, Queensland, South Australia and the Australian Capital Territory continued to ease restrictions.

## Testing

*(State and territory reporting)*

As at 11 October 2020, a total of 8,008,111 tests have been conducted in Australia. The cumulative nationwide proportion of positive tests remains low at < 0.4% (Table 5). With the exception of Victoria, the cumulative testing positivity in individual jurisdictions is < 0.25%.

During this reporting period 461,888 tests were conducted nationally, with a positivity rate of 0.05%. This represents a 15% decrease in testing numbers compared to the last reporting period. Testing rates decreased to 9.2 tests per 1,000 population per week during this reporting period, from a peak of 19.4 tests per 1,000 population per week in early August. Jurisdictional testing rates are driven by both current case numbers and numbers of people experiencing symptoms. All states except Victoria reported a positivity rate of < 0.06%. Victoria reported a positivity rate of 0.08%, which is a decrease from the previous reporting period (0.18%). The low

national positivity rate, along with high rates of testing, indicates a low prevalence of COVID-19 nationally.

For the fortnight ending 9 October 2020, testing rates continued to decline across most age groups (Figure 6). Testing rates were lowest in those aged 0–19 years old.

## International situation

*(World Health Organization)*

On 11 October 2020, more than 216 countries, regions and areas had reported 37,109,113 COVID-19 cases, a 13.2% increase in cumulative global cases in the past fortnight. Cumulative global deaths increased by 7.9% in the past fortnight, with deaths reported to WHO passing one million. Globally, while the rate of new cases each fortnight was relatively stable since late July, there was considerable variation from country to country and across regions.

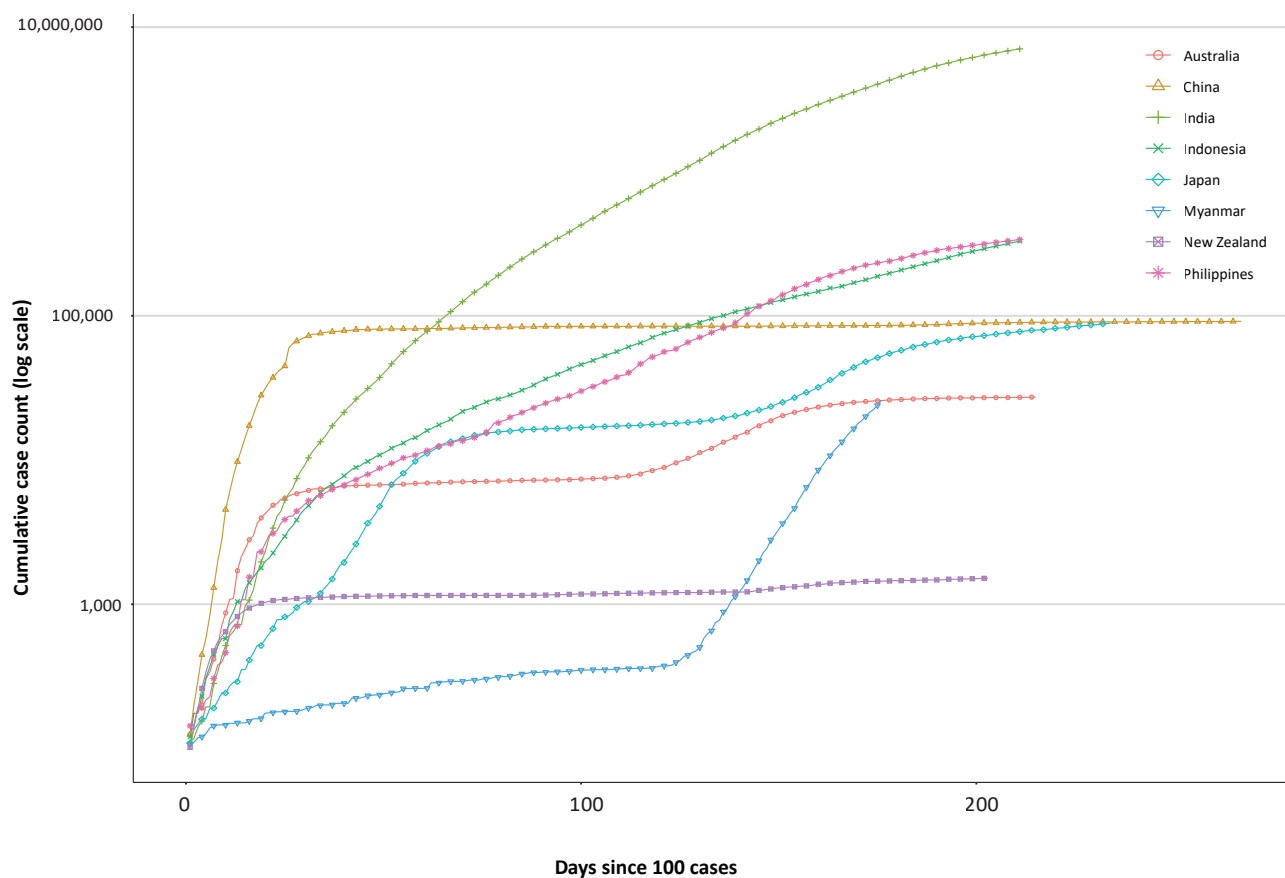
The largest proportions of new cases globally were in the Americas (36%), Europe (28%), and South East Asia (27.5%). In the past fortnight, several countries in Central and Eastern Europe experienced sharp increases in cases, or experienced a second wave, such as France (37.3% increase) and the United Kingdom (37.6% increase).

The Americas represent approximately 48% of cumulative cases and 55% of cumulative deaths. Cases in the South East Asia Region now represent 21.3% of the cumulative global burden of cases and 11.9% of deaths. Europe's cumulative caseload represents 18.6% and deaths 23% of the respective global totals. The global Case Fatality Rate (CFR) is approximately 2.9%, which has been decreasing as ascertainment of cases improves. The global cumulative per capita rates are 483.1 cases and 13.9 deaths per 100,000 population.

## Western Pacific Region

There was a total of 651,841 cases (1.8% of the global total) in the Western Pacific region, along

Figure 7. Number of COVID-19 cases (logarithmic scale) by selected country and days since passing 100 cases, 11 October 2020



with 14,265 deaths (1.3% of the global total). In this reporting period, 50,590 new cases were reported, representing a decrease in fortnightly reported cases. The rate of COVID-19 cases in the region was 34.4 cases per 100,000 people and the mortality rate was 0.7 deaths per 100,000 population.

The Philippines has reported the highest number of cumulative cases in the region reaching 336,926 cases, followed by China (91,305 cases) and Japan (88,912 cases). In this reporting period, the Philippines reported 35,670 cases, representing 70% of new regional cases. Japan reported 7,222 cases, representing 14.2% of new regional cases. Malaysia experienced a surge of cases, with 4,327 cases in the past fortnight representing 8.5% of new regional cases. China reported 339 new cases, representing 0.7% of new regional cases.

As at 11 October 2020, New Zealand reported 38 cases in the previous fortnight, all of which were

linked to overseas travel and were being managed in isolation. New Zealand has returned to Alert Level 1 throughout the country.<sup>29,30</sup>

### South East Asia Region

The South East Asia region has continued to experience large increases in new case numbers. In total, the region reported approximately 7.91 million cases (21.3% of the global total) and 126,917 deaths (11.9% of the global total), with 1.19 million new cases in this reporting period.

New cases in the region remain largely concentrated in India, where 1.06 million new cases were reported in the past fortnight, comprising 89.2% of new cases reported regionally in this period (Figure 7). The Republic of the Union of Myanmar continued to experience a sharp increase in case numbers with 16,073 cases reported in the past fortnight, an increase

of 160% in cases reported from the previous reporting period. This prompted a renewed strategy for making testing more widely available. The majority of cases were locally transmitted in the Yangon region where the government has extended restriction of movement until 31 October 2020.<sup>31</sup>

Indonesia reported 57,613 new cases in the past fortnight, which was similar to the previous fortnight. Although largely concentrated in Jakarta, COVID-19 has spread to all 34 provinces. Stay-at-home restrictions and business closure measures were put in place on 14 September 2020 and remain until further notice.<sup>32</sup>

The Australian Government's recent budget announcement, on 6 October 2020, included \$304.7 million for a *COVID-19 Response Package — support to the Pacific and Timor-Leste*, which will deliver critical, temporary, economic support to address the costs of the pandemic. The supplementary funding is for two years and is separate from Australia's \$4 billion *Partnerships for Recovery* official development assistance program. It also announced \$23.2 million to fund the COVID-19 Vaccine Access and Health Security Program focusing on Pacific island countries, Timor-Leste and Southeast Asian countries.<sup>33,34</sup>

## Interpretation

Since the first cases of COVID-19 were identified in Australia, all states and territories have reported cases of COVID-19, with some jurisdictions experiencing higher numbers and more substantial community-associated transmission. These differences arise from factors including state demographics, population size, and patterns of overseas arrivals. Australia continues to experience low levels of community transmission of COVID-19 in some jurisdictions.

Nationally, there has been an overall downward trend in cases following a secondary peak in late July 2020. The majority of locally-acquired cases in the last fortnight occurred in Victoria, most of which were associated with localised outbreaks or clusters. Victoria has continued to

report declines in case numbers due to interventions and intensive investigations of all cases and outbreaks. New South Wales has continued to report the highest proportion of overseas-acquired cases, all of which were in quarantine.

This fortnight, there was a shift in the age group most affected, with those aged 20–29 years having the highest rate of notification; however, people aged  $\geq 90$  years old continue to have the highest rate overall. Other demographic trends remain largely unchanged, with children aged 0–9 years old having the lowest rate of infection, and cases in Aboriginal and Torres Strait Islander persons accounting for fewer than 1% of all confirmed cases. The local and national epidemiology of COVID-19 continues to inform the public health measure implemented, with a number of jurisdictions easing restrictions this fortnight as COVID-19 case number declined or were sustained at low levels.

As Australian states and territories are at different stages in managing the epidemic of COVID-19, there is significant variation in the public health measures implemented. It is important to note that changes in notifications over time are strongly influenced by a range of factors other than disease incidence. These factors include changes in testing policies; screening programs, including the preferential testing of high-risk populations; and periodic awareness campaigns.

## Definitions

“**Cluster**” in relation to COVID-19 refers to two or more cases (who do not reside in the same household) that are epidemiologically related in time, place or person where a common source (such as an event or within a community) of infection is suspected but not yet established.

“**COVID-19**” is the disease caused by a novel coronavirus—SARS-CoV-2—that emerged in China in late 2019. ‘CO’ stands for corona-, ‘V’ stands for virus, ‘ID’ stands for infectious disease, and ‘-19’ refers to the year that this disease was first reported.

“**COVID-19 associated death**” is defined for surveillance purposes as a death in a probable or confirmed COVID-19 case, unless there is a clear alternative cause of death that cannot be related to COVID-19 (e.g. trauma).<sup>37</sup> There should be no period of complete recovery from COVID-19 between illness and death. Where a Coroner’s report is available, these findings are to be observed.

“**Date of illness onset**” is derived from data collected by the NNDSS and represents the diagnosis date, or reported true onset of disease date. If unknown, the earliest of specimen collection date, notification date or notification receive date is used.

“**Notification received date**” is reported in the NNDSS and represents the date the case is first notified on the NNDSS. As notification can only occur after testing is completed and information processed, counts for a defined period will vary according to the date type used.

“**Outbreak**” in relation to COVID-19 refers to two or more cases (who do not reside in the same household) among a specific group of people and/or over a specific period of time where illness is associated with a common source (such as an event or within a community). Some states and territories may report a single case associated with a residential aged care facility as an outbreak.

“**SARS-CoV-2**” is the virus that causes the disease COVID-19. It is a betacoronavirus genetically related to the 2003 Severe acute respiratory syndrome coronavirus (SARS-CoV).

“**This reporting period**” refers to the period covered by this report, i.e. 28 September–11 October 2020.

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## References

1. Rockett RJ, Arnott A, Lam C, Sadsad R, Timms V, Gray KA et al. Revealing COVID-19 transmission in Australia by SARS-CoV-2 genome sequencing and agent-based modeling. *Nat Med*. 2020. doi: <https://doi.org/10.1038/s41591-020-1000-7>.
2. World Health Organization (WHO). Transmission of SARS-CoV-2: implications for infection prevention precautions. Scientific brief. [Internet.] Geneva: WHO; 9 July 2020. [Accessed on 14 October 2020.] Available from: <https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions>.
3. McAloon C, Collins Á, Hunt K, Barber A, Byrne AW, Butler F et al. Incubation period of COVID-19: a rapid systematic review and meta-analysis of observational research. *BMJ Open*. 2020;10(8). doi: <https://doi.org/10.1136/bmjopen-2020-039652>.
4. Australian Government Department of Health. Australian National Disease Surveillance Plan for COVID-19. [Internet.] Canberra: Australian Government Department of Health; 30 May 2020. Available from: <https://www.health.gov.au/resources/publications/australian-national-disease-surveillance-plan-for-covid-19>.
5. Yuan Z, Xiao Y, Dai Z, Huang J, Zhang Z, Chen Y. Modelling the effects of Wuhan's lockdown during COVID-19, China. *Bull World Health Organ*. 2020;98(7):484–94.
6. Rothan HA, Byrareddy SN. The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. *J Autoimmun*. 2020;109. doi: <https://doi.org/10.1016/j.jaut.2020.102433>.
7. Hu Y, Sun J, Dai Z, Deng H, Li X, Huang Q et al. Prevalence and severity of coronavirus disease 2019 (COVID-19): A systematic review and meta-analysis. *J Clin Virol*. 2020; 127. doi: <https://doi.org/10.1016/j.jcv.2020.104371>.
8. WHO. *Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19)*. Geneva: WHO; 2020. [Accessed on 14 October 2020.] Available from: <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>.
9. Australian Government Department of Health. Coronavirus Disease 2019 (COVID-19): CDNA National guidelines for public health units. Canberra: Australian Government Department of Health; 9 October 2020. [Accessed on 13 October 2020.] Available from: [https://www1.health.gov.au/internet/main/publishing.nsf/Content/7A8654A8CB144F5FCA2584F8001F91E2/\\$File/COVID-19-SoNG-v3.9.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/7A8654A8CB144F5FCA2584F8001F91E2/$File/COVID-19-SoNG-v3.9.pdf).
10. Dalton C, Durrheim D, Fejsa J, Francis L, Carlson S, d'Espaignet ET et al. Flutracking: a weekly Australian community online survey of influenza-like illness in 2006, 2007 and 2008. *Commun Dis Intell Q Rep*. 2009;33(3):316–22.
11. Monash Health. FluCAN (Influenza surveillance): FluCAN (The Influenza Complications Alert Network) [Internet.] Melbourne: Monash Health; 2020. Available from: <https://monashhealth.org/services/monash-infectious-diseases/research/influenza-research/flucan-influenza-surveillance-2/>.
12. Australian and New Zealand Intensive Care Society (ANZICS). SPRINT-SARI: Short period incidence study of severe acute respiratory infection. [Internet.] Camberwell: ANZICS; 2020. Available from: <https://www.anzics.com.au/current-active-endorsed-research/sprint-sari/>.
13. Global Initiative on Sharing All Influenza Data (GISAID). [Website.] Berlin: Federal Republic of Germany, Freunde von GISAID

- e.V.; 2020. [Accessed on 15 October 2020.] Available from: <https://www.gisaid.org/>.
14. Bedford T, Neher R, Hadfield J, Hodcroft E, Sibley T, Huddleston J et al. Nextstrain: Genomic epidemiology of novel coronavirus - Oceania-focused subsampling. [Internet.] Nextstrain; 2020. [Accessed on 15 October 2020.] Available from: <https://nextstrain.org/ncov/oceania>.
  15. World Health Organization (WHO). WHO Coronavirus Disease (COVID-19) dashboard. [Internet.] Geneva: WHO; 12 October 2020. [Accessed on 12 October 2020.] Available from: <https://covid19.who.int/>.
  16. Australian Government Department of Health. Coronavirus (COVID-19) advice for the health and aged care sector. [Internet.] Canberra: Australian Government Department of Health; 2020. [Accessed 13 August 2020.] Available from: <https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/coronavirus-covid-19-advice-for-the-health-and-aged-care-sector>.
  17. Communicable Diseases Network Australia (CDNA). Coronavirus disease 2019 (COVID-19) outbreaks in residential care facilities: CDNA national guidelines for the prevention, control and public health management of COVID-19 outbreaks in residential care facilities in Australia. Canberra: Australian Government Department of Health, CDNA; 13 March 2020. [Accessed on 13 August 2020.] Available from: <https://www.health.gov.au/sites/default/files/documents/2020/03/coronavirus-covid-19-guidelines-for-outbreaks-in-residential-care-facilities.pdf>.
  18. Seemann T, Lane CR, Sherry NL, Duchene S, Goncalves da Silva A, Caly L et al. Tracking the COVID-19 pandemic in Australia using genomics. *Nat Commun*. 2020;11(1):4376. doi: <https://doi.org/10.1038/s41467-020-18314-x>.
  19. Eden JS, Rockett R, Carter I, Rahman H, de Ligt J, Hadfield J et al. An emergent clade of SARS-CoV-2 linked to returned travellers from Iran. *Virus Evol*. 2020;6(1):veaa027. doi: <https://doi.org/10.1093/ve/veaa027>.
  20. Prime Minister of Australia. Media statement: 04 Sep 2020. [Internet.] Canberra: Australian Government, Department of Prime Minister and Cabinet; 4 September 2020. [Accessed on 16 September 2020.] Available from: <https://www.pm.gov.au/media/national-cabinet-040920>.
  21. Government of New South Wales. What you can and can't do under the rules: recent and upcoming changes. [Internet.] Sydney: Government of New South Wales; 2020. [Accessed on 14 October 2020.] Available from: <https://www.nsw.gov.au/covid-19/what-you-can-and-cant-do-under-rules#recent-and-upcoming-changes>.
  22. Victoria State Government Health and Human Services (DHHS). Coronavirus: Victoria's restriction levels. [Internet.] Melbourne: Victoria State Government, DHHS; 2020. [Accessed on 14 October 2020.] Available from: <https://www.dhhs.vic.gov.au/victorias-restriction-levels-covid-19>.
  23. Queensland Government. Roadmap to easing restrictions. [Internet.] Brisbane: Queensland Government; 2020. [Accessed on 14 October 2020.] Available from: <https://www.covid19.qld.gov.au/government-actions/roadmap-to-easing-queenslands-restrictions>.
  24. Government of Western Australia. COVID-19 coronavirus: WA Roadmap. [Internet.] Perth: Government of Western Australia; 2020. [Accessed on 14 October 2020.] Available from: <https://www.wa.gov.au/organisation/department-of-the-premier-and-cabinet/covid-19-coronavirus-wa-roadmap>.
  25. Government of South Australia. COVID-19 response: COVID response updates.

- [Internet.] Adelaide: Government of South Australia; 2020. [Accessed on 14 October 2020.] Available from: <https://www.covid-19.sa.gov.au/recovery>.
26. Tasmanian Government. Coronavirus disease (COVID-19): important community updates. [Internet.] Hobart: Tasmanian Government; 2020. [Accessed on 14 October 2020.] Available from: <https://coronavirus.tas.gov.au/facts/important-community-updates>.
27. Australian Capital Territory Government. Canberra's recovery plan: COVID-19 Easing of Restrictions Roadmap as at 09 October 2020. Canberra: Australian Capital Territory Government; 2020. [Accessed on 14 October 2020.] Available from: [https://www.covid19.act.gov.au/\\_\\_data/assets/pdf\\_file/0009/1640961/PICC0050-COVID-Recovery-Plan-09102020.pdf](https://www.covid19.act.gov.au/__data/assets/pdf_file/0009/1640961/PICC0050-COVID-Recovery-Plan-09102020.pdf).
28. Northern Territory Government. Roadmap to the new normal. [Internet.] Darwin: Northern Territory Government; 2020. [Accessed on 14 October 2020.] Available from: <https://coronavirus.nt.gov.au/roadmap-new-normal>.
29. New Zealand Government Ministry of Health. COVID-19: Current cases. Wellington: New Zealand Government Ministry of Health; 13 October 2020. [Accessed on 13 October 2020.] Available from: <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-current-situation/covid-19-current-cases#managed-isolation>
30. New Zealand Government. Current alert level. [Internet.] Wellington: New Zealand Government; 2020. [Accessed on 12 October 2020.] Available from: <https://covid19.govt.nz/alert-system/current-alert-level/>
31. Ministry of Health and Sports (Myanmar) Department of Public Health Central Epidemiology Unit. Situation Report 184: 8 October 2020. Naypyidaw: Government of Myanmar Ministry of Health and Sports; 2020. [Accessed on 12 October 2020.] Available from: <http://mohs.gov.mm/su/nheh5826NH>.
32. Kementerian Kesehatan Republik Indonesia. Infeksi Emerging. [Internet.] Jakarta: Indonesian Government Ministry of Health; 2020. [Accessed on 11 October 2020.] Available from: [https://infeksiemerging.kemkes.go.id/download/Situasi\\_Terkini\\_111020.pdf](https://infeksiemerging.kemkes.go.id/download/Situasi_Terkini_111020.pdf)
33. Australian Government Department of Foreign Affairs and Trade (DFAT). Budget Highlights 2020-21. [Internet.] Canberra: Australian Government, DFAT; 2020. [Accessed on 14 October 2020.] Available at: <https://www.dfat.gov.au/about-us/corporate/portfolio-budget-statements/pbs-2020-21-dfat-budget-highlights>.
34. Australian Government Department of Foreign Affairs and Trade. Partnerships for recovery 2020-2021. Canberra: Australian Government, DFAT; 2020. [Accessed on 14 October 2020.] Available at: <https://www.dfat.gov.au/sites/default/files/pbs-2020-21-dfat-aid-budget-summary.pdf>.

## Appendix A: Supplementary figures and tables

Table A.1. COVID-19 case notifications and rates per 100,000 population,<sup>a</sup> by age group and sex, 11 October 2020 Australia

Age Group	This reporting period										Cumulative					
	Cases			Rate per 100,000 population			Cases			Rate per 100,000 population						
	Male	Female	People	Male	Female	People	Male	Female	People	Male	Female	People				
0 to 9	11	12	23	0.7	0.8	0.7	727	643	1,370	44.4	41.5	43.0				
10 to 19	10	19	29	0.6	1.3	0.9	1,186	1,146	2,332	75.5	77.2	76.3				
20 to 29	21	18	39	1.1	1.0	1.1	2,956	3,230	6,210	159.1	179.4	169.7				
30 to 39	19	18	37	1.0	1.0	1.0	2,382	2,337	4,734	131.0	125.9	128.8				
40 to 49	15	7	22	0.9	0.4	0.7	1,737	1,722	3,487	107.3	104.0	106.5				
50 to 59	11	11	22	0.7	0.7	0.7	1,555	1,673	3,236	103.1	106.4	105.1				
60 to 69	3	6	9	0.2	0.4	0.3	1,151	1,187	2,340	90.5	88.4	89.5				
70 to 79	3	2	5	0.3	0.2	0.3	841	744	1,585	96.7	80.7	88.4				
80 to 89	3	2	5	0.8	0.4	0.6	490	774	1,264	137.1	167.8	154.4				
90 and over	1	0	1	1.5	0.0	0.5	230	552	783	335.2	413.3	387.3				

<sup>a</sup> Cases and rates for persons include 78 cases identified as gender X or unknown gender

## Appendix B: Frequently asked questions

### Q: Can I request access to the COVID-19 data behind your CDI fortnightly reports?

A: National notification data on COVID-19 confirmed cases is collated in the National Notifiable Disease Surveillance System (NNDSS) based on notifications made to state and territory health authorities under the provisions of their relevant public health legislation.

Normally, requests for the release of data from the NNDSS requires agreement from states and territories via the Communicable Diseases Network Australia, and, depending on the sensitivity of the data sought and proposed, ethics approval may also be required.

Due to the COVID-19 response, unfortunately, specific requests for NNDSS data have been put on hold. We are currently looking into options to be able to respond to data requests in the near future.

We will continue to publish regular summaries and analyses of the NNDSS dataset and recommend the following resources be referred to in the meantime:

- NNDSS summary tables: <http://www9.health.gov.au/cda/source/cda-index.cfm>
- Daily case summary of cases: <https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/coronavirus-covid-19-current-situation-and-case-numbers>
- *Communicable Diseases Intelligence* COVID-19 epidemiology report: [https://www1.health.gov.au/internet/main/publishing.nsf/Content/novel\\_coronavirus\\_2019\\_ncov\\_weekly\\_epidemiology\\_reports\\_australia\\_2020.htm](https://www1.health.gov.au/internet/main/publishing.nsf/Content/novel_coronavirus_2019_ncov_weekly_epidemiology_reports_australia_2020.htm)
- State and territory public health websites.

### Q: Can I request access to data at post-code level of confirmed cases?

A: Data at this level cannot be released without ethics approval and permission would need to be sought from all states and territories via the Communicable Diseases Network Australia. As noted above, specific requests for NNDSS data are currently on hold.

Where current or recent reported case numbers are high enough to justify it, a GIS/mapping analysis of cases will be included in the *Communicable Diseases Intelligence* COVID-19 epidemiology report. In order to protect privacy of confirmed cases, data in this map will be presented at SA3 level.

### Q: Where can I find more detailed data on COVID-19 cases?

A: We are currently looking into ways to provide more in-depth epidemiological analyses of COVID-19 cases, with regard to transmission and severity, including hospitalisation. These analyses will continue to be built upon in future iterations of the *Communicable Diseases Intelligence* report.

### Q: Where do I find the COVID-19 background information which was included as Appendix A in previous fortnightly epidemiology reports?

A: This information was most recently published in Epidemiology Report 24 (<https://doi.org/10.33321/cdi.2020.44.75>). Additional information can be found in the CDNA Series of National Guidelines (SoNG) for COVID-19. (<https://www1.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-novel-coronavirus.htm>).