

Access to BreastScreen Australia screening services

Web report | Last updated: 16 Feb 2024 | Topic: [Cancer screening](#)

About

Access to BreastScreen Australia screening services presents an interactive dashboard showing the minimum time it takes women aged 50-74, from the general and Aboriginal and Torres Strait Islander (First Nations) populations, to drive to a BreastScreen Australia screening service provided at a chosen frequency.

The dashboard presents results by state/territory and selected smaller geographic levels. More detailed analyses and additional geographic levels are featured in charts and data files.

Cat. no: CAN 158

- [Interactive dashboard](#)
- [Interactive charts](#)
- [Data](#)

Findings from this report:

- [99.8% of all women and 96% of First Nations women, aged 50-74, can access a service within a 1-hour drive every 2 years](#)
- [94% of all women and 89% of First Nations women, aged 50-74, can access a service within a 20-minute drive every 2 years](#)
- [BreastScreen Australia runs at least 161 permanent and 664 visiting sites that provide screening mammography services](#)
- [In Very remote areas, 1 in 4 women live more than a 1-hour drive from a service open at least every 2 years](#)

Summary

Breast cancer is the most common cancer in Australian women. Early detection using screening mammography can reduce illness and death. High participation in screening among women aged 50-74 every 2 years maximises the reduction in mortality from breast cancer. Some Australians experience long drive times to screening services which could reduce access to and participation in screening, and could delay the diagnosis of a breast cancer.

This report, *Access to BreastScreen Australia screening services*, shows the minimum time women aged 50-74 from the general, First Nations, and rural and remote populations need to drive to reach a BreastScreen Australia screening mammogram service. In Australia, 99.8% of all women aged 50-74 live within a one-hour drive of a service open at least every 2 years. The findings also show where poor access to nearby screening services could make timely diagnosis of breast cancer more challenging. This report provides opportunities for strategically planned service delivery, strengthened cross-jurisdictional coordination, and increased cross-sectoral engagement. Refer to the [Introduction](#) for information about how the findings can be translated in context of other factors.

This report contains a dashboard, charts and supplementary data files, using information current as at the time of publication. The reference date for the population data was 30 June 2021, while screening services were pooled from 2021 to 2024. Explore the dashboard to see where the population lives in relation to screening services, for a selection of geographic levels. Interactive charts provide further details, including a broader range of geographic levels.

[Interactive dashboard](#)

[Interactive charts](#)

[Data](#)

Introduction

National BreastScreen Australia program

BreastScreen Australia is a joint initiative of the Australian and state and territory governments and is the only nationally accredited breast cancer screening program. Early detection can reduce illness and death from breast cancer by providing opportunities for earlier treatment. Each jurisdiction operates BreastScreen services offering free breast screenings (mammograms) to detect breast cancer early. Women over 40 years can have a free screening mammogram every 2 years. Women aged 50-74 are actively encouraged to screen every 2 years, whereas eligible women aged 40-49 and over 74 years can have a free screening mammogram but are not actively invited. Participation in screening is a key performance indicator. The National Preventive Health Strategy 2021-2030 sets a participation rate target of at least 65% by 2025 (Department of Health 2021). In 2020-2021, 48% of women aged 50-74 were screened through BreastScreen Australia (AIHW 2023a). Participation in 2020-2021 was impacted by the COVID-19 pandemic, however, as services had to reduce capacity due to the need to implement COVID-19 safety measures.

BreastScreen Australia provides screening services via fixed and mobile sites. Fixed sites that offer services year-round (permanent sites) provide convenience in relation to time; women can choose an appointment for a time convenient to them. Mobile and fixed sites offering services only for a short time span (visiting sites) could provide access to screening mammograms to women who would otherwise face excessively long drive times to attend a permanent site. In comparison to permanent sites, visiting sites may provide greater convenience in relation to one's home location, however, they do not offer the same level of convenience in relation to time. Instead of offering services year-round, visiting sites offer services for a limited or discrete period, for example, a one-week screening block held every 2 years. Women whose availability does not match the scheduled visit may not be able to participate in screening at that visiting site at the recommended frequency of every 2 years. The impact is greater for the small proportion of women who are advised to have more frequent annual screenings. This effect could be reduced with timely access via screening services that operate more often.

Note: In Australia, breast screening also occurs outside the National BreastScreen Australia program. This has previously been shown to equate to about 3.5% of BreastScreen Australia activity (BreastScreen Australia 2009 as cited in Nickson et al. 2019). A subset of women who participate in screening are recalled for further testing at an assessment centre. Some Australians experience barriers to accessing assessment services, which can differ to those affecting access to screening services, and were out of scope for the work presented here.

Supporting the participation of First Nations and rural and remote women

BreastScreen Australia aims to provide equitable and timely access to screening mammograms to all eligible women in Australia. Each jurisdiction's BreastScreen service aims to achieve the same participation rates for priority populations, as for women from the general population. Two priority populations include Aboriginal and/or Torres Strait Islander (First Nations) women and women living in rural and remote areas (BreastScreen Australia 2022).

Breast cancer incidence, mortality and screening participation among women aged 50-74 varies geographically and by Indigenous status. First Nations women aged 50-74 have a lower incidence and participation rate, but a higher mortality rate than non-Indigenous women (AIHW 2023a). In relation to rural and remote women, incidence is lower with increasing remoteness and participation is lowest in remote areas (AIHW 2022). Mortality was highest for those living in *Inner regional* areas and lowest for those in *Very remote* areas (AIHW 2023a).

Variation in participation by Indigenous status and Remoteness Areas

In comparison to the target of at least 65% participation by 2025 in breast screening, the participation rate was 35% for First Nations and 48% for non-Indigenous women aged 50-74 in 2020-2021 (AIHW 2023a). Note that the age-standardised rates, which are normally used for comparisons between First Nations and non-Indigenous people, were similar (35% and 47% respectively).

In 2019-2020, age-standardised participation was lowest among women from the target group who lived in *Very remote* areas, at 36% (AIHW 2022). This was followed by *Remote* areas and *Major cities* at 49% and 48%, respectively, and *Outer regional* and *Inner regional* areas at 55% and 53%, respectively (AIHW 2022). Despite shared characteristics of remoteness and lower socioeconomic position, there are meaningful differences in the participation rates by Indigenous status. In 2019-2020, First Nations women had lower age-standardised participation rates than that of non-Indigenous women across all Remoteness Areas, with a rate difference of -11% to -18% (AIHW 2023b; see [Table 1](#)). The rate difference was largest in *Very remote*, *Remote*, and *Outer regional* areas. For example, the participation rate was 23% of First Nations women and 39% of non-Indigenous women in *Very remote* areas (rate difference was -16%) (AIHW 2023b; see [Table 1](#)).

Early detection can reduce the risk of dying from breast cancer. Disparities in participation may contribute to an uneven distribution of the timeliness of breast cancer detection and its impact on illness and death. These disparities may be partly attributed to variation in access to screening services.

Table 1: Participation rates_(a) in BreastScreen Australia of First Nations and non-Indigenous women aged 50-74, by Remoteness Area, 2019-2020

	Major cities (%)	Inner regional (%)	Outer regional (%)	Remote (%)	Very remote (%)

First Nations	36.1	41.6	38.1	28.5	22.5
Non-Indigenous	47.8	52.8	54.2	46.6	38.5
Rate difference^(b)	-11.7	-11.2	-16.1	-18.1	-16.0

- Rates are the number of women screened as a percentage of the eligible female population, calculated as the average of the 2019 and 2020 population estimates modelled by the AIHW (see note 2). Rates are age-standardised; rates are directly age-standardised to the Australian 2001 standard population in 5-year age groups between 50 and 74.
- Rate difference is the age-standardised rate for First Nations women minus the age-standardised rate for non-Indigenous women.

Notes:

- Women in the 'not stated' category for Indigenous status are excluded from these data.
- Rates are calculated using population estimates based on Bayesian smoothing and Iterative Proportional Fitting of ABS projected populations (using the 2016 Census).
- In 2020, the participation of First Nations women from the Northern Territory and those in *Remote* and *Very remote* areas was impacted by both the COVID-19 pandemic and the absence of the BreastScreen NT mobile truck, which was being upgraded.

Source: AIHW (2023b).

Translating findings into practice

This report shows the minimum time that women, living in different parts of Australia, need to drive to reach a BreastScreen Australia screening mammogram service, given the distribution of permanent and visiting sites. It provides evidence for the general population as well as two priority populations: First Nations women and women living in rural and remote areas. The findings can be used to identify areas where long drive times to reach screening services could make participation and timely diagnosis of breast cancer more challenging.

This report can help to guide service delivery and planning, including the optimal allocation of screening services. In translating this evidence into decisions, mechanisms to support equity of physical access should be judged in context of the enablers and barriers faced by First Nations women and women living in rural and remote areas, along with other factors that enhance service delivery. Furthermore, specific local areas may have unique characteristics that affect physical access such as the road conditions, availability of infrastructure to operate screening units, availability of organised group transportation, and the needs of clients from that area such as out-of-work screening hours, and issues with transport and parking. Users of this report can combine the drive time findings with other information to judge the feasibility of options to improve physical access and their anticipated effect on improving participation.

This report also provides opportunities for strengthened cross-jurisdictional coordination and increased cross-sectoral engagement. This may include greater community engagement with BreastScreen Australia, as well as improved service delivery and health promotion initiatives for women living in areas near state/territory borders who can participate in screening operated by a different jurisdiction. These are important enablers for participation that, when implemented together with strategically planned service delivery, will help progress towards the participation target of at least 65% by 2025 and towards achieving the same participation rates for priority populations, as for women from the general population.

References

AIHW (Australian Institute of Health and Welfare) (2022) [BreastScreen Australia monitoring report 2022](#), AIHW, Australian Government, accessed 20 October 2023.

AIHW (2023a) [BreastScreen Australia monitoring report 2023](#), AIHW, Australian Government, accessed 20 October 2023.

AIHW (2023b) [Aboriginal and Torres Strait Islander Health Performance Framework, Data tables: Measure 3.04 Early detection and early treatment](#), AIHW, Australian Government, accessed 6 October 2023.

BreastScreen Australia (2022) [BreastScreen Australia National Accreditation Standards, 2022](#), Department of Health, Australian Government, accessed 6 October 2023.

Department of Health (2021) [National Preventive Health Strategy 2021-2030](#), Department of Health, Australian Government, accessed 17 November 2023.

Nickson C, Velentzis LS, Brennan P, Mann GB and Houssami N (2019) 'Improving breast cancer screening in Australia: a public health perspective', *Public Health Research & Practice*, 29(2):e2921911.

Describing access to permanent and visiting screening sites

In this report, the term, ‘service frequency’, is used to grade how frequently screening sites are available to a population. [Table 2](#) shows how different service frequency categories are acquired from the 5 types of screening site active from 2021-2024.

For example, women with access to permanent sites necessarily have access to a site ‘open permanently’, as well as one ‘open at least annually’ and ‘open at least every 2 years’.

Because some women - particularly in rural areas - may be able to drive to alternative visiting sites in different years, the service frequency in an area may be more favourable than the available types of screening site would suggest. Those scenarios are detailed in [Table 2](#).

Note that to maximise the relevance of the results, efforts were made to represent the availability of services in 2023 and 2024 as a priority. For example, new services or changes to existing services in 2023 or 2024 (anticipated) were allowed to override availability in 2021 and 2022. Similarly, services that were discontinued between 2021 and 2023 were excluded from the standard results - only being included in the category, ‘open at least once from 2021 to 2024’, which shows in the dashboard and other geographical results.

For more detailed information, see the [Technical notes](#).

Table 2: The service frequency (left) acquired from access to the different types of screening site (top) available from 2021-2024

Service frequency	Permanent sites	Annual sites	Biennial sites	4-yearly sites	Infrequent, trial or discontinued sites
Open permanently	✓				
Open at least annually	✓	✓	✓ if alternative sites can be reached in each year		
Open at least every 2 years	✓	✓	✓	✓ if alternative sites can be reached in every second year	
Open at least once from 2021 to 2024	✓	✓	✓	✓	✓

✓ At least one of these sites must be accessible or conditions must be met to acquire each service frequency.

Note: No sites were deemed to visit on a 3-yearly cycle.

Interactive dashboard

On this page:

- [Overview](#)
- [Details](#)

Overview

The dashboard includes an interactive map that visualises where populations live in relation to BreastScreen Australia screening services, based on drive time measurements. Explore the dashboard to see information by state/territory, Statistical Areas Level 2, Statistical Areas Level 3, Indigenous Areas, and Urban Centres and Localities. Refer to the [Technical notes](#) for information on the methods and refer to the [Glossary](#) for information on the geographical structures used in this report.

Click the panel below to explore the dashboard

- For the best experience use Chrome, Edge or Firefox browsers. For more information on browser compatibility, see [Supported browsers: external site opens in new window](#)
- Best viewed on a desktop, laptop or tablet.
- If components of the dashboard are failing to load, try refreshing the page or interacting with the selection options and map.
- Need help? Refer to [Navigating the dashboard](#).

Access to BreastScreen Australia screening services dashboard



Details

The dashboard allows users to explore the data using different approaches. Users can select characteristics (geographic level, population group, drive time category, and screening service frequency) to find a list of the most populated areas that correspond to the user's selections. Alternatively, users can locate a specific area of interest and view a selection of population and drive time information for the surrounding area. Within this population (corresponding to the selected geographic level and Indigenous status), users can apply further constraints to find out how many of the women who live in this area would need to drive longer than a specified time (over 20 minutes, over one hour, or over 2 hours) to reach a screening service operating at a selected frequency (open: permanently, at least annually, at least every 2 years, or at least once from 2021 to 2024).

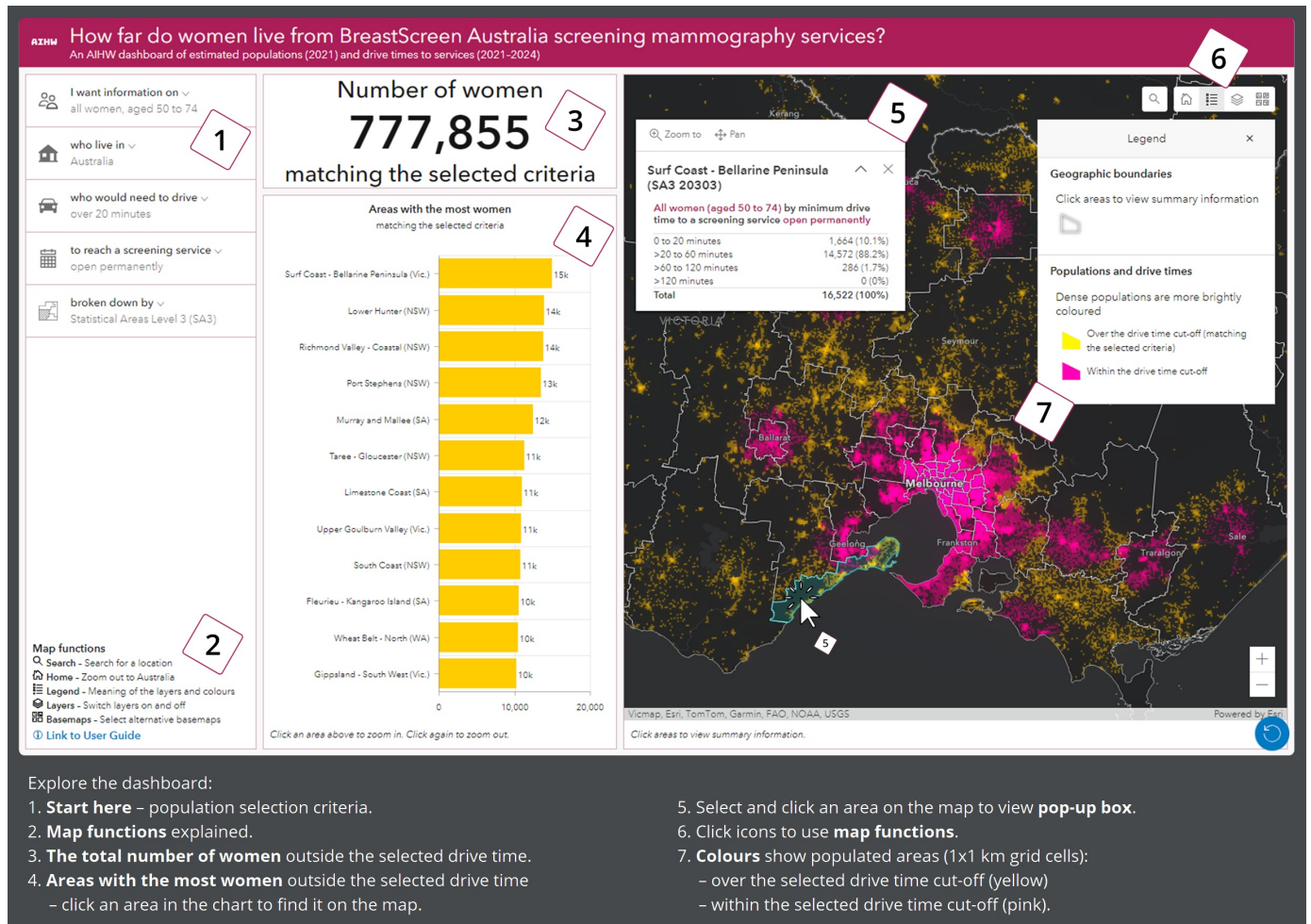
The dashboard uses a coloured grid-layer to represent the estimated populations living in 1km²-sized squares across Australia. It shows:

- where the population lives
- the density of the population
- whether the time it would take to drive from that location to a screening service at a selected frequency is over or within the selected drive time cut-off.

The grid-layer adds context to the map. It shows where the population is distributed within a single region of interest, as well as giving indications of the drive time measurements. By inspecting the population distribution, users can gauge whether chosen geographic boundaries cover populations of interest in a meaningful way.

Note: Components of figures may not sum to totals due to rounding.

Interactive dashboard



Detailed instructions

1. Start here

Select the population, drive time, service type and geographic breakdowns of interest.

2. Map functions

Refer to this key for an explanation of the icons in the top right corner of the map.

3. Women who live outside of the selected drive time

The number of women aged 50-74 from the selected population (by Indigenous status and state/territory) who live outside the selected drive time from a screening site open at the selected frequency.

When a drive time of 'over 0 minutes (everyone)' is selected, all women of the selected population are included.

4. The areas (region type selected in the left panel) with the most women outside of the selected drive time

The number of women from the selected population who live outside the selected drive time from a screening site open at the selected frequency, split by area.

In the default view, the chart shows the 12 SA3s in Australia with the most women living over a 20-minute drive from a screening service open permanently.

Click on an area's yellow rectangular bar or name to locate it. This will re-position the map in the right panel to the selected area.

Hover over areas in the chart to view the estimated number of women.

Visit [Interactive Charts](#) and [Data](#) to find information for extra geographic areas and for a complete ranking of areas and their population size.

5. Pop-up box

On the map, click on an area of interest to view extra information about drive times in that entire area.

Note that if you change an option in the left panel or click on a different area in the central panel, you will need to close and re-open the pop-up box to update the information in the pop-up box (otherwise it will not match your new population).

6. Select map functions to:

- view the legend
- search for places and postcodes using free text
- switch off layers
- view alternative basemaps.

A blue reset button appears in the lower right corner, which can clear any selections and return the map to its default position.

7. Coloured population grid showing populated areas (1x1 km grid cells):

- over the selected drive time cut-off (yellow - matching the selected criteria)
- within the selected drive time cut-off (pink).

In the default view, yellow squares are over a 20-minute drive from a screening service open permanently, and pink squares are within a 20-minute drive.

Dense populations are more brightly coloured:

- ≥ 200 women per square kilometre (brightest)
- $\geq 100-200$ women per square kilometre
- $\geq 10-100$ women per square kilometre
- $\geq 1-10$ women per square kilometre (dullest).

Areas that are not coloured either have no estimated population or fewer than one woman per square kilometre.

Interpreting the dashboard

In the screenshot (above), the information in the central panel shows:

- An estimated 777,855 women aged 50-74 in Australia need to drive over 20 minutes to reach a screening service that is open permanently.
- Based on the selections in the left panel, the SA3 with the most women who need to drive more than 20 minutes is 'Surf Coast - Bellarine Peninsula' in Victoria.
- Hovering over the rectangular bar for 'Surf Coast - Bellarine Peninsula' shows the estimated number of women living outside a 20-minute drive in this area: 14,858 women from the selected population (all women aged 50-74).

In the screenshot's map, the information in the pop-up box shows:

- An estimated 16,522 women aged 50-74 live in the SA3, 'Surf Coast - Bellarine Peninsula'.
- Most women (14,572 or 88%) need to drive more than 20 minutes but not more than 60 minutes to reach a screening service that is open permanently. No women have to drive more than 120 minutes.

Comparing an area's population numbers from the chart and the pop-up box:

- For each area, the population number in the chart can be different to the numbers in the pop-up box.
- The number in the chart relates to the selected drive time cut-off, while the numbers in the pop-up box show 4 non-overlapping drive time ranges and the total population. Numbers in the pop-up box are not affected by the selected drive time cut-off.

Looking at the population distribution:

- The 'Surf Coast - Bellarine Peninsula' SA3 is relatively long and narrow in shape.
- The coloured grid shows a concentration of women on the Bellarine Peninsula (north east) farther than 20 minutes from a permanent service. Another relatively dense population lives in and around Torquay, close to the midpoint of the SA3. Communities along the southern coast are more sparsely populated.

If you would like more information to find what you are looking for, or interpret the information presented by the dashboard, contact us using the feedback form:



Interactive charts

The charts present information on where populations live, where screening sites are located, and how accessibility differs according to geographic and population characteristics. In comparison to the dashboard, the charts provide additional geographic levels and high-level comparisons.

List of charts

- [Overview of service and population distribution](#)
 - [Overview of drive times to services](#)
 - [Comparisons of accessibility by remoteness](#)
 - [Comparisons of accessibility by socioeconomic area](#)
 - [First Nations women's overrepresentation farther from services](#)
 - [Accessibility across various geographic levels](#)
 - [Summary information by geographic area](#)
-

Interactive charts

The BreastScreen Australia program operates in every state and territory. Nationally, there were a total of 845 service locations active from 2021 to 2024 (with 2024 data, anticipated). Among those sites, 825 are expected to deliver screening at least every 4 years on an ongoing basis. Access to those 825 regular screening sites inform most of the analysis in this report.

Approximately 3.6 million women aged 50-74 lived in Australia on 30 June 2021 (ABS 2021), representing the population actively invited for breast screening.

To screen women living in different parts of the country, the majority (664 sites or 80%) of regular screening sites are visited periodically - generally by mobile mammography units. The remaining 161 sites operate permanently at fixed clinics.

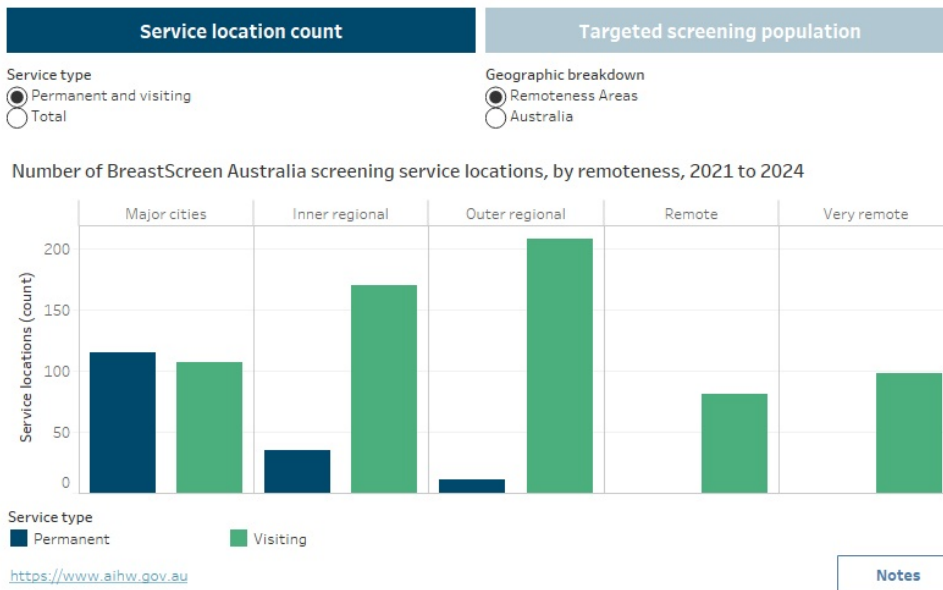
Permanent sites are mainly located in *Major cities* areas, where the majority (2.5 million or 68%) of women aged 50-74 also live. Visiting sites are more spread out across Remoteness Areas, with over half (57%) located in regional areas (378 sites).

The number of women declines with increasing remoteness, with less than 2% of women aged 50-74 living in *Remote* and *Very remote* areas (62,200 women). *Remote* and *Very remote* areas lack any permanent sites, but contain a considerable number of visiting service locations (179 sites).

In *Very remote* areas, more than 1-in-3 women aged 50-74 are First Nations people (36.3% or 8,000 women), compared with 1.3% in *Major cities* (30,900 women). As a result, a higher proportion of First Nations women rely on visiting sites, compared with non-Indigenous women.

Figure 1: The distribution of BreastScreen Australia screening service locations (2021-2024) and women aged 50-74 (2021), by remoteness

A set of 2 interactive graphs. A long description is available below.



Data tables

Long description for Figure 1

A set of 2 interactive graphs. The first is a column graph showing the distribution of permanent and visiting BreastScreen Australia screening locations by Remoteness Area, from 2021 to 2024. The second is a column graph showing the distribution of women aged 50 to 74 by remoteness, at 30 June 2021. Refer to tables S1 and S2 in data tables.

References

ABS (Australian Bureau of Statistics) (2021) 'Population estimates by age and sex, by SA2 (ASGS2021), 2001 to 2021' [data set], [Regional population by age and sex](#), accessed 27 October 2022.

Interactive charts

The following analysis relates to estimated drive times to BreastScreen service locations for the targeted screening population. This can be described as the spatial accessibility of services.

Box 1: Data sources - in brief

Service locations: BreastScreen Australia sites providing screening mammography services to the general public. Includes only sites active from 2021 to 2024 (with 2024 data, anticipated), and generally only those delivering screening at least every 4 years on an ongoing basis.

Target population: The number of women aged between 50 and 74 years. This group is actively targeted to participate in the BreastScreen program and is represented here by the number of females of that age group from the ABS' 2021 *Regional population by age and sex* estimates.

For further details, see [Technical notes](#).

Based on the distribution of BreastScreen services and the target population, there is a high degree of accessibility overall:

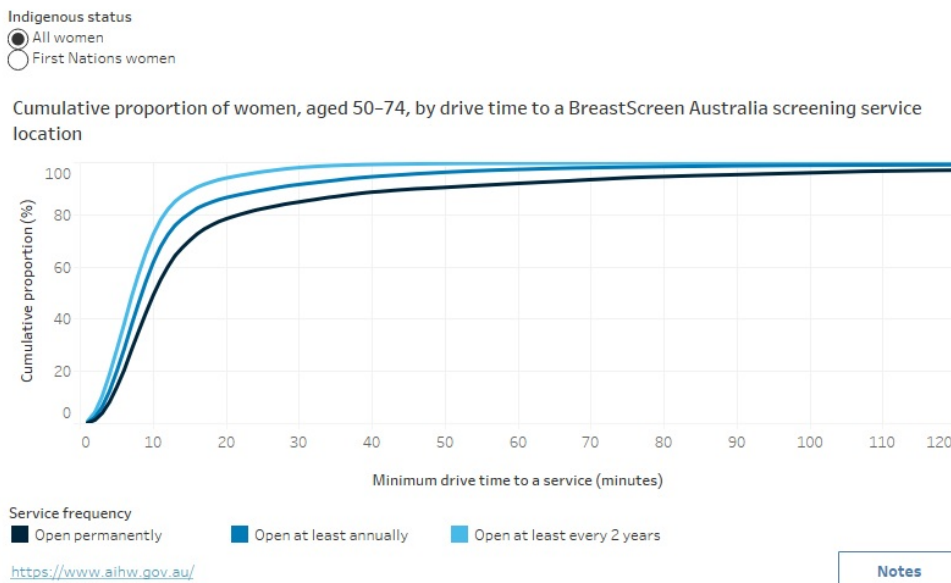
- 94% of women (aged 50-74) live within a 20-minute drive of a service open at least every 2 years (3.4 million out of 3.6 million women).
- 99.8% of women live within a one-hour drive of a service open at least every 2 years.
- 92% of women live within a one-hour drive of a service open permanently.

First Nations women are more likely to live in areas with lower accessibility than non-Indigenous women, particularly in terms of permanent services:

- 89% of First Nations women (aged 50-74) live within a 20-minute drive of a service open at least every 2 years (73,900 out of 82,700 women).
- 96% of First Nations women live within a one-hour drive of a service open at least every 2 years (79,600 women).
- 70% of First Nations women live within a one-hour drive of a service open permanently (58,100 women).

Figure 2: The cumulative proportion of women, aged 50-74, by drive time to a BreastScreen Australia screening service location, by service frequency and Indigenous status

An interactive graph. A long description is available below.



[Data tables](#)

Long description for Figure 2

An interactive line graph showing the cumulative proportion of women living within a range of drive times to a BreastScreen service, in one-minute increments. Proportions for different service frequencies are shown, with fewer women living near permanent services than near services open at least every 2 years. The proportions rise quickly initially, with 89 per cent of women living within 15 minutes of a service at least every 2 years. Refer to Table S3 in data tables.



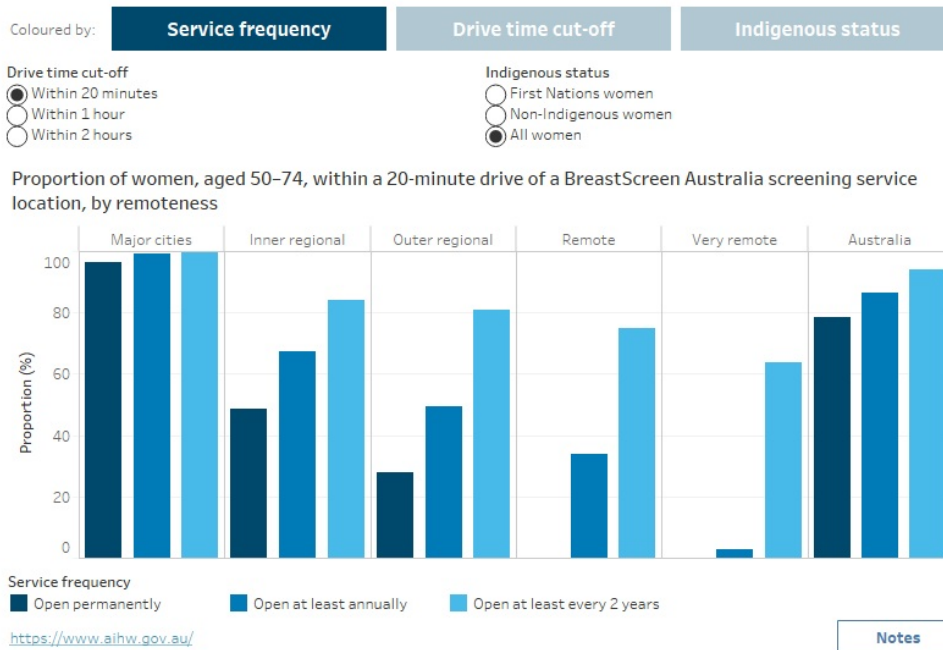
Interactive charts

Separating the drive time results by Remoteness Area reveals:

- Most women in each remoteness category live within a 20-minute drive of a screening service open at least every 2 years. However, around 16% of women from *Very remote* areas (3,500 women) live over 2 hours from a service open at least every 2 years, which likely presents a significant barrier to routine participation in the screening program for these women.
- In *Major cities*, 96% of women live within a 20-minute drive of a permanent service location. Most women in regional areas would need to drive for over 20 minutes to reach a permanent service, yet even 86% of women from *Outer regional* areas live within a 2-hour drive of these services. Very few women from remote areas live within a 2-hour drive of a permanent service.
- First Nations women in *Very remote* areas tend to live in locations that are farther from screening services, in comparison with non-Indigenous women. For example, 26% of First Nations women (2,100 women) live over a 2-hour drive from a service open at least every 2 years, compared with 10% of non-Indigenous women (1,400 women).

Figure 3: The proportion of women, aged 50-74, by drive time to a BreastScreen Australia screening service location, by service frequency, Indigenous status and remoteness

A set of 3 interactive graphs. A long description is available below.



Data tables

Long description for Figure 3

A set of 3 interactive graphs. All 3 are column graphs showing the proportion of women with access to BreastScreen Australia screening service locations by Remoteness Area. The first graph highlights differences by service frequency. The second graph highlights differences by drive time. The third graph highlights differences by Indigenous status. Refer to Table S4 in data tables.

Interactive charts

This analysis shows a relationship between spatial accessibility of BreastScreen services for women in Australia and collective socioeconomic characteristics:

- For the total population of women aged 50-74, analysis used the ABS' Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) to classify areas (Statistical Areas Level 1) into 10 deciles, from the most disadvantaged (first decile) to the most advantaged (tenth decile).
- For First Nations women aged 50-74, analysis used the Australia National University's Indigenous Relative Socioeconomic Outcomes (IRSEO) index to classify areas (Indigenous Areas) into 10 deciles, from the most advantaged (first decile) to the most disadvantaged (tenth decile).

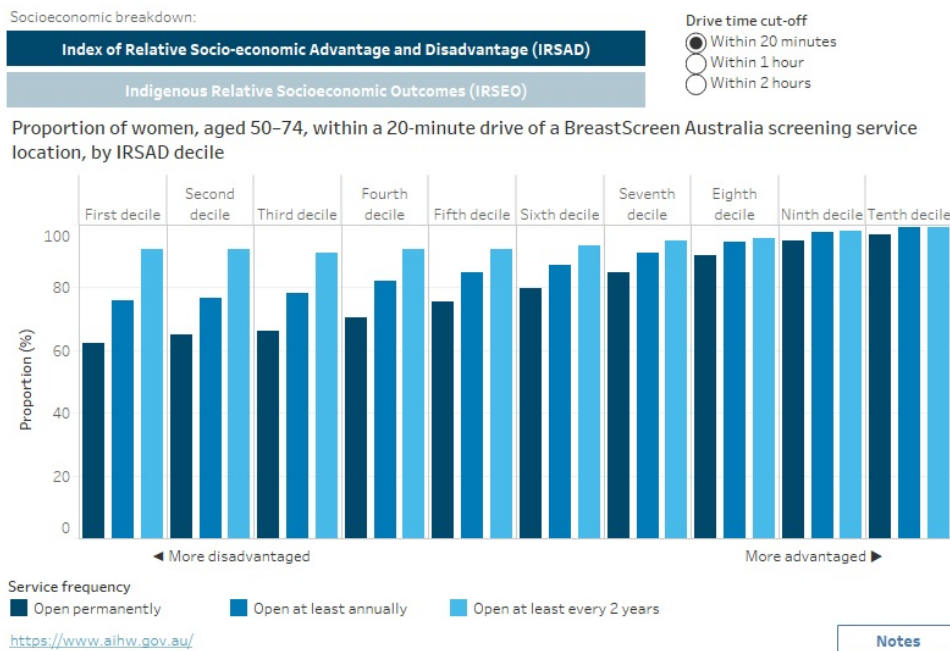
The results show that the proportion of women who live closer to screening services varies by both IRSAD decile and IRSEO decile, with a general trend of lower accessibility for more disadvantaged areas.

For example, the proportion of women who live within a 20-minute drive of a permanently open service ranges from 62% in the most disadvantaged IRSAD decile to 97% in the most advantaged decile. The presence of visiting services lifts accessibility markedly, with 92% of women in the most disadvantaged decile living within a 20-minute drive of a service open at least every 2 years.

Among First Nations women, there is an even stronger accessibility trend across IRSEO deciles. No First Nations women in the most disadvantaged IRSEO decile live within a 2-hour drive of a permanent service, and only 55% live within a 2-hour drive of a service open at least every 2 years.

Figure 4: The proportion of women, aged 50-74, by drive time to a BreastScreen Australia screening service location, by service frequency, Indigenous status and socioeconomic area decile

A set of 2 interactive graphs. A long description is available below.



Data tables

Long description for Figure 4

A set of 2 interactive graphs. The first is a column graph showing the proportion of all women living within different drive time cut-offs of a BreastScreen Australia screening service location, by Index of Socio-economic Advantage and Disadvantage, or IRSAD, decile. The proportion who live within a given cut-off increases with increasing advantage. The second is a column graph showing the proportion of First Nations women living within different drive time cut-offs of a service location, by Indigenous Relative Socioeconomic Outcomes, or IRSEO, decile. The proportion who live within a given cut-off generally increases with increased advantage. Refer to Tables S5 and S6 in data tables.

Interactive charts

The vast majority (96%) of First Nations women live within a one-hour drive of a screening service that operates at least every 2 years. However, First Nations women are more likely than non-Indigenous women to live relatively far from BreastScreen Australia screening locations:

- Nationally, there were 82,700 First Nations women aged 50-74 in 2021, accounting for 2.3% of women in that age group.
- As the drive time to screening locations increases, the proportion of women who are First Nations people also increases.
- In areas over 2 hours from the nearest service open at least every 2 years, First Nations women make up the majority of women aged 50-74 (57%).

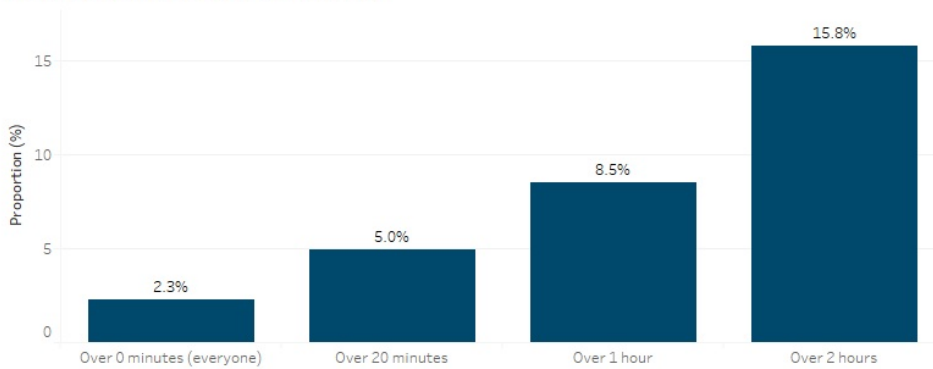
Figure 5: The proportion of women, aged 50-74, who are First Nations people, by drive time to a BreastScreen Australia screening location, by service frequency

An interactive graph. A long description is available below.

Service frequency

- Open permanently
- Open at least annually
- Open at least every 2 years

Proportion of women, aged 50-74, who are First Nations people, by drive time to a BreastScreen Australia screening service location open permanently



<https://www.aihw.gov.au/>

Notes

Data tables

Long description for Figure 5

An interactive column graph showing the proportion of women who are First Nations people, for a range of drive time cut-offs to BreastScreen Australia screening service locations, by service frequency. The overrepresentation of First Nations women increases as drive times increase, especially considering services available at least every 2 years. Refer to Table S7 in data tables.

Interactive charts

Figure 6 presents population estimates and drive time results similarly to the chart within the [Interactive dashboard](#), ranking areas in terms of populations of interest.

Compared with the dashboard chart, Figure 6 bears the following additional features:

- Includes a wider range of geographic levels - Remoteness Areas; Statistical Areas Level 4 (SA4); Indigenous Regions (IREG); Indigenous Locations (ILO); Local Government Areas (LGA); Primary Health Network (PHN) regions; Suburbs and Localities (SAL).
- Allows for alternative drive time selections.
- Optionally, shows the proportion of women by drive time, rather than the number.

Separating the drive time results by smaller regions reveals that:

- Most women who live more than a 2-hour drive from their nearest service live in the regional and remote parts of the Northern Territory, Western Australia, South Australia and Queensland.
- For both First Nations and non-Indigenous women, this pattern changes to also include parts of Victoria and New South Wales when considering drive times of more than 1 hour.

Figure 6: The number of women, aged 50-74, by drive time to a BreastScreen Australia screening location, by geographic area, by service frequency, by Indigenous status

An interactive graph. A long description is available below.

Number of women, aged 50-74, by drive time to a screening service open at least every 2 years, by state and territory



[Data tables](#)

Long description for Figure 6

An interactive bar graph showing the number and proportion of women in various locations with different drive times to BreastScreen Australia screening service locations. The drive times, service frequency, Indigenous status, and geographical breakdown can all be chosen to investigate areas and populations of interest. Refer to CSV tables in data tables.

Interactive charts

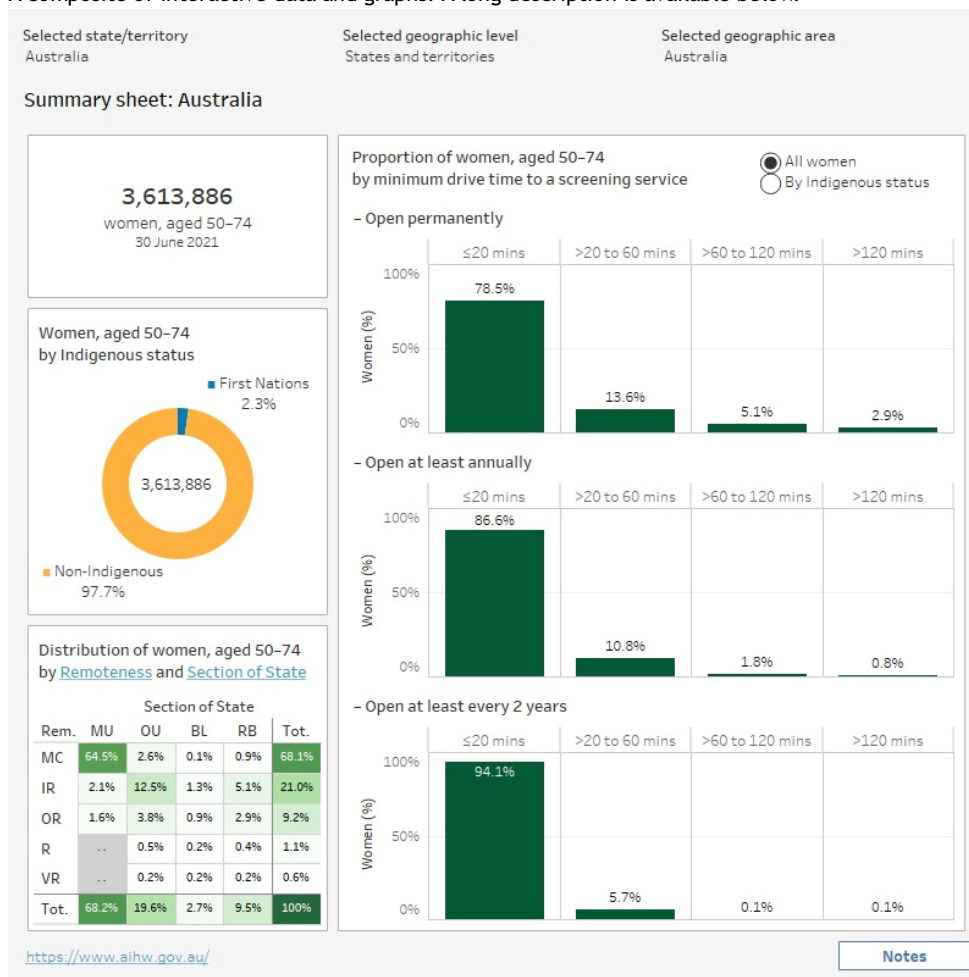
Figure 7 displays a summary sheet of information for each geographic area included in this report, including population characteristics and drive time results.

Note: Figure 7 shows the distribution of the targeted screening population by **Remoteness Area** and **Section of State**, for context. While Remoteness Areas are based on the road distance to different-sized urban centres, the Section of State structure categorises communities on the basis of the local population size.

For example, Darwin, an urban centre with over 100,000 usual residents in 2021, is classified as *Major urban* in terms of Section of State (the top urban category), but *Outer regional* in terms of remoteness, due to its long distance from the nearest urban centre with over 250,000 people.

Figure 7: Summary information by geographic area

A composite of interactive data and graphs. A long description is available below.



Data tables

Long description for Figure 7

A composite of interactive data and graphs relating to a selected area. The figure shows: the number of women aged 50 to 74 in 2021; the proportion of women who are First Nations or non-Indigenous; the distribution of women by Remoteness Area and Section of State; and the proportion of women by drive time to a BreastScreen Australia screening service location, by service frequency. Refer to tables G1 to G12 in geographic data tables.



Technical notes

- [Population disaggregation](#)
- [Service data and harmonisation](#)
- [Drive time analysis](#)
- [Abbreviations and symbols](#)

We value your feedback. Did you find what you were looking for? Was the information relevant and easy to understand? Please provide comments using the feedback form:

Technical notes

Overview

Scope: The estimated resident population (ERP) of females, aged 50-74, by Indigenous status, at 30 June 2021, based on ABS final estimates. This aligns with the age group of women actively targeted for 2-yearly screening by BreastScreen Australia.

ERP numbers were disaggregated (spread out) across the ABS Population Grid (2021) and Mesh Block areas (Australian Statistical Geography Standard Edition 3) using probabilistic methods, partly based on 2021 Census counts (person-level).

With this level of disaggregation, drive times and population estimates could be calculated for small areas (one square kilometre resolution), and results could be produced for any geographic level based on Mesh Blocks.

Details

Notes:

- Where relevant, geographic boundaries refer to the Australian Statistical Geography Standard (ASGS) Edition 3.
- Where sparse data were used (Census counts), smoothing techniques were applied to avoid placing reliance on small numbers.

Data inputs - Final population data matched:

- [P1] Females, aged 50-74, by SA2, 30 June 2021 (preliminary)_(a).

Data inputs - Population data used during intermediate steps:

- [P2] First Nations females, aged 50-74, by state and territory, 30 June 2021 (final)_(b)
- [P3] First Nations females, aged 50-64 and 65+, by IREG, 30 June 2021 (final)_(c)
- [P4] First Nations persons, by SA2, 30 June 2021 (final)_(d)
- [P5] Persons, by Statistical Area Level 1 (SA1), 30 June 2021 (preliminary)_(e)
- [P6] Persons, by Australian Population Grid, 30 June 2021_(f)
- [P7] Persons, by SA2, 30 June 2021 (preliminary)_(a).

Data inputs - Other data used to steer disaggregation:

- [C1] Males and females (Census counts), aged 0-49, 50-64, 65-74 and 75+, by Indigenous status, by SA2 and IREG, 2021_(g)
- [C2] Females (Census counts), aged 50-74, by Indigenous status, by SA2, 2021_(h)
- [C3] Females (Census counts), aged 50-74, by Indigenous status, by SA1, 2021_(i)
- [C4] Females (Census counts), aged 50-74, by SA1, 2021_(i)
- [C5] Persons (Census counts), by SA1, 2021_(i)
- [C6] Persons (Census counts), by Mesh Block, 2021_(j)
- [A1] Address counts (Geocoded National Address File, G-NAF), by Australian Population Grid and Mesh Block, May 2022_(k).

Data sources:

- ABS (2021) 'Population estimates by age and sex, by SA2 (ASGS2021), 2001 to 2021' [data set], [Regional population by age and sex](#), accessed 27 October 2022.
- ABS (30 June 2021) 'Table 1: Estimated resident Aboriginal and Torres Strait Islander, non-Indigenous and total populations, States and territories - 30 June 2021' [data set], [Estimates of Aboriginal and Torres Strait Islander Australians](#), accessed 31 August 2023.
- ABS (30 June 2021) 'Table 2: Estimated resident Aboriginal and Torres Strait Islander, non-Indigenous and total populations, Indigenous Regions - 30 June 2021' [data set], [Estimates of Aboriginal and Torres Strait Islander Australians](#), accessed 31 August 2023.
- ABS (30 June 2021) 'Table 4: Estimated resident Aboriginal and Torres Strait Islander, non-Indigenous and total populations, Statistical Areas Level 2 - 30 June 2021' [data set], [Estimates of Aboriginal and Torres Strait Islander Australians](#), accessed 31 August 2023.
- ABS (2023) 'Estimated Resident Population by Statistical Area Level 1 - 30 June 2011 to 2022' [customised report], [Queensland Government Statistician's Office](#), accessed 31 March 2023.
- ABS (2021) 'Australian population grid in ESRI Grid format, 2016 to 2021' [Population grid files], [Regional population](#), accessed 7 September 2022.
- ABS (2021) [Sex \(SEXP\) by Age group \(AGE5P\) and Indigenous status \(INGP\) and Indigenous Region \(IREG\) and Statistical Area Level 2 \(SA2\)](#) [TableBuilder], accessed 4 September 2023.
- ABS (2021) [Sex \(SEXP\) by Age group \(AGE5P\) and Indigenous status \(INGP\) and Statistical Area Level 2 \(SA2\)](#) [TableBuilder], accessed 2 April 2023.
- ABS (2021) [Sex \(SEXP\) by Age group \(AGE5P\) and Indigenous status \(INGP\) and Statistical Area Level 1 \(SA1\)](#) [TableBuilder], accessed 31 August 2023.
- ABS (2021) '2021 Census Mesh Block counts' [data set], [Census mesh block counts](#), accessed 29 July 2022.
- Geoscape Australia (May 2022) Geocoded National Address File (G-NAF) [data set], accessed [via [Data.gov.au](#)] 19 May 2022.

Procedure summary:

Below, square brackets are used to indicate inputs and curly brackets are used to indicate results.

- [A1] used to split [P6] by Population Grid and Mesh Block → {R1} *Persons, by Population Grid and Mesh Block*
- [C6] used to adjust [R1] → {R2} *Persons, by Population Grid and Mesh Block*
- [P5] used to benchmark [R2] → {R3} *Persons, by Population Grid and Mesh Block*
- [P6] used to benchmark [R3] → {R4} *Persons, by Population Grid and Mesh Block*
- [C4]÷[C5] and [P1]÷[P7] used to estimate target population size in [R4] → {R5} *Females, aged 50-74, by Population Grid and Mesh Block*
- [P1] used to benchmark [R5] → {R6} *Females, aged 50-74, by Population Grid and Mesh Block*
- [C2] used to estimate target population size in [R6] by Indigenous status → {R7} *Females, aged 50-74, by Indigenous status, by Population Grid and Mesh Block*
- [C3] used to adjust [R7] → {R8} *Females, aged 50-74, by Indigenous status, by Population Grid and Mesh Block*
- [C1] used to disaggregate [P2], [P3] and [P4] → {R9} *Males and females, aged 0-49, 50-64, 65-74 and 75+, by Indigenous status, by SA2 and IREG, 2021*
- [R9] used to adjust [R8] → {R10} *Females, aged 50-74, by Indigenous status, by Population Grid and Mesh Block.*

Limitations

- The smallest geographic level for which ERPs are officially prepared and validated by the ABS is SA2. In this report, population estimates that are low, cover small areas, are more geographically isolated, or specific to First Nations and non-Indigenous women are subject to greater relative error. For example, estimates of the number of First Nations women or non-Indigenous women in small remote communities should be treated as indicative only.
- Population disaggregation via proxy data (in this case: Census counts, total populations and G-NAF addresses) is an imperfect process. Proxy data may not be accurate or representative of the target population's distribution.
- Population data from 2021 were used, instead of more recent data for 2022, mainly for coherency with Aboriginal and Torres Strait Islander ERPs from 2021, which were the best available at the time of analysis. Where preliminary ERPs have been used, there may be discrepancies with other revised or final ABS estimates.

Technical notes

Overview

Scope: BreastScreen Australia screening mammography service locations, active from 2021-2024, with 2024 anticipated.

Due to the nature of the screening program (recommended every 2 years) and the importance of visiting services in regional and remote areas, location data were collected along with the timing of visits, if applicable. The availability of services in individual years was used to add gradation to the drive time results.

To maximise the relevance of the results, efforts were made to represent the availability of services in 2023 and 2024 as a priority. For example, new services or changes to existing services in 2023 or 2024 (anticipated) were allowed to override availability in 2021 and 2022. Similarly, services that were discontinued between 2021 and 2023 were excluded from the standard results - only being included in the category, 'open at least once from 2021 to 2024', which shows in the dashboard and other geographical results.

Details

Collection phase: Data for screening sites were received from state and territory BreastScreen organisations between July and October 2023.

Type of screening site:

- BreastScreen organisations provided the following information for each service location, along with street address/coordinates:

Reference year (following a hierarchy)	Type of screening site (by the end of the reference year)
One from options: Q1. Screening in 2023? <ul style="list-style-type: none"> [If yes] 2023 [If not] Q2. Screening in 2024? <ul style="list-style-type: none"> [If yes] 2024 [If not] Q3. Screened in 2022? <ul style="list-style-type: none"> [If yes] 2022 [If not] Q4. Screened in 2021? <ul style="list-style-type: none"> [If yes] 2021 [If not] Out-of-scope 	One from options: <ul style="list-style-type: none"> Permanently open Visiting annually Visiting every 2 years Visiting every 3 years Visiting every 4 years Visiting infrequently (5+ years) or trial site Permanently closed

- For visiting services, the provided frequency was then extrapolated across the 2021-2024 period to align with the requirements of the drive time analysis (see [Drive time analysis](#)).

Validation: Data were validated against online information then resupplied to the organisations to advise of any changes made. Geocode placements are expected to be within 200 metres of true locations.

Limitations

- Capacity information (the number of women that a service could potentially screen) was not sought for this analysis, due to the complexity that this would add to the data collection process and reporting of results. In reality, services will have a range of capacities for service delivery, and this may have an impact on women's ability to receive screening.
- Services that are not administered by BreastScreen Australia are not included in this analysis but may be important in some areas (for example, Norfolk Island).
- Service frequency is represented in terms of the expected service schedule covering the period 2021-2024. Disruptions to usual frequency, such as those that occurred following the outbreak of COVID-19, and those tied to brief infrastructure/workforce issues are not factored into this analysis. Service changes that take place after the analysis was finalised are unable to be included.
- As service frequency was based on calendar-year information, there are likely to be instances where the term, 'at least annually' does not represent availability of services within any given 12-month window - for example, if a visiting service was only near to a population in January 2022 and December 2023 (a 24-month span). Likewise, the term, 'at least every 2 years', may not represent availability within any given 24-month period.

Technical notes

Overview

Drive times refer to the estimated time it takes to travel by car from one location to another, based on the road network and speed limits, via the fastest route. This estimate may differ from the actual travel time.

Drive times between population centroids (ABS Population Grid, 2021) and nearest service locations (in terms of time) were calculated using Esri software. Drive times were adjusted for the distance to the road network and imputed in the absence of a valid route.

Six sets of drive times were generated using subsets of the service locations, so that results would reflect the availability of services from the potential client's point of view. For example, a population could be within a one-hour drive of a service 'open at least annually', if they lived 5-minutes from a biennial (2-yearly) service in 2023 and 45-minutes from a biennial service in 2024.

Details

Origins: Land centroid of each populated grid cell from the ABS Population Grid, 2021.

Destinations: Service locations (accuracy: within 200 metres).

Road network: ArcGIS StreetMap Premium Asia Pacific 2023 Release 1.

Barriers: None (women may use any service, nationally).

Traffic consideration: None (driving unimpeded).

Drive time outputs:

- *RUN_PERM*: Time to nearest permanent service (ongoing)
- *RUN_2021*: Time to nearest service in 2021 (ongoing)
- *RUN_2022*: Time to nearest service in 2022 (ongoing)
- *RUN_2023*: Time to nearest service in 2023 (ongoing)
- *RUN_2024*: Time to nearest service in 2024 (ongoing)
- *RUN_ANY*: Time to nearest service (any, including trial, infrequent and discontinued sites).

Adjustments and imputation:

- In the vast majority of cases, drive times needed little adjustment: Geodesic distances from population centroid to road network (start journey) and from road network (end journey) to service location ("snapping distance") were penalised at one minute per kilometre (equivalent to 60 km/h). It was especially important to consider the snapping distances in remote areas, where the Esri road network could be incomplete. A speed of 60 km/h was chosen to return moderately conservative results.
- For locations where the road network provided no drive time results: the geodesic distance to the closest service was used to impute a drive time, at 2-minutes per kilometre (equivalent to 30 km/h). It was especially important to impute results for islands where ferry routes were missing from the road network. A speed of 30 km/h was chosen to return extra conservative results.
- For locations where the snapping distance accounted for more than 25% of the total drive time: the lesser of total drive time and the geodesic distance time was used. This was applied in case any populated location had a nearby service but incomplete road network data.

Combining results of the drive time outputs:

- For drive time to a service *open permanently*: *RUN_FIXED*
- For drive time to a service *open at least annually*: maximum of {*RUN_2021*, *RUN_2022*, *RUN_2023*, *RUN_2024*}
- For drive time to a service *open at least every 2 years*: minimum of { maximum of [*RUN_2021*, *RUN_2023*], maximum of [*RUN_2022*, *RUN_2024*] }
- For drive time to a service *open at least once from 2021 to 2024*: *RUN_ANY*.

Limitations

The drive time analysis is very accurate in most cases. However, there are some general limitations:

- Minimum drive times are employed as an objective measure relating to the ease with which people can use services, where distance presents a barrier. In reality: there may be more important, non-spatial barriers affecting access to services; there are subjective differences of opinion relating to the same travel time; and there are many unmeasured spatial factors, such as traffic, parking, road quality, fuel costs, people movements (for work or other activities).
- People are assumed to be able to travel by motor vehicle, when necessary. For people without this option or for whom this is more burdensome, distance presents additional challenges.
- Additionally, the digital road network may be missing potential routes, or may include routes that are not accurate. Note that by displaying drive time results at the grid-level as part of the interactive dashboard, this allows for user sense-checking of anomalies.

More specifically to this analysis:

- Residents within each 1×1 kilometre grid square are assumed to have the same drive times to services. This does not account for the differences in how people are distributed within those grid squares, which can have a considerable impact in certain areas (for example, where water or other barriers separate 2 communities).
- Noting that modelled populations were rounded for display, grid squares with between 0 and 1 estimated residents from the target group (women aged 50-74, by Indigenous status) are not shown on the map on the interactive dashboard, but their modelled populations still contribute to results when aggregated to geographic areas.

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Technical notes

Table: Abbreviations

Terms	Description
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
ASGS	Australian Statistical Geography Standard
BL	Bounded locality
COVID-19	Coronavirus disease 2019
ERP	estimated resident population
G-NAF	Geocoded National Address File
IARE	Indigenous Area
ILOC	Indigenous Location
IR	Inner regional
IREG	Indigenous Region
IRSAD	Index of Relative Socio-economic Advantage and Disadvantage
IRSEO	Indigenous Relative Socioeconomic Outcomes
L	locality
LGA	Local Government Area
MC	Major cities
MU	Major urban
NSW	New South Wales
NT	Northern Territory
OR	Outer regional
OT	Other Territories
OU	Other urban
PHN	Primary Health Network
Qld	Queensland
R	Remote
RB	Rural balance
Rem.	Remoteness
SA	South Australia
SA1	Statistical Area Level 1
SA2	Statistical Area Level 2
SA3	Statistical Area Level 3
SA4	Statistical Area Level 4

SAL	Suburbs and Localities
SEIFA	Socio-Economic Indexes for Areas
Tas.	Tasmania
Tot.	total
UCL	Urban Centres and Localities
Vic.	Victoria
VR	Very remote
WA	Western Australia

Table: Symbols

Symbols	Description
%	per cent
<	less than
>	more than
≤	less than or equal to
≥	more than or equal to
—	nil or rounded to zero
..	not applicable

Glossary

Aboriginal and/or Torres Strait Islander (First Nations)

In most data collections, a person who identified themselves, or was identified by another household member, as being of Aboriginal or Torres Strait Islander origin. For a few data collections, information on acceptance of a person as being Indigenous by an Indigenous community may also be required. See also [First Nations people](#).

accessibility

The relative ease of reaching destinations distributed in space, with respect to an origin point. In this report, this refers to the [drive time](#) from women's place of usual residence to a [screening site](#) available at a range of [service frequencies](#).

age standardisation

A way to remove the influence of age when comparing populations with different [age structures](#). This is usually necessary because the rates of many diseases vary strongly and usually increase with age. The age structures of the different populations are converted to the same 'standard' structure, and then the disease rates that would have occurred with that structure are calculated and compared. Age-standardised rates are usually expressed per 100,000 population.

age structure

The relative number of people in each age group in a population.

drive time

The estimated time it takes to travel by car from one location to another, based on the road network and speed limits, via the fastest route. This estimate may differ from the actual travel time.

estimated resident population (ERP)

The official ABS estimate of the Australian population. The ERP is derived from the 5-yearly Census counts and is updated quarterly between each Census. It is based on the usual residence of the person.

First Nations people

People of Aboriginal or Torres Strait Islander descent who identify as an [Aboriginal or Torres Strait Islander](#).

fixed site

A [screening site](#) that is stationary or fixed in location and does not relocate to alternative locations. See also [mobile site](#).

incidence

The number of new cases of invasive breast cancer occurring during a given period.

Index of Relative Socioeconomic Advantage and Disadvantage (IRSAD)

One of the set of [Socio-Economic Indexes for Areas \(SEIFA\)](#) for ranking the average socioeconomic conditions of a population in a geographic area. The 2021 IRSAD index incorporates 29 variables from the 2021 Census of Population and Housing that measure employment, occupation, education, income and housing. See ABS (2023).

Index of Relative Socioeconomic Advantage and Disadvantage (IRSAD) deciles

IRSAD deciles in this report are area-based, containing approximately the same number of Statistical Areas Level 1 (SA1), grouped according to their 2021 IRSAD rank. The first or lowest decile contains the most disadvantaged tenth of SA1s. See also [Index of Relative Socioeconomic Advantage and Disadvantage](#).

Indigenous Area (IARE)

Indigenous Areas are medium-sized regions with populations that are large enough for the release of detailed statistics. Part of the Indigenous Structure in the Australian Statistical Geography Standard. Compared with other structures in the Australian Standard Geography Standard, the Indigenous Structure better reflects the distribution of the Indigenous population.

Indigenous Location (ILOC)

Indigenous Locations represent small First Nations communities (urban and rural) with a minimum population of 90 First Nations usual residents. An ILOC is an area designed to allow the release of statistics relating to First Nations people with a high level of spatial accuracy whilst maintaining the confidentiality of individuals. ILOCs are aggregates of one or more SA1s. Part of the Indigenous Structure in the Australian Statistical Geography Standard. Compared with other structures in the Australian Standard Geography Standard, the Indigenous Structure better reflects the distribution of the Indigenous population.

Indigenous Region (IREG)

Indigenous Regions are large geographical areas used to report data about First Nations people. Part of the Indigenous Structure in the Australian Statistical Geography Standard. Compared with other structures in the Australian Standard Geography Standard, the Indigenous Structure better reflects the distribution of the Indigenous population.

Indigenous Relative Socioeconomic Outcomes (IRSEO)

The 2021 IRSEO index ranks the average socioeconomic conditions of First Nations populations across Indigenous Areas. The index incorporates 9 variables from the 2021 Census of Population and Housing that measure employment, occupation, education, income and housing. The IRSEO index is considered to be more suitable regarding the First Nations population than traditional measures of socioeconomic disadvantage used in Australia such as the [Socio-Economic Indexes for Areas](#). See Biddle and Markham (2023).

Indigenous Relative Socioeconomic Outcomes (IRSEO) deciles

IRSEO deciles in this report are area-based, containing approximately the same number of Indigenous Areas (IARE), grouped according to their 2021 IRSEO rank. The first or lowest decile contains the most advantaged tenth of IAREs. See also [Indigenous Relative Socioeconomic Outcomes](#).

Local Government Area (LGA)

A spatial unit which represents the whole geographical area of responsibility of an incorporated Local Government Council, an Aboriginal or Island Council in Queensland, or a Community Government Council (CGC) in the Northern Territory.

mammogram

A soft tissue X-ray of the breast.

mammography

The process of taking a [mammogram](#).

Mesh Block

Mesh Blocks are the smallest geographical area defined by the Australian Bureau of Statistics (ABS) and form the building blocks for the larger regions of the Australian Statistical Geography Standard (ASGS). All other statistical areas or regions are built up from or, approximated by whole Mesh Blocks.

mobile site

A [screening site](#) where a mobile screening van or four-wheel drive bus provides a screening service. See also [fixed site](#).

mortality

The number of deaths occurring during a given period.

open at least annually

[Service frequency](#) corresponding to the accessibility of [permanent sites](#) and [visiting sites](#) that, when combined, provide access to a [screening site](#) at least once every calendar year.

open at least every 2 years

[Service frequency](#) corresponding to the accessibility of [permanent sites](#) and [visiting sites](#) that, when combined, provide access to a [screening site](#) at least once every 2 calendar years.

open at least once from 2021 to 2024

[Service frequency](#) corresponding to the accessibility of [permanent sites](#) and [visiting sites](#) that, when combined, provide access to a [screening site](#) at least once during the years, 2021-2024.

open permanently

[Service frequency](#) corresponding to the accessibility of [permanent sites](#).

participation rate

The proportion of women aged 50 to 74 years who are screened through BreastScreen Australia in a 2-year period. Participation is measured over 2 calendar years to align with the recommended screening interval.

permanent site

A [fixed site](#) which provides [screening mammography](#) services throughout the year and is expected to continue beyond 2023. See also [visiting site](#).

Population Grid

Modelled population estimates from the ABS, presented in one square kilometre grid format, covering Australia.

Primary Health Network (PHN)

Independent organisation funded by the Australian Department of Health and Aged Care to coordinate primary health care. Each PHN cares for a corresponding geographical region. Together, the PHNs geographically cover the whole of Australia.

Remoteness Areas

Classification that divides each state and territory into several regions based on their relative accessibility to goods and services (such as general practitioners, hospitals and specialist care) as measured by road distance to urban centres of different sizes. These regions are based on the Accessibility/Remoteness Index of Australia and defined as Remoteness Areas by the Australian Statistical Geography Standard.

screening mammography

[Mammography](#) that is performed when a woman does not have signs or symptoms of disease.

screening site

A BreastScreen Australia site providing [screening mammography](#) services to the general public. This excludes assessment-only services, and screening mammography that occurs outside the BreastScreen Australia program. This includes both [fixed](#) and [mobile sites](#). Used interchangeably with [screening service location](#).

Section of State

An ABS geographical classification scheme, grouping [Urban Centres and Localities \(UCL\)](#) into classes of urban areas based on population size (*Major urban* or *Other urban*). Remaining areas are considered to be rural (*Bounded locality* or *Rural balance*).

service frequency

This describes the frequency at which the [accessibility](#) of [screening sites](#) was measured, for women needing to access a site: [open permanently](#), [open at least annually](#), [open at least every 2 years](#), and [open at least once from 2021 to 2024](#).

screening service location

Used interchangeably with [screening site](#).

Socio-Economic Indexes for Areas (SEIFA)

A set of indexes, created from Census data, that aim to represent the socioeconomic position of Australian communities and identify areas of advantage and disadvantage. The indexes' value reflects the overall or average level of advantage or disadvantage of the population of an area; it does not show how individuals living in the same area differ from each other in their socioeconomic group. This report uses one of the SEIFA indexes, the [Index of Relative Socioeconomic Advantage and Disadvantage](#).

socioeconomic status

The social and economic position of an individual or group within the larger society. In this report, socioeconomic status is reported using two area-based indexes - the [Index of Relative Socioeconomic Advantage and Disadvantage](#) and the [Indigenous Relative Socioeconomic Outcomes](#).

statistical areas

Geographical classifications forming part of the main Australian Statistical Geography Standard structure. They encompass four levels, with increasing size and population: Statistical Areas Level 1 (SA1); Statistical Areas Level 2 (SA2); Statistical Areas Level 3 (SA3); and Statistical Areas Level 4 (SA4).

Suburbs and Localities (SAL)

Suburbs and Localities, formerly State Suburbs, are an ABS Mesh Block approximation of the officially recognised boundaries of suburbs (in cities and larger towns) and localities (outside cities and larger towns) as defined by the State and Territory governments of Australia.

target group

Women aged between 50 and 74 years, which is the group that is actively targeted to participate in the screening and is represented here by the number of females of that age group from the ABS' 2021 [Regional population by age and sex](#) estimates. Used interchangeably with [target population](#).

target population

Used interchangeably with [target group](#).

Urban Centres and Localities (UCL)

Urban Centres and Localities (UCL) represent areas of concentrated urban development. They are identified using dwelling and population density criteria and data from the 2021 Census of Population and Housing. An 'urban centre' is generally a population centre with 1,000 or more people. A 'locality' is generally a population centre of between 200 and 999 people. All SA1s in a state or territory which are not included in a UCL, are combined into one Remainder of State/Territory area.

visiting site

A [fixed site](#) or [mobile site](#) which provides screening services for a limited period, often at regular intervals. See also [permanent site](#).

References

ABS (Australian Bureau of Statistics) (2021) 'Population estimates by age and sex, by SA2 (ASGS2021), 2001 to 2021' [data set], [Regional population by age and sex](#), accessed 27 October 2022.

ABS (2023) [Socio-Economic Indexes for Areas \(SEIFA\), Australia, 2021](#), ABS website, Australian Government, accessed 14 December 2023.

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Data





Notes

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Related material

Resources

Related topics

- [Cancer](#)
 - [First Nations people](#)
 - [Rural & remote Australians](#)
-

