# Changes in Aboriginal and Torres Strait Islander people's use of health services in the early part of the COVID-19 pandemic

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## Key findings

During the first 18 months of the pandemic (January 2020 to June 2021), 171 cases of coronavirus disease 2019 (COVID-19) were confirmed among Aboriginal and Torres Strait Islander people (Indigenous Australians), representing less than 1% of all cases in Australia.

This article compares Indigenous Australians' use of selected primary health care services, presentations to emergency departments (EDs), hospitalisations and elective surgeries during this time with pre-pandemic patterns and trends. While data on Indigenous health checks, Indigenous-specific primary health care organisations (ISPHCOs), ED presentations and elective surgeries were available for the full 18 months, hospital admissions and data from the Voluntary Indigenous Identifier (VII) adjusted Medicare Benefits Schedule (MBS) data set (VII adjusts for the under-identification of Indigenous Australians in national MBS data) were available only for 2019–20.

The analyses show that:

- Telehealth accounted for nearly 412,800 of the 4.7 million claims for non-referred general practitioner (GP) consultations in 2019–20 (8.8%), compared with just under 3,300 claims for non-referred GP consultations by videoconference in 2018–19. The increase follows the introduction of MBS rebates for telephone consultations and the expanded eligibility for video conferencing items on or after 13 March 2020.
- Claims for Indigenous health checks declined across all ages, with the decline starting in March 2020 and continuing through 2020–21.
- In March–June 2020 (compared with March–June 2019), ED presentations were 10% lower (around 19,000 fewer ED presentations); hospitalisations (excluding dialysis) were 9.7% lower (around 10,000 fewer hospitalisations); and elective surgeries were 31% lower (about 3,100 fewer elective surgeries), a trend directly related to the restrictions placed on performing surgeries classified as less urgent (categories 2 and 3).
- In the period 1 July 2020 to 30 June 2021, ED presentations and elective surgeries appeared to be in-line with pre-pandemic levels and trends.

Beginning in July 2021, COVID-19 case numbers among Indigenous Australians began to rise due to outbreaks of the Delta and then the Omicron variants. The cumulative number of cases for Indigenous Australians was around 14,400 by the end of 2021, more than 63,800 by the end of January 2022, and nearly 175,000 by 22 May 2022 (PCR confirmed and RAT positive tests). Future work will focus on this period.

For Indigenous Australians, good health is more than just the absence of disease or illness; it is a holistic concept that includes physical, social, emotional, cultural, spiritual and ecological wellbeing, for both the individual and the community. This concept of health emphasises the connectedness between these factors and recognises the impact that social and cultural determinants have on health (Dudgeon et al. 2014; Gee et al. 2014; Parker and Milroy 2014; Social Health Reference Group 2004).

Factors posing risks to good health include the long-term effects of colonisation and its ongoing impact on matters such as self-determination, the disruption of ties to land, and the adverse impact of direct and systemic racism (Osborne et al. 2013; Reading and Wien 2009). This association between health and social and cultural determinants helps to explain and contextualise variation in health-related indicators within the Indigenous Australian population, as well as the 'health gap' between Indigenous and non-Indigenous Australians.

Access to appropriate, high-quality and timely health care throughout life that acknowledges the impact of these social, cultural and historical determinants is essential to improve health outcomes for Indigenous Australians. However, data show that, while access to some health services has improved over time, Indigenous Australians do not always have the same level of access to health services as other Australians (AIHW 2020a). Disparities in access may be due to factors such as remoteness, affordability, and to services that do not provide culturally responsive care (for more information, see Box 3.2, and 'Determinants of health for Indigenous Australians' and 'Indigenous Australians and the health system' at www.aihw.gov.au/australias-health/summaries).

Since the start of the COVID-19 pandemic in January 2020, protecting the health, safety and wellbeing of Indigenous Australians has been a key national priority. The national response has been proactively led by the Aboriginal and Torres Strait Islander Advisory Group on COVID-19, co-chaired by the National Aboriginal Community Controlled Health Organisation (NACCHO) with the Department of Health, working on principles of shared decision-making, power-sharing, two-way communication, self-determination, leadership and empowerment. Many individual communities, particularly in remote and isolated areas, were also empowered to make their own decisions about local restrictions and policies to keep their communities safe, and demonstrated strength and resilience (Crooks et al. 2020; Keene 2020).

The local and national response has included a range of public health measures implemented periodically during the pandemic to prevent the spread of COVID-19: community closures; travel restrictions/border closures; bans on social gatherings; closure of schools, workplaces and retail shops; mask wearing; closures or reduction of key services; and vaccine mandates. (For more details, see 'Chapter 1 The impact of a new disease: COVID-19 from 2020, 2021 and into 2022'; for an overview of Indigenous-specific measures between January and May 2020, see Keene 2020.)

These public health measures and other restrictions may have affected Indigenous Australians' need for, and use of, a broad range of health services. For example, social distancing, stay-at-home orders, mask wearing and encouragement of hand washing/hand sanitising protect against the spread of other illnesses besides COVID-19, thus reducing the need for services. On the other hand, restrictions on social and family gatherings and cultural activities, along with concerns over contracting COVID-19, may have affected the health and wellbeing of Indigenous Australians, and increased their need for services (Follent et al. 2021).

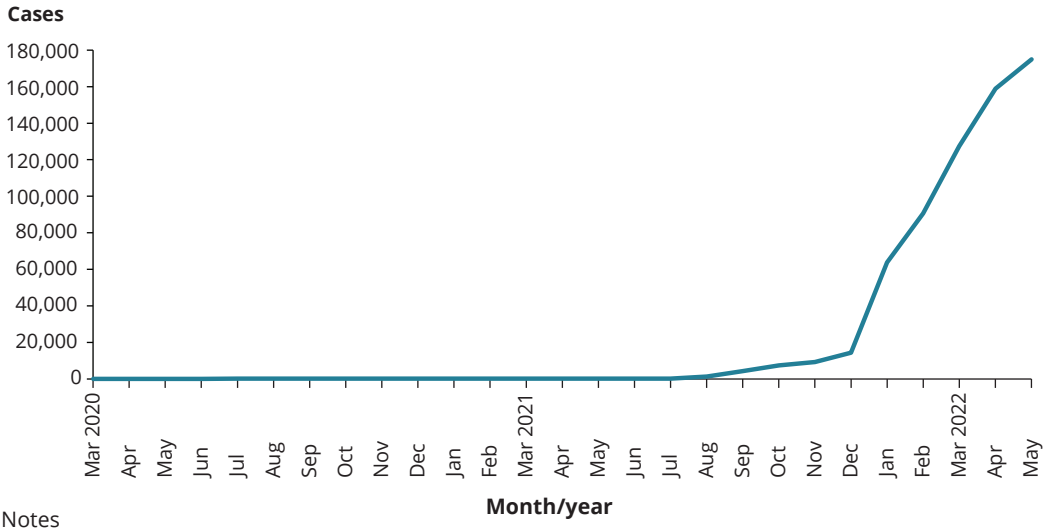
This article highlights changes in primary health care use, presentations to EDs, hospitalisations and elective surgeries for Indigenous Australians in the first 18 months of the pandemic, with a focus on March–June 2020, a period when all states and territories enacted some form of the public health measures and when cases of COVID-19 among Indigenous Australians were low (Box 3.1).

## Box 3.1: COVID-19 and Indigenous Australians

### Case numbers

During the first 18 months of the pandemic (January 2020 to June 2021), 171 cases of COVID-19 were confirmed among Indigenous Australians, representing less than 1% of all cases in Australia. Case numbers began increasing after this period, due to outbreaks of the Delta and then the Omicron variants. By the end of 2021, the cumulative number of cases among Indigenous Australians was around 14,400; it was more than 63,800 by the end of January 2022, and nearly 175,000 by 22 May 2022 (approximately 2.5% of all cases in Australia).

**Figure 3.1: Cumulative number of PCR confirmed and RAT positive COVID-19 cases among Indigenous Australians, by notification date (year and month), 1 March 2020–22 May 2022**




Notes

1. Data extracted 23 May 2022 for the reporting period ending 22 May 2022. Due to the dynamic nature of the National Interoperable Notifiable Disease Surveillance System (NINDSS), numbers may be subject to revision and may vary from the numbers previously reported and from case notifications released by states and territories.
2. At the time of data extraction, probable cases were not yet reported to NINDSS from the Northern Territory, Tasmania, Western Australia, or from Victoria since 15 May 2022. Additionally, Queensland only report RAT positive cases that have been conducted in a clinical setting; self-administered RAT positive cases are not reported to NINDSS.

Source: NINDSS.

The accuracy of these counts has varied over the course of the pandemic. There have been variations in the proportion of records of positive cases of COVID-19 that were missing data on Indigenous status: 3% of records when there were relatively few new cases in Australia, at least 19% between September and December 2021, just under half (49%) by mid-January 2022, and 20% by 10 April 2022. There have also been differences in the timing and completeness of jurisdictional reports to the National Interoperable Disease Surveillance System (NINDSS).

*(continued)*

## Box 3.1 (continued): COVID-19 and Indigenous Australians

### Deaths

The first recorded death of an Indigenous person due to COVID-19 occurred at the end of August 2021. By 5 December 2021, there had been 20 deaths in total, 31 deaths as at 16 January 2022, and 107 deaths from the beginning of the pandemic to 10 April 2022 (COVID-19 NIRST 2022).

More information on COVID-19 and Indigenous Australians is available in 'Chapter 1 The impact of a new disease: COVID-19 from 2020, 2021 and into 2022'.

Source: Data on the number of confirmed cases of COVID-19 for Indigenous Australians are drawn from the National Interoperable Disease Surveillance System and are based on an Indigenous status identifier (COVID-19 NIRST 2021). Data in Figure 3.1 were supplied by the Department of Health. Aggregate data on cases, hospitalisations and deaths are made publicly available through the Coronavirus disease (COVID-19) epidemiology reports which are published in the journal *Communicable Diseases Intelligence* (*https://www1.health.gov.au/internet/main/publishing.nsf/Content/cda-pubs-cdi-cdicur.htm*). The first reporting of Indigenous status was in the ninth weekly report (29 March 2020), where a total number to that date was reported (with no breakdown by previous reporting periods). All the subsequent reports include information on the number of deaths from COVID-19. Data on the proportion of cases with unknown Indigenous status have been reported intermittently (report numbers 9–22, 40–43, 45, 50–51, 53–60).

It is important to acknowledge that, even though their case numbers for COVID-19 were low from January 2020 to the end of July 2021, Indigenous Australians were still affected by the overall pressures on the health system due to the total number of COVID-19 cases in Australia.

This article starts with an overview of the factors affecting health service use, and the potential effects of the pandemic. The findings illustrate that there were changes in how health services were delivered/accessed (including more opportunities for telehealth services) as well as changes in the volume of service use.

## Factors affecting health service use

Health service use depends on a complex set of factors involving both the location and supply of health services, and circumstances at an individual level. Supply-level factors include whether services are accessible to, and appropriate for, Indigenous Australians (including physical/geographic accessibility, cultural responsiveness, financial accessibility), and the extent to which services are available in a timely fashion – for example, length/timing of waiting lists.

At the individual level, the use of a health service depends on factors such as current health issues, perceived needs for the service, health beliefs, health literacy, previous experiences with the health system (including cultural safety – see Box 3.2), and the ability to access services when needed (including having the resources to pay for private health services if desired).

Statistics on health service use reflect the interaction between these individual and systemic factors (Davy et al. 2016; Levesque et al. 2013). It is important to note, however, that service use statistics are unable to capture people who may have needed a service but were unable to access it (although waiting lists for services such as elective surgery may provide some indication of unmet need).

### Box 3.2: Cultural safety and culturally responsive health services

Cultural safety refers to the experiences of Indigenous Australians during their use of, and encounters with, health services and health professionals. It is a 'state where people are enabled and feel they can access health care that suits their needs, are able to challenge personal or institutional racism levels (when they experience it), establish trust in services and expect effective, quality care' (IAHA 2019:4).

A culturally safe health care system is one that respects Indigenous cultural values, strengths and differences, and addresses racism and inequity (AHMAC 2017). Ensuring cultural safety goes beyond cultural awareness and cultural respect; it requires health professionals and health services to be culturally responsive, where actions are taken to overcome racism and power imbalances and there is active engagement with Indigenous clients/patients to ensure that the system meets their needs (Coalition of Peaks 2020; Dudgeon et al. 2010; IAHA 2019).

For more information, see Cultural safety in health care for Indigenous Australians: monitoring framework at https://www.aihw.gov.au/reports/indigenous-australians/cultural-safety-health-care-framework/contents/summary.

The pandemic has resulted in changes at both systemic and individual levels, which have affected the use of health services.

Systemic changes that may have reduced the use of health services include:

- closure of, or restrictions in, some types of health care services (such as cancer screening, non-urgent dental care, elective surgery)
- concentration of in-hospital resources on COVID-19 wards and intensive care units when necessary
- redirection of health staff to COVID-19 testing clinics and, later, to vaccination clinics
- restrictions on who could enter health care facilities because a person had COVID-related symptoms, or was a close contact of someone with COVID-19 (including staff, visitors and potential patients)
- restricted access to interstate, urban based, or international health staff due to border closures and remote community travel restrictions.

Recognising the potential impact of these factors on access to health services, a range of temporary telehealth MBS items were made available, starting in March 2020. These items were to allow continuity of care for patients, as well as to protect both patients and health care providers from the risk of contracting COVID-19. Some of these changes became permanent. (For information on MBS telehealth items and eligibility requirements, see www.mbsonline.gov.au.)

The expansion of telehealth rebates was designed to improve access to services. In practice, however, their use requires both providers and patients to have access to a secure phone or a tablet/computer with reliable connectivity, to have credit on their accounts, the skills to use the technology, privacy, and to feel comfortable using these modes of communication.

Pandemic-related changes for individuals and communities may have affected behaviours in people seeking health services because of:

- worries about contracting COVID-19
- the need for health care (such as reduced infection rates from other illnesses because of public health measures, or increased mental health needs or reduced social and emotional wellbeing due to worries about the disease itself and the impact of restrictions on social, cultural and family gatherings), or
- the ability to access care when needed (travel restrictions).

## Approach

The findings include data on selected measures of health service use during the pandemic – including primary health care, presentations to EDs, hospitalisations and elective surgeries – compared with data for previous time periods. Caution needs to be exercised in attributing changes entirely to the pandemic, since:

- health service use may have been already changing before the pandemic
- changes detected during the pandemic may be due to factors other than COVID-19
- increased use may reflect prior unmet need for the service when access to it is expanded (for example, through telehealth).

To that end (where possible), the results include:

- long-term trend data which compare health service use during the pandemic with expected use based on prior trends. Where long-term data are not available, data from 2017–18 and 2018–19 are included for comparison
- breakdowns by key characteristics to examine if changes were concentrated within certain groups (such as young children or people living in remote areas) or were observed more broadly
- comparisons by month or week to examine emerging patterns and provide a more targeted focus on the period March–June 2020
- numeric and percentage changes in the numbers of service users and population-based service use rates. These are important given the variable and sometimes small numbers of Indigenous Australians using specific services.

## Primary health care

Primary health care is typically the first contact an individual with a health concern has with the health system. High-quality primary care can contribute to improved health and wellbeing by improving health literacy and the self-management of chronic disease (providing linkages to services within and outside the health system), and by improving screening and treatment of acute and chronic illnesses. For Indigenous Australians, it is essential that care is culturally safe (Dudgeon et al. 2014; Griew et al. 2008).

Indigenous Australians can access primary health care through:

- mainstream services, which are generally funded by a combination of MBS rebates and patient contributions (if a service is not bulk billed) and/or
- ISPHCOs, which receive funding from the Australian Government through the Indigenous Australians' Health Programme to provide comprehensive and culturally safe care to Indigenous clients. Aboriginal Community Controlled Health Organisations (ACCHOs) manage the majority of the funded organisations, which are located throughout Australia (for more information, see AIHW 2022a).

Before the pandemic, nearly all primary care in Australia was delivered through face-to-face consultations, supplemented by some telehealth services in remote and isolated communities.

The potential impact of the pandemic on primary care use is mixed. Seeking medical care was always an exemption to 'stay-at-home' orders. However, during March–June 2020 and in subsequent localised outbreaks and lockdowns, individual medical practices and ISPHCOs instituted changes in the types of services offered and how they were provided to keep their staff and patients safe (such as moving to telehealth where possible or screening patients for COVID-19 symptoms before allowing face-to-face consultations). As well, some preventive and chronic disease care was postponed.

## Indigenous health checks

Indigenous Australians can receive a specifically-designed annual Medicare-funded health check. These customised health checks were introduced following calls by Indigenous health leaders, recognising that many Indigenous Australians have increased risk factors for several conditions.

Health checks support engagement in comprehensive primary health care in a culturally safe way and are an opportunity to identify patients' health goals and priorities, provide risk assessment and healthy lifestyle information and supports, and encourage early detection and treatment of common conditions that cause ill health and early death – for example, diabetes and heart disease (AIHW 2021b, 2021d; Butler et al. 2022; NACCHO/RACGP 2019).

### Number and timing of health checks

In 2011–12, slightly more than 96,500 health check claims were made, at a rate of 143 per 1,000 Indigenous Australians (crude rate). The number of health check claims grew steadily until 2017–18, when there were slightly more than 237,800, at a rate of 309 per 1,000.

In the year before the pandemic (2018–19), the growth in the number and rate of health check claims stabilised, increasing by about 10,300 to 248,213 (a rate of 316 per 1,000).

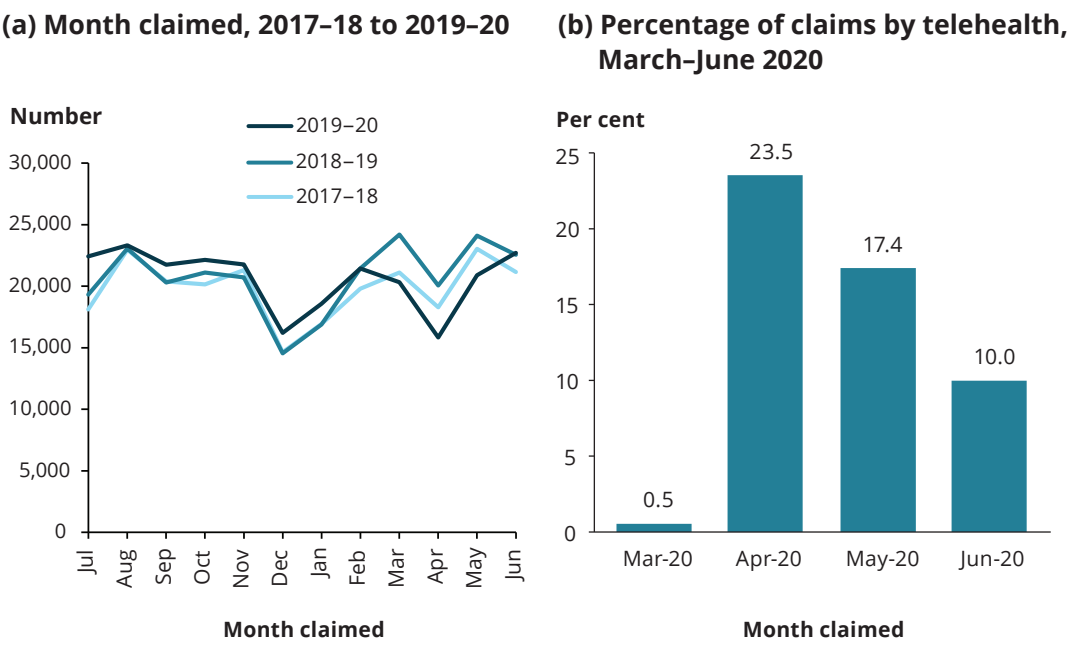
In 2019–20, which encompassed the first 6 months of the pandemic, the number of health check claims fell slightly (by 0.3%) to 247,369 (a rate of 308 per 1,000).

These yearly figures mask a usual seasonal pattern of claims for health checks, with prominent drops in December and January and slight drops in April.

For the March–June period in 2020, the number of health check claims fell in March, April and May by 16%, 21% and 13%, respectively, compared with equivalent months in 2019. By June 2020, however, the number of health check claims was on par with those in June 2019 (Figure 3.2a).

At the same time, there was a high uptake of telehealth items (Figure 3.2b), particularly in April 2020, where 24% of claims for health checks were for items that were not face to face; this proportion fell to 10% in June 2020. The majority of telehealth claims (92%) were by telephone rather than video.

**Figure 3.2: MBS Indigenous health check claims by month (a) and telehealth (b)**




Notes

1. Month is based on the date the service was claimed, not the date the service was performed. MBS rules allow for an individual to claim a health check every 9–12 months from their last claim, and the number of claims do not equate to the number of people who had a health check.
2. Includes MBS items 715 and 228 from July 2018 plus MBS telehealth items 92004, 92011 (videoconference), 92016 and 92023 (teleconference) from March 2020. Note that the teleconference items (92016, 92023) were removed from the MBS as of 1 July 2021.
3. While many required aspects of the health check can be completed as a remote service via telehealth, some components can be delivered only through face-to-face consultation with the patient. Therefore, for a health check undertaken by telehealth to be processed via Medicare, all components, including checks delivered both remotely and face to face, must be completed, which may mean a delay in completing and claiming for the item.

Source: AIHW analysis of Medicare Benefits Schedule data and Australian Bureau of Statistics population data (ABS 2021).

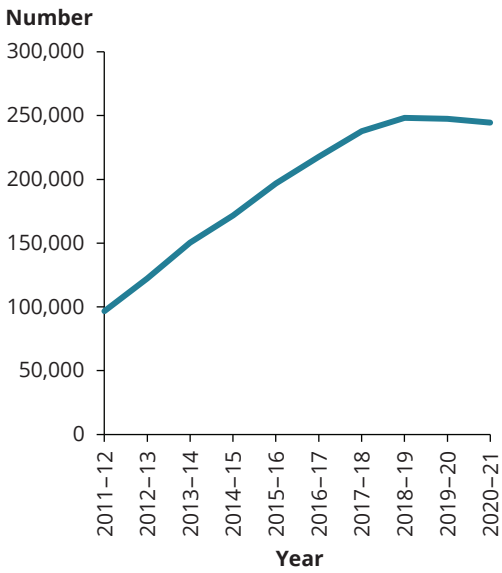
## Did the changes continue in 2020–21?

The overall decline in the number and rate of health check claims continued into 2020–21 (Figure 3.3a,b). The number of health check claims in 2020–21 fell by 1.1% from 2019–20 to 244,567 (a rate of 298 per 1,000). Of health checks claimed in 2020–21, 5.1% were for telehealth items (of which 8.5% were for videoconference and the rest for teleconference).

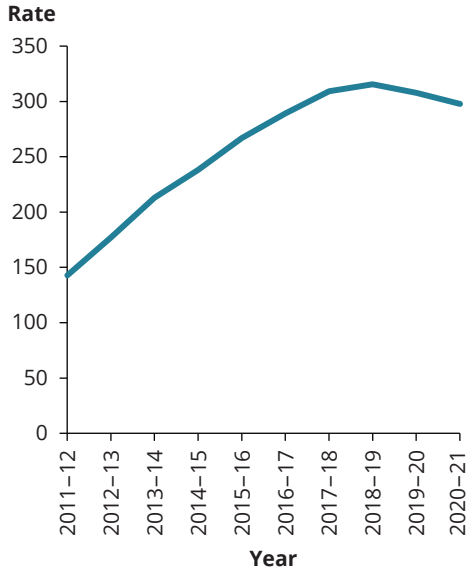
The declines in health check claims were seen across all age groups (Figure 3.3c).

**Figure 3.3: MBS Indigenous health check claims over time, by number (a), rate (b) and age group (c)**

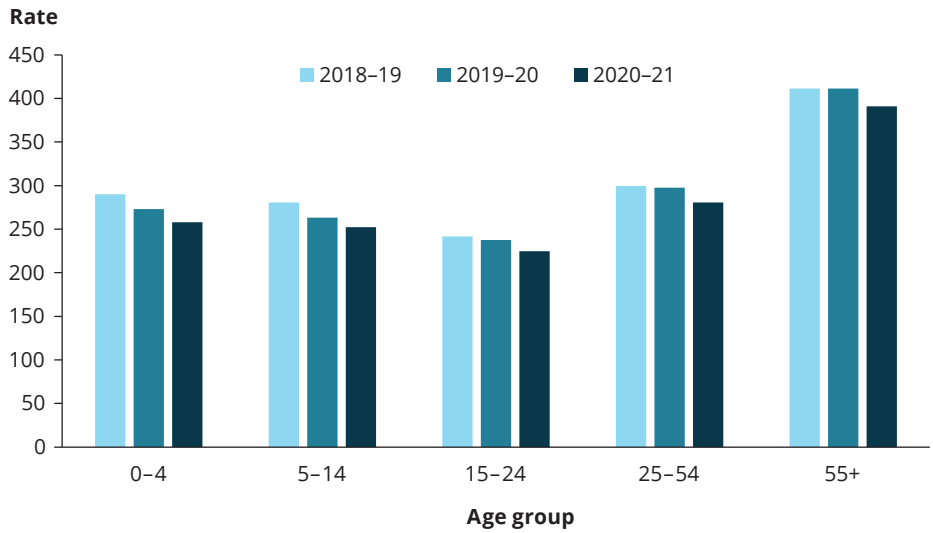
**(a) Number of health check claims**




**(b) Rate (health check claims per 1,000 population)**




**(c) Rate (health check claims per 1,000 population), by age group**




Notes

1. Month is based on the date the service was claimed, not the date the service was performed. MBS rules allow for an individual to claim a health check every 9–12 months from their last claim, and the number of claims do not equate to the number of people who had a health check.
2. Includes MBS items 715 and 228 from July 2018 plus MBS telehealth items 92004, 92011 (videoconference), 92016 and 92023 (teleconference) from March 2020. Note that the teleconference items (92016, 92023) were removed from the MBS as of 1 July 2021.

Source: AIHW analysis of Medicare Benefits Schedule data and Australian Bureau of Statistics population data (ABS 2021).

## MBS-rebated GP and practice nurse items

Three MBS-rebated primary health care items are presented in Table 3.1: non-referred (GP) attendances, GP chronic disease management plans, and practice nurse items. They each represent different aspects of primary care – for example, non-referred (GP) attendances include everything from providing health advice; diagnosing medical conditions; ordering tests or following up on test results, repeat or new prescriptions; and managing acute issues (or, for chronic diseases, where there is no MBS chronic disease management in place).

The data are from the Voluntary Indigenous Identifier (VII) adjusted MBS data set (which adjusts for the under-identification of Indigenous Australians in national MBS data). The data are available for financial years only and cannot be disaggregated by month.

**Table 3.1: Distribution of selected MBS primary care items for Indigenous Australians, by delivery mode, 2017–18 to 2019–20**

| | Non-referred (GP) attendance | | | |
|---|---|---|---|---|
| Delivery mode | 2017–18 | 2018–19 | 2019–20 | % by mode (2019–20) |
| Face-to-face | 4,567,240 | 4,599,911 | 4,282,241 | 91.2 |
| Videoconference | 3,008 | 3,260 | 20,484 | 0.4 |
| Telephone | not rebated | not rebated | 392,312 | 8.4 |
| Number | 4,570,249 | 4,603,171 | 4,695,036 | 100.0 |
| Rate (per person) | 5.56 | 5.50 | 5.50 | . . |
| | GP chronic disease management plans | | | |
| Face-to-face | 86,523 | 85,470 | 79,463 | 92.3 |
| Videoconference | not rebated | not rebated | 513 | 0.6 |
| Telephone | not rebated | not rebated | 6,099 | 7.1 |
| Total number | 86,523 | 85,470 | 86,075 | 100.0 |
| Rate per 1,000 population | 105 | 102 | 101 | . . |
| | Practice nurse items | | | |
| Face-to-face | 336,667 | 369,924 | 387,325 | 98.4 |
| Videoconference | 1,833 | 1,796 | 3,117 | 0.8 |
| Telephone | not rebated | not rebated | 3,315 | 0.8 |
| Total number | 338,501 | 371,721 | 393,757 | 100.0 |
| Rate per 1,000 population | 412 | 444 | 461 | . . |

. . not applicable.

Notes

1. Numbers and rates have been adjusted for under-identification in the Medicare Australia Voluntary Indigenous Identifier (VII) database. Indigenous estimates generated by the adjustment methodology for a given period will vary according to the point in time at which they are calculated. The adjustment factors are updated regularly to account for ongoing change in the population coverage of the VII sample.
2. Data are assigned to years based on when a service was claimed.
3. Practice nurse items include MBS numbers 10983, 10984, 10987, 10988, 10989, 10997, 93200, 93201, 93202 and 93203.

Source: AIHW analysis of Medicare Benefits Schedule Voluntary Indigenous Identifier adjusted database and Australian Bureau of Statistics population data.

For the 2 GP items, there were relatively small differences in the numbers and rates of services delivered over the 3 periods; that is, the overall level of service delivery remained steady, even during the first 6 months of the pandemic (January to June 2020). However, the mode of delivery shifted considerably when comparing data for 2019–20 with data for the 2 previous periods. In 2019–20, nearly 412,800 claims for non-referred (GP) consultations and slightly more than 6,600 claims for GP chronic disease management plans were delivered by telehealth, representing 8.8% and 7.7%, respectively, of all claims. More than 90% of the telehealth claims for the 2 GP items in 2019–20 were for services delivered by teleconference rather than videoconference.

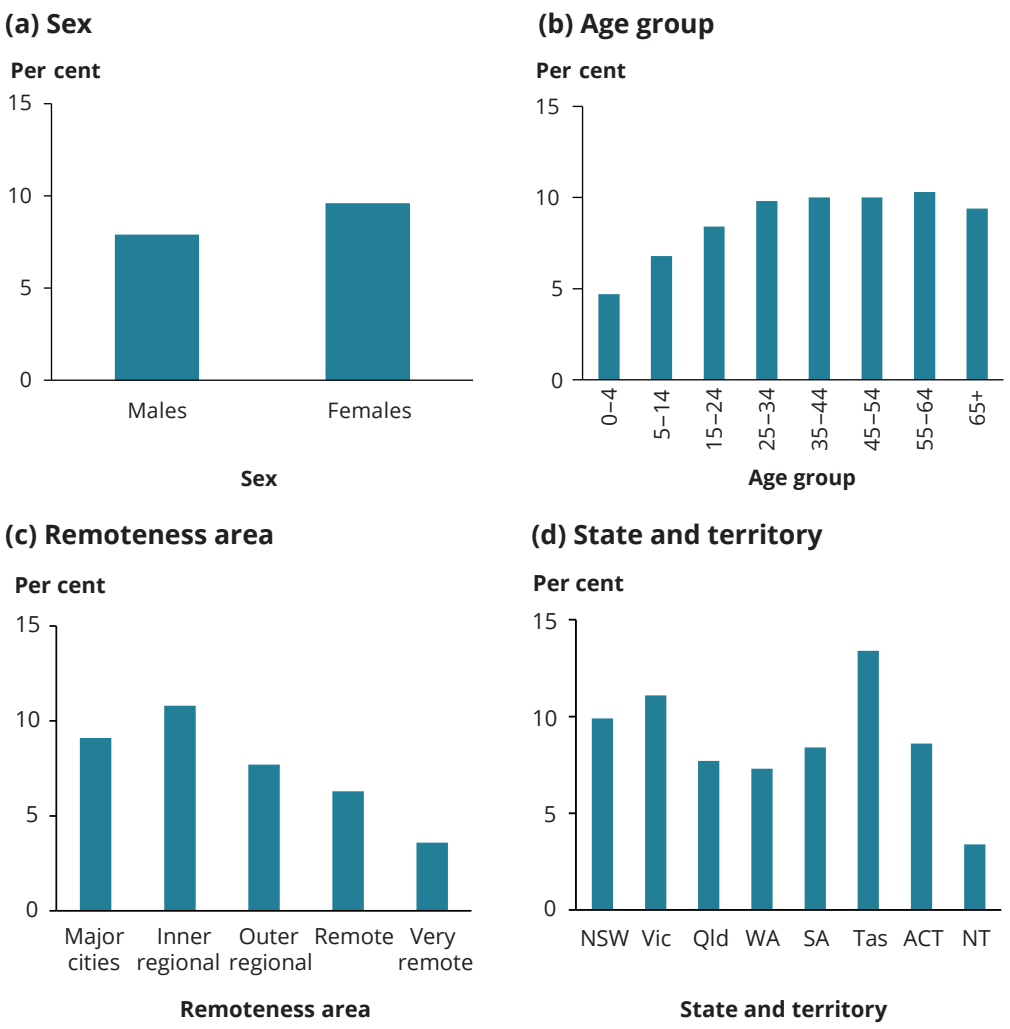
The pattern differed for claims for practice nurse items – the total number and rate of claims increased over each period, with less than 2% of all claims in 2019–20 being for telehealth (likely related to the 'hands-on' nature of practice nurse roles).

It is important to note that there already were MBS-rebated videoconference items before the pandemic, but there were strict eligibility requirements and their use was relatively rare. The increase in telehealth consultations evident in the 2019–20 data is primarily due to the introduction of MBS telehealth items that started being implemented on 13 March 2020 and were fully implemented by the end of that month (RACGP 2022).

For mainstream GPs, the patient had to have been an active client of the service within the preceding 12 months in order to claim telehealth items (ACCHOs were exempt from this requirement). The MBS rebate for GP chronic disease management plans conducted by teleconference was removed as of 1 July 2021 (Department of Health 2022).

Figure 3.4 highlights the distribution of the use of telehealth for non-referred (GP) attendances in 2019–20.

**Figure 3.4: Proportion of MBS non-referred (GP) attendances claimed for videoconference or telephone modes for Indigenous Australians, by sex (a), age group (b), remoteness area (c) and state and territory (d), 2019–20**




Notes

1. Numbers and rates have been adjusted for under-identification in the Medicare Australia VII database. Indigenous estimates generated by the adjustment methodology for a given period will vary according to the point in time at which they were calculated. The adjustment factors are updated regularly to account for the ongoing change in the population coverage of the VII sample.
2. Data are assigned to years based on when a service was claimed.

Source: AIHW analysis of Medicare Benefits Schedule Voluntary Indigenous Identification adjusted database.

The highest proportions of claims by telehealth were for Indigenous people living in *Inner regional* areas, Indigenous women, and Indigenous people aged 25 and older. The lowest proportions were for Indigenous people living in *Very remote* areas, and for children aged 0–4 for whom less than 5% of consultations were conducted through telehealth.

## Indigenous specific primary health services

As noted previously, ISPHCOs are an important provider of comprehensive and culturally appropriate services to Indigenous Australians throughout the country (Box 3.3). A number of organisations within the sector have been substantially involved not only in participating in local and national pandemic-related committees to ensure the safety of their clients, staff and communities, but also in providing on-the-ground services during the pandemic (AHCWA 2020).

### Box 3.3: Overview of ISPHCOs

In 2020–21, 191 of the 218 primary health care organisations funded under the Indigenous Australians' Health Programme provided data to the yearly Online Services Report (OSR) collection (covering the financial year). Of these:

- more than one-third (34% or 65) were in the Northern Territory, with another 20% in New South Wales/Australian Capital Territory and 15% in Queensland
- more than one-third (36% or 68) were in *Very remote* areas, with another 20% in *Inner regional* and 19% *in Outer regional* areas
- around two-thirds (65% or 124) were ACCHOs.

In 2020–21, the 191 organisations:

- employed around 8,300 full-time equivalent staff (52% of whom are Indigenous)
- provided care to about 454,000 clients (of whom 81% are Indigenous), at an average of 12.1 contacts per client.

More information is available from AIHW (2022a).

OSR data were used to examine changes in 2 aspects of service delivery/service use (client numbers, client contacts) during the first and second years of the pandemic among a subset of 161 ISPHCOs who reported to each of the 2018–19, 2019–20 and 2020–21 collections. Yearly variations in organisations' data are expected; however, if the reported numbers vary by 20% or more from those in the previous collection, organisations are prompted either to confirm that the data are correct or to resubmit the data if incorrect. These validation rules also provide an opportunity for those organisations to provide further information about the data and reasons for the changes. Some organisations in the 2019–20 and 2020–21 collections used this opportunity to comment on the impact of the pandemic (AIHW 2022a).

## Client numbers

The number of clients receiving at least 1 service from the 161 included organisations rose from 388,118 in the 2018–19 collection to 393,146 in the 2019–20 collection, an increase of 1.3%.

This total increase masks variation at the organisation level, however (Table 3.2). There were 5 organisations with more than a 20% decrease in their client numbers (a total of around 2,200 fewer clients than in 2018–19) and 11 organisations with more than a 20% increase in their client numbers (a total increase of around 7,400 clients compared with numbers for 2018–19).

The total number of clients also rose between 2019–20 and 2020–21, but at a slower rate (0.5%), from 393,146 to 394,947. Again, there was variation at the organisation level (Table 3.2). The number of organisations having more than:

- a 20% decrease in their client numbers doubled, from 5 to 10 (a total of around 4,300 fewer clients than in 2019–20)
- a 20% increase in their client numbers remained stable at 11 (for a total of around 8,000 more clients).

**Table 3.2: Number of organisations, by degree of variation from previous collection**

| 2019–20 compared with 2018–19 | | | | | | |
|---|---|---|---|---|---|---|
| | Number of organisations | | | Number of clients | | |
| Degree of variation | Cited pandemic | Did not cite pandemic | Total | 2018–19 | 2019–20 | Difference |
| 20% or more decrease | 3 | 2 | 5 | 8,933 | 6,707 | –2,226 |
| 20% or more increase | — | 11 | 11 | 22,285 | 29,678 | 7,393 |
| Less than 20% change | n.a. | n.a. | 145 | 356,900 | 356,761 | –139 |
| **Total** | **3** | **13** | **161** | **388,118** | **393,146** | **5,028** |
| **2020–21 compared with 2019–20** | | | | | | |
| | Number of organisations | | | Number of clients | | |
| Degree of variation | Cited pandemic | Did not cite pandemic | Total | 2019–20 | 2020–21 | Difference |
| 20% or more decrease | — | 10 | 10 | 17,287 | 12,959 | –4,328 |
| 20% or more increase | — | 11 | 11 | 23,524 | 31,480 | 7,956 |
| Less than 20% change | n.a. | n.a. | 140 | 352,335 | 350,508 | –1,827 |
| **Total** | **—** | **21** | **161** | **393,146** | **394,947** | **1,801** |

– nil or rounded to zero; n.a. not available.

Note: Organisations are those that reported to the OSR collection in 2018–19, 2019–20 and 2020–21 and had no identified data quality issues.

Source: Online Services Report collection.

Three organisations cited the pandemic in explaining the decrease in their client numbers between 2018–19 and 2019–20, but did not provide details. None of the organisations whose client numbers increased by more than 20% in either of the comparison periods offered the pandemic as an explanation for the changes.

## Client contacts

Client contacts are a count of the interactions between clients and each type of health worker in an organisation (both employed and visiting health staff) and include those made by drivers and field officers (transport contacts). Client contacts do not include administrative contacts or those relating to groups and residential care.

Contrasting with the findings for client numbers, recorded client contacts (excluding transport contacts) for the 160 included organisations declined between the 2018–19 and 2019–20 OSR collections, from 4.62 million to 4.53 million (a 2.0% decrease) (Table 3.3).

Twelve organisations had decreases in their client contacts of more than 20% (around 158,000 fewer client contacts in total). For this same period, however, another 18 organisations increased their client contacts by more than 20% (around 93,000 more client contacts in total).

**Table 3.3: Number of organisations, by degree of variation from previous collection**

| 2019–20 compared with 2018–19 | | | | | | |
|---|---|---|---|---|---|---|
| | Number of organisations | | | Number of client contacts (excluding transport) | | |
| Degree of variation | Cited pandemic | Did not cite pandemic | Total | 2018–19 | 2019–20 | Difference |
| 20% or more decrease | 6 | 6 | 12 | 315,208 | 157,035 | -158,173 |
| 20% or more increase | 2 | 16 | 18 | 270,367 | 363,442 | 93,075 |
| Less than 20% change | — | 130 | 130 | 4,034,576 | 4,008,035 | -26,541 |
| **Total** | **8** | **152** | **160** | **4,620,151** | **4,528,512** | **-91,639** |
| **2020–21 compared with 2019–20** | | | | | | |
| | Number of organisations | | | Number of clients | | |
| Degree of variation | Cited pandemic | Did not cite pandemic | Total | 2019–20 | 2020–21 | Difference |
| 20% or more decrease | 7 | 18 | 25 | 258,633 | 189,222 | -69,411 |
| 20% or more increase | 3 | 13 | 16 | 424,872 | 545,344 | 120,472 |
| Less than 20% change | 26 | 93 | 119 | 3,845,007 | 3,798,898 | -46,109 |
| **Total** | **36** | **124** | **160** | **4,528,512** | **4,533,464** | **4,952** |

– nil or rounded to zero.

Notes

1. Organisations are those that reported to the OSR collection in 2018–19, 2019–20, and 2020–21 and had no identified issues in the comparability of their data over time. One organisation was excluded from the client contacts analysis because its data for one of the collections were excluded.
2. For client contacts, the validation rules trigger for 20% change in individual subcategories of client contacts (by individual professions) as well as the total number of contacts. Thus, while an organisation's overall total may represent less than a 20% variation from their previous total, they may have made a comment against an individual client contact subcategory.

Source: Online Services Report collection.

The total number of recorded client contacts (excluding transport contacts) remained essentially unchanged between the 2019–20 and 2020–21 collections (increasing by only 0.1%). However, the number of organisations with a decrease of 20% or more grew to 25 (for a combined decrease of 69,000 contacts) and the number of organisations whose client contacts increased by 20% or more dropped to 16 (with a combined increase of more than 120,000 contacts).

### Impact of the pandemic on client contacts specifically, and ISPHCOs more generally

While only organisations with a 20% or more variation from the previous collection had an opportunity to explain those variations (and should not be considered a representative sample of the reporting organisations), their comments do provide an 'on-the-ground' perspective of the pandemic's impact.

Organisations' comments showed that the pandemic did affect client contacts for at least 8 organisations in 2019–20, and 36 in 2020–21. According to these organisations, the pandemic's role in decreasing recorded client contacts was related to a combination of:

- lockdowns and travel restrictions, which reduced mobility of both clients and staff (resulting in a combination of fewer available staff and an inability or reluctance of clients to attend)
- re-orientation of staff and resources towards pandemic-specific activities (such as vaccination or testing clinics)
- inclusion (or not) of telehealth consultations as contacts in clients' records, with some organisations reporting that they had not been included.

The pandemic was also cited as a reason for increased activities, particularly in the 2020–21 period:

- Some organisations experienced a 'rebound' effect, where they provided additional appointments and services to make up for those that had been restricted during the first wave of the pandemic.
- The need to pre-screen clients for respiratory symptoms or COVID-19 before their face-to-face attendance led to increased contacts.
- Vaccination clinics also contributed to increased activities.

As well, one organisation reported that it had an increase in the presentation of Indigenous clients seeking culturally safe services because of their concerns about COVID-19.

## Emergency department presentations

EDs are a critical component of the health system, providing care for patients who have life-threatening (or other) conditions that require urgent medical care. For some people, they provide a gateway to care as an admitted patient in a hospital or to other specialised or ongoing health care. For others, they serve as the first or only point of contact with the health system, due to combinations of patient preference, unavailability of other services, or the lack of need for ongoing care.

Data on ED presentations are available from the AIHW's National Non-Admitted Patient Emergency Department Care Database. For more information, see www.aihw.gov.au/reports-data/myhospitals/sectors/emergency-department-care.

Indigenous Australians use EDs at a higher rate than non-Indigenous Australians, which may be due to a combination of demographic and location factors, differential heath needs and, for some, timely access to primary health services. In 2019–20, women made up slightly more than half (53%) of presentations by Indigenous Australians to an ED. The younger age and geographical distribution of the Indigenous population is reflected in the age and location profile of people who presented to an ED, with 43% under the age of 25. Only 25% of presentations were by people aged 45 and older. Nearly 55% of presentations were by Indigenous Australians living in *Major cities* and *Inner regional* areas (Supplementary Table S3.1).

Three principal diagnostic categories (as represented by ICD-10 codes) accounted for 52% of ED presentations by Indigenous Australians in 2019–20 (Supplementary Table S3.2):

- symptoms, signs and abnormal clinical and laboratory findings (22%)
- injury and poisoning, and certain other consequences of external causes (21%)
- diseases of the respiratory system (8.9%).

## Potential effects of the pandemic on ED use

Conceptually, the pandemic had the potential to decrease the use of EDs because of:

- individuals' fears of coming into contact with people infected with COVID-19 (Wong et al. 2020)
- public health messaging encouraging the public to use ED and ambulance services only in emergency circumstances
- lowered needs due to:
  - the health effects of the restrictions
  - the messaging put in place to curb the spread of COVID-19, particularly those measures such as mask wearing and stay-at-home orders that would have reduced the transmission of other infections (George et al. 2022)
  - a reduction in road injuries due to travel restrictions.

The pandemic may also have had a direct impact on ED presentations in 2 ways. First, people with COVID-19 being treated outside hospital settings may have required emergency care and, second, people with symptoms consistent with those of the virus may have presented to the ED for diagnosis and/or treatment.

## Number and timing of presentations

In 2013–14, there were nearly 400,000 presentations to EDs by Indigenous Australians, a rate of 516 presentations per 1,000 Indigenous Australians (crude rate). The number of presentations grew by an average of 8.5% per year to around 589,500 in 2018–19, while the crude rate grew by an average of 6.4% per year to 704 per 1,000 in 2018–19 (the last full financial year before the pandemic).

Between 2018–19 and 2019–20, the number and crude rate of ED presentations still increased (which differs from the pattern for non-Indigenous Australians), but the rate of increase was considerably smaller than in the previous years – a 4.4% increase in total presentations (to around 615,400) and a 2.4% increase in the crude rate (to 721 per 1,000). This is around 24,000 presentations fewer than expected had the previous average rate of growth applied.

This 4.4% increase in presentations for the financial year masks variability within the yearly data, which align with the implementation of the COVID-19 related public health measures starting in March 2020:

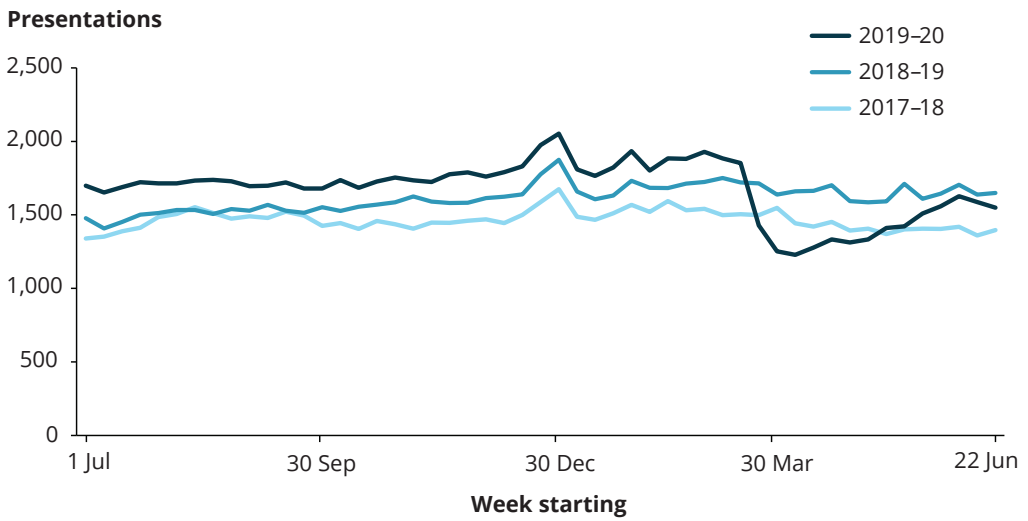
- Between 1 July 2019 and 28 February 2020, the number of ED presentations for Indigenous Australians was 45,000 higher than between 1 July 2018 and 28 February 2019.

- Between 1 March 2020 and 30 June 2020, there were more than 19,000 fewer ED presentations for Indigenous Australians than between 1 March and 30 June 2019.

The impact can also be seen in average daily presentations. Before mid-March 2020, average daily ED presentations by Indigenous Australians in the 2019–20 financial year followed the same general pattern as in the previous collections, just with higher numbers (Figure 3.5).

Starting the week of 23 March 2020, however, average daily ED presentations were 17% lower than for the same week in 2019; they were also 26% lower in the week starting 6 April than for the same week in 2019, but then they rose again. By the end of the financial year (week starting 22 June 2020), the average daily number of ED presentations was 6.1% lower than for the same week in 2018.

**Figure 3.5: Average daily presentations (by week) to EDs, Indigenous Australians, 2017–18 to 2019–20**




Note: Dates are assigned based on the day of presentation to the ED, not the day of discharge.

Source: AIHW National Non-Admitted Patient Emergency Department Care Database.

## What changed in March–June 2020 compared with March–June 2019?

ED presentations between March and June 2020 were compared with those between March and June 2019 by:

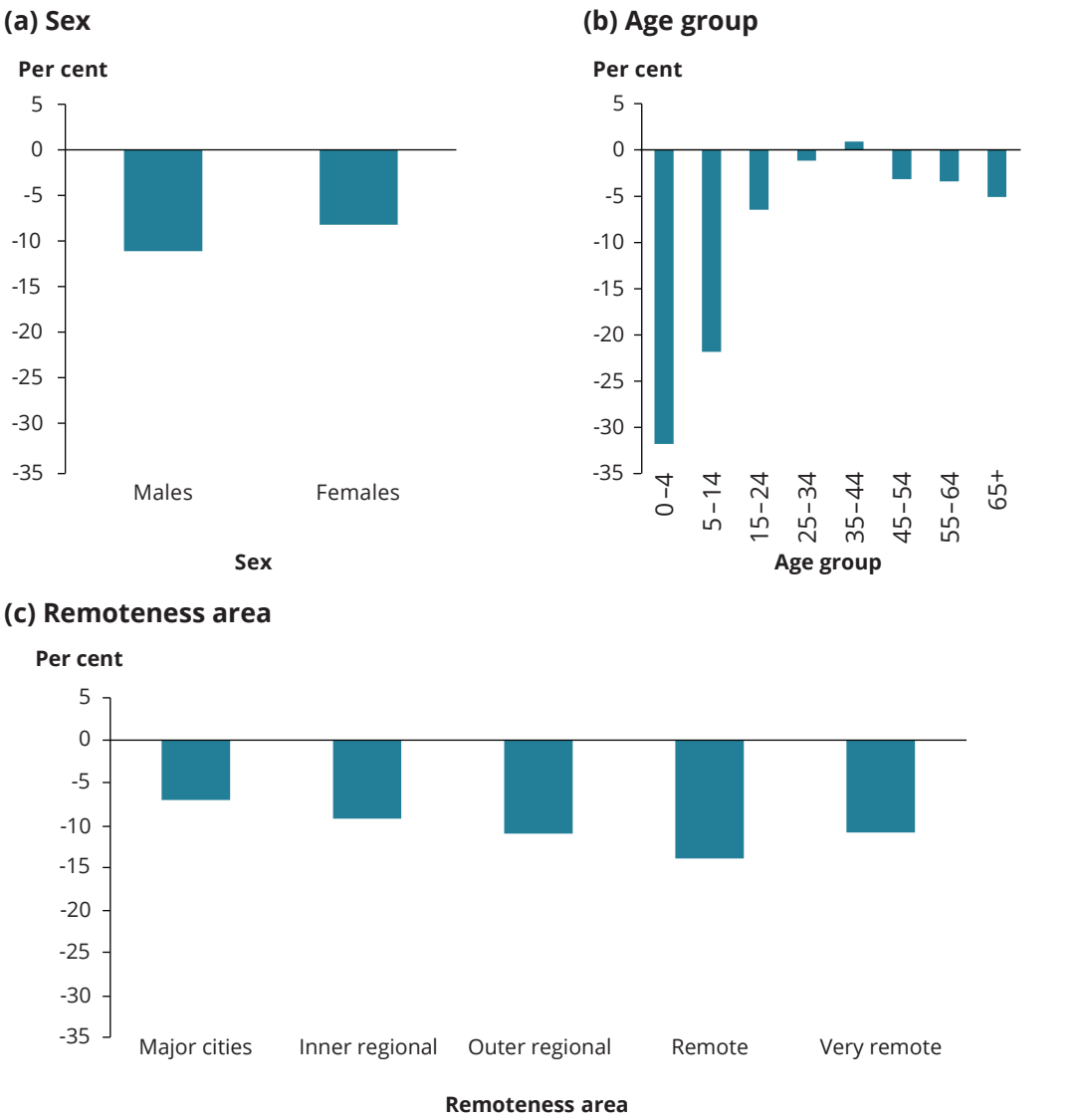
- characteristics such as age group (to see whether the changes were spread equally across all ages – Figure 3.6)
- triage category (see Table 3.4)
- principal diagnoses (to assess whether specific diagnosis categories increased or decreased (see Supplementary Table S3.3).

### Characteristics

Declines in ED presentations were slightly higher for Indigenous men than women (11% versus 8.2%). The number of presentations for Indigenous people living in *Remote* areas between March and June 2020 was 14% lower than for the same period in 2019 and, equivalently, 11% lower for Indigenous people in *Outer regional* and *Very remote* areas.

ED presentations for the youngest children (aged 0–4) were 32% lower in March–June 2020 than in March–June 2019, with presentations by 5–14-year-olds also showing a considerable decline (22%). There was less change among older age groups, though presentations for people aged 35–44 were slightly higher in 2020 than in 2019.

**Figure 3.6: Percentage change in ED presentations by Indigenous Australians, by sex (a), age group (b) and remoteness area (c), March–June 2020 compared with March–June 2019**




Note: Dates are assigned based on the day of presentation to the ED, not the day of discharge.

Source: AIHW National Non-Admitted Patient Emergency Department Care Database.

For Indigenous children aged 0–4, the 32% decline translates to nearly 9,500 fewer ED presentations in March–June 2020 than in March–June 2019. Three principal diagnostic categories accounted for 83% of the difference:

- diseases of the respiratory system (dropped from about 7,500 in March–June 2019 to nearly 3,900 in March–June 2020)

- infectious and parasitic diseases (dropped from slightly more than 4,500 in March–June 2019 to slightly more than 2,200 in March–June 2020)
- symptoms, signs and abnormal clinical and laboratory findings (dropped from nearly 5,500 in March–June 2019 to just under 3,600 in March–June 2020).

Disease of the ear and mastoid, diseases of the eye and adnexa, and diseases of the skin and subcutaneous tissue accounted for an additional 8.4% of the difference for young children (about 800 fewer presentations in March–June 2020 than in March–June 2019).

## Triage category

When a patient arrives at an ED, they are assessed (triaged) for urgency, then categorised on a scale from Category 1 (requires resuscitation – immediate treatment) to Category 5 (non-urgent – treatment within 2 hours).

Table 3.4 shows that, overall, the majority of ED presentations by Indigenous Australians in March–June in both 2019 and 2020 were triaged into urgent and semi-urgent categories (less than 1% were Category 1, requiring resuscitation).

The number of semi-urgent presentations was 14% lower in March–June 2020 than in March–June 2019, and urgent presentations dropped by 8.3%. Non-urgent presentations dropped by 6.1%.

**Table 3.4: Distribution of ED presentations by Indigenous Australians, by triage category, March–June 2020 compared with March–June 2019**

| | March–June | | Difference between March–June 2020 and March–June 2019 | |
|---|---|---|---|---|
| Triage category | 2019 | 2020 | Number | % |
| 1 - Resuscitation: requires treatment immediately | 1,476 | 1,547 | 71 | 4.8 |
| 2 - Emergency: requires treatment within 10 minutes | 24,684 | 23,860 | -824 | -3.3 |
| 3 - Urgent: requires treatment within 30 minutes | 70,389 | 64,532 | -5,857 | -8.3 |
| 4 - Semi-urgent: requires treatment within 1 hour | 84,124 | 72,713 | -11,411 | -13.6 |
| 5 - Non-urgent: requires treatment within 2 hours | 22,101 | 20,748 | -1,353 | -6.1 |
| Not assigned | 118 | 61 | -57 | -48.3 |
| **Total** | **202,892** | **183,461** | **-19,431** | **-9.6** |

Note: Dates are assigned based on the day of presentation to the ED, not the day of discharge.

Source: AIHW National Non-Admitted Patient Emergency Department Care Database.

## Principal diagnosis

The principal diagnosis is the diagnosis established at the conclusion of the patient's attendance in an emergency department to be mainly responsible for occasioning the attendance. (See AIHW 2022b for more detail on how these data are compiled and on data quality issues.)

Although 2 ICD-10-AM codes were introduced in 2020 to capture presentations to ED of suspected COVID-19 cases, these were not necessarily applied in a consistent manner across health facilities, and the volume of presentations for suspected COVID-19 is likely to have been influenced by the nature of testing arrangements in each location. Data for these 2 ICD-10-AM codes are included in the supplementary tables, but they must be interpreted with caution and should not be used as a proxy for either suspected or confirmed COVID-19 cases (AIHW 2022b).

Comparing ED presentations for March–June 2020 with those for March–June 2019, the largest percentage declines in presentations were for infectious and parasitic diseases, diseases of the respiratory system, diseases of the ear and mastoid and diseases of the eye and adnexa, all of which declined by at least 20% (Supplementary Table S3.3).

The largest numerical drop in ED presentations was for diseases of the respiratory system, which declined by more than 5,800 presentations. This was followed by a decline for injury, poisoning and certain other consequences of external causes, which fell by about 5,300 presentations. Presentations for infectious and parasitic diseases declined by more than 3,000 in March–June 2020 compared with presentations for March–June 2019.

The decline in presentations for diseases of the respiratory system is likely due to several factors, including the impact of public health measures (such as social distancing, isolation, home schooling) and the virtual disappearance of influenza. People with respiratory or flu-like symptoms may also have been directed to attend COVID-19 testing sites rather than EDs.

Six illnesses/diseases were responsible for 90% of the decline in ED presentations from diseases of the respiratory system in March–June 2020 compared with the same period in 2019 (Table 3.5). The large comparative decline in presentations for influenza may also be due to the unusual influenza outbreak in 2019 (Marsh et al. 2022) – that is, the 2019 numbers were unusually high.

**Table 3.5: Distribution of detailed ICD-10-AM codes for ED presentations for diseases of the respiratory system, Indigenous Australians, March–June 2019 and March–June 2020**

| ICD-10-AM code | March–June 2019 | March–June 2020 | Numerical change | % change |
|---|---|---|---|---|
| Acute upper respiratory infections (J00–J06) | 7,468 | 5,842 | -1,626 | -21.8 |
| Other acute lower respiratory infections (J20–J22) | 3,072 | 1,592 | -1,480 | -48.2 |
| Influenza (J09–J11) | 858 | 115 | -743 | -86.6 |
| Pneumonia (J12–J18) | 2,022 | 1,485 | -537 | -26.6 |
| Asthma (J45–J46) | 2,136 | 1,686 | -450 | -21.1 |
| Other disease of upper respiratory tract (J30.0, J31–J39) | 1,689 | 1,301 | -388 | -23.0 |
| All other | 3,330 | 2,742 | -588 | -17.7 |
| **Total** | **20,575** | **14,763** | **-5,812** | **-28.2** |

Note: Dates are assigned based on the day of presentation to the ED, not the day of discharge.
Source: AIHW National Non-Admitted Patient Emergency Department Care Database.

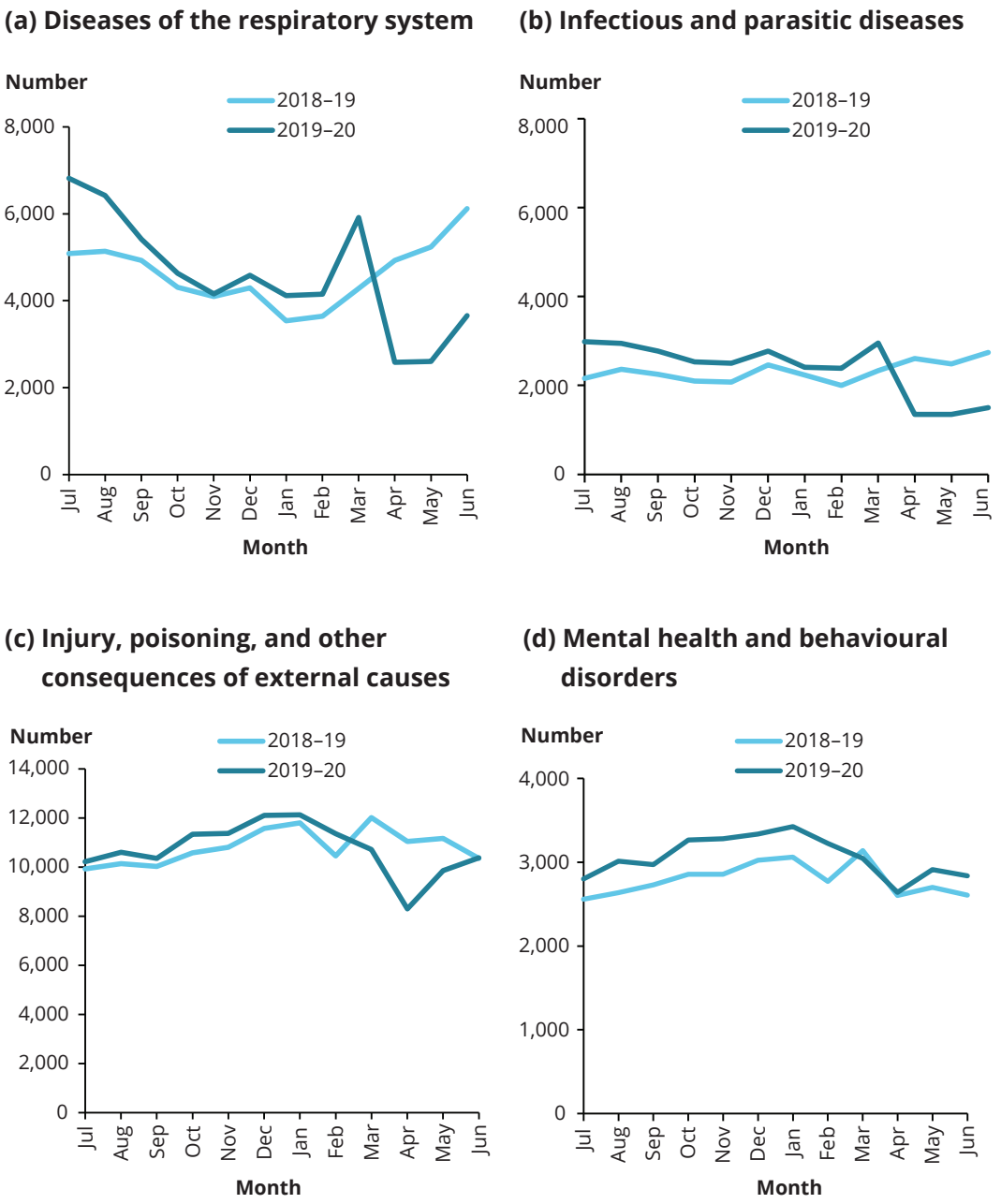
Compared with March–June 2019, the number of ED presentations in March–June 2020 for factors influencing health status and contact with health services (excluding dialysis) increased by about 1,100, and there were slightly more than 380 presentations for mental health and behavioural disorders; however, these numbers must be interpreted with caution as they are likely to be under-counts in both periods (AIHW 2022c). There was also an increase in the number of presentations for external causes of morbidity and mortality.

### Changes by month for selected diagnoses

ED presentations by month for diseases of the respiratory system and infectious and parasitic diseases (Figure 3.7) show similar patterns: the numbers are generally higher than for the same month in 2018–19, they spike in March 2020 and then sharply decline and stay below the 2019 numbers between April and June 2020. It is reasonable to attribute at least part of these declines to the protective effects of the social distancing, enhanced hygiene, and mask wearing rules that were instituted during the first wave of the pandemic.

The monthly pattern for ED presentations for injuries, poisoning and external causes is slightly different. Numbers of presentations declined sharply in April 2020 compared with April 2019 but, by the end of June 2020, had returned to June 2019 levels. Presentations for mental health and behavioural disorders were higher across all months in 2019–20 than in 2018–19 (except for March).

**Figure 3.7: Number of ED presentations by month, by selected diagnoses, Indigenous Australians, 2018–19 and 2019–20**




Note: Dates are assigned based on the day of presentation to the ED, not the day of discharge.

Source: AIHW National Non-Admitted Patient Emergency Department Care Database.

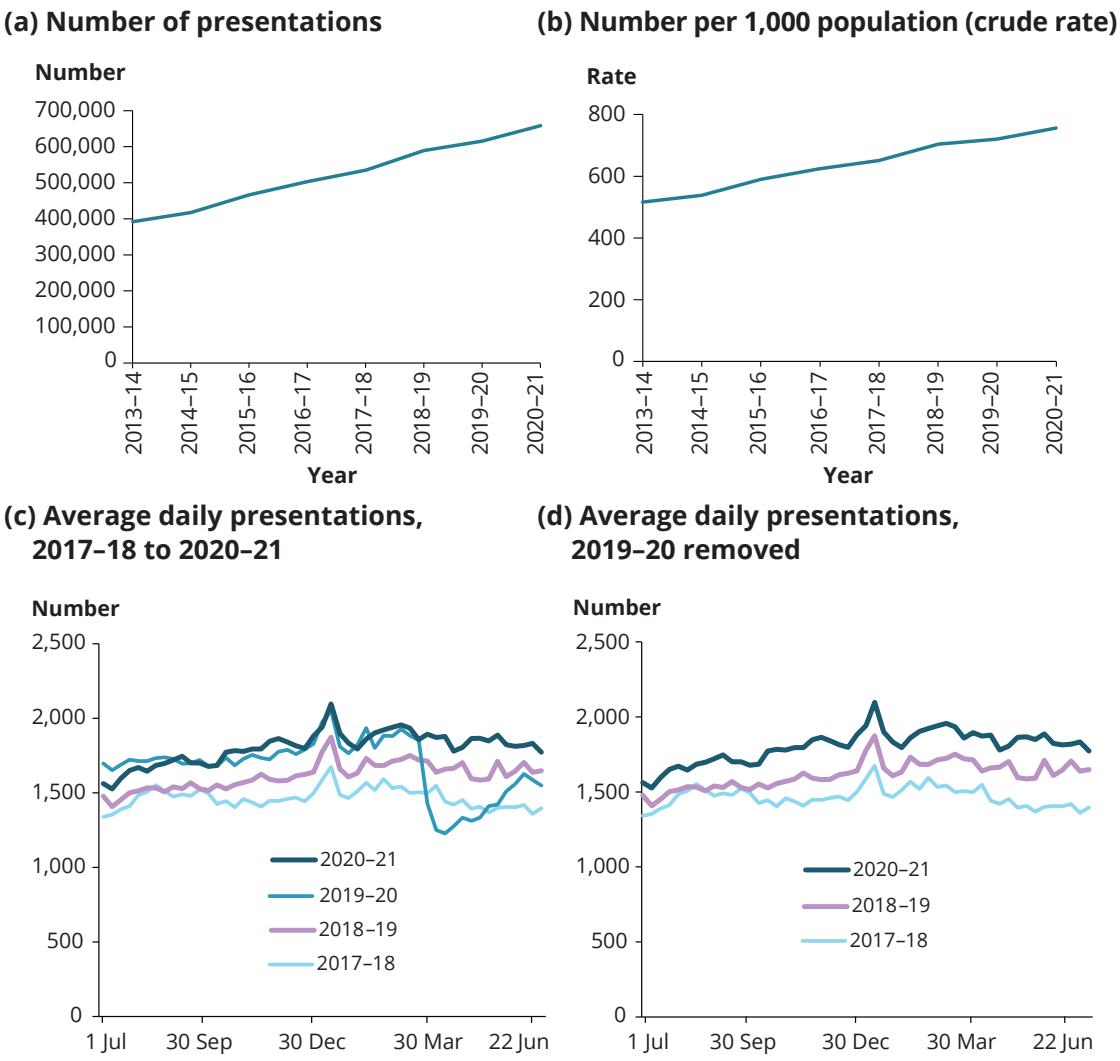
## Did the changes continue in 2020–21?

In 2020–21, the number and rate of ED presentations by Indigenous Australians were consistent with pre-pandemic trends (Figure 3.8). Between 2019–20 and 2020–21, the number of ED presentations grew by 7.0% to just under 660,000, a rate of 756 presentations per 1,000.

Average daily presentations in 2020–21 also mirror the pre-pandemic pattern, just with higher numbers. Removing the 2019–20 year from the average daily presentation in Figure 3.8d highlights how different the March–June 2020 period was.

ED presentations generally increased across all age groups, jurisdictions and remoteness area categories except for Indigenous Australians living in *Remote* areas where the number of presentations in 2020–21 was essentially the same as in 2019–20.

**Figure 3.8: ED presentations over time, Indigenous Australians**




Note: Dates are assigned based on the day of presentation to the ED, not the day of discharge.

Source: AIHW National Non-Admitted Patient Emergency Department Care Database.

The greatest increase by triage category was for presentations in category 2 (requiring treatment within 10 minutes), which rose by 13% between 2019–20 and 2020–21. The increase in the other 4 triage categories ranged between 4.8% and 7.4% (Supplementary Table S3.4).

Presentations for all principal diagnoses increased between 2019–20 and 2020–21 (Supplementary Table S3.5), except for:

- diseases of the respiratory system (fell by 5,113)
- certain infectious and parasitic diseases (fell by 3,465)
- external causes of morbidity and mortality (fell by 1,190)
- diseases of the eye and adnexa (fell by 497).

## Hospitalisations

Admitted patient services, or hospitalisations, are provided when a patient is formally admitted to a hospital. Hospitalisations can either be on the same day or involve a stay in hospital of 1 or more nights. A hospitalisation may be for medical, surgical or other acute care, childbirth, mental health care, sub-acute care (for example, rehabilitation or palliative care) or non-acute care (for example, maintenance care for a person suffering limitations due to a health condition). Some admitted patient services can also be provided via 'hospital-in-the-home' programs, where patients receive a combination of in-hospital and outside-hospital care.

Data on hospitalisations are drawn from the National Hospital Morbidity Database – a compilation of episode-level records from admitted patient morbidity data collection systems in Australian hospitals. The data are based on the National Minimum Data Set for Admitted Patient Care and include demographic, administrative and length-of-stay data, as well as data on the diagnoses of the patients, the procedures they underwent in hospital and external causes of injury and poisoning. For more information, see www.aihw.gov.au/reports-data/myhospitals/sectors/admitted-patients.

Hospitalisation rates are based on the number of hospital episodes of care rather than on the number of individual people who are hospitalised. A person who has frequent hospitalisations for the same disease is counted multiple times in the hospitalisation rate.

Indigenous Australians have higher hospitalisation rates than non-Indigenous Australians. In 2019–20, women made up more than half (58%) of hospitalisations for Indigenous Australians. Unlike ED presentations, which are skewed to the younger age groups for Indigenous Australians, older age groups make up a higher proportion of hospitalisations: 43% were aged 45–64, and another 17% aged 65 and older. The highest numbers of hospitalisations were for Indigenous Australians living in *Major cities* (157,400), followed by those in *Outer regional* areas (133,500) and *Very remote* areas (115,000) (Supplementary Table S3.6).

Kidney dialysis treatment made up 44% of hospitalisations for Indigenous Australians in 2019–20 (257,000). This number is related to both the high levels of kidney disease in the Indigenous population and the way that hospital data are structured. Each kidney dialysis treatment is counted as a separate hospital episode, so that each person receiving 3 dialysis treatments per week contributes around 150 hospital episodes per year.

The next most common ICD-10-AM diagnostic categories in 2019–20 for Indigenous Australians were:

- injury and poisoning, and certain other consequences of external causes (6.6%)
- symptoms, signs and abnormal clinical and laboratory findings (6.0%)
- pregnancy, childbirth and the puerperium (5.2%) (Supplementary Table S3.7).

## Potential effects of the pandemic on hospitalisations

There were several changes to the hospital system during the early part of the pandemic, which may have reduced the numbers of hospitalisations, including:

- cancellations of elective surgeries
- movement of staff and resources within hospitals to cover increased needs of COVID-19 positive patients within the system, and to cover COVID-19 testing clinics.

As highlighted in the previous section on ED presentations, however, there may also have been a decreased need for hospitalisations from infectious and/or respiratory illnesses as well as from the decline in ED presentations from poisoning, injuries and other external causes.

## Number and timing of hospitalisations

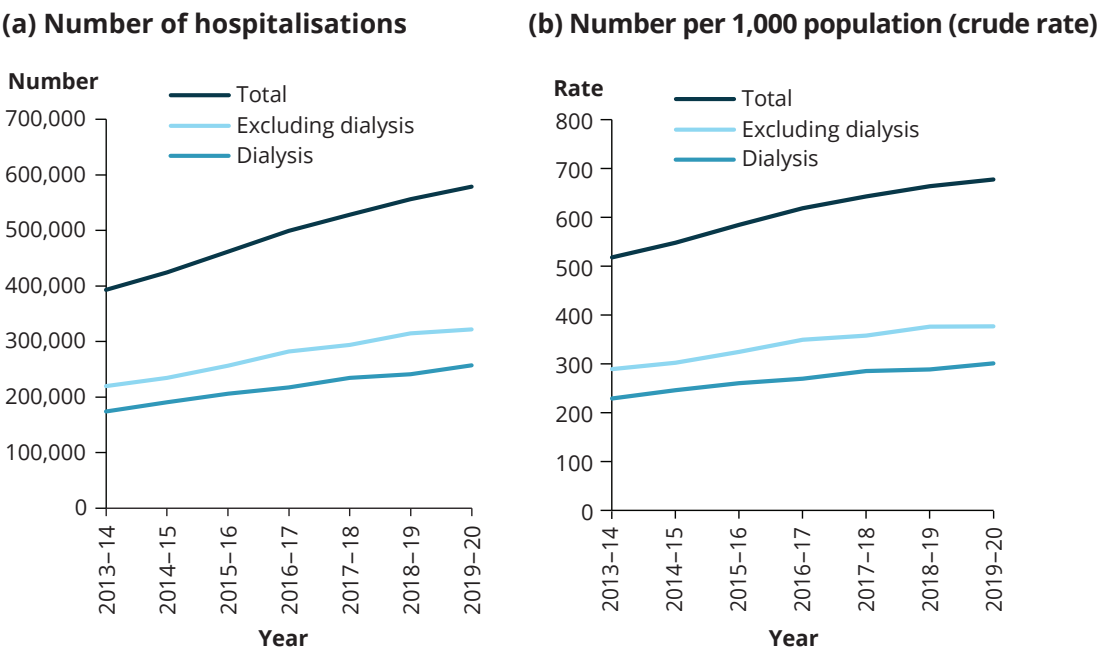
In 2013–14, there were slightly more than 393,000 hospitalisations (including dialysis) for Indigenous Australians, a rate of 518 hospitalisations per 1,000. By 2018–19, there were around 556,000 hospitalisations, at a rate of 664 per 1,000. The total number of hospitalisations grew by 4.0% (to 578,000) between 2018–19 and 2019–20, while the rate grew by 2.0%.

It is important, however, to look at hospitalisations for dialysis separately from other hospitalisations (Figure 3.9). The number of hospitalisations for dialysis in 2019–20 were around 15,700 higher than in 2018–19 (an increase of 6.5%), while the crude rate increased from 288 per 1,000 to 301 (an increase of 4.5%). Analysis of average daily hospitalisations and monthly numbers of hospitalisations showed that hospitalisations for dialysis in 2019–20 were higher than those in every period during 2017–18 and 2018–19.

For hospitalisations excluding dialysis, the total number of hospitalisations grew by 2.1% in 2019–20 compared with 2018–19, and the crude rate grew by 0.2%. While the total number of hospitalisations excluding dialysis was higher in 2019–20 than in 2018–19, there were different patterns throughout the year, which coincided with the first wave of the pandemic:

- Between 1 July 2019 and 28 February 2020, the number of hospitalisations for Indigenous Australians rose by 17,000 on that for the previous year (a rise of 8.2%).
- Between 1 March 2020 and 30 June 2020, the number of hospitalisations for Indigenous Australians was more than 10,000 lower than that for March–June 2019 (a drop of 9.7%).

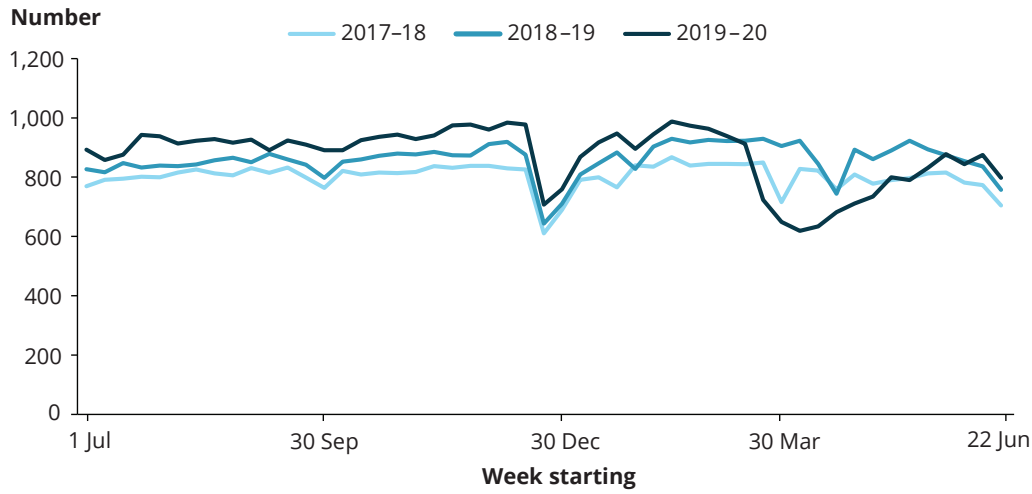
**Figure 3.9: Hospitalisations over time, by whether they were for dialysis, Indigenous Australians**




Note: Dates are assigned based on the day of admission, not the day of discharge.
Source: AIHW National Hospital Morbidity Database.

The differences in the March–June period are highlighted in the trends in average daily hospitalisations (Figure 3.10). Until the week starting 16 March 2020, the average number of daily hospitalisations (by week) was higher than in the previous 2 collections. The numbers are lower in March–June 2020 than in 2018 and 2019 for a period of around 11 weeks. By the end of June 2020, hospitalisations were slightly higher than in 2019 and 2018, suggesting that the decrease may have been temporary.

**Figure 3.10: Average number of daily hospitalisations excluding dialysis (by week), 2017–18 to 2019–20, Indigenous Australians**




Note: Dates are assigned based on the day of admission, not the day of discharge.

Source: AIHW National Hospital Morbidity Database.

## What changed in March–June 2020 compared with March–June 2019?

Hospitalisations between March and June 2020 were compared with those between March and June 2019 by characteristics (excluding dialysis, see Figure 3.11) and principal diagnoses (all hospitalisations, see Supplementary Table S3.8).

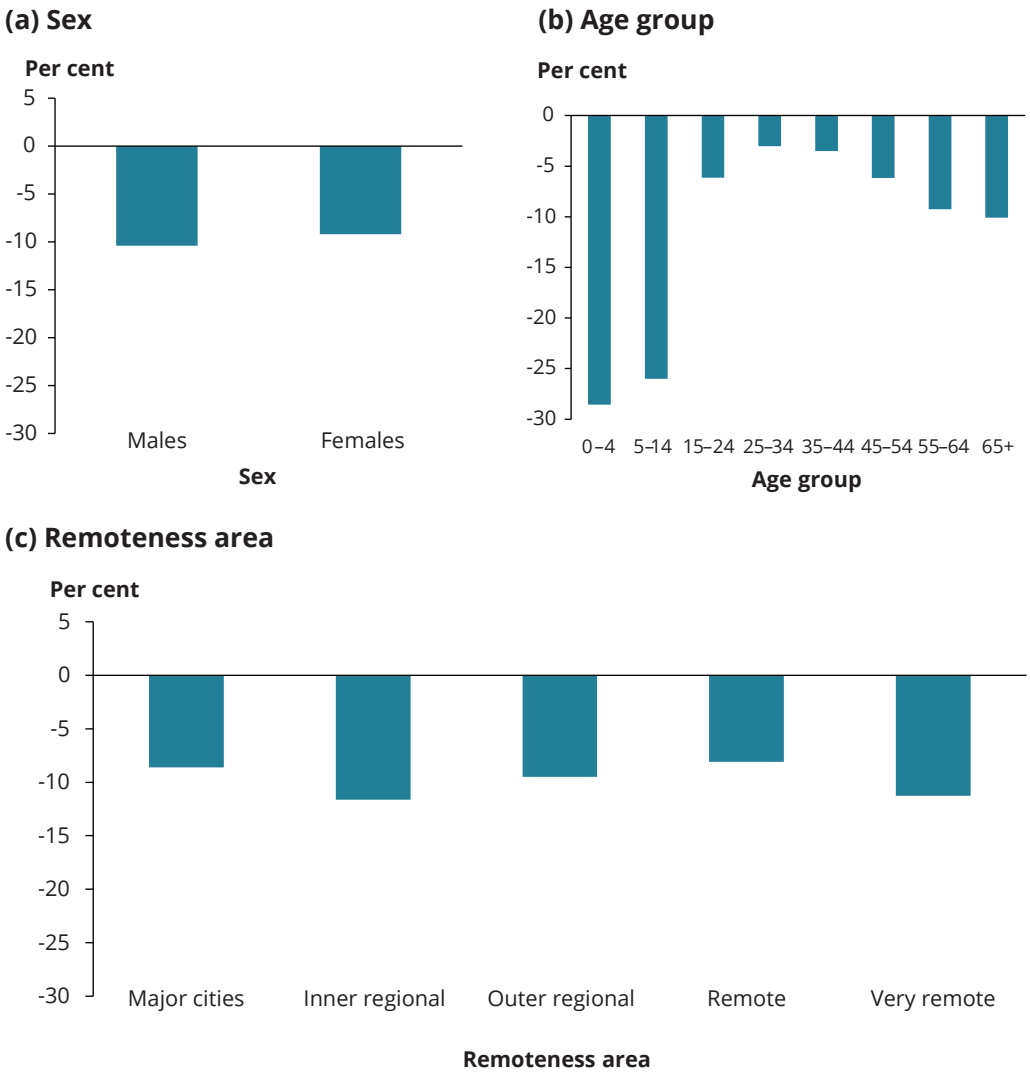
### Characteristics

Compared with hospitalisations in March–June 2019 for Indigenous children aged 0–4 and 5–14, hospitalisations in March–June 2020 declined by 29% and 26%, respectively; there were only small declines for Indigenous Australians aged 25–44. Hospitalisations for Indigenous Australians living in *Inner regional* and *Very remote* areas were more than 10% lower in March–June 2020 than in March–June 2019.

For children aged 0–4, the largest numerical declines between March–June 2019 and March–June 2020 were from hospitalisations for:

- diseases of the respiratory system, from 2,963 to 1,241 (58% lower)
- infectious and parasitic diseases, from 922 to 472 (49% lower)
- diseases of the ear and mastoid, from 397 to 201 (49% lower)
- symptoms, signs and abnormal clinical and laboratory findings, from 1,015 to 742 (27% lower).

**Figure 3.11: Percentage change in hospitalisations excluding dialysis, by sex (a), age group (b), remoteness area (c), Indigenous Australians, March–June 2020 compared with March–June 2019**




Note: Dates are assigned based on the day of admission, not the day of discharge.

Source: AIHW National Hospital Morbidity Database.

## Principal diagnosis

Changes in hospitalisations by principal diagnostic category between March–June 2020 and March–June 2019 showed that by far the largest reduction was for hospitalisations involving diseases of the respiratory system, which were 38% lower in March–June 2020 than they were in March–June 2019. Numerically, the next largest reductions were in hospitalisations for diseases of the digestive system and those for musculoskeletal

conditions, while hospitalisations for diseases of the ear and mastoid and diseases of the eye and adnexa had the highest proportional declines (along with diseases of the respiratory system) (Supplementary Table S3.8).

Conditions prompting increased hospitalisations in March–June 2020 compared with March–June 2019 were mental health and behavioural disorders, pregnancy/childbirth and conditions originating in the perinatal period.

A closer look at hospitalisations for respiratory conditions reveals that the biggest decline was for admissions related to influenza (Table 3.6). However, the 2019 flu season was unusual in both its timing and in the high number of cases – for that reason, data for the same period in 2018 have also been included in the table for reference.

**Table 3.6: Distribution of detailed ICD-10-AM codes for hospitalisations for diseases of the respiratory system, Indigenous Australians, March–June 2018–2020**

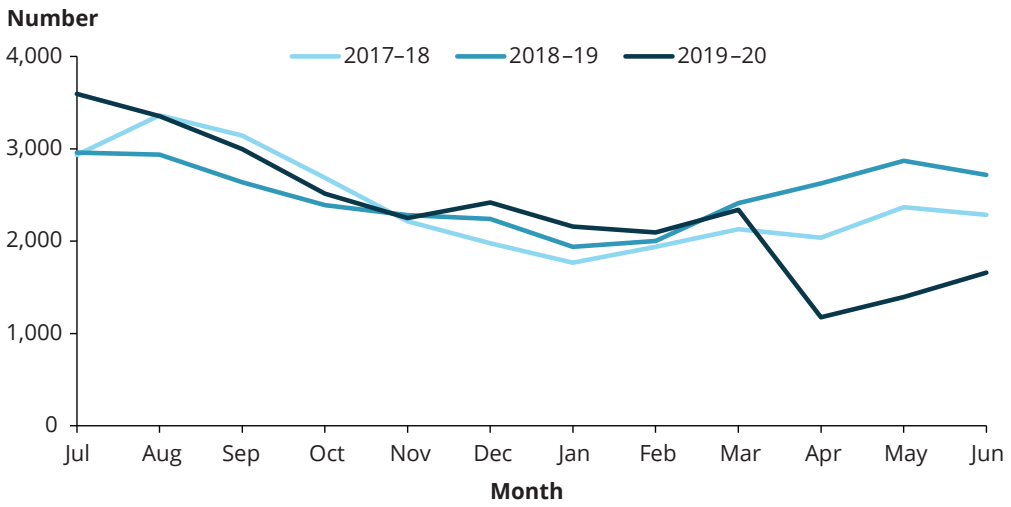
| | March–June | | | Change between March–June 2020 and March–June 2019 | |
|---|---|---|---|---|---|
| ICD-10-AM code | 2018 | 2019 | 2020 | Number | % |
| Influenza (J09–J11) | 73 | 849 | 65 | -784 | -92.3 |
| Pneumonia (J12–J18) | 1,680 | 1,997 | 1,476 | -521 | -26.1 |
| Bronchitis and emphysema (J40–J44, J47) | 1,716 | 2,020 | 1,535 | -485 | -24.0 |
| Asthma (J45–J46) | 795 | 905 | 541 | -364 | -40.2 |
| Acute upper respiratory infections (J00–J06) | 1,241 | 1,367 | 888 | -479 | -35.0 |
| Other acute lower respiratory infections (J20–J22) | 1,700 | 1,725 | 754 | -971 | -56.3 |
| Other disease of upper respiratory tract (J30.0, J31–J39) | 948 | 996 | 654 | -342 | -34.3 |
| Other diseases of the respiratory system (J65–J99) | 599 | 672 | 604 | -68 | -10.1 |
| Chronic sinusitis (J32), Allergic rhinitis ('hay fever') (J30.1–J30.4), Pneumoconiosis (J60–J64) | 67 | 91 | 47 | -44 | -48.4 |
| **Total** | **8,819** | **10,622** | **6,564** | **-4,058** | **-38.2** |

Note: Dates are assigned based on the day of admission, not the day of discharge.

Source: AIHW National Hospital Morbidity Database.

Figure 3.12 highlights the monthly pattern of hospitalisations for diseases of the respiratory system between 2017–18 and 2019–20. Although the number of hospitalisations increased again in May 2020 (after a sharp drop in the preceding 2 months), the increase was still lower than for the same period in 2019. Because 2018–2019 might have been an unusual reference period for hospitalisations for respiratory issues because of the flu season, data for 2017–18 are also included in this figure.

**Figure 3.12: Number of hospitalisations for diseases of the respiratory system, by month, Indigenous Australians, 2017–18 to 2019–20**




Note: Dates are assigned based on the day of admission, not the day of discharge.

Source: AIHW National Hospital Morbidity Database.

## Elective surgery

Elective surgery is planned surgery that can be booked in advance as a result of a specialist clinical assessment, with the patient placed on a waiting list.

Due to concerns about the capacity of hospitals to deal with expected COVID-19 related activity during the first wave of the pandemic, restrictions were applied to selected elective surgeries from 26 March 2020. Under these restrictions, only Category 1 and exceptional Category 2 procedures could be undertaken. These restrictions were eased (but not fully lifted) from 29 April 2020, allowing all Category 2 and some important Category 3 procedures to be performed. (See Box 3.4 for an explanation of the different categories.)

Data on elective surgery are available from the National Elective Surgery Waiting Times Data Collection which provides episode-level data on patients added to or removed from elective surgery waiting lists managed by public hospitals. Information is available on waiting times and other characteristics of elective surgery in all public hospitals. The data include private patients treated in public hospitals, and may include public patients treated in private hospitals, but does not include private patients in private hospitals. Removals are counted for patients who have been removed for admission, or for another reason.

The restrictions led to an overall decrease in admissions for elective surgery of 8.4% between 2018–19 and 2019–20 for Indigenous Australians (Table 3.7). Additions to elective surgery waiting lists fell by 3.7%, while there were increases in the number of people on the waiting lists transferred to another hospital's list.

**Table 3.7: Additions and removals from public hospital elective surgery waiting lists for Indigenous Australians, 2015–16 to 2019–20**

| | Number by year | | | | | Change (%) | |
|---|---|---|---|---|---|---|---|
| Status | 2015–16 | 2016–17 | 2017–18 | 2018–19 | 2019–20 | Average since 2015–16 | Since 2018–19 |
| **Additions** | **28,790** | **31,638** | **32,745** | **33,786** | **32,535** | **3.2** | **-3.7** |
| **Removals** | | | | | | | |
| Elective admission | 24,544 | 26,322 | 27,208 | 28,358 | 25,988 | 1.6 | -8.4 |
| Emergency admission | 273 | 306 | 279 | 331 | 293 | 2.6 | -11.5 |
| *Total admissions* | *24,817* | *26,628* | *27,487* | *28,689* | *26,281* | *1.6* | *-8.4* |
| Not contactable/ died | 481 | 600 | 641 | 647 | 643 | 8.0 | -0.6 |
| Treated elsewhere | 805 | 721 | 758 | 871 | 881 | 2.7 | 1.1 |
| Surgery not required | 2,726 | 2,953 | 3,030 | 3,116 | 3,001 | 2.5 | -3.7 |
| Transferred | 422 | 457 | 640 | 770 | 971 | 23.7 | 26.1 |
| Not reported | 157 | 195 | 203 | 167 | 175 | 3.8 | 4.8 |
| **Total removals** | **29,408** | **31,554** | **32,759** | **34,260** | **31,952** | **2.2** | **-6.7** |

Note: Interpretation of changes since 2018–19 should take into account the impacts of the cancellation of urgency categories 2 and 3 elective surgery in March 2020 due to COVID-19. Interpretation of changes over time in earlier years should take into account changes in coverage as noted in AIHW 2021a.

Source: AIHW National Elective Surgery Waiting Times Data Collection.

Elective surgery procedures are classified based on the recommended time frames in which the patient requires care (Box 3.4).

### Box 3.4: Elective surgery urgency categories

**Category 1**: patients are assessed as requiring surgery within 30 days, including patients whose condition has the potential to deteriorate quickly and require emergency care.

**Category 2**: patients are assessed as requiring surgery within 90 days, including conditions that cause pain, dysfunction or disability in patients whose condition is unlikely to deteriorate quickly and unlikely to require emergency care.

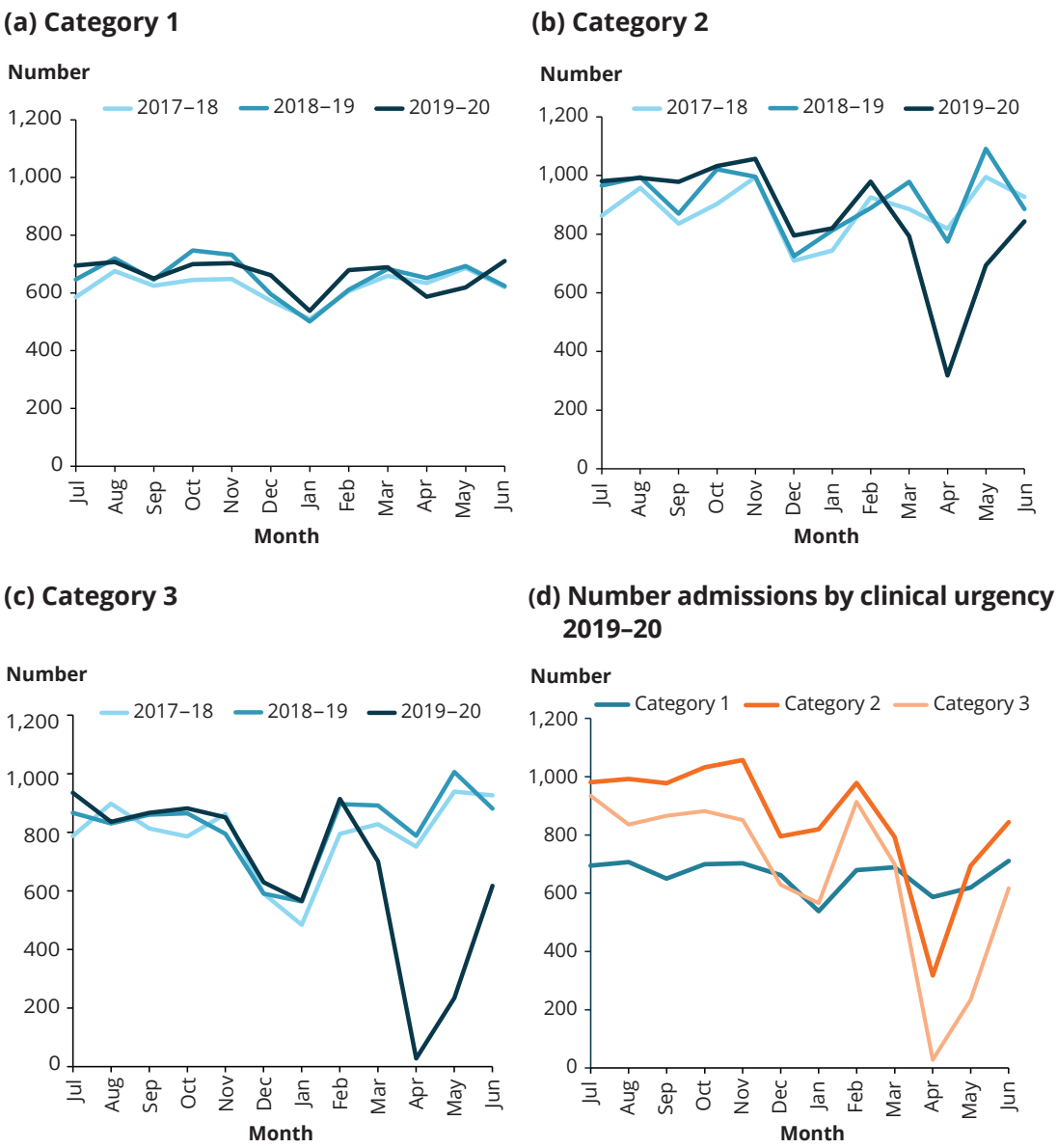
**Category 3**: patients are assessed as requiring surgery within a year, including conditions that cause pain, dysfunction or disability in patients whose condition is unlikely to deteriorate quickly.

For more information, see https://www.aihw.gov.au/reports-data/myhospitals/sectors/elective-surgery.

Admissions for Category 1 surgeries for Indigenous Australians in 2019–20 increased by 1.1% over those for 2018–19, but admissions for Category 3 surgeries decreased by 18%, and by 6.6% for Category 2 surgeries.

The impact of the restrictions by month and clinical urgency category are shown in Figure 3.13. While Category 1 surgeries dipped in April 2020, by June 2020 they were above the number performed in June 2019 and June 2018. Category 2 surgeries dropped considerably in April 2020 then began to increase again, but were still below the numbers performed in June 2019 and June 2018. As expected, the greatest impact was on Category 3 surgeries: while they did increase again after April 2020, they were still much lower than in the previous 2 years. These patterns are likely the result of the delay in surgeries creating backlogs, not a reduction in the need for the surgeries.

**Figure 3.13: Number of monthly elective surgery admissions, by clinical urgency categories, Indigenous Australians, 2017–18 to 2019–20**

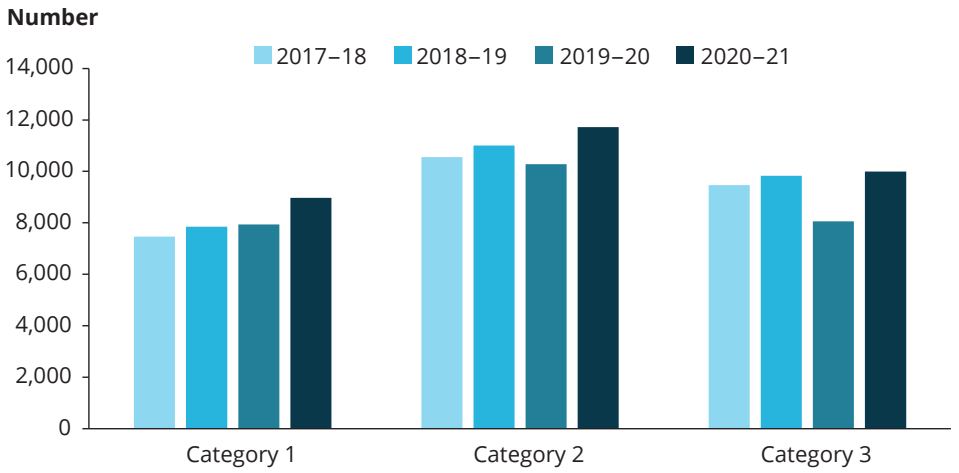



Source: AIHW National Elective Surgery Waiting Times Data Collection.

## Did the changes continue in 2020–21?

The number of elective surgeries rose by 17% between 2019–20 and 2020–21, from 26,281 in 2019–20 to 30,687 in 2020–21. The increase was across urgency categories but was largest for Category 3 surgeries (increase of 24%), suggesting that there was some 'catch-up' of the surgeries that had been postponed in the March–June 2020 period (Figure 3.14).

**Figure 3.14: Number of admissions for elective surgery, by clinical urgency categories, Indigenous Australians, 2017–18 to 2020–21**




Source: AIHW National Elective Surgery Waiting Times Data Collection.

## Conclusion

This article highlighted changes in primary care use, ED presentations, hospitalisations and elective surgeries for Indigenous Australians during the first 18 months of the pandemic, complementing the broader body of COVID-19 related analyses by the AIHW (see http://www.aihw.gov.au/covid-19).

These changes are likely to be a result of interactions among a mix of factors: underlying health needs, ability to access services, and adjustments to the health sector itself (some of which may have enhanced access, while others decreased access). Some of these changes are directly linked to pandemic-related policies, such as restrictions in elective surgery and the expansion of MBS rebates for telehealth. Others may have indirect links to the pandemic, such as the decrease in presentations to an ED for infectious illnesses, which are likely due to public health measures and changes in individual behaviours (AIHW 2021c).

### Data gaps

This article highlights key data gaps that restrict full examination of health service use during the pandemic. These data gaps include:

- at the time of writing, the only national data on the included health services available from July 2021 onwards (the period that included the outbreaks of the Delta and Omicron variants) were claims for Indigenous health checks.
- the fact that some data (such as the VII-adjusted MBS and the OSR datasets) are available only for full years. As illustrated by the monthly disaggregations of claims for Indigenous health checks, ED presentations, elective surgeries and hospitalisations, full-year data can mask important changes during periods within a year.
- a current lack of surveys and qualitative data focusing on the lived experiences of Indigenous Australians during the pandemic to complement the available quantitative data.

There are also concerns around the ability to accurately count the numbers of COVID-19 infections in Australia generally, and for Indigenous Australians specifically, due to:

- the quality of Indigenous identification on pathology forms for polymerase chain reaction (PCR) tests, which may under-count cases
- potential double-counting of positive results from rapid antigen tests (RATs) and PCR tests for the same individual
- unknown numbers of undiagnosed (and unrecorded) cases (for more information, see 'Chapter 1 The impact of a new disease: COVID-19 from 2020, 2021 and into 2022').

## Future work

The data in this article covered only the period when COVID-19 cases were low among Indigenous Australians, and before outbreaks of both the Delta and Omicron variants. Future work will:

- include additional years of data
- analyse data at lower geographies
- examine the impact of the pandemic on health status/health outcomes.

As well, the impact of the pandemic on Indigenous Australians' mental health/social and emotional wellbeing and use of services related to mental health will be examined further.

# Further information

Impacts of COVID-19 on data used in this report are explored in more detail in a range of AIHW reports, including:

- *Aboriginal and Torres Strait Islander specific primary health care: results from the nKPI and OSR collections,* at https://www.aihw.gov.au/reports/indigenous-australians/indigenous-primary-health-care-results-osr-nkpi/contents/about
- *Admitted patient activity*, at https://www.aihw.gov.au/reports-data/myhospitals/intersection/activity/apc
- *Elective surgery*, at https://www.aihw.gov.au/reports-data/myhospitals/sectors/elective-surgery
- *Emergency department care*, at https://www.aihw.gov.au/reports-data/myhospitals/sectors/emergency-department-care
- *Impacts of COVID-19 on Medicare Benefits Scheme and Pharmaceutical Benefits Schedule: quarterly data*, at https://www.aihw.gov.au/reports/health-care-quality-performance/impacts-of-covid19-mbs-pbs-quarterly-data/contents/data-overview
- MBS Indigenous-specific health checks in *Tracking progress against the Implementation Plan goals for the Aboriginal and Torres Strait Islander Health Plan 2013–2023*, at https://www.aihw.gov.au/reports/indigenous-australians/tracking-progress-against-ipg-2013-2023/contents/impacts-of-covid-19-on-indigenous-specific-health-checks

For more AIHW data and information that relates to COVID-19, see https://www.aihw.gov.au/covid-19.

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