

2.1 Fibre optic colonoscopy

Context

This data item examines the number of colonoscopies performed. The data are for MBS-funded fibre optic colonoscopy services. They exclude publicly funded hospital services. Colonoscopies for public patients in public hospitals account for about 20 per cent of colonoscopies nationally.¹

A colonoscopy is a medical procedure that examines the large bowel (colon). It is used for screening and surveillance for colorectal cancer and other large bowel diseases.

During a colonoscopy, a thin, flexible tube called a fibre optic colonoscope is carefully fed into the bowel. This allows the clinician to see whether any abnormalities are present and, if so, sample (biopsy) or remove them.

Colonoscopies are performed when patients exhibit some or all of the following signs or symptoms:

- bleeding from the bowel
- blood in the stool
- unexplained abdominal pain
- changes in bowel habits.

Colonoscopies promote earlier detection of bowel cancer.

Evidence shows that people who return a positive faecal occult blood test have a higher rate of abnormalities in colonoscopies, thus making it a cost-effective intervention to prevent bowel cancer.² A colonoscopy can also be used to prevent bowel cancer by screening for polyps (which can be a precursor to bowel cancer) in those with an increased risk. This includes not only those who return a positive faecal occult blood test, but those with a history of polyps and a family history of bowel cancer.

General practitioners play a pivotal role in referring people for colonoscopies. General practitioner recommendations have also been shown to positively influence participation in bowel cancer screening using faecal occult blood tests.³

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Magnitude of variation

In 2013–14, there were 589,748 MBS-funded services for fibre optic colonoscopy, representing 2,355 services per 100,000 people (the Australian rate).

The number of MBS-funded services for fibre optic colonoscopy across 324* local areas (SA3s) ranged from 146 to 4,374 per 100,000 people. The number of services was **30.0 times higher** in the area with the highest rate compared to the area with the lowest rate. The average number of services varied across states and territories, from 902 per 100,000 people in the Northern Territory, to 2,688 in Queensland.

After excluding the highest and lowest results, the fibre optic colonoscopy rate across the 310 remaining local areas was **4.1 times higher** in one local area compared to another.

Rates were markedly higher in local areas in and around capital cities and were lower in remote areas. In major cities, rates were lowest in areas of low socioeconomic status and increased in areas of higher socioeconomic status. This socioeconomic patterning was not observed in regional or remote areas.

Interpretation

Potential reasons for the variation include differences in:

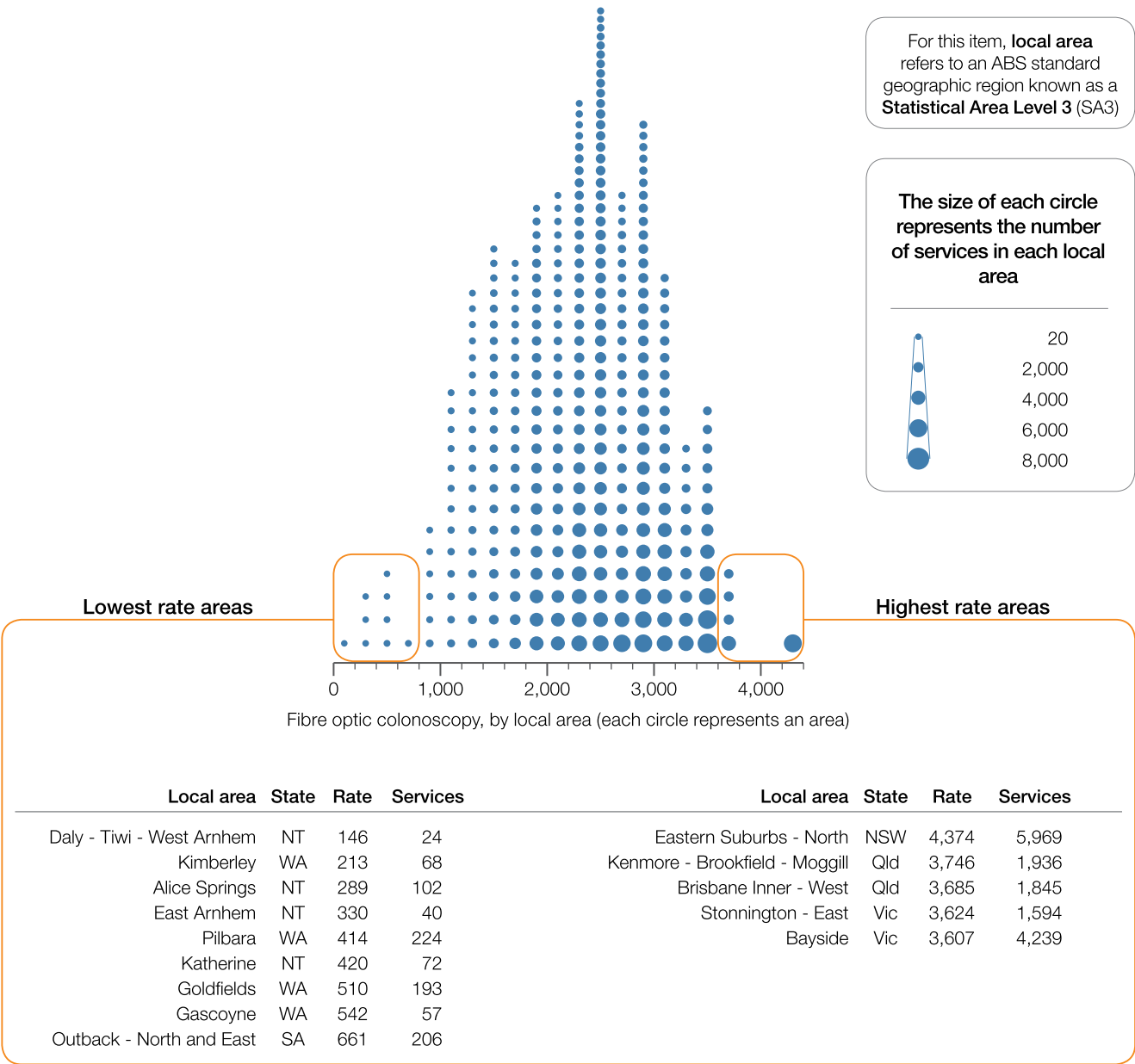
- clinical decision-making and clinicians' adherence to the NHMRC guidelines
- levels of screening among patients with no symptoms. The national guidelines endorse colonoscopies only for those who return a positive faecal occult blood test or are at a moderate or high risk of colorectal pathology.² Screening with colonoscopy may explain high rates among those who are at an average or low risk
- levels of private health insurance. This may explain the higher colonoscopy rates in higher socioeconomic areas, where more people have private health cover
- local availability of colonoscopy services in rural and remote locations, where the need to travel long distances may be a barrier
- levels of voluntary faecal occult blood test screening. The lowest rates of participation in the 2013–14 National Bowel Cancer Screening Program were among people from lower socioeconomic groups and those from remote areas⁴
- administrative arrangements in public hospitals, whereby some patients may be referred to private outpatient schemes (increasing the rate of MBS colonoscopies in some areas).

To explore this variation, further analysis could focus on:

- gathering data on rates of colonoscopy for publically funded patients to develop a comprehensive picture of variation.

*There are 333 SA3s. For this item, data were suppressed for 9 SA3s. This is because of confidentiality requirements given the small numbers of services in these areas.

Figure 18: Number of MBS-funded services for fibre optic colonoscopy per 100,000 people, age standardised, by local area, 2013–14



Notes:
Rates are standardised based on the age structure of the Australian population in 2001.
State/territory and national rates are based on the total number of services and people in the geographic area.
The term local area refers to an ABS standard geographic region known as a Statistical Area Level 3 (SA3).

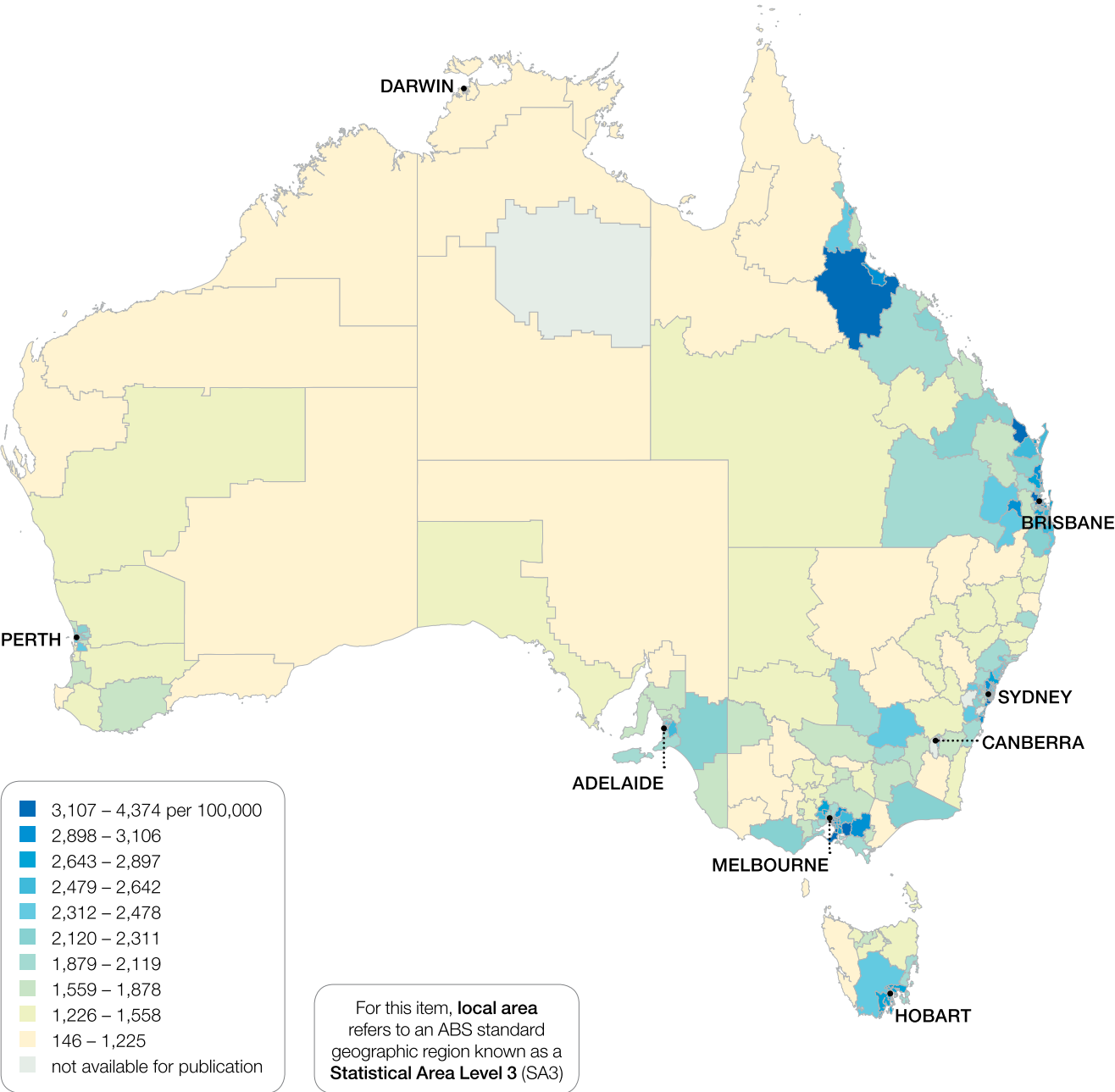
MBS statistics exclude services provided free of charge to public patients in hospitals, to Department of Veterans' Affairs beneficiaries, some patients under compensation arrangements and through other publicly funded programs.
SA3 analysis excludes approximately 430 services from GPO postcodes 2001, 2124, 3001, 4001, 5001, 6843 but these data are included in state/territory and national level analysis.

For more technical information please refer to the Technical Supplement.

Sources: National Health Performance Authority analysis of Department of Human services Medicare Benefits statistics 2013–14 (data supplied 12/08/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

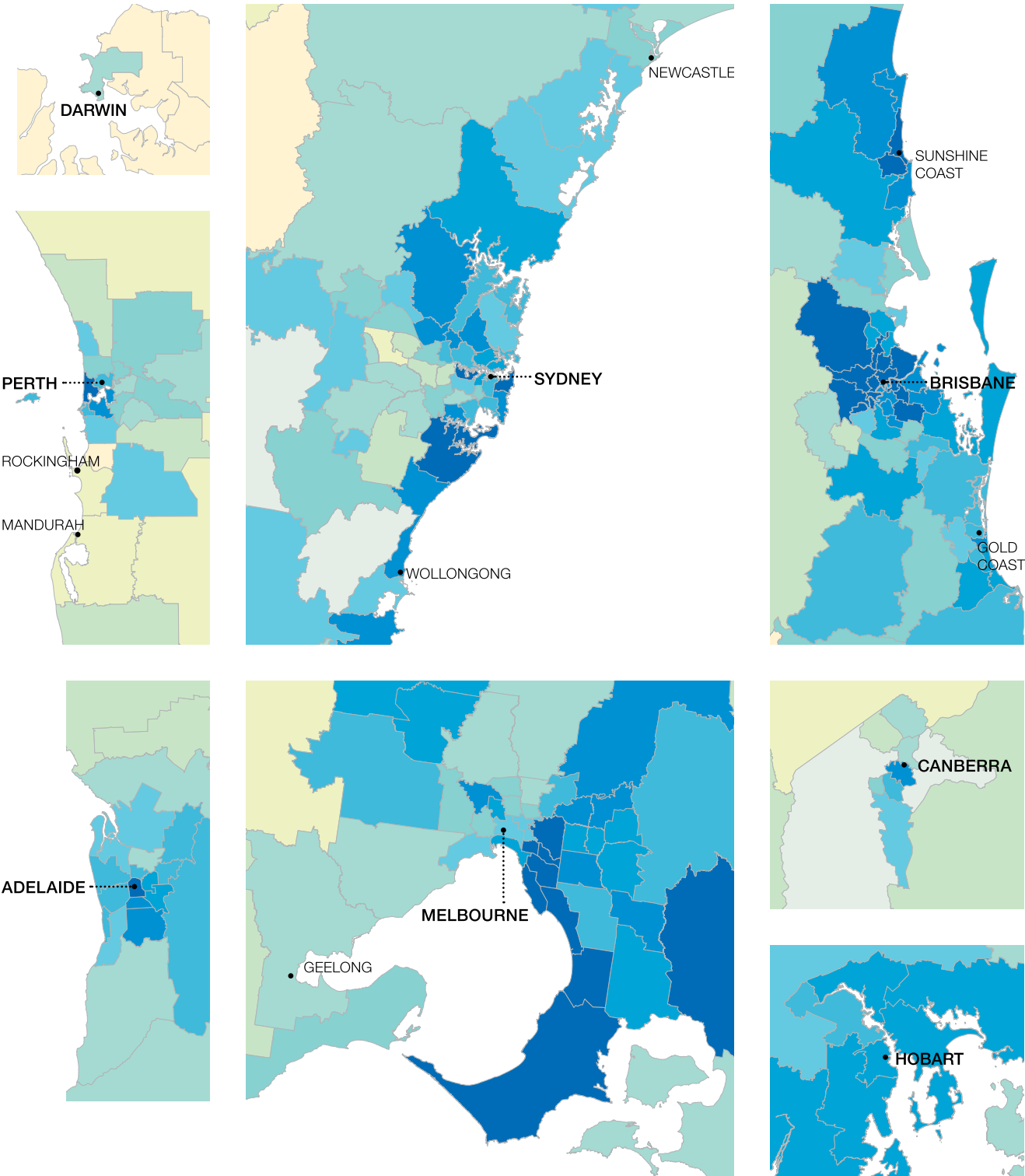
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Figure 19: Number of MBS-funded services for fibre optic colonoscopy per 100,000 people, age standardised, by local area, 2013–14



Sources: National Health Performance Authority analysis of Department of Human services Medicare Benefits statistics 2013–14 (data supplied 12/08/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

The number of MBS-funded services for fibre optic colonoscopy across 324 local areas (SA3s) ranged from 146 to 4,374 per 100,000 people. The number of services was **30.0 times higher** in the area with the highest rate compared to the area with the lowest rate.

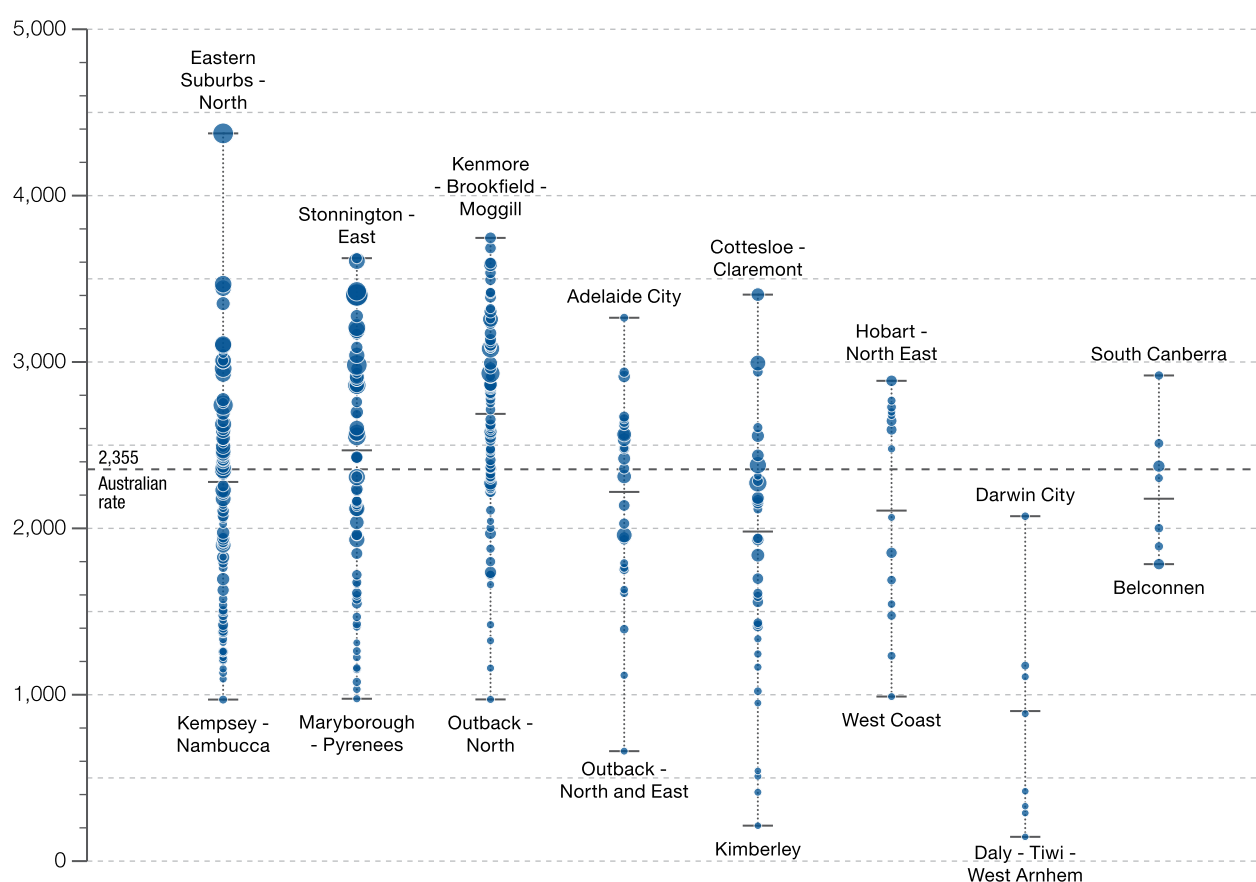


Sources: National Health Performance Authority analysis of Department of Human services Medicare Benefits statistics 2013–14 (data supplied 12/08/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

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Figure 20: Number of MBS-funded services for fibre optic colonoscopy per 100,000 people, age standardised, by local area, state and territory, 2013–14

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT
Highest rate	4,374	3,624	3,746	3,266	3,405	2,887	2,073	2,919
State/territory	2,279	2,469	2,688	2,219	1,981	2,107	902	2,178
Lowest rate	971	976	972	661	213	989	146	1,785
No. services	185,985	153,168	132,657	43,432	51,366	13,042	1,845	8,232



For this item, **local area** refers to an ABS standard geographic region known as a **Statistical Area Level 3 (SA3)**

The size of each circle represents the number of services in each local area



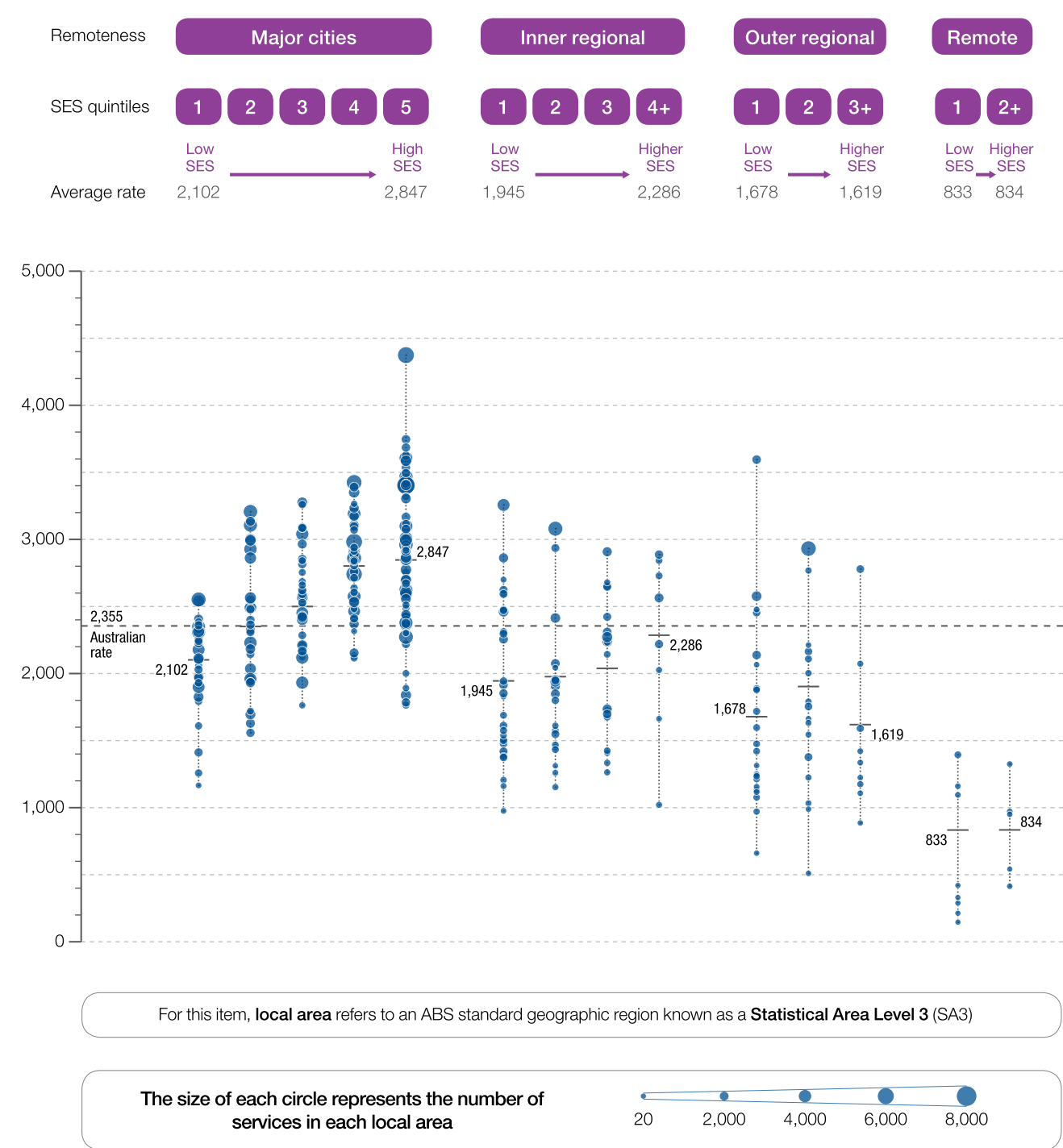
Notes:

Rates are standardised based on the age structure of the Australian population in 2001.

State/territory and national rates are based on the total number of services and people in the geographic area.

Sources: National Health Performance Authority analysis of Department of Human services Medicare Benefits statistics 2013–14 (data supplied 12/08/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

Figure 21: Number of MBS-funded services for fibre optic colonoscopy per 100,000 people, age standardised, by local area, remoteness and socioeconomic status (SES), 2013–14



Notes:
 Rates are standardised based on the age structure of the Australian population in 2001.
 The national rate is based on the total number of services and people in Australia.
 Average rates are based on the total number of services and people in the local areas within each group.

Sources: National Health Performance Authority analysis of Department of Human services Medicare Benefits statistics 2013–14 (data supplied 12/08/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

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Resources

- Australian Cancer Network Colorectal Cancer Guidelines Revision Committee. The Cancer Council Australia and Australian Cancer Network. *Guidelines for the prevention, early detection and management of colorectal cancer*. 2005. Available at: www.nhmrc.gov.au/guidelines-publications/cp106.
- Royal Australian College of General Practitioners. *Guidelines for preventive activities in general practice 8th edition*. 2012. Available at: www.racgp.org.au/your-practice/guidelines/redbook/.

1 DLA Piper Australia. Review of MBS colonoscopy items. Canberra: Department of Health and Ageing, 2011.

2 Australian Cancer Network Colorectal Cancer Guidelines Revision Committee. Guidelines for the prevention, early detection and management of colorectal cancer. Sydney: Cancer Council Australia and Australian Cancer Network, 2005.

3 Royal Australian College of General Practitioners. Guidelines for preventive activities in general practice, 8th edition. East Melbourne: RACGP, 2012.

4 Australian Institute of Health and Welfare. National Bowel Cancer Screening Program: monitoring report 2013–14. Cancer Series No. 94. Cat. no. CAN 92. Canberra: AIHW, 2015.