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Australian Institute of Health and Welfare

Cancer screening and COVID-19 in Australia

AIHW

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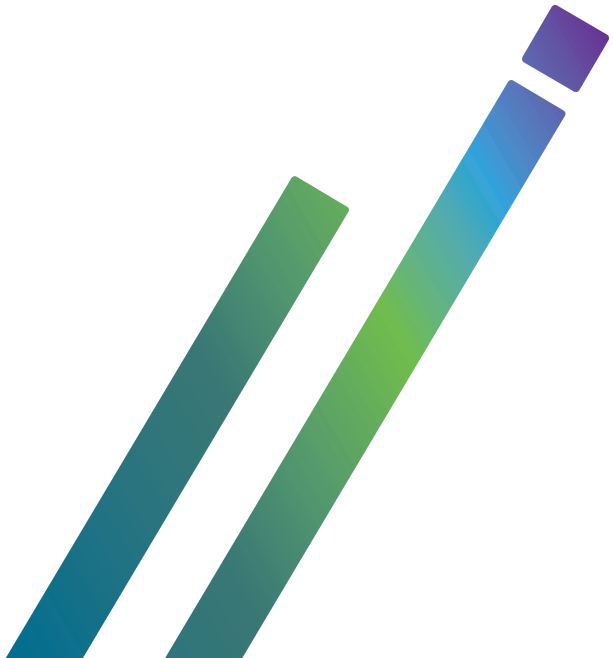

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Contents

Introduction

What was the impact of COVID-19 in Australia?

Early 2020 saw the emergence of a global pandemic caused by the novel coronavirus disease COVID-19. All Australians were affected by COVID-19. Restrictions imposed by the Australian and state and territory governments limited people's movement and activities to limit the spread of the disease, and many people changed their behaviour to protect themselves and others from the risk of exposure.

The first cases of COVID-19 were recorded in Australia on 25 January 2020. As the disease spread, restrictions were put in place to contain its impact. By the end of March 2020, restrictions had shut down all non-essential businesses and activities, with Australians urged to stay at home (Grattan Institute 2020). Restrictions started to ease from late April, although with state and territory differences.

In Victoria, COVID-19 cases began to rise again in June 2020, in what became known as the 'second wave'. Tightened restrictions were introduced on 9 July, with the highest level of restrictions introduced from 2 August with stricter restrictions in metropolitan Melbourne than in regional Victoria. While there was some easing of restrictions on 13 September and again on 27 October, significant restrictions were only relaxed in late November 2020 (Department of Health and Human Services 2020).

What is cancer screening and why is it important?

Australia has three national cancer screening programs—BreastScreen Australia, the National Cervical Screening Program, and the National Bowel Cancer Screening Program.

Screening aims to detect cancers early, either by detecting any early precancerous signs (to stop the cancer developing in the first place) or by detecting cancers when they are small (and treatment options and survival prospects are better). People who are diagnosed through the three national cancer screening programs generally have much better survival prospects than those who are diagnosed when their cancers have become symptomatic and are more advanced (AIHW 2018).

If screening is delayed or missed, it is possible that a precancerous abnormality may progress to cancer, or a cancer may develop to a stage that is more difficult to treat.

What is COVID-19?

Coronaviruses are a common form of virus that can cause respiratory diseases that range from the common cold to much more serious illnesses (Department of Health 2020). These viruses spread from person to person in a number of ways. COVID-19 is a coronavirus disease caused by a new coronavirus called SARS-CoV-2 (short for severe acute respiratory syndrome coronavirus 2) that was first reported to the World Health Organization (WHO) in December 2019 (WHO 2020).

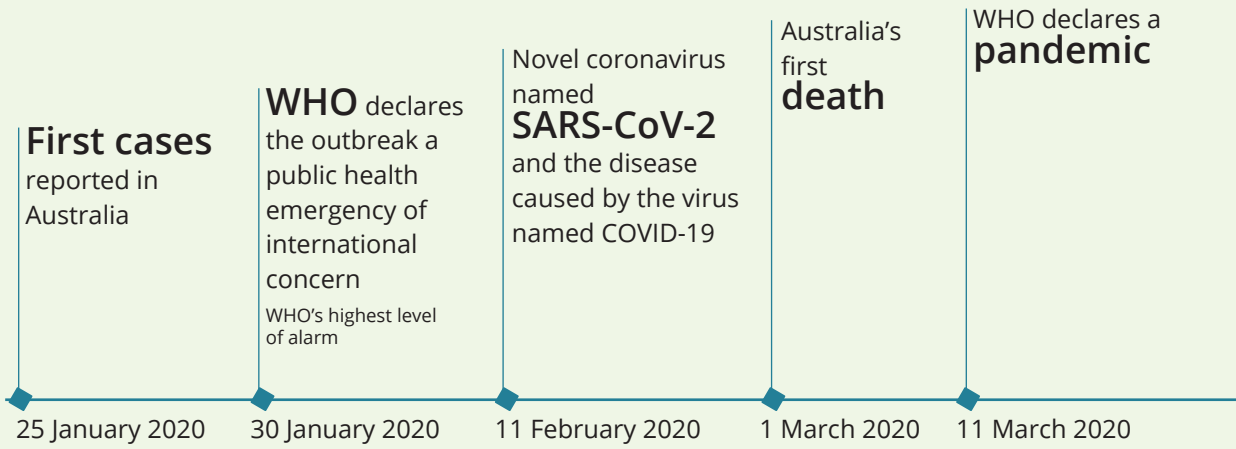
The coronavirus that causes COVID-19 spread quickly after it was first reported, declared to be an international pandemic by WHO on 11 March 2020.

How has COVID-19 affected cancer screening?

The COVID-19 pandemic affected many areas of peoples' lives, including their access to, and use of, health services such as cancer screening programs.

As a part of COVID-19 restrictions, many health care services suspended or changed the way they delivered their services. Due to this, and the potential for people to change their behaviour whilst under restrictions, there was increased public interest around the effects of COVID-19 on Australia's three national cancer screening programs—BreastScreen Australia, the National Cervical Screening Program, and the National Bowel Cancer Screening Program.

Key events of the COVID-19 pandemic in Australia



BreastScreen Australia

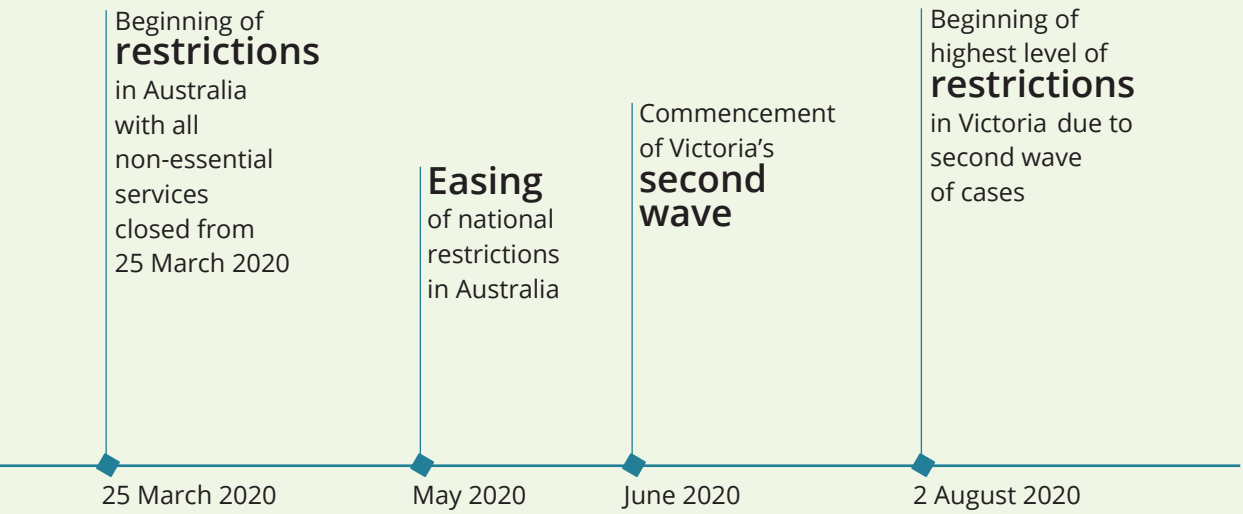
provides screening mammograms which involve close contact between clients and health workers. BreastScreen services were suspended from late March to late April/ early May 2020 due to COVID-19 restrictions for what were, at the time, considered non-essential services. BreastScreen services remained open during Victoria's second wave.

National Cervical Screening Program

involves a test which is usually carried out by a person's general practitioner (GP). While GP services continued during the pandemic, there was an increased use of telehealth consultations, and cervical screening tests require in-person consultations. There was no suspension of the National Cervical Screening Program at any time during 2020.

National Bowel Cancer Screening Program

involves home test kits, sent to eligible participants who return them by mail. People do not need to leave their homes to complete the test, or to get their results, but do need to mail their completed test kit to the pathology laboratory. There was no suspension of the National Bowel Cancer Screening Program at any time during 2020.



Measuring the impact of COVID-19 on cancer screening

At the time of publication, the COVID-19 pandemic continues to be an evolving situation, posing a threat to people's health and wellbeing in Australia and globally. The data presented here cover the period from January to September 2020, capturing the first 9 months of the disease in Australia.

The data in this report were sourced from live databases (state and territory BreastScreen registers and the National Cancer Screening Register), which are updated over time, with later data likely to have a greater level of completeness.

Timeliness of data was a priority for this report. The nature of timely data provision means that data are considered preliminary, and should be not be directly compared with data used in other AIHW cancer screening reports, where data are sourced at a different time.

The number of screening tests for the three national cancer screening programs in Australia are not consistent month to month, but tend to follow yearly or two-yearly patterns due to factors such as the timing of public holidays, services to remote areas of Australia, and timing of invitations to screen. Because of this, data are presented for 2020 alongside comparable years so that comparisons can be made on a monthly or weekly basis and the impact of COVID-19 can be better discerned. For the National Cervical Screening Program and the National Bowel Cancer Screening Program, the year of comparison is 2019. For BreastScreen Australia, the year of comparison is 2018.

This report builds on recent findings from Cancer Australia that showed a reduction in diagnostic and therapeutic procedures for skin, breast, and colorectal cancers between March and May 2020 compared to the same months in 2019 (Cancer Australia 2020a), recently updated to include data to September (Cancer Australia 2020b).

Data in this report are the **number of screening tests**, not the number of people screened.

These data are therefore very **different to participation**, which is the number of people screened as a proportion of the population or of those invited.

Why look at age?

According to WHO (2020), people aged 60 and over are at higher risk for developing severe illness due to COVID-19.

Australia's cancer screening programs target people based on the age at which there is a higher incidence of the disease.

Target age groups for the programs all commence prior to age 60, and extend to age 74. This means that there is a cohort of people that are at higher risk of developing cancer or precancerous disease (and therefore for whom cancer screening is particularly important) who are also at higher risk of developing severe illness due to COVID-19 (which may impact use of face-to-face health services).

People over 60 years are at a higher risk of developing severe illness as a result of COVID-19

In this report, the segregation of screening tests completed by those aged less than 60 and those aged 60 and over, is unique to this report due to the World Health Organization's statement that people over 60 years are at a higher risk of developing severe illness as a result of COVID-19. This differs from the age groups typically shown when reporting data for the three cancer screening programs, and as such should not be directly compared. The ages included in each of the two categories (less than 60 years and 60 years and over) will depend on the age of eligibility of each cancer screening program. For the NCSP and NBCSP, this is their respective target age groups, however, for BreastScreen Australia, all women 40 years and over are eligible to screen.

Looking at the number of screens completed for those under 60 years and those over 60 years, may indicate whether people who were at higher risk of COVID-19 were more impacted by the pandemic and whether this affected their ability, or willingness, to attend screening services or complete screening kits.

Why look at remoteness area and socioeconomic area?

Cancer screening typically differs between rural and remote areas and cities (remoteness area), and across areas with differing levels of socioeconomic disadvantage (socioeconomic area) (AIHW 2020b; AIHW 2020c; AIHW 2020d).

There are many reasons why cancer screening in different areas of Australia could be more or less affected by COVID-19. For example, many regional areas had lower rates of COVID-19 infections, so the impact on use of face-to-face health services may have been smaller. As another example, people in areas of greater socioeconomic disadvantage, who experience higher rates of many chronic conditions that place them at higher risk from COVID-19, may have been more cautious about use of face-to-face health services.

Why look at Indigenous Australians?

Aboriginal and Torres Strait Islander people and people living in remote communities are at greater risk from COVID-19 due to factors such as higher rates of other health issues (and so may have been cautious about use of face-to-face health services) and poorer access to health care (Department of Health 2021).

Indigenous Australians typically have lower screening rates than non-Indigenous Australians (AIHW 2020c), and so it is extremely important to understand whether Indigenous Australians were impacted more than other Australians in terms of access to, and use of, cancer screening, further impacting their participation in cancer screening.

Why look at Australians who speak a language other than English?

Language can be a barrier in receiving information about what is or is not safe to do during COVID-19, and whether services are currently available.

People who speak a language other than English at home typically have lower screening rates than those who only speak English at home (AIHW 2020c), and so understanding whether or not COVID-19 has further impacted their participation in cancer screening is similarly important.

What happens next?

The long-term effects of delayed screening during the COVID-19 pandemic will not be known for some time. It will be important to continue monitoring the effects of this changing situation on cancer screening and other health services into the future.

Impact of COVID-19 on BreastScreen Australia

About BreastScreen Australia

BreastScreen Australia is Australia's national breast cancer screening program which uses screening mammograms to detect unsuspected breast cancer in asymptomatic women. Women aged 40 and over are eligible for free mammograms every 2 years. Screening mammograms are performed in specialised facilities which usually involve close contact between the client and health worker.

Screening mammograms work well in older women as breasts become less dense as women age, and incidence of breast cancer is much higher in women over 50 years of age. Women aged 50–74 are targeted by BreastScreen Australia for 2-yearly screening mammograms, but as all women over the age of 40 are eligible to screen, there are also data available for women aged 40–49 and 75 and over.

BreastScreen services suspended due to restrictions

To protect clients, staff and the community from the risk of COVID-19, BreastScreen services were temporarily suspended from 25 March 2020. While the suspension was lifted around a month later (in late April–early May 2020 for many services), breast screening resumed in a staged approach with longer appointments and precautionary measures to ensure the safety of women and staff. The rate at which BreastScreen services could resume was impacted by various jurisdictional social distancing and infection control guidelines and requirements.

BreastScreen services remained open during Victoria's second wave.

Data considerations

Due to the biennial nature of the BreastScreen Australia program, data for 2020 are presented alongside data from 2018, the last comparable time period.

All data are reported for the target age group, women aged 50–74.

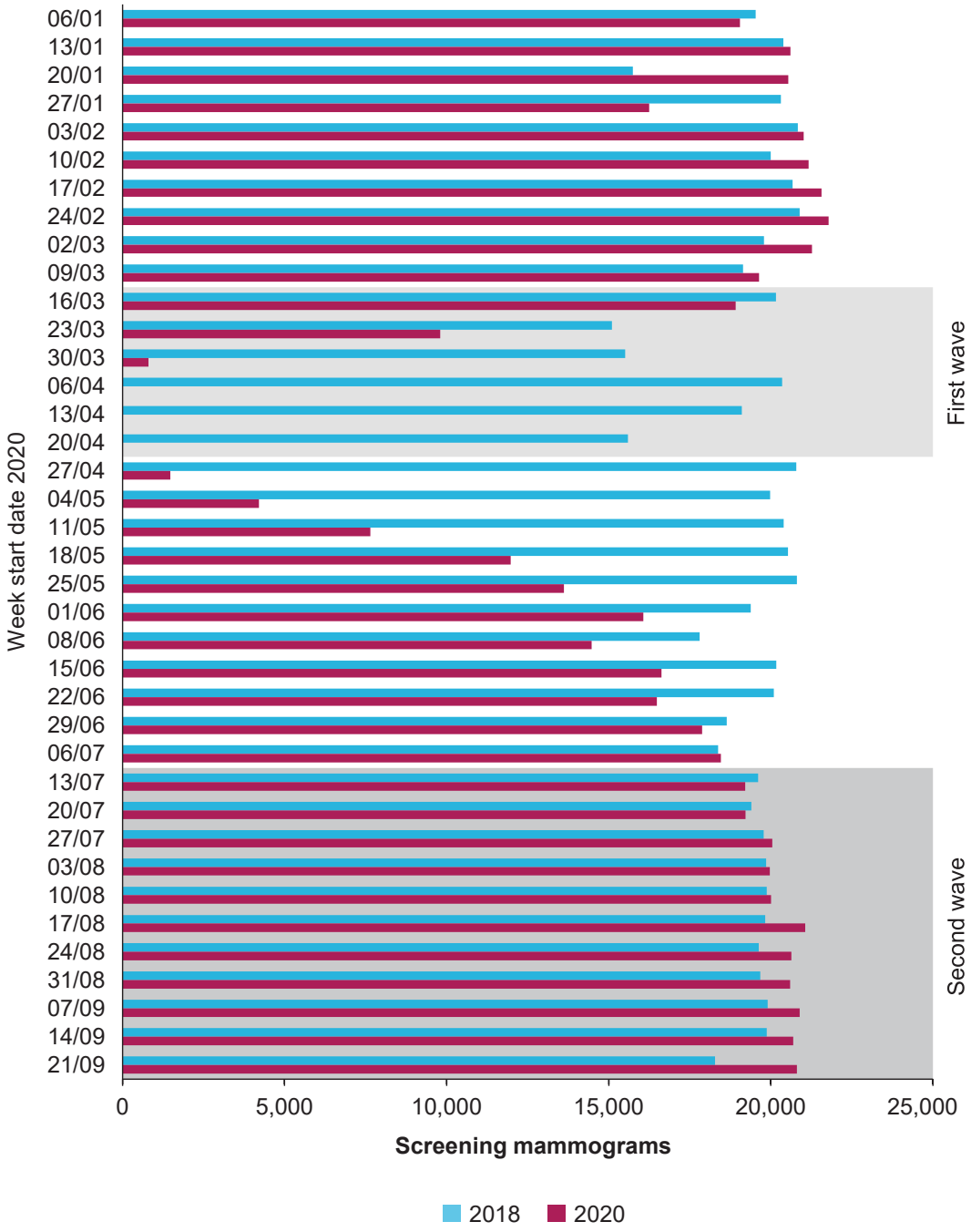
How did the number of screening mammograms vary week to week?

The number of screening mammograms performed through BreastScreen Australia significantly declined in March 2020 as the COVID-19 pandemic worsened and tighter restrictions were put in place that included a suspension of all BreastScreen services from 25 March 2020.

While more than 70,000 screening mammograms were conducted in March 2020, this had fallen to just over 1,100 in April. By comparison, in April 2018, more than 74,000 screening mammograms were carried out.

Following an easing of restrictions that included a lifting of the suspension from late April/early May 2020, the number of screening mammograms increased through May and June, and in July 2020 numbered around 3,000 more than in July 2018. In September, the number of screening mammograms increased to over 90,000, which was again greater than the number of screening mammograms in September 2018.

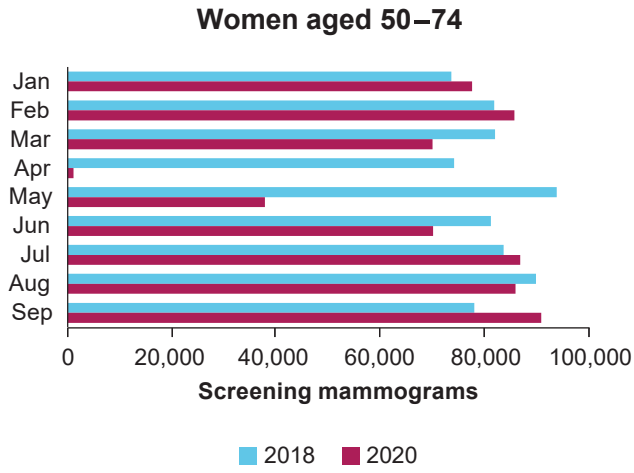
Number of screening mammograms by week



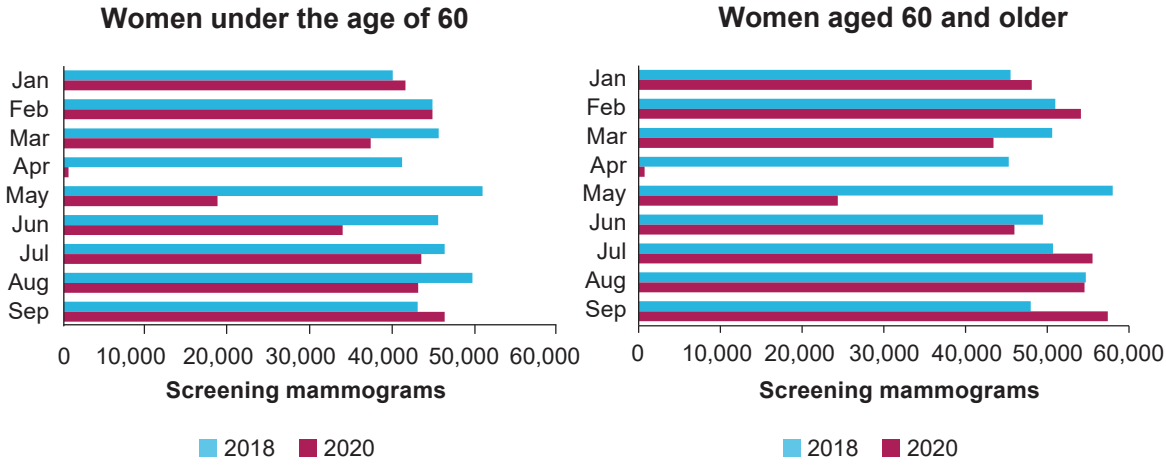
The two grey shaded sections indicate the period of tightened restrictions during Australia's 'first wave' and the period of tightened restrictions in Victoria during the 'second wave'.

Younger women were slower to return to screening mammograms after restrictions eased

All ages saw the largest decline in the number of screening mammograms in April 2020, and a return to higher levels from July–September 2020.



For women aged 60 and over more screening mammograms were performed in 2020 than in 2018 between July and September, while for women under the age of 60, in the same time period, the number of screening mammograms performed in 2020 was still lower than the number performed in 2018.

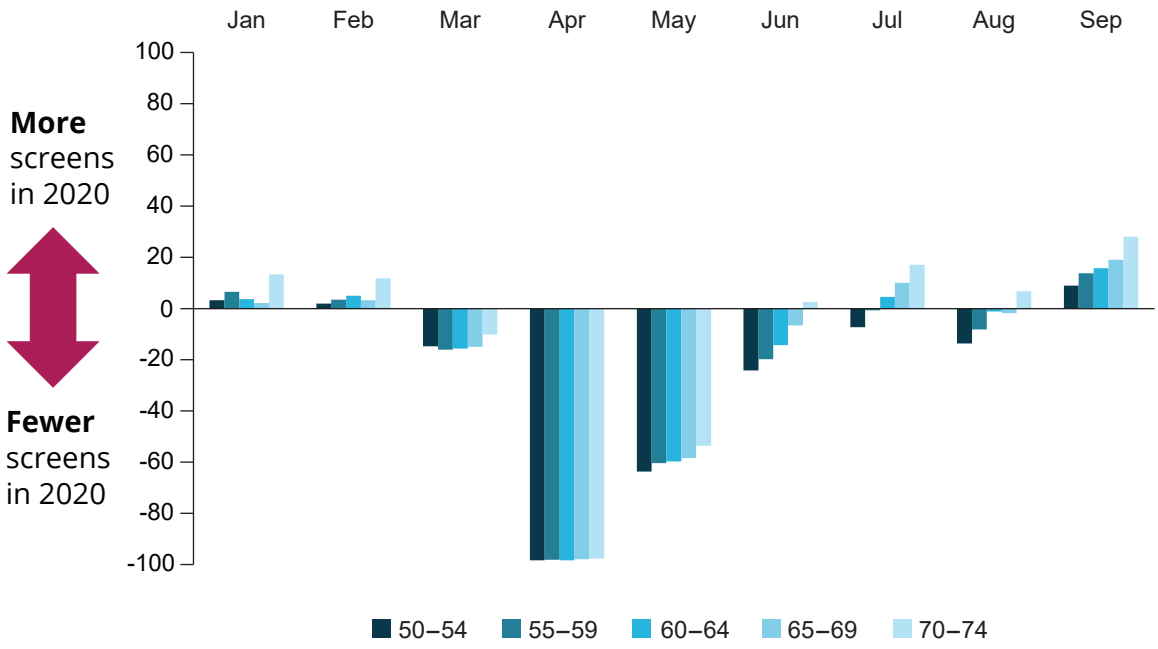


All women aged 40 and older are eligible to attend BreastScreen Australia, which is a larger cohort than the target age group of 50–74. Here, "Women under the age of 60" refers to women aged 40–59 and "Women aged 60 and older" is not restricted by an upper age limit.

Data by 5-year age groups confirm this trend:

- Younger women aged 50–54 were slower to return to pre-COVID-19 levels of screening following the easing of COVID-19 restrictions in July and August compared to older women.
- Older women aged 70–74 had the smallest decrease in the number of screening mammograms in 2020 compared to 2018, and returned to pre-COVID-19 levels of screening earlier than younger women.

Percentage difference in the number of screening mammograms in 2020 compared to 2018, by age group



How did the number of screening mammograms vary across states and territories?

Some states and territories were more affected by the COVID-19 pandemic than others. This is due to a number of factors including the restrictions imposed in those states and territories and the presence of COVID-19 'hot spots'. Due to the second wave, which resulted in a surge of cases, Victoria was one of the worst affected. Larger states and territories like New South Wales and Queensland, with higher population density in major cities in particular, were still affected to a greater extent than the smaller states and territories.

In 2020, all states and territories experienced their lowest number of screening mammograms performed per month in April and May, and most had reached high numbers of screens per month in August and September. The notable exception to this is Victoria, where the number of screening mammograms stayed lower over these months.

Restrictions in individual states and territories affected the number of screening mammograms able to be performed each month. Various jurisdictional social distancing and infection control guidelines and requirements across the country impacted resumption rates at BreastScreen services following initial closures.

How to interpret the heat map

The below table shows a heat map relating the number of screening mammograms in each month in 2018 and 2020 in each state and territory. For each state and territory, solid blue shading means there were no, or very few, screening mammograms performed in that month. Solid pink shading represents the most screening mammograms performed in a month (out of the reported months) for that state or territory. For example, in New South Wales, January–March 2020 are shaded in pale blues and pinks which indicates roughly average screening. This is then followed by April and May 2020 which are both solid blues and indicate a significant drop in screening. Finally, July–September are shaded in solid (or light) pink which shows that the screening in those months are some of the better months for participation in BreastScreen Australia and are comparable to the best months in 2018: May and August.

Heat map showing number of screening mammograms performed through BreastScreen Australia, by state, by month, women aged 50–74, 2018 and 2020

Low — Mid — High

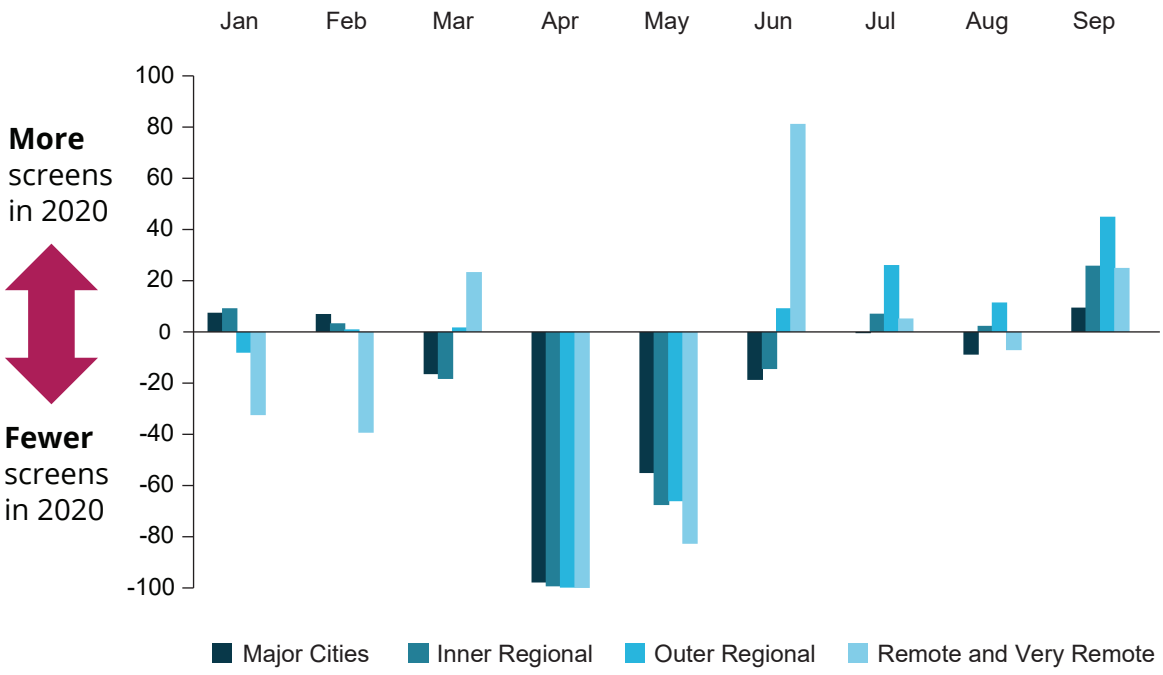
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
NSW	2018	22,561	25,825	27,029	23,495	29,639	24,822	26,937	28,776	25,550
	2020	23,631	27,597	23,551	0	6,637	23,318	29,129	27,817	29,524
Vic	2018	17,597	19,099	18,580	18,478	23,145	19,551	20,854	21,664	18,552
	2020	19,710	21,034	15,453	3	6,951	12,929	16,858	16,816	18,892
Qld	2018	16,659	17,989	16,386	14,331	17,931	17,623	16,206	17,321	15,213
	2020	16,985	18,858	15,578	38	10,413	15,552	19,293	19,216	19,859
WA	2018	7,755	8,804	9,127	8,340	9,961	8,324	9,056	9,778	7,389
	2020	7,017	7,780	7,605	633	8,132	9,200	10,733	9,648	9,579
SA	2018	5,851	6,674	6,905	6,279	8,527	7,167	6,371	8,456	7,495
	2020	6,411	6,911	4,924	78	2,714	4,897	6,551	8,542	8,584
Tas	2018	2,385	2,312	2,590	2,052	2,956	2,220	2,875	2,364	2,087
	2020	2,605	2,164	1,587	0	1,521	2,362	2,550	2,244	2,590
ACT	2018	907	1,245	1,443	1,259	1,432	1,301	1,166	1,549	1,781
	2020	1,234	1,424	1,333	364	1,394	1,539	1,585	1,454	1,751
NT	2018	253	279	325	308	727	577	600	413	329
	2020	366	374	308	0	243	685	577	639	543
Aus	2018	73,968	82,227	82,385	74,542	94,318	81,585	84,065	90,321	78,396
	2020	77,959	86,142	70,339	1,116	38,005	70,482	87,276	86,376	91,322

Trends in the number of screening mammograms vary across remoteness areas

The higher number of screens in June 2020 compared with 2018 in remote and very remote areas may be due to a combination of relatively few screening mammograms in June 2018 and a higher than usual number of screening mammograms in June 2020 following the lifting of suspension and return to service delivery. However, the number of screening mammograms in remote and very remote areas is small, which will result in an amplification of any differences.

BreastScreen services in more remote areas may have experienced greater disruption and taken longer to reinstate following the initial suspension of services, which may have impacted access to this service. Many states and territories also had to adjust their schedules to screen women whose appointments had been cancelled during the suspension, which makes it difficult to directly compare the number of screening mammograms each month in 2020 to the same month in 2018.

Percentage difference in the number of screening mammograms in 2020 compared to 2018, by remoteness area



Impact of COVID-19 on BreastScreen services in remote and very remote areas

State and territory BreastScreen services are dedicated to providing a high-quality service to all Australian women, which means reaching women who live in remote and very remote parts of Australia to ensure that these women are not excluded from breast cancer screens and their benefits.

State and territory BreastScreen services have mobile services that travel to remote and very remote communities. This is done according to a schedule so ensure that women are able to rescreen every two years. State and territory BreastScreen services also offer group bookings and assistance with transport to assist women to overcome difficulties with travelling long distances to attend BreastScreen.

As many Indigenous Australians live in remote and very remote locations, BreastScreen services offer services that are culturally sensitive to Aboriginal and Torres Strait Islander women such as group bookings, 'Indigenous women only' screening days, and the use of artwork and screening shawls featuring local Indigenous artists' work.

COVID-19 impacted the ability of BreastScreen services to reach women in remote and very remote areas in a range of ways.

When BreastScreen services were suspended in late March 2020, this included the suspension of mobile services to remote and very remote areas, which meant the same missed screening mammograms as in major cities and regional areas. However, there were added challenges with resumption of services and offering screening mammograms to both those women whose screening mammogram had been cancelled and women who were due for rescreening following resumption of services.

State and territory BreastScreen services faced different challenges, and applied a range of strategies in their aim to continue to providing BreastScreen services to women living in remote and very remote areas.

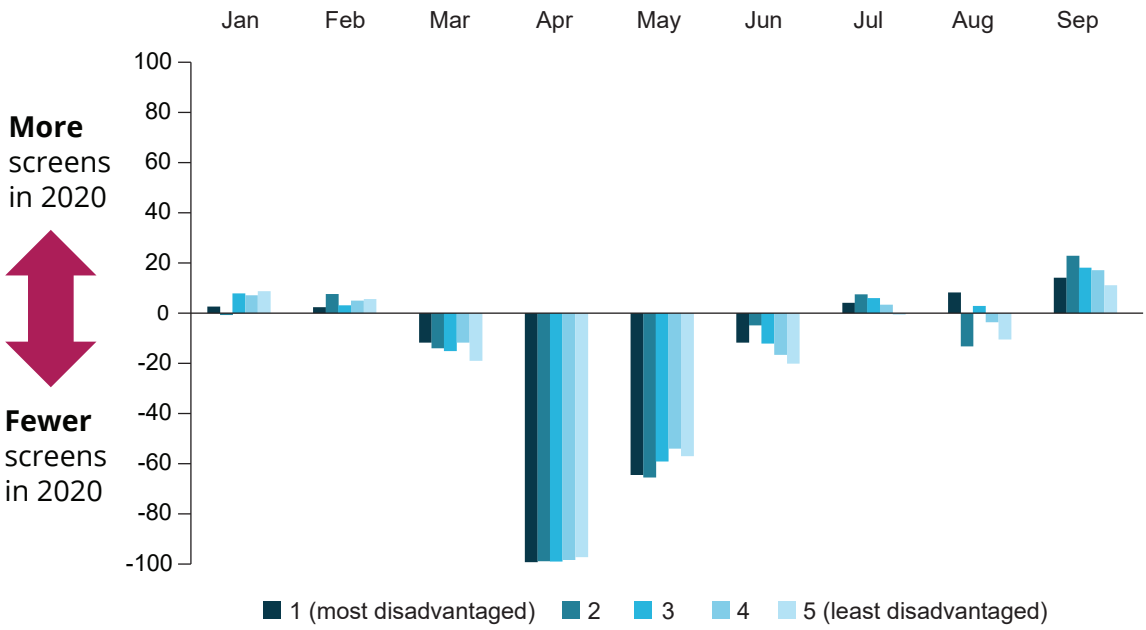
Following the disruption to the schedule for mobile services, strategies employed by BreastScreen services were influenced by individual state and territory circumstances, but included reallocating or prioritising mobile vans to regional and remote areas after the COVID-19 suspension to support the rescheduling of appointments and mobile van visits, delaying the existing mobile schedule and shifting this to later in the year, and allocating resources to screen additional women in regional areas or major cities when women from remote and very remote areas travelled to these areas for personal or medical reasons.

Some challenges could not be overcome. Changes to schedules were limited by the wet season in the north of Australia, and the closure of Aboriginal communities. Group bookings were also suspended. The Northern Territory faced a particular challenge due to the planned upgrade of their mobile unit severely affected by the closure of workplaces, interstate travel restrictions, and the second wave in Victoria that delayed delivery of key equipment for the upgrade.

Screening mammograms across socioeconomic areas

While there is some variation, the percentage difference is fairly similar across the socioeconomic areas.

Percentage difference in the number of screening mammograms in 2020 compared to 2018, by socioeconomic area



Indigenous Australians returned to screening following lifting of restrictions

Participation levels in BreastScreen Australia are typically lower in Indigenous women than in non-Indigenous women (38% of the population compared with 54% in those aged 50–74 in 2017–2018 (AIHW 2020c)).

The number of screening mammograms decreased equally for Indigenous and non-Indigenous Australians in April and May. Following the lifting of suspension and return to service delivery, there were proportionally more screening mammograms for Indigenous Australians, with non-Indigenous women only reaching this same level in September 2020. This may be related to some states and territories being able to reallocate or prioritise mobile vans to regional and remote areas.

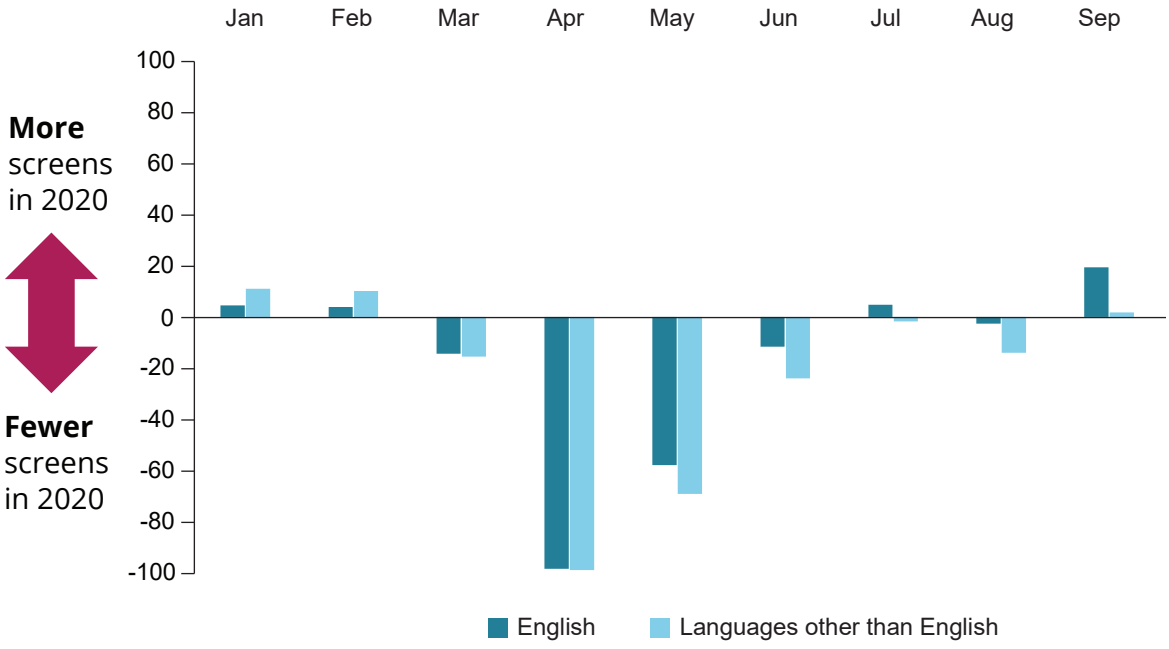
As for remote and very remote areas, however, the number of screening mammograms for Indigenous Australians is small, which will result in an amplification of any differences, and scheduling changes make month-to-month comparisons difficult.

Percentage difference in the number of screening mammograms in 2020 compared to 2018, by Indigenous status

Women who speak a language other than English slower to return to screening

Women who speak a language other than English at home typically have lower participation in BreastScreen Australia (45% compared with those who speak English only at 56% in 2017–2018 (AIHW 2020c)). The return of screening activity in 2020 to levels similar to those seen in 2018, following the April lockdown, differed between these two groups. Women who speak a language other than English showed a slower return to screening compared with women who speak only English at home.

Percentage difference in the number of screening mammograms in 2020 compared to 2018, by main language other than English spoken at home



Fewer women had their first screening mammogram through BreastScreen Australia during COVID-19

BreastScreen data are frequently reported according to whether or not the data relate to a woman's first screening mammogram through BreastScreen Australia.

This is because a woman is more likely to have a breast cancer detected the first time she visits a BreastScreen service than in subsequent visits, as this first visit detects prevalent cancers that may have been present for some time rather than incident cancers that have grown between screens.

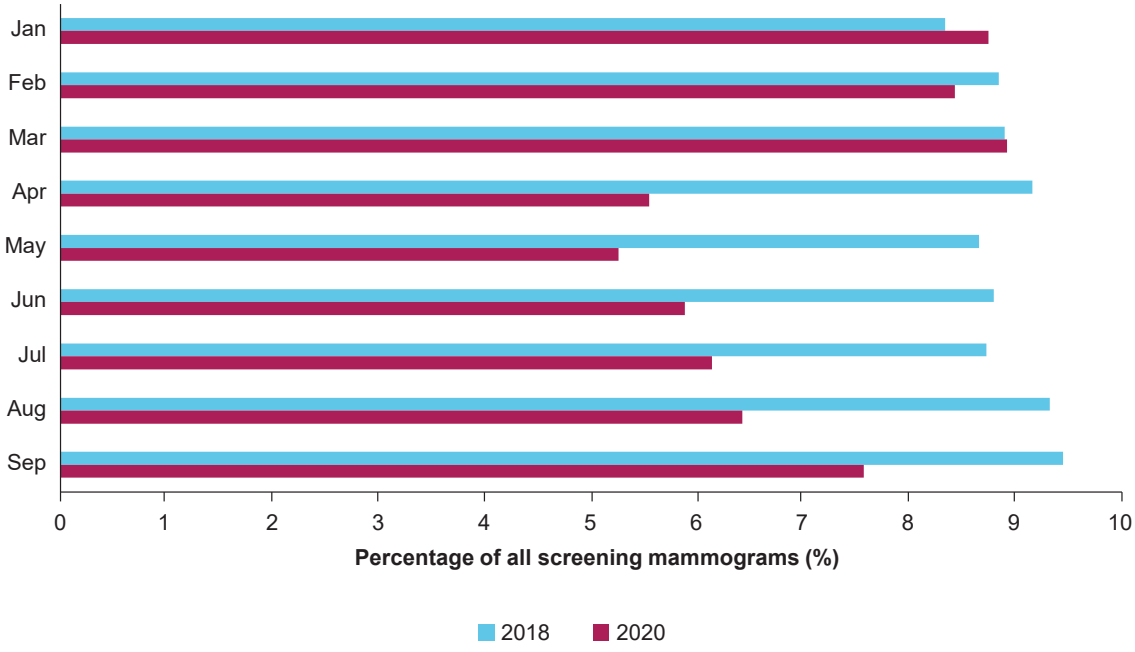
In the context of COVID-19, it is useful to investigate the proportion of screening mammograms that were performed for women who had never previously screened (that is, were attending for their first screening mammogram) through BreastScreen Australia.

After restrictions were introduced in April 2020, the proportion of screening mammograms performed for women who had never previously screened was lower than in 2018. While this proportion then increased from June to September 2020, it was still lower than 2018 proportions for all months from April to September 2020.

The suspension of all BreastScreen services from late March to late April–early May 2020, followed by a staged approach to resumption of services that involved longer appointments and precautionary measures, resulted in a large number of missed screening mammograms. This caused significant operational constraints for BreastScreen services to manage demand for breast cancer screening, which meant that BreastScreen services had to prioritise rescreening existing clients (including those whose screening mammogram had been cancelled, those who were in a higher risk category, and those due for their rescreen) rather than recruiting new clients.

These factors led to the lower proportion of screening mammograms performed for women who had never previously screened apparent in the figure below. This is likely also a factor in the lower attendance of younger women noted in the earlier section that investigated effects of COVID-19 on age.

Proportion of screening mammograms performed for women who had never previously screened, by month, 2018 and 2020



Impact of COVID-19 on the National Cervical Screening Program

About the National Cervical Screening Program

The National Cervical Screening Program is Australia's cervical cancer screening program. It aims to reduce cervical cancer cases, illness, and deaths by detecting precancerous abnormalities before any potential progression to cervical cancer.

The screening test for the National Cervical Screening Program is a Cervical Screening Test , which is a human papillomavirus (HPV) test, followed by a cytology (examination of cells) test if HPV is found. Cervical Screening Tests are most commonly conducted by a general practitioner (GP). While GP services continued during the pandemic, there was an increased use of telehealth consultations, and cervical screening tests require in-person consultations.

People aged 25–74 are targeted by the National Cervical Screening Program for 5-yearly screening (in this context 'people' refers to people with a cervix which may include women, transgender men, intersex people, and non-binary people, who are all eligible to screen).

Program changes make direct comparisons inappropriate at this stage

The number of Cervical Screening Tests conducted was expected to be lower in 2020 than in 2019, irrespective of the COVID-19 pandemic and subsequent restrictions (as modelled in Smith et al. 2016). This is largely due to the program changing from 2-yearly Pap tests to 5-yearly Cervical Screening Tests from December 2017, as most screening people were due for their first HPV test 2 years after their last Pap test (during the years 2018 and 2019), with screening in 2020 mainly comprised of people overdue for their first HPV test and those newly-screening.

This makes it inappropriate to directly compare 2020 data to 2019 data.

While not able to be directly compared, the number of tests in 2019 is shown alongside 2020 to provide context of cervical screening trends that could also be expected to occur in 2020 (for example, there are typically fewer tests performed around Easter and Christmas).

Data considerations

The number of tests conducted was expected to be lower in 2020 than in 2019, irrespective of the COVID-19 pandemic and subsequent restrictions due to a change from 2-yearly to 5-yearly screens.

Only primary screening HPV tests have been included; follow-up tests for people who had a positive screening test or treatment for HPV infection, have been excluded.

All data are reported for the target age group, people aged 25–74.

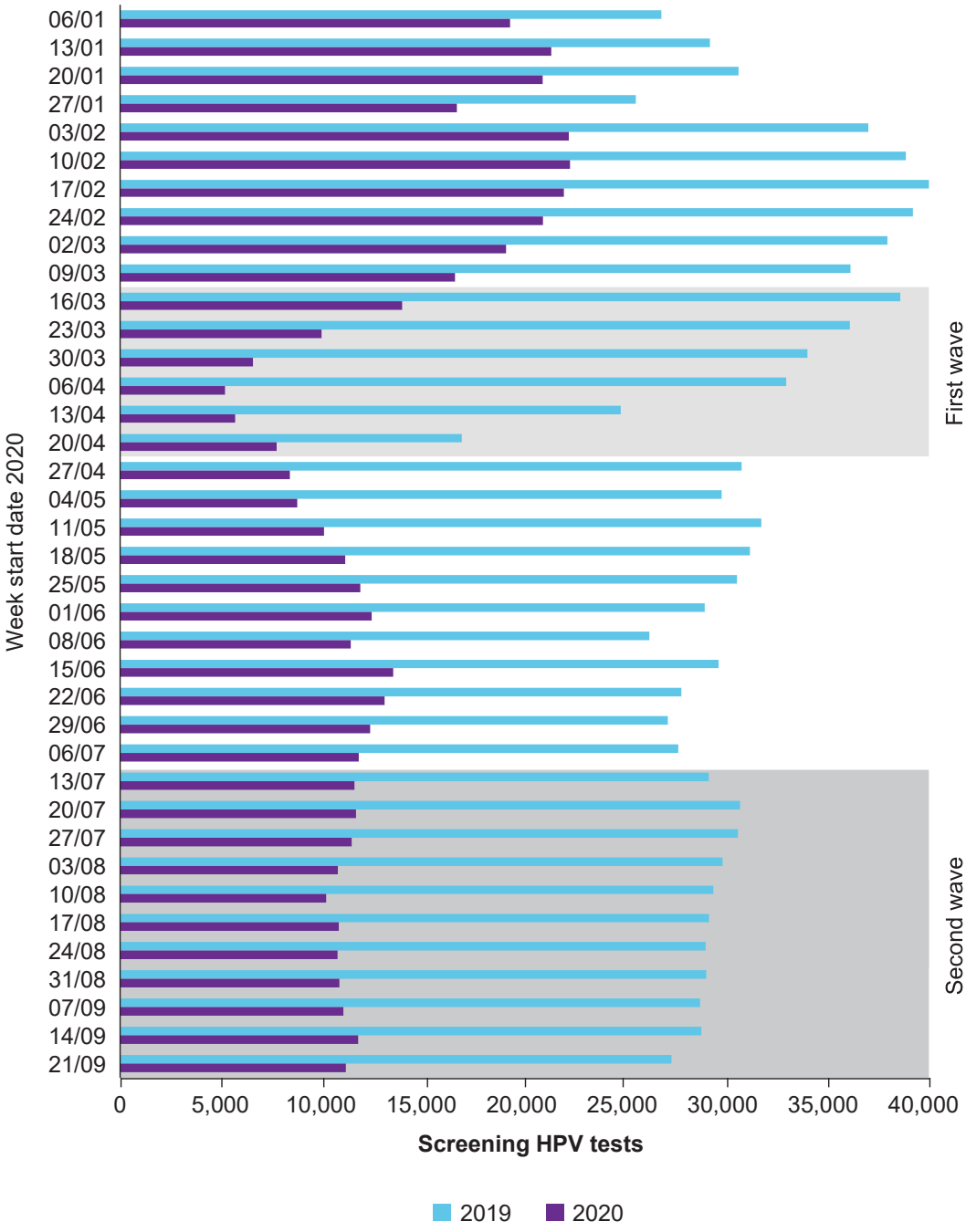
How did the number of screening HPV tests vary week to week?

The expected trend of fewer screening HPV tests in 2020 compared with 2019 due to the change from 2-yearly to 5-yearly screening is evident.

Data show a decline in the number of screening HPV tests from the second half of March 2020. The number of screening HPV tests remained low throughout April, during which there were fewer than 30,000 screening HPV tests carried out. The number of screening HPV tests increased in May and June, with a slight decrease in July and August, before increasing again in September 2020. Even with these differences, the number of screening HPV tests appears to have levelled off in July to September 2020.

While there were fewer screening HPV tests in 2020 compared with 2019, the impact of COVID-19 cannot be quantified without further years of data (as 2020 is the first year impacted by the transition to 5-yearly screening).

Number of screening HPV tests by week

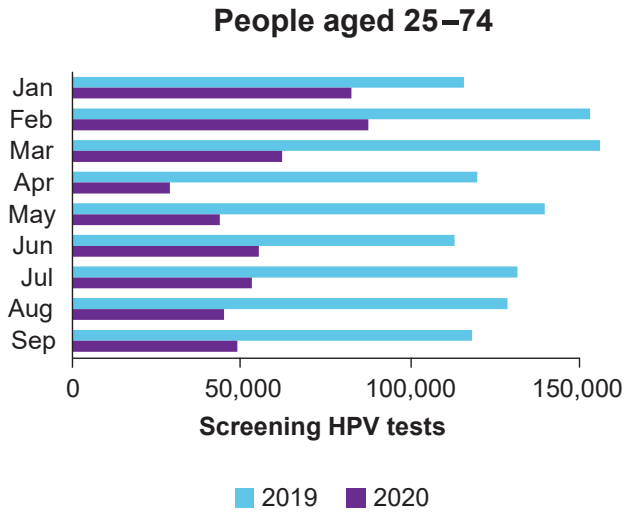


The two grey shaded sections indicate the period of tightened restrictions during Australia's 'first wave' and the period of tightened restrictions in Victoria during the 'second wave'.

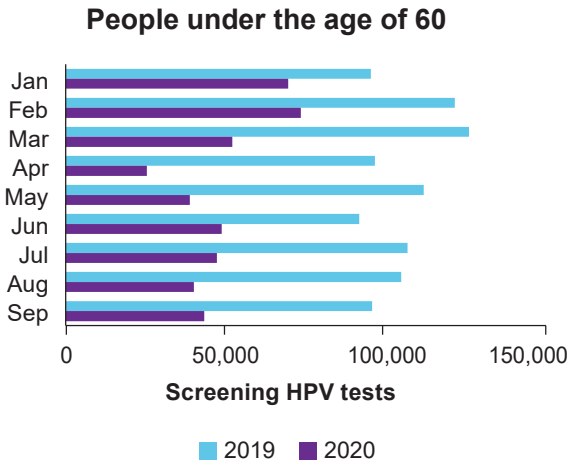
2020 numbers should not be directly compared to 2019 numbers, which are shown only to provide context for trends.

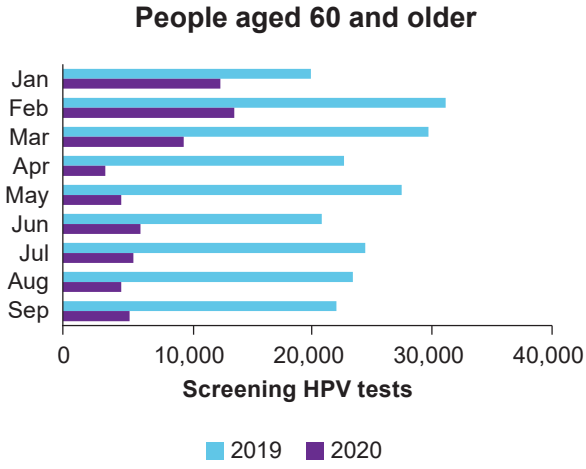
Older people had fewer screening HPV tests during COVID-19

The largest decline in the number of screening HPV tests was seen in April 2020 for all age groups.



The number of screening HPV tests is shown separately for people **aged 60 and older**—those determined to be at significant risk of severe illness due to COVID-19—and for people **under the age of 60**.



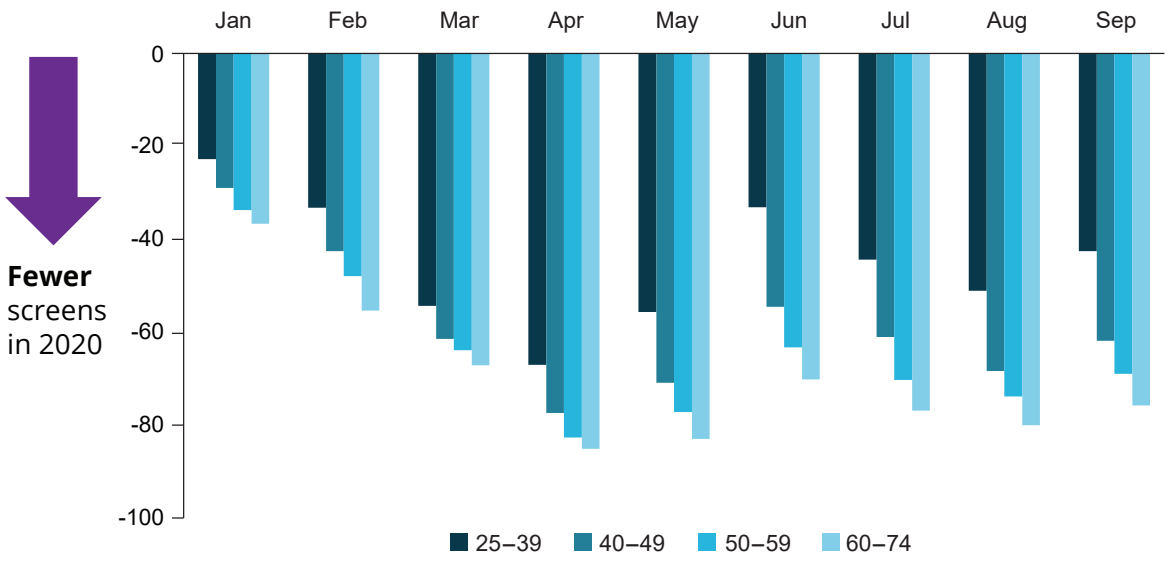


2020 numbers should not be directly compared to 2019 numbers, which are shown only to provide context for trends.

People aged less than 60 were split into three age groups to better understand age effects.

- Younger people aged 25–39 had a 'bounce back' effect in June 2020 following the easing of COVID-19 restrictions, with proportionately more screening HPV tests performed in this month in 2020 compared to 2019 than older people.
- People aged 60–74 had proportionately fewer screening HPV tests in 2020, compared with in 2019, for all months.

Percentage difference in the number of screening HPV tests in 2020 compared to 2019, by age group



2020 numbers should not be directly compared to 2019 numbers, which are shown only to provide context for trends.

Number of screening HPV tests reduced during lock down for all states and territories

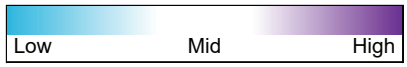
Patterns in the number of screening HPV tests and the impact of the COVID-19 pandemic cannot be fully ascertained, as many other factors were affecting the number of screening HPV tests in 2019 and 2020.

Across Australia, both 2019 and 2020 trends shower higher numbers of screens earlier in the year. However, while the month with the fewest number of screens in 2019 varied across states and territories, in 2020 April was the month with the fewest screening HPV tests performed for all states and territories. This coincides with the COVID-19 restrictions introduced at the end of March.

How to interpret the heat map

The below table shows a heat map relating the number of screening HPV tests in each month in 2019 and 2020 within in each state. This heat map is different from those for both BreastScreen Australia and the National Bowel Cancer Screening Program in their own sections of this report. To allow for better analysis of trends for each state, each year is shaded and scaled on its own. This means that while dark purple corresponds to the highest number of screening HPV tests in a month, it is only the highest in that year. The solid blue is the lowest number of screens per month for that year but not necessarily close to zero. This table should be interpreted differently to the other heat maps in this report.

Heat map of screening activity through the National Cervical Screening Program, by state, by month, people aged 25–74



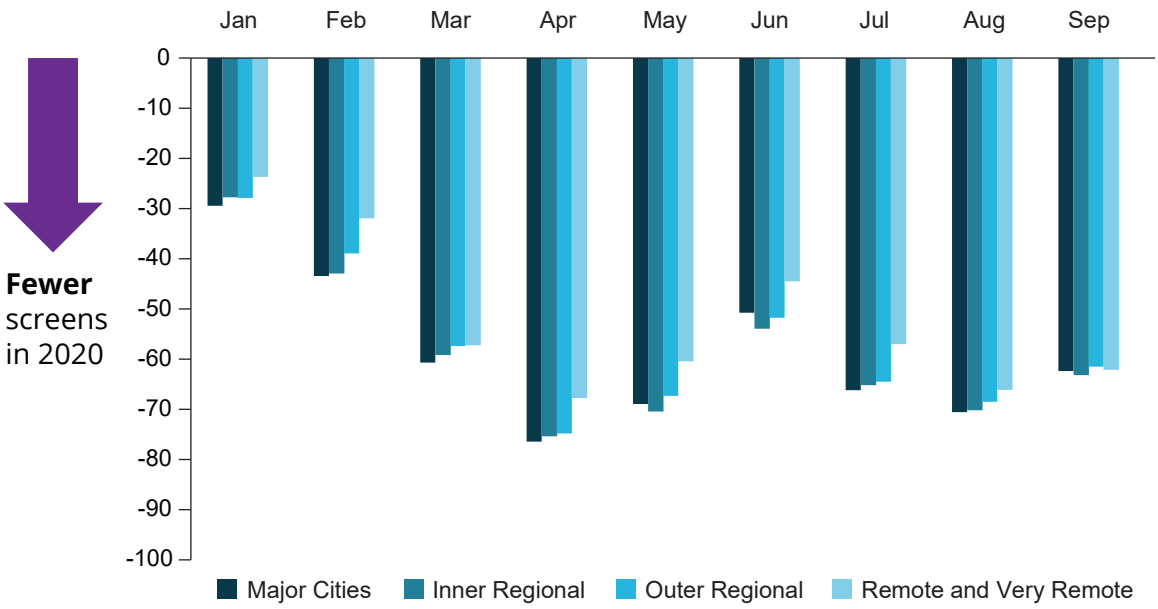
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
NSW	2019	35,419	48,200	49,004	35,968	42,007	33,159	38,965	38,377	36,443
	2020	25,427	27,810	19,998	9,304	13,845	17,467	15,105	13,357	15,152
Vic	2019	31,569	41,282	41,123	32,633	38,900	30,649	36,903	34,677	30,544
	2020	21,760	23,029	15,543	6,884	10,659	13,828	9,530	7,114	10,178
Qld	2019	22,944	29,826	31,551	23,647	27,826	23,810	26,762	26,218	24,145
	2020	16,648	17,144	12,571	6,229	8,978	11,794	9,864	8,162	9,241
WA	2019	12,510	16,101	16,536	13,062	15,173	11,899	14,309	14,152	12,691
	2020	9,248	9,273	6,571	2,901	5,005	5,877	4,996	4,567	4,260
SA	2019	8,705	11,624	11,378	8,991	10,477	8,990	9,628	9,783	8,995
	2020	5,866	6,303	4,568	2,022	2,975	3,733	3,303	2,978	3,171
Tas	2019	2,162	2,814	3,300	2,757	3,105	2,510	2,947	2,895	2,662
	2020	1,609	1,782	1,372	524	805	1,145	1,172	947	1,023
ACT	2019	2,148	2,659	2,744	2,275	2,472	2,196	2,469	2,441	2,151
	2020	1,449	1,535	1,209	544	962	1,132	1,109	944	1,023
NT	2019	949	1,277	1,449	1,110	1,232	1,047	1,163	1,222	1,261
	2020	701	977	779	521	613	683	519	455	570
Aus	2019	117,281	155,096	158,136	121,284	141,569	114,474	133,389	130,346	119,786
	2020	83,553	88,645	62,816	29,177	44,136	55,851	53,717	45,421	49,393

2020 numbers should not be directly compared to 2019 numbers, which are shown only to provide context for trends.

Screening HPV tests across remoteness areas

While people in remote and very remote areas were slightly less impacted than other remoteness area over the months April–July 2020, overall the percentage difference is fairly similar across remoteness areas.

Percentage difference in the number of screening HPV tests in 2020 compared to 2019, by remoteness area

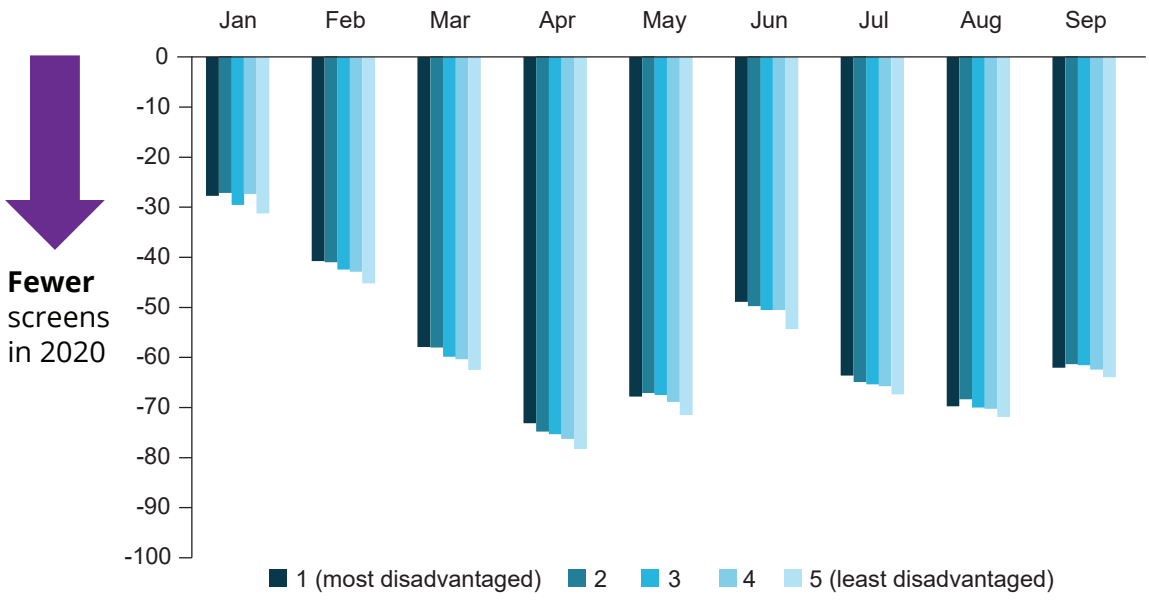


2020 numbers should not be directly compared to 2019 numbers, which are shown only to provide context for trends.

Screening HPV tests across socioeconomic areas

While there is some variation, the percentage difference is fairly similar across the socioeconomic areas.

Percentage difference in the number of screening HPV tests in 2020 compared to 2019, by socioeconomic area



2020 numbers should not be directly compared to 2019 numbers, which are shown only to provide context for trends.

Impact of COVID-19 on the National Bowel Cancer Screening Program

About the National Bowel Cancer Screening Program

The National Bowel Cancer Screening Program is Australia's bowel (colorectal) cancer screening program. The relatively slow development of bowel cancer means that precancerous polyps and early stage cancers can be screened for and treated. Screening is done via a non-invasive test, known as an Immunochemical Faecal Occult Blood Test (iFOBT), which can detect microscopic amounts of blood in a stool sample that may indicate an abnormality.

Australians aged 50–74 are eligible to be sent an iFOBT kit. Only those invited and sent a kit can participate, and do so by completing the kit and posting it to the program pathology laboratory for results. People do not need to leave their homes to complete the test or get their results, however, they do need to mail their test to the laboratory.

Australians may only participate in the National Bowel Cancer Screening Program if they are invited

Australians may only participate in the program if they are invited and sent an iFOBT kit. Due to factors including transport times and weather (which can affect the quality of the sample returned for laboratory testing), there are some fluctuations in the number of screening kits sent out each month. Fluctuations became more apparent from late 2019 through 2020.

Fluctuations in the number of invitations in turn impact the number of completed kits that are returned in the ensuing weeks and months.

To aid in interpretation, data on the number of invitations is provided alongside the number of bowel screening kits returned.

Data considerations

The National Bowel Cancer Screening Program has also broadened its target age groups in recent years, and in early 2020 finalised the process of increasing the frequency of testing. This has led to testing kits being sent to more people in recent years.

This, combined with invitation fluctuations, can make it difficult to assess clear patterns in the number of participants each month, and in particular during the COVID-19 pandemic.

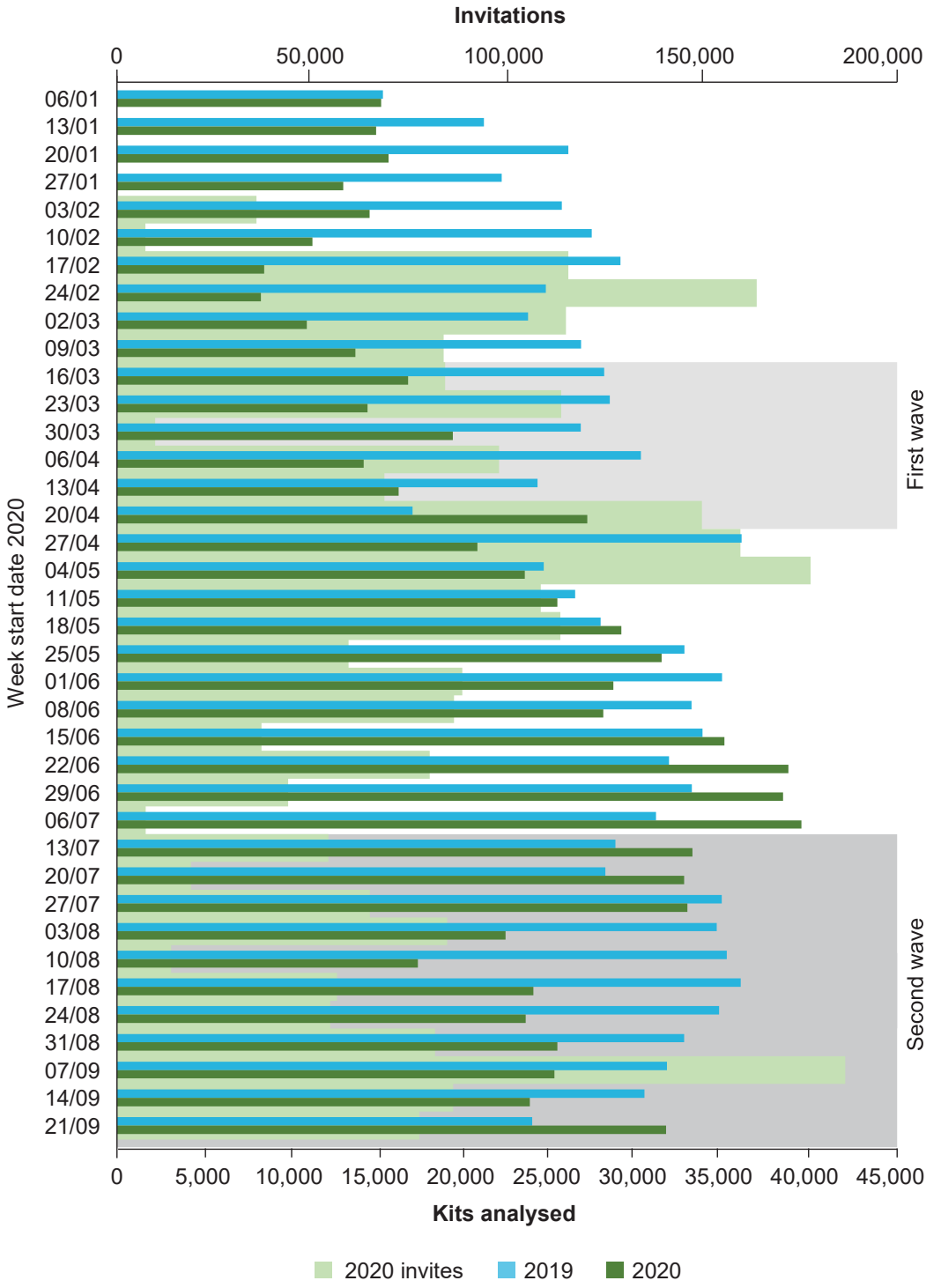
In this report, **data are reported for the target age group, that is, people aged 50–74**.

How did the number of bowel screening tests vary week to week?

No clear patterns directly correlating with the COVID-19 pandemic can be seen from the data. The number of kits returned was, at times, lower in 2020 than in 2019, however, there may have been other factors behind this.

The number of kits returned rose around the time restrictions first started to ease. This may have been due to a greater number of invitations sent in the preceding months. Likewise, a decrease in the number of kits returned in August and September may have been due to a drop in the number of invitations sent in June and July.

Number of iFOBT kits returned by week

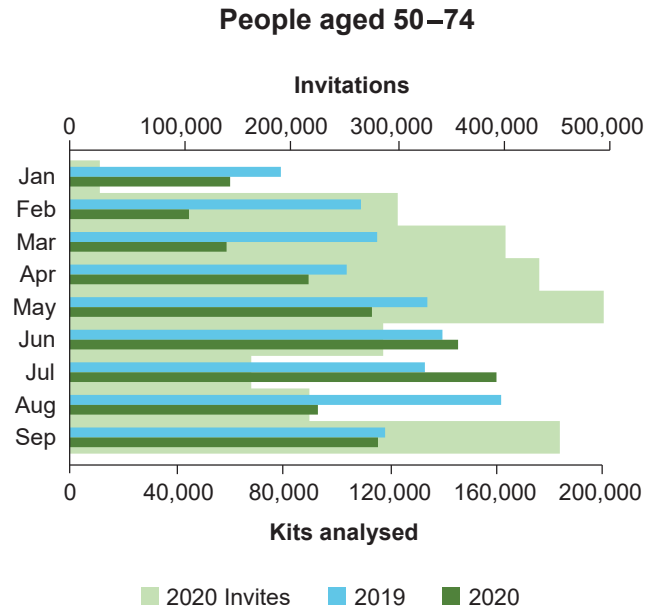


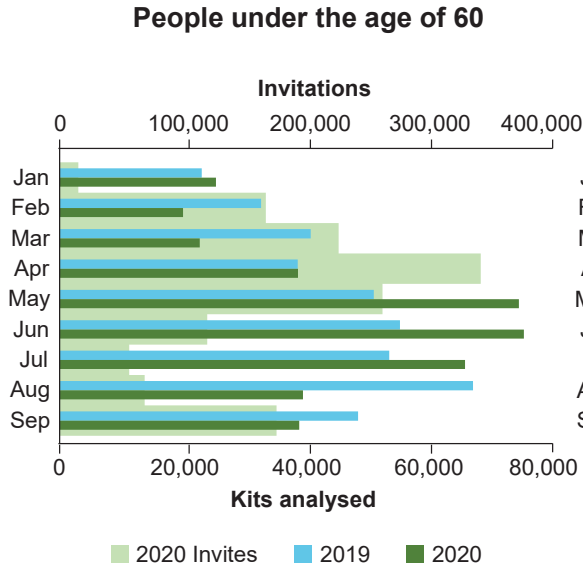
The light green shading shows the number of invitations sent each week, to provide context for the number of screening tests.

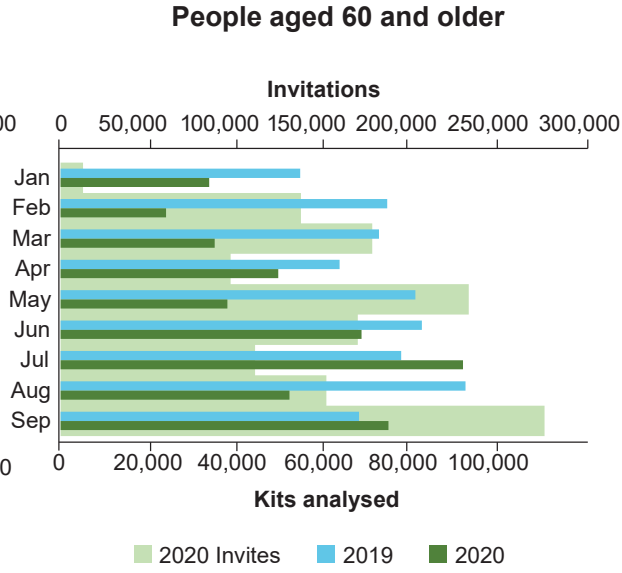
The two grey shaded sections indicate the period of tightened restrictions during Australia's 'first wave' and the period of tightened restrictions in Victoria during the 'second wave'.

Patterns in number of bowel screening tests by age

Fluctuations in the number of invitations sent in 2020 that peaked for most age groups in March–May makes it difficult to determine if there was an effect of COVID-19 on the number of kits returned in 2020 compared with 2019.

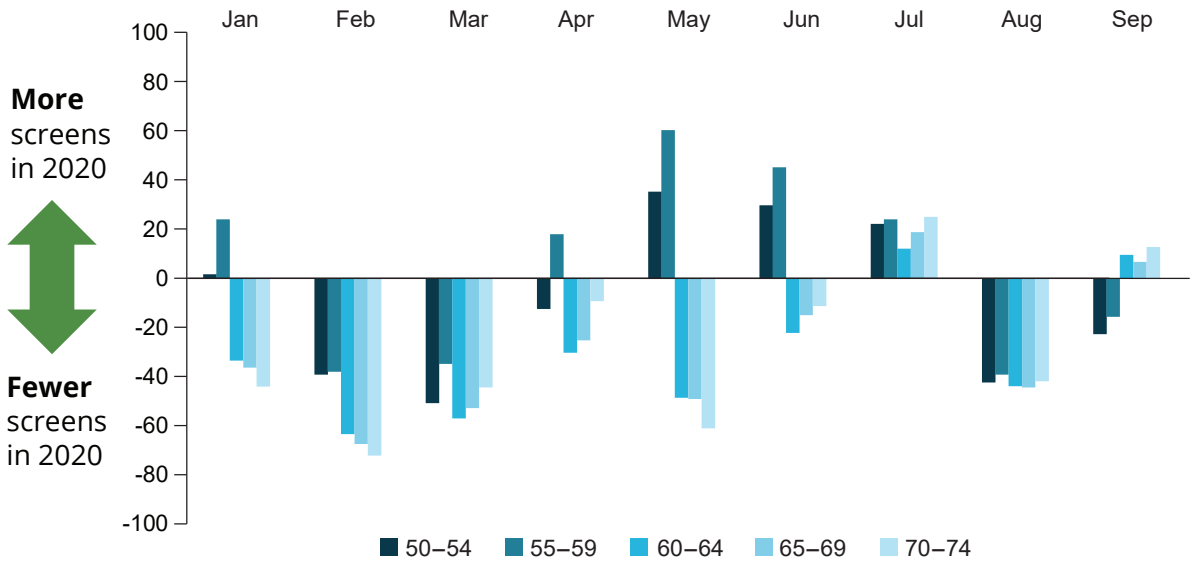






The differences between 2019 and 2020 screening kits returned presented in the graph below shows no clear pattern across age groups.

Percentage difference in the number of iFOBT kits returned in 2020 compared to 2019, by age group



How did the number of bowel screening tests vary by state and territory?

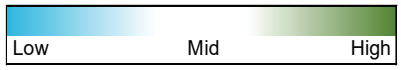
In 2019 most jurisdictions follow a similar pattern with low number of kits returned in the early months and higher numbers from May. In 2020, for most jurisdictions these higher kit returns start a little later in June and drop of again in August.

There is no apparent effect of either the initial introduction of national restrictions in April, or the second wave and surge of cases in Victoria in July and August.

How to interpret the heat map

The heat map below shows a comparison of the number of iFOBT tests returned in each month in 2019 and 2020 for each state or territory. Solid blue shading shows the lowest number of kits returned in any month across the two years for a given state. Similarly, solid green shows the highest number of returned kits in a month.

Heat map of screening kits returned through the National Bowel Cancer Screening Program, by state, by month, people aged 50–74, 2019–2020

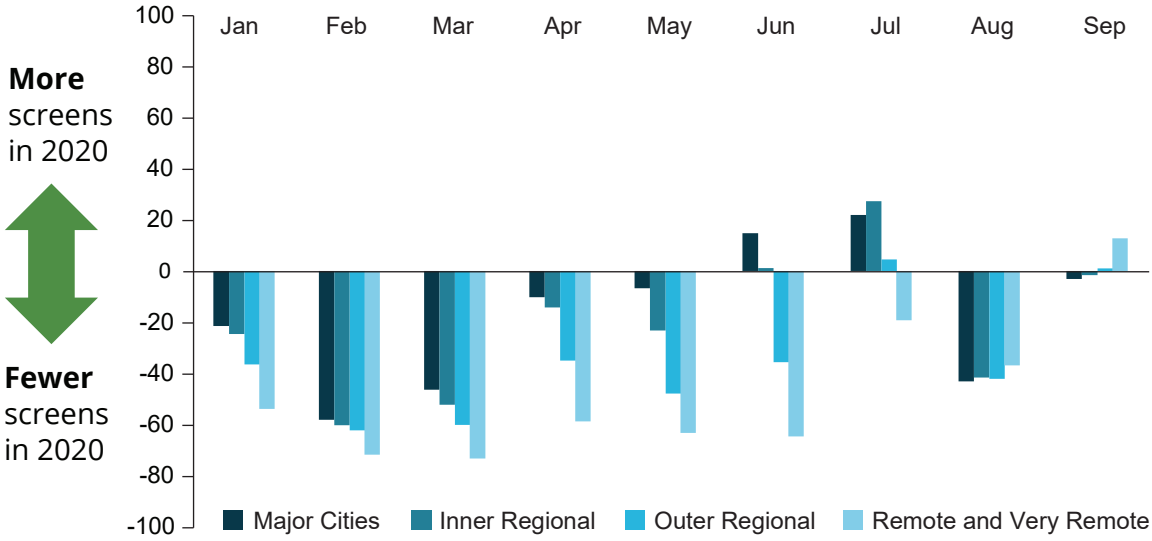


		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
NSW	2019	24,029	36,881	37,081	29,649	40,314	36,142	35,273	48,178	36,067
	2020	19,060	16,342	21,746	35,467	40,186	49,695	51,751	29,267	32,704
Vic	2019	21,281	31,839	32,957	30,283	37,309	38,622	33,952	36,369	27,977
	2020	15,316	11,484	19,225	27,034	34,696	41,066	42,965	22,391	31,087
Qld	2019	15,713	17,762	20,425	20,105	24,871	29,103	27,980	37,204	25,947
	2020	10,867	7,389	7,309	13,085	17,737	24,086	29,239	18,652	25,482
WA	2019	8,974	7,781	9,907	10,803	14,990	18,057	19,775	21,823	14,919
	2020	6,857	3,806	3,028	4,046	8,806	13,419	16,458	10,379	13,797
SA	2019	6,319	10,783	10,633	9,460	11,594	12,466	11,306	12,554	9,451
	2020	6,291	4,075	5,411	6,778	8,737	11,994	13,232	7,695	8,453
Tas	2019	2,126	3,275	3,730	3,056	3,841	3,758	3,631	3,981	2,793
	2020	1,454	1,007	1,776	2,712	2,682	4,752	4,532	2,839	2,991
ACT	2019	1,139	1,830	1,675	1,609	1,971	2,145	2,007	2,841	2,131
	2020	1,058	1,154	1,077	1,657	1,965	2,454	2,819	1,715	1,712
NT	2019	674	519	435	348	965	1,352	1,047	1,025	567
	2020	69	66	45	38	86	138	1,119	1,371	941
Aus	2019	80,255	110,670	116,843	105,313	135,856	141,645	134,971	163,975	119,852
	2020	60,972	45,323	59,617	90,817	114,895	147,604	162,116	94,309	117,167

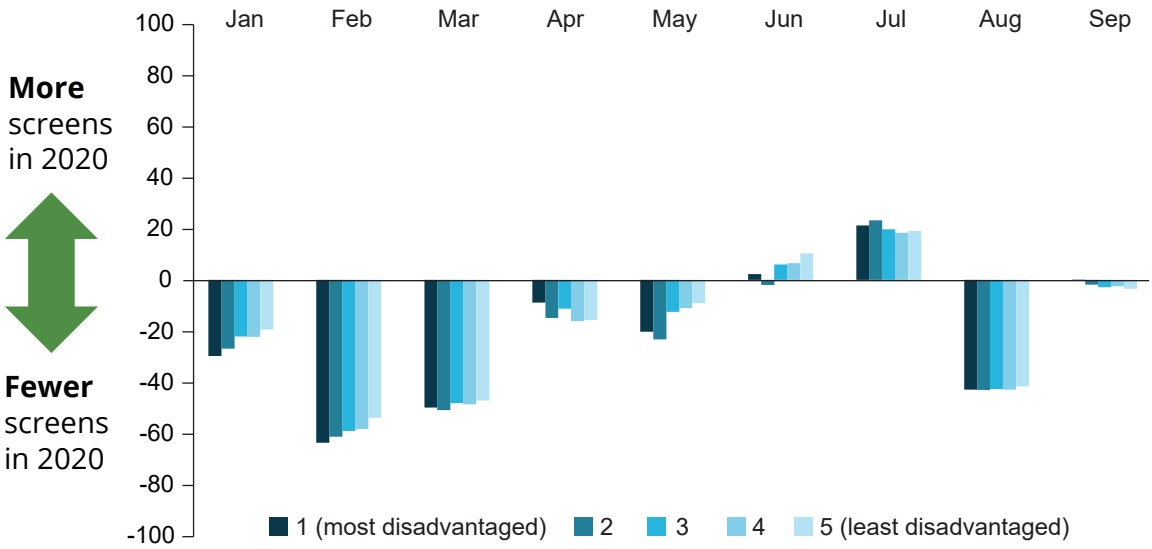
How did the number of bowel screening tests vary by remoteness area and socioeconomic area?

Fluctuations in the number of invitations sent in 2020 makes it difficult to determine if COVID-19 had an effect on the number of bowel screening kits returned in 2020 compared with 2019 across remoteness areas or socioeconomic areas.

Percentage difference in the number of iFOBT kits returned in 2020 compared to 2019, by remoteness area



Percentage difference in the number of iFOBT kits returned in 2020 compared to 2019, by socioeconomic area



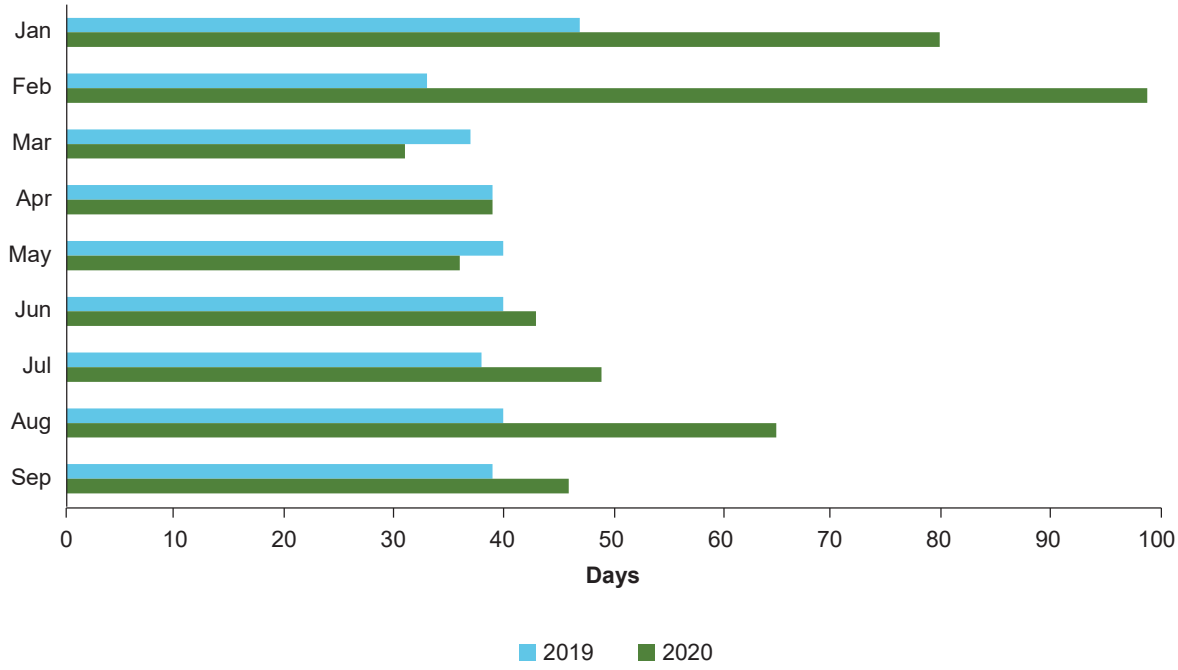
What was the effect of COVID-19 on the time between invitation sent and kit return?

To participate in the National Bowel Cancer Screening Program a person must be invited to do so by being sent a bowel screening kit. Median time between when an invitation was sent and a completed kit returned was calculated according to the month in which the kit was returned. A higher median time during the months most affected by COVID-19 restrictions could indicate that people who received an invitation some time ago decided to complete and return the kit due to having more time at home during the restrictions.

While relatively consistent in 2019, this was higher in 2020 in January and February, and around August.

However, it is difficult to interpret the effect of COVID-19 on the median time between invitation and kit return because this is higher in periods where fewer invitations were sent, as there are fewer kits that can be returned soon after invitation. This is apparent in January and February 2020 in particular, which follow the transfer of bowel screening data into the National Cancer Screening Register in November 2020, and thereafter a large drop in the number of invitations sent in the months that followed, with invitations returning to higher levels from mid-February 2021. This may also explain the higher median time around August 2020, as the number of invitations sent was notably lower throughout July 2020.

Median number of days between bowel screening invitation sent and kit returned, 2019 and 2020



Spotlight on Victoria's second wave

After Australia's success in quickly flattening the curve of infection earlier in the year, Victoria's cases rose again in what has come to be known as the 'second wave'. To combat this in Victoria, tightened restrictions were introduced on 9 July, with the highest level of restrictions (Melbourne to Stage 4 and regional Victoria to Stage 3) introduced from 2 August 2020. While there was some easing of restrictions on 13 September and again on 27 October, significant restrictions were only relaxed in late November 2020.

While all screening programs were available to the Victorian public during the second wave there are a number of reasons people would choose not to participate during this time. Given the impact of the first wave on cancer screening in Australia, there is particular interest in understanding if and how screening may have been impacted by the second wave in Victoria.

How did the number of screening tests vary week to week?

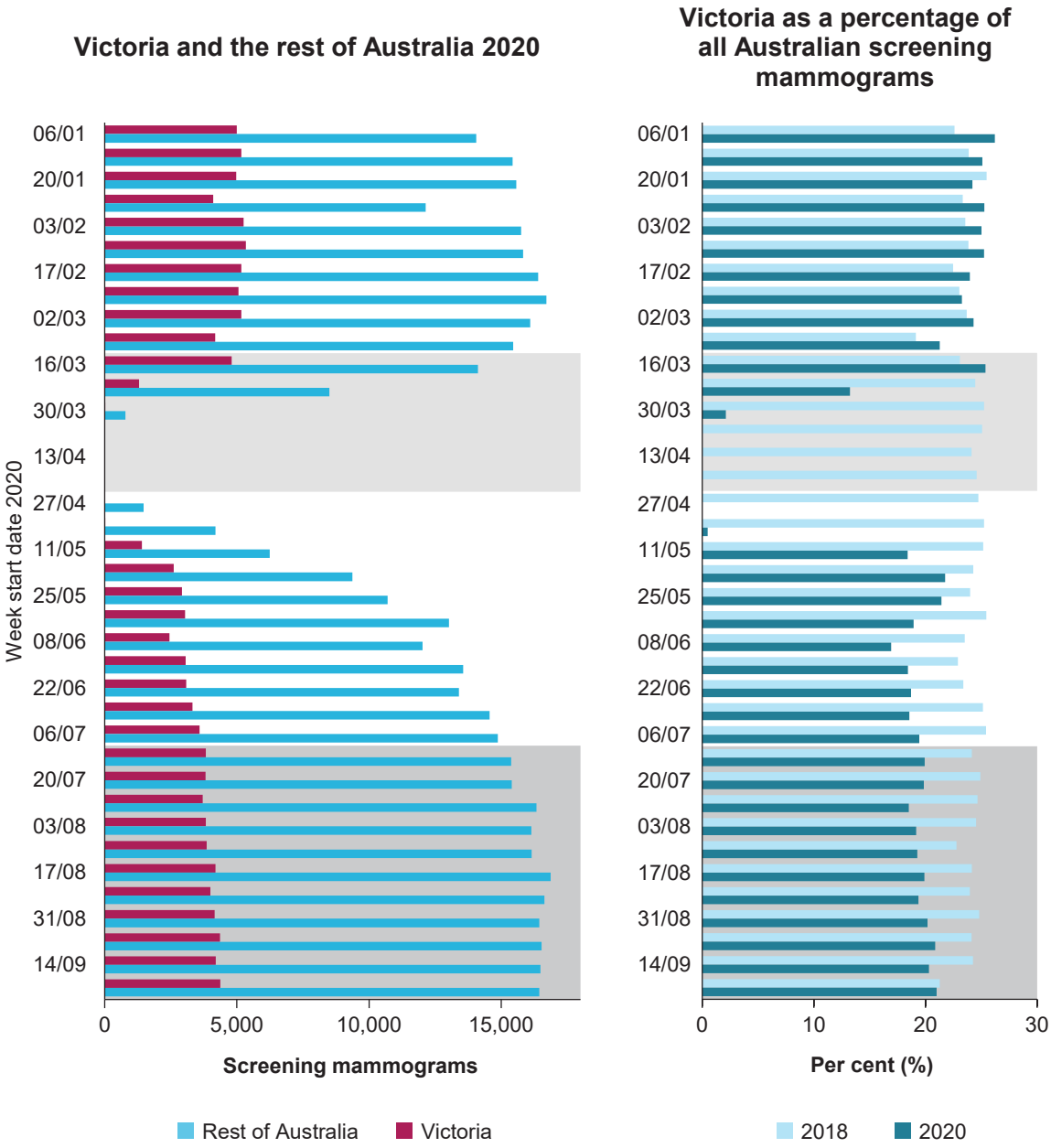
Victoria is the second largest state or territory by population, in Australia, so it contributes a large number to Australia's weekly screening totals. Because of this, national trends can be noticeably affected by trends in Victoria.

To examine the effect of the second wave in Victoria, the number of screening tests in Victoria are presented alongside the rest of Australia. Further, as VIctoria makes up a significant percentage of all Australian screens, the right hand graph in each of the below pairs is a graph that compares the percentage of screens performed in Victoria, out of all screens performed in Australia for that week, for the comparable years for each program.

BreastScreen screening mammograms in Victoria

There appears that there was only a minimal effect, if any, of the second wave on the number of screening mammograms performed in Victoria.

Screening mammograms performed through BreastScreen Australia in Victoria and the rest of Australia, by week, women aged 50–74, 2020

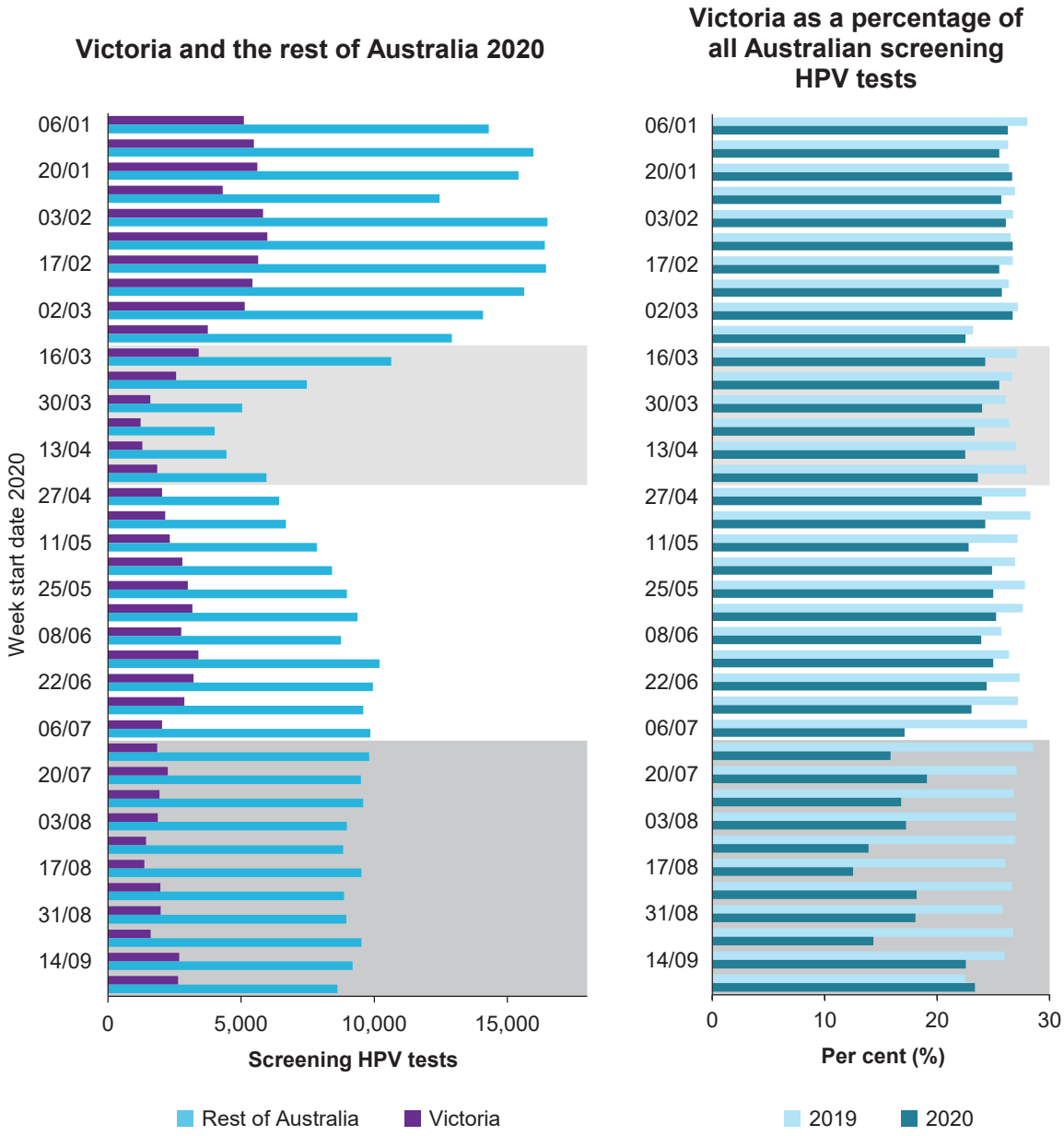


The two grey shaded sections indicate the period of tightened restrictions during Australia's 'first wave' and the period of tightened restrictions in Victoria during the 'second wave'.

Cervical screening HPV tests in Victoria

The number of screening HPV tests in Victoria were proportionately lower than the number of screening HPV tests in the rest of Australia in July and, particularly, August 2020, which may be an effect of the second wave dissuading people from attending face-to-face appointments required for cervical screening.

Screening HPV tests performed in Victoria and the rest of Australia, by week, people aged 25–74, 2020



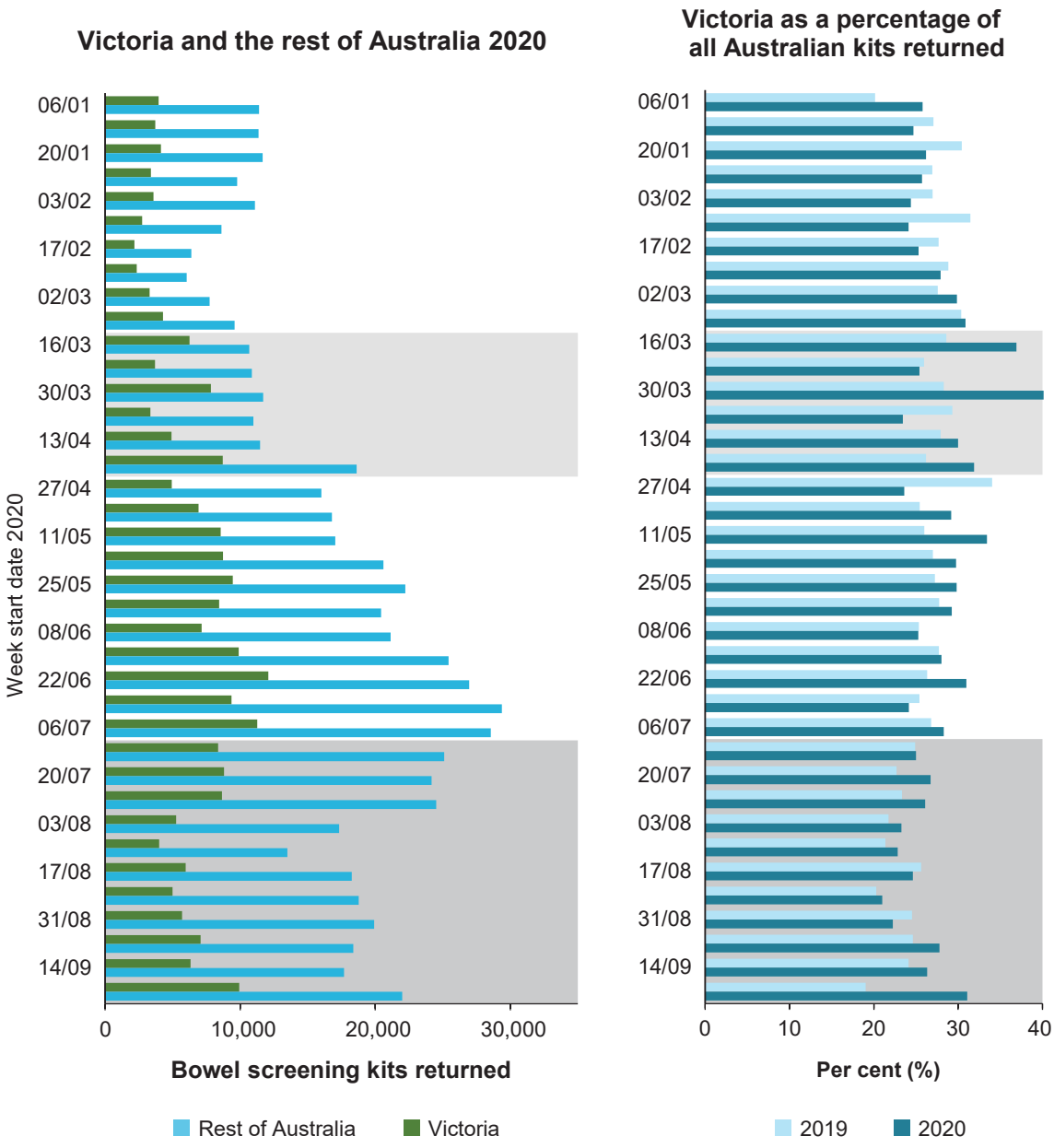
The two grey shaded sections indicate the period of tightened restrictions during Australia's 'first wave' and the period of tightened restrictions in Victoria during the 'second wave'.

2020 numbers should not be directly compared to 2019 numbers, which are shown only to provide context for trends.

Bowel screening kits returned in Victoria

The National Bowel Cancer Screening Program in Victoria had the same wide fluctuation in number of iFOBT kits returned as the rest of Australia. There was a more pronounced drop in screening kits returned in the first week of June, but the turbulent nature and dependence on invitations of the program means that it is not possible to determine the effect COVID-19 had on bowel cancer screening in Victoria.

Bowel screening kits returned in Victoria and the rest of Australia, by week, people aged 50–74, 2020



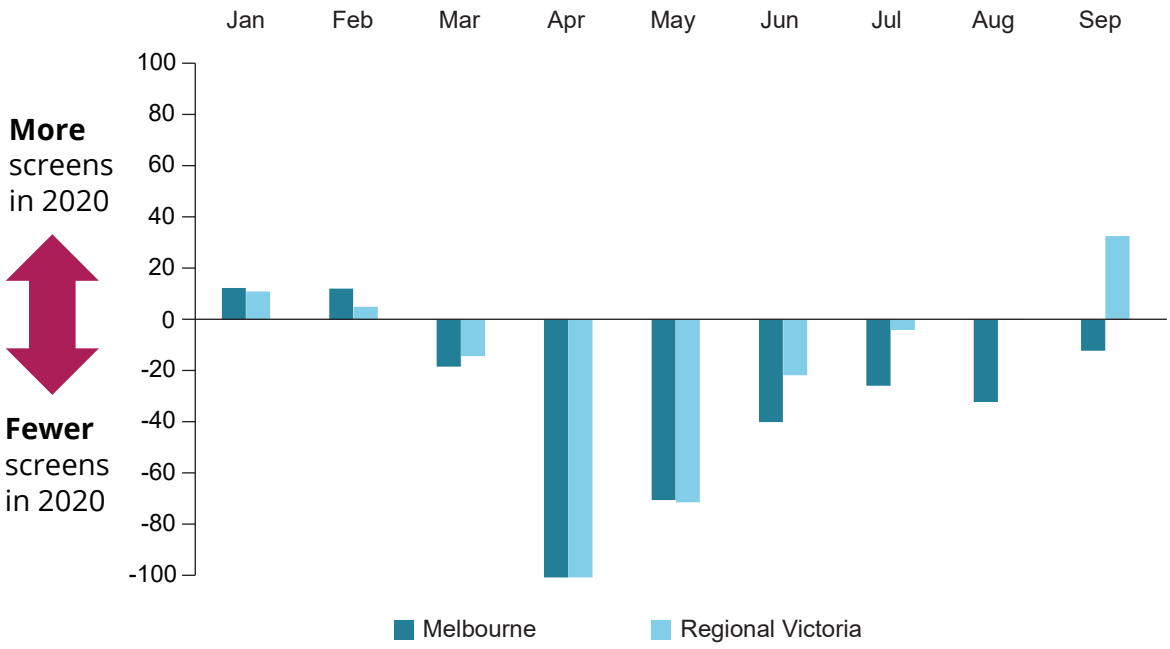
The two grey shaded sections indicate the period of tightened restrictions during Australia's 'first wave' and the period of tightened restrictions in Victoria during the 'second wave'.

How did the number of screening tests vary between Melbourne and regional Victoria?

As the number of COVID-19 cases and restrictions were both greater in Melbourne than in regional Victoria, both the number of screening mammograms and the number of screening HPV tests were examined in Melbourne versus regional Victoria.

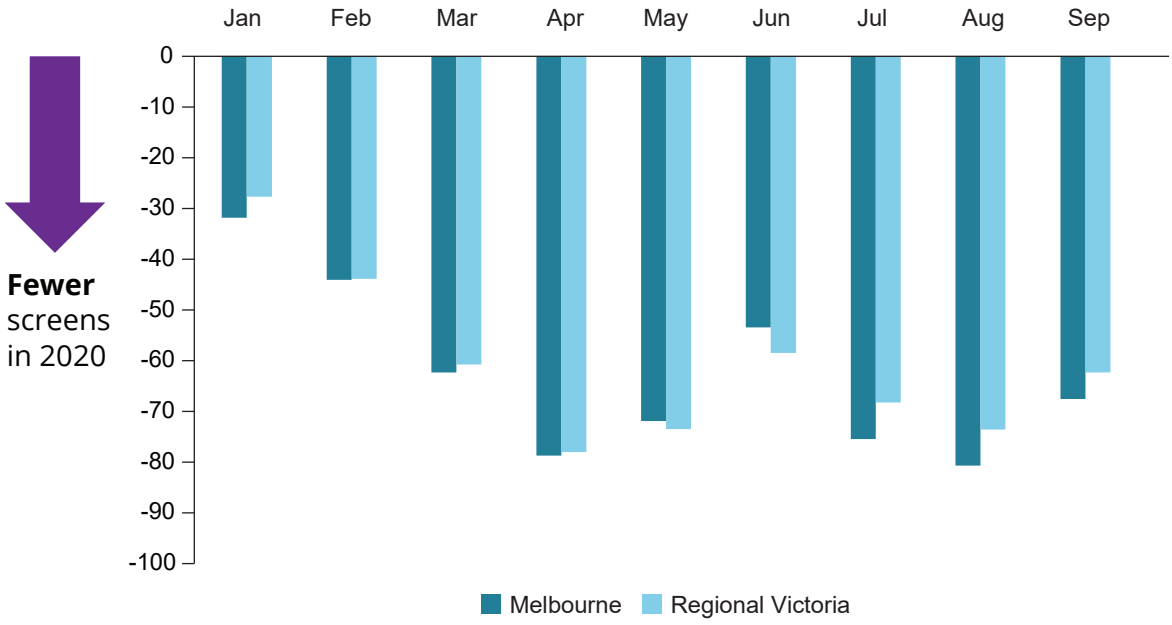
In June–September 2020, while the number of screening mammograms in Melbourne remained below the number performed in these months in 2018, the number of screening mammograms in regional Victoria rose relative to 2018 numbers, exceeding the 2018 number in September 2020.

Percentage difference in the number of screening mammograms in 2020 compared with 2018, metropolitan Melbourne and regional Victoria



In July–September 2020, there were proportionately more screening HPV tests performed in regional Victoria compared with Melbourne.

Percentage difference in the number of screening HPV tests in 2020 compared with 2019 metropolitan Melbourne and regional Victoria



2020 numbers should not be directly compared to 2019 numbers, which are shown only to provide context for trends.

Acknowledgments

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Thanks are also extended to NCSR—the source of cervical screening and bowel screening data included in this report.

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Technical notes

BreastScreen Australia

The number of screening mammograms performed by BreastScreen Australia is reported for women aged 50–74 (the target age group of BreastScreen Australia) for:

- January to September 2018; and
- January to September 2020.

Note that while data for 2019 are shown by week in the data tables, due to the biennial nature of screening through BreastScreen Australia, 2020 data should only be compared with 2018 data.

These data are counts of screening mammograms, not women, and should not be compared to the formal BreastScreen Australia participation indicator.

All data are considered preliminary, and are therefore subject to minor changes in future publications as data are revised.

Data were kindly provided by state and territory BreastScreen programs.

National Cervical Screening Program

The number of screening HPV tests (defined as HPV tests for which the reason was primary screening test) is reported for people aged 25–74 (the target age group of the National Cervical Screening Program) for:

- January to September 2019; and
- January to September 2020.

Note that while data for 2018 and 2019 are shown by week in the data tables, it is not useful to compare the actual numbers to those in 2020 due to a shift from 2-yearly screening to 5-yearly screening resulting in fewer screening HPV tests in 2020, even before COVID-19. These data do, however, provide information on temporal trends in cervical screening, to aid in the assessment of any impacts of COVID-19 on screening HPV tests in 2020.

These data are counts of tests, not people, and should not be compared to the formal National Cervical Screening Program participation indicator.

All data are considered preliminary, and are therefore subject to minor changes in future publications as data are revised.

Data were extracted from the National Cancer Screening Register.

National Bowel Cancer Screening Program

Invites issued are a count of all screening invitations issued by the National Cancer Screening Register (this register took over operation of the National Bowel Cancer Screening Register from November 2019). Two-yearly screening was fully rolled out during 2020.

Screening tests are a count of all kits returned. This can include kits issued in a previous period and returned to the register at a later date. It can also include multiple kits per person due to expired, spoiled, damaged, or incorrectly completed kits.

The number of invites and screening tests is reported for people aged 50–74 (the target age group of the National Bowel Cancer Screening Program) for:

- January to September 2019; and
- January to September 2020.

These data are counts of tests, not people, and should not be compared to the formal National Bowel Cancer Screening Program participation indicator.

All data are considered preliminary, and are therefore subject to minor changes in future publications as data are revised.

Data were extracted from the National Cancer Screening Register.

Weeks

Weeks begin on a Monday and week 1 of the year is the week that includes both January 4th and the first Thursday of the year. If the first Monday of January is the 2nd, 3rd, or 4th, the preceding days are part of the last week of the preceding year.

The comparable weeks between each year are the weeks that are numbered the same. The week start date shown in this report refers only to the week start date for that number week in 2020; the start date for 2018 and 2019 will be shifted slightly from the date for 2020.

Week 1 in 2020 includes days in December 2019, and week 40 includes days in October 2020. Therefore weeks 1and 40 are not shown for any years.

Months

Months were assigned using the month part of the invite or screening test date.

State or territory

For the National Cervical Screening Program and the National Bowel Cancer Screening Program, state or territory refers to the state or territory of residence. For BreastScreen Australia, state or territory reported refers to the state or territory in which screening occurred, not the state or territory of residence.

Data sources

AIHW analysis of state and territory BreastScreen register data; AIHW analysis of National Cancer Screening Register data.

This report looks at the impact of the COVID-19 pandemic on cancer screening in 2020, by presenting the number of screens between January and September 2020, and how these compare to the number of screens over the same period in the previous comparable year. The impact of COVID-19 was clearest for BreastScreen Australia: following a drop in screening mammograms in April 2020, the number of screening mammograms had returned to pre-COVID-19 numbers in September 2020.

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