Australian Government
Australian Institute of Health and Welfare

Healthy Communities:

Patients' out-of-pocket spending on Medicare Services, 2016–17

Technical Note

AIHW

www.myhealthycommunities.gov.au

Summary

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This Technical Note accompanies *Healthy Communities: Patients' out-of-pocket spending on Medicare services, 2016–17* on <*www.myhealthycommunities.gov.au*>.

This report uses two data sources:

- Medicare Benefits Schedule, 2016–17
- Australian Bureau of Statistics (ABS) Patient Experiences in Australia Survey, 2016–17

The report presents the proportion of patients with out-of-pocket costs, the total out-of-pocket cost per patient, the amount patients spent out-of-pocket per service, and the proportion of people who delayed or did not use a service when needed due to cost. The report measures include:

Medicare Benefits Schedule, 2016–17

All non-hospital Medicare services

- Percentage of patients with out-of-pocket costs for non-hospital Medicare services
- Total out-of-pocket cost per patient for all non-hospital Medicare services (for patients with costs)

Specialist attendances

- Percentage of patients with out-of-pocket costs for specialist attendances
- Patients' out-of-pocket cost per specialist attendance (for patients with costs)

General Practitioner (GP) attendances

- Percentage of patients with out-of-pocket costs for GP attendances
- Patients' out-of-pocket cost per GP attendance (for patients with costs)

Diagnostic imaging services

- Percentage of patients with out-of-pocket costs for diagnostic imaging services
- Patients' out-of-pocket cost per diagnostic imaging service (for patients with costs)

Obstetric attendances

- Percentage of patients with out-of-pocket costs for obstetric attendances
- Patients' out-of-pocket cost per obstetric attendance (for patients with costs)

For patients with costs, the out-of-pocket cost per patient and per service measures are presented for patients at the 50th (median) and 90th percentile in the report and online display of data. Data are also available for patients at the 25th and 75th percentile in the accompanying Excel download.

ABS Patient Experiences in Australia survey, 2016–17

- Percentage of people who delayed or did not see a medical specialist, GP, get an imaging test and/or get a pathology test due to cost in the last 12 months, by PHN area
- Percentage of people who delayed or did not see a GP when needed due to cost in the last 12 months, by PHN area

Further details on these indicators are available in the indicator specification tables on pages 13-21.

About the data sources

Medicare Benefits Schedule 2016–17

Data for the report were sourced from the Medicare Benefits Schedule (MBS) claims data, which are administered by the Australian Government Department of Health. The claims data are derived from administrative information on services that qualify for a Medicare benefit under the *Health Insurance Act 1973* and for which a claim has been processed by the Department of Human Services. Data are reported for claims processed between 1 July 2016 and 30 June 2017.

Scope and coverage

Under MBS arrangements, Medicare claims can be made by persons who reside permanently in Australia. This includes New Zealand citizens and holders of permanent residence visas. Applicants for permanent residence may also be eligible depending on circumstances. In addition, persons from countries with which Australia has reciprocal health care agreements might also be entitled to benefits under MBS arrangements.

It is important to note that some Australian residents may obtain medical services through other arrangements. This includes services that were fully or partially subsidised by the Department of Veterans' Affairs, compensation arrangements, or through other publicly funded programs including jurisdictional salaried GP services provided in remote outreach clinics. Some areas have a higher proportion of services that are not Medicare funded than other areas and this may affect comparability.

Out-of-pocket costs

The MBS lists fees for certain health services (the Schedule fee). If a health practitioner provides a service listed on the MBS, on a 'fee-for-service' basis to a Medicare eligible patient, the patient or practitioner can make a claim with Medicare. Medicare will then provide a rebate or benefit as a percentage of the Schedule fee as set out below:

- 100% of the *Schedule fee* for non-referred attendances for non-admitted patients
- 85% of the *Schedule fee* for all other services for non-admitted patients, other than as part of privately insured episodes of hospital substitute treatment
- 75% of the *Schedule fee* for professional services as part of an episode of hospital treatment (other than public patients)
- 75% of the *Schedule fee* for professional services rendered to a patient as part of a privately insured episode of hospital substitute treatment.

Health providers can choose how much they charge, so the fee charged may be higher than the *Schedule fee*. The gap between the fee charged by the provider and the benefit paid by Medicare is the 'out-of-pocket' cost incurred by the patient.

Out-of-pocket costs for services to private in-patients and for privately insured episodes of hospital substitute treatment are not included, since data on supplementary benefits paid by private health benefits organisations are not available through the Medicare claims system. The out-of-pocket costs associated with services included in this report cannot be further subsidised under other insurance schemes.

Statistics in this report do not include persons who did not claim on Medicare, either because they did not have Medicare eligible services, or because they did not claim for Medicare eligible services. The report does not include costs related to pharmaceuticals, either purchased privately or subsidised by the Pharmaceutical Benefits Scheme.

Where patients have claimed on Medicare before paying the treating practitioner and have not subsequently produced proof to Medicare of the fee paid, the amount is included in the 'out-of-pocket' costs.

The out-of-pocket costs for non-hospital Medicare services that any given patient pays in a calendar year are limited by the Original Medicare Safety Net (OMSN) and the Extended Medicare Safety Net (EMSN). These safety nets cover part of the costs after patients have spent a certain amount in a calendar year. The impact of the safety nets was accounted for when calculating both annual out-of-pocket cost per patient, and out-of-pocket cost per service.

For more detailed information on the MBS services and item types, see the Australian Government Department of Health MBS Online website: <www.mbsonline.gov.au>.

For more information about the OMSN and EMSN see: <www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/Factsheet-ExtendedMedicareSafetyNet+-+Jan2018>.

Geography

The report presents information at the geography of:

- **Primary Health Network (PHN) areas –** 31 geographic areas covering Australia, with boundaries defined by the Australian Government Department of Health (2016).
- **Statistical Areas Level 3 (SA3s) –** 340 geographic areas covering Australia, with boundaries defined by the Australian Bureau of Statistics (ABS) (2016).

National results are also included.

All results are based on the patient's Medicare enrolment postcode, not where they received the health care service. Most peoples' Medicare enrolment postcode will be their residential postcode.

Measures calculated at PHN area and SA3 were compiled by applying a geographic concordance to the unit record data. The concordance used the patient's Medicare enrolment postcode as recorded on the last claim processed in the reference year. Where a patient had more than one postcode listed on their last date of processing in the year, then the postcode was taken from the last date of service on that date of processing.

Where a postcode boundary overlapped more than one PHN area or SA3, the percentage of patients attributed to each area was the same as the percentage of the postcode population that fell within each area. Patients were attributed to an area based on the cumulative ratio of the postcode to PHN area/SA3 and the corresponding last 3 digits of the patient's Personal Identifier Number (PIN). For example, if 30% of a postcode overlapped with PHN A and 70% with PHN B, then 30% of patients (PINs ending in 000 to 299) were allocated to PHN A, while the remaining 70% of patients (PINs ending in 300 to 999) were allocated to PHN B. The last 3 digits of patients' PINs are for the most part evenly distributed across Australia, so when postcodes are split across different PHN areas/SA3s there is a similar chance of being allocated to an area based on the estimated postcode population in that area.

Figures were rounded at the end of the calculations to avoid truncation error. Individual area results may not add to national totals due to rounding and missing location data.

Metropolitan and regional PHN areas

Some information is presented by **metropolitan** and **regional PHN areas** to illuminate apparent differences in the out-of-pocket costs by populations in these areas. Metropolitan PHN areas have 85% or more of the population in major cities, as defined by the ABS. All other PHN areas are classified as regional PHN areas. See Table 1 for the metropolitan or regional classification of each PHN area.

Local areas (SA3s)

Identification of SA3s with similar socioeconomic or remoteness characteristics can help when making comparisons between areas. Results for local areas (SA3s) are presented by ABS categories of remoteness and, in major cities, also by socioeconomic status. Results are grouped into the following categories:

- Major cities
  - Higher socioeconomic areas
  - Medium socioeconomic areas
  - Lower socioeconomic areas
- Inner regional
- Outer regional
- Remote (includes very remote).

SA3s in major cities

The majority of SA3s (190 of 340) across Australia are in the major cities. SA3 populations can be diverse in terms of socioeconomic status. To better enable fair comparisons within city areas, SA3s were divided into three socioeconomic groups: higher, medium and lower using the 2016 ABS Index of Relative Socioeconomic Disadvantage (IRSD). IRSD is one of the Socio-Economic Indexes for Area (SEIFA) produced by the ABS (2018b). The socioeconomic groups were defined as follows to produce three groups:

- Lower: IRSD quintiles 1 and 2
- Medium: IRSD quintiles 3 and 4
- Higher: IRSD quintile 5.

SA3s in major cities were allocated to a socioeconomic group based on the largest number of SA1s in each group. Across all SA3s, the population percentage in the chosen socioeconomic group ranged from 39% to 92%. This indicates that some SA3s have a broad diversity in socioeconomic status.

SA3s by remoteness

SA3 boundaries align well with the ABS remoteness classification for major cities, inner regional areas and outer regional areas (ABS 2018a). SA3s are not as well defined between remote and very remote areas, so these categories were combined into a single category (remote) for this analysis.

SA3s were allocated to one remoteness category based on the largest percentage of the population in each of the categories, which ranged from 48% to 100%. However, if 95% of the geographic area in an SA3 was remote or very remote, it was categorised on the basis of geographic area rather than population. This affected four SA3s – Broken Hill and Far West (NSW), Outback-North and East (SA), Goldfields (WA) and Mid West (WA).

Results for SA3s, including for each SA3 by its remoteness and/or socioeconomic category, are available to download from: <http://www.myhealthycommunities.gov.au/explore-the-data>.

Table 1: Metropolitan and regional Primary Health Network areas

Primary Health Network areas

Metropolitan		
	Name	**Proportion of the population* in Major Cities****
PHN101	Central and Eastern Sydney	100%
PHN801	Australian Capital Territory	100%
PHN102	Northern Sydney	99%
PHN103	Western Sydney	99%
PHN401	Adelaide	99%
PHN201	North Western Melbourne	98%
PHN203	South Eastern Melbourne	98%
PHN303	Gold Coast (Qld)	98%
PHN501	Perth North	98%
PHN502	Perth South	98%
PHN202	Eastern Melbourne	96%
PHN302	Brisbane South	96%
PHN301	Brisbane North	95%
PHN105	South Western Sydney	90%
PHN104	Nepean Blue Mountains (NSW)	86%
Regional		
	Name	**Proportion of the population* in Major Cities****
PHN108	Hunter New England and Central Coast (NSW)	64%
PHN106	South Eastern NSW	52%
PHN304	Darling Downs and West Moreton (Qld)	35%
PHN306	Central Queensland, Wide Bay, Sunshine Coast	34%
PHN206	Western Victoria	30%
PHN109	North Coast (NSW)	16%
PHN402	Country SA	10%
PHN107	Western NSW	0%
PHN110	Murrumbidgee (NSW)	0%
PHN204	Gippsland (Vic)	0%
PHN205	Murray (Vic & part NSW)	0%
PHN305	Western Queensland	0%
PHN307	Northern Queensland	0%
PHN503	Country WA	0%
PHN601	Tasmania	0%
PHN701	Northern Territory	0%

* population = ABS ERP 30 June 2016.

** Major Cities = as defined by the Australian Statistical Geography Standard 2016 Remoteness Areas (ABS 2016).

Source: ABS Estimated Resident Population at 30 June 2016

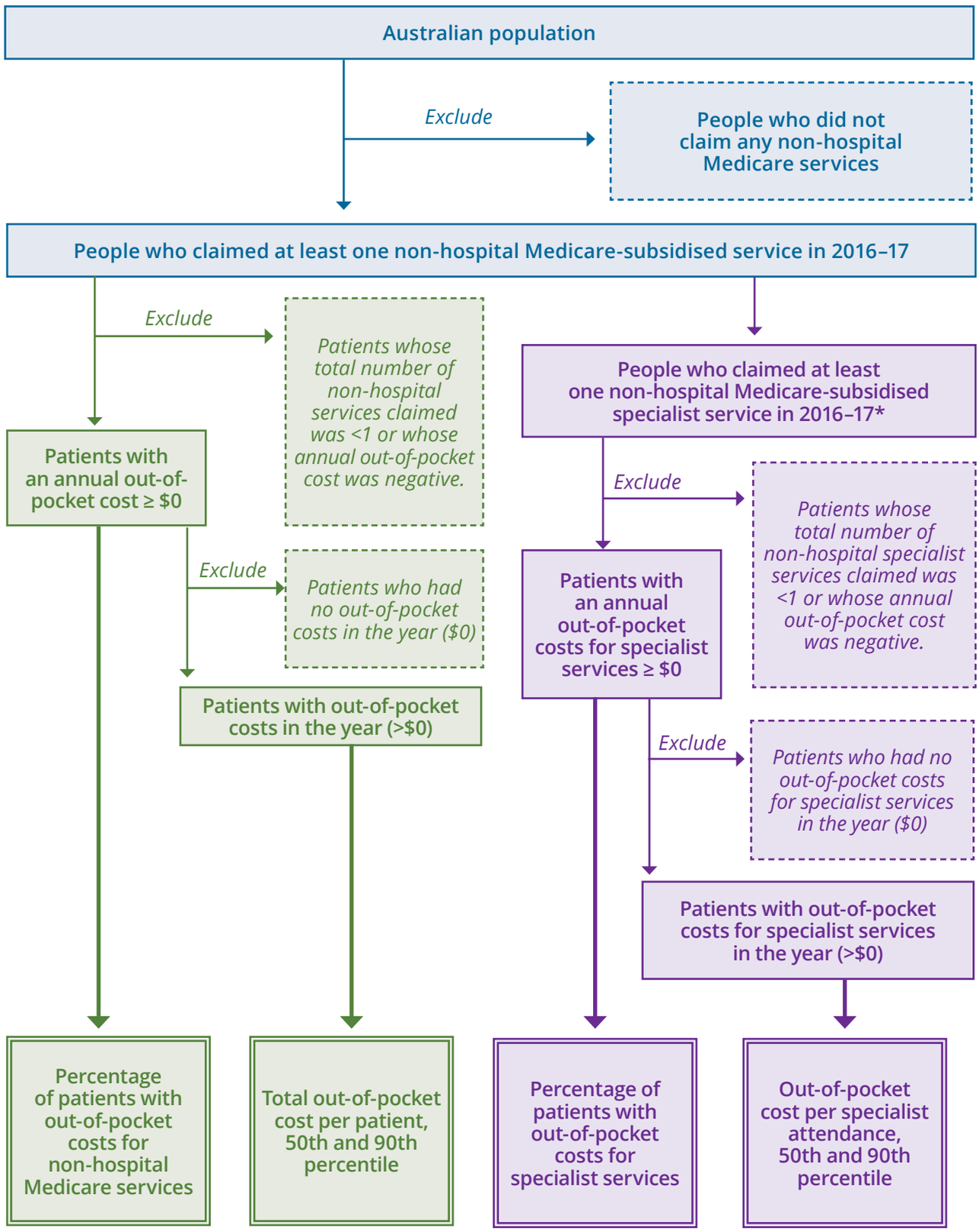
Suppression of results

Results for an area were suppressed (marked 'NP – not available for publication') if any of the following conditions were met:

- there were fewer than six patients or fewer than six providers of services in the PHN area or SA3 (note a patient/provider is only included if they received or provided at least one service in the area)
- one provider provided more than 85% of services or two providers provided more than 90% of services to patients in an area
- one patient received more than 85% of services or two patients received more than 90% of services provided in an area
- one provider charged more than 85% of out-of-pocket costs or two providers charged more than 90% of out-of-pocket costs in an area
- one patient was charged more than 85% of out-of-pocket costs or two patients were charged more than 90% of out-of-pocket costs in an area
- less than 20 services were provided in an area, or
- the population of an area was less than 2,500.

For further information about the MBS measures, see Figure 1 and the indicator specification tables on pages 13–18, 20–21.

Figure 1: Flowchart of populations included in the MBS measures of the *Patients' out-of-pocket spending on Medicare services, 2016–17* report



* This flowchart section can also be applied to the corresponding GP, diagnostic imaging and obstetric measures

Patient experiences in Australia in 2016–17

The report also contains the results from the ABS 2016–17 Patient Experience Survey, collected between 1 July 2016 and 30 June 2017.

The Patient Experience Survey is conducted annually by the ABS and collects information from a representative sample of the Australian population. The Patient Experience Survey is one of several components of the Multipurpose Household Survey, as a supplement to the monthly Labour Force Survey.

The Patient Experience Survey collects data on use and experiences of a range of health care services, including:

- GPs
- Medical specialists
- Dental professionals
- Imaging and pathology tests
- Hospital admissions
- Emergency department visits.

It includes data from people who used health services in the previous 12 months, as well as from those who did not, and enables analysis of health service information in relation to particular population groups. Data are also collected on selected aspects of communication between patients and health professionals.

Scope and coverage

The 2016–17 Patient Experience Survey included persons aged 15 years and over, but excluded:

- Members of the Australian permanent defence forces
- Diplomatic personnel of overseas governments
- Overseas residents in Australia
- Members of non-Australian defence forces (and their dependants)
- Persons living in non-private dwellings such as hotels, university residences, boarding schools, hospitals, nursing homes, homes for people with disabilities and prisons
- Persons resident in the Indigenous Community Strata, which includes discrete Aboriginal and Torres Strait Islander communities.

For further information refer to Patient Experiences in Australia: Summary of Findings, 2016–17.

Geography

The report presents information for two Patient Experience measures by PHN areas – 31 geographic areas covering Australia, with boundaries defined by the Australian Government Department of Health (2016).

Four measures are reported by remoteness areas: *Major cities, Inner regional* and *Outer regional/ Remote/Very remote*. These are classified according to the Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2011. Remoteness areas are classified according to the Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2011 (ABS 2017a).

Suppression of results

The quality of estimates from the ABS Patient Experience Survey can vary across PHN areas as the survey was not specifically designed to produce estimates at this level of geography. To ensure robust reporting of these data by PHN areas, the following suppression or 'interpret with caution' rules were developed and applied by the Australian Institute of Health and Welfare.

Estimates of a percentage or its complement that had a relative standard error greater than 50% were suppressed. These estimates were considered unreliable for most practical purposes.

Data for PHN areas were suppressed if the sample size of the denominator was less than 100 people.

The 'interpret with caution' flag was applied to data if the relative standard error associated with the percentage or its complement was greater than 25%.

Estimates for the Northern Territory were also marked with an 'interpret with caution' flag and caveat. This is because the survey excludes the Indigenous Community Strata (encompassing discrete Aboriginal and Torres Strait Islander communities) which comprises around 25% of the estimated resident population in the Northern Territory living in private dwellings.

List of patient experience indicators

The table below outlines the short and long name for each indicator included in the report. The column 'ABS questions (2016–17)' shows the item or items in the Patient Experience Survey questionnaire used to derive the indicator (ABS 2017b).

Short name	Long name	Geography	ABS questions (2016–17)
Cost barriers to specialist, GP, imaging or pathology	Percentage of people who delayed or did not see a medical specialist, GP, get an imaging test and/or get a pathology test at least once due to cost in the last 12 months	PHN	All items listed below
Cost barriers to GP care	Percentage of people who did not see or delayed seeing a GP at least once due to cost in the last 12 months	PHN Remoteness area	GPS_Q08, GPS_Q08A GPS_Q09 GPS_Q09A
Cost barriers to specialist care	Percentage of people who did not see or delayed seeing a medical specialist at least once due to cost in the last 12 months	Remoteness area	MDS_Q05 MDS_Q05A MDS_Q06 MDS_Q06A
Cost barriers to imaging	Percentage of people who delayed or did not have an imaging test at least once due to cost in the last 12 months	Remoteness area	IMG_Q02 IMG_Q03
Cost barriers to pathology	Percentage of people who delayed or did not have a pathology test at least once due to cost in the last 12 months	Remoteness area	PTH_Q02 PTH_Q03

For further information refer to *Web update: Patient experiences in Australia in 2016–17, Technical Note* on <www.myhealthycommunities.gov.au>.

Indicator specifications

Percentage of patients with out-of-pocket costs for non-hospital Medicare services

This specification applies to the following indicator:

- Percentage of patients with out-of-pocket costs for non-hospital Medicare services.

Data source	
	Medicare Benefits Schedule (MBS) claims data 2016–17
Indicator description and calculation	
Eligible claims	A claim is classified as a non-hospital attendance if the following condition is true: • The service is not conducted in a hospital to an admitted patient. Non-hospital Medicare-subsidised services include: GP and practice nurse attendances, specialist attendances, obstetric attendances, pathology tests and collection items, diagnostic imaging, optometry, allied health attendances, radiotherapy and therapeutic nuclear medicine, operations, assistance at operations and other MBS services that were provided to patients not admitted to hospital. This includes eligible telehealth services. This does not include services from the Child Dental Benefits Schedule.
Numerator	Number of patients whose annual out-of-pocket cost (fee charged minus benefit paid) for all eligible claims processed between 1 July 2016 and 30 June 2017 was greater than zero.
Denominator	Number of patients who claimed at least one non-hospital Medicare service processed between 1 July 2016 and 30 June 2017.
Calculation	Numerator ÷ denominator
Geographic disaggregation	PHN area and SA3 identified from patients' enrolment postcode.
Notes	Data are reported by the financial year in which they were processed. If a service was flagged as bulk-billed, then the fee charged was set to equal the benefit paid (so there was no out-of-pocket cost for that service). Patients were excluded if the sum of eligible services in the year was less than one, or if their annual out-of-pocket expenditure was less than zero. Costs associated with bulk-billing incentives or other top-up items are included in the analysis. Further information on the MBS services and item types are available in Table 2 (page 21) and at <www.mbsonline.gov.au>.

Total out-of-pocket cost per patient for all non-hospital Medicare services (for patients with costs)

This specification applies to the following indicator:

- Total out-of-pocket cost per patient for all non-hospital Medicare services (for patients with costs at the 25th, 50th, 75th and 90th percentiles).

Data source	
	Medicare Benefits Schedule (MBS) claims data 2016–17
Indicator description and calculation	
Eligible claims	A claim is classified as a non-hospital attendance if the following condition is true: • The service is not conducted in a hospital to an admitted patient. Non-hospital Medicare-subsidised services include: GP and practice nurse attendances, specialist attendances, obstetric attendances, pathology tests and collection items, diagnostic imaging, optometry, allied health attendances, radiotherapy and therapeutic nuclear medicine, operations, assistance at operations and other MBS services that were provided to patients not admitted to hospital. This includes eligible telehealth services. This does not include services from the Child Dental Benefits Schedule.
Calculation	Each patients' annual out-of-pocket cost for non-hospital Medicare services was calculated by subtracting the total benefits paid from the total fees charged for eligible claims processed between 1 July 2016 and 30 June 2017. Patients' with annual out-of-pocket costs at the 25th, 50th (median), 75th and 90th percentile were identified at each geographic disaggregation, for patients with an annual out-of-pocket cost greater than zero. This includes patients who had some, but not all of their services bulk-billed.
Geographic disaggregation	PHN area and SA3 identified from patients' enrolment postcode.
Notes	Data are reported by the financial year in which they were processed. If a service was flagged as bulk-billed, then the fee charged was set to equal the benefit paid (so there was no out-of-pocket cost for that service). Patients were excluded if the sum of eligible services in the year was less than one, or if their annual out-of-pocket expenditure was equal to or less than zero. Costs associated with bulk-billing incentives or other top-up items are included in the analysis. Further information on the MBS services and item types are available in Table 2 (page 21) and at <www.mbsonline.gov.au>.

Percentage of patients with out-of-pocket costs, by service type

This specification applies to the following indicators:

- Percentage of patients with out-of-pocket costs for specialist attendances
- Percentage of patients with out-of-pocket costs for GP attendances
- Percentage of patients with out-of-pocket costs for diagnostic imaging services
- Percentage of patients with out-of-pocket costs for obstetric attendances.

Data source	
	Medicare Benefits Schedule (MBS) claims data 2016–17
Indicator description and calculation	
Eligible claims	***Specialist attendances*** A claim is classified as a specialist attendance if the following conditions are true: • the item is in the Broad Type of Service group: – Specialist attendance (C/200) • the service is not conducted in a hospital to an admitted patient. Specialist attendances are Medicare-subsidised referred patient/doctor encounters, such as visits, consultations, and attendances by video conference, involving medical practitioners who have been recognised as specialists or consultant physicians for Medicare benefits purposes. Specialist attendances exclude obstetric attendances, which are included in the 'Obstetrics' Broad Type of Service group in official MBS claims data. ***GP attendances*** A claim is classified as a GP attendance if the following conditions are true: • the item is in any of the following Broad Type of Service groups: – non-referred attendances – GP/VR GP (A/101) – non-referred attendances – Enhanced Primary Care (M/102) – non-referred attendances – Other (B/103). • the service is not conducted in a hospital to an admitted patient. GP attendances are Medicare-subsidised patient/doctor encounters, such as visits and consultations, for which the patient has not been referred by another doctor. GP attendances exclude services provided by practice nurses and Aboriginal and Torres Strait Islander health practitioners on a GP's behalf.

	Diagnostic imaging services A claim is classified as a diagnostic imaging service if the following conditions are true: • the item is in the Broad Type of Service group: – Diagnostic Imaging (G/600) • the service is not conducted in a hospital to an admitted patient. Diagnostic imaging services are Medicare-subsidised diagnostic imaging procedures such as x-rays, computerised tomography scans, ultrasound scans, magnetic resonance imaging scans and nuclear medicine scans. ***Obstetric attendances*** A claim is classified as an obstetric attendance if the following conditions are true: • the item is in the Broad Type of Service group: – Obstetrics (D/300) • the service is not conducted in a hospital to an admitted patient. Obstetric attendances are Medicare-subsidised services for the purpose of planning and managing a pregnancy. These services can be provided by an obstetrician or GP; or by a midwife, nurse or Aboriginal and Torres Strait Islander health practitioner when the service is provided on behalf of, and under the supervision of, a medical practitioner. Obstetric attendances do not include Midwifery Services, which are included in the M13 group in official MBS claims data (Table 2, page 21).
Numerator	Number of patients whose annual out-of-pocket cost (fee charged minus benefit paid) for all eligible claims for the relevant service type processed between 1 July 2016 and 30 June 2017 was greater than zero.
Denominator	Number of patients who had at least one eligible claim for the relevant service type processed between 1 July 2016 and 30 June 2017.
Calculation	Numerator ÷ denominator
Geographic disaggregation	PHN area and SA3 identified from patients' enrolment postcode.
Notes	Data are reported by the financial year in which they were processed. If a service was flagged as bulk-billed, then the fee charged was set to equal the benefit paid (so there was no out-of-pocket cost for that service). Patients were excluded if the sum of eligible services in the year was less than one, or if their annual out-of-pocket expenditure on those eligible services was less than zero.

Patients' out-of-pocket cost per service (for patients with costs), by service type

This specification applies to the following indicators, reported for patients with costs at the 25th, 50th, 75th and 90th percentile:

- Patients' out-of-pocket cost per specialist attendance
- Patients' out-of-pocket cost per GP attendance
- Patients' out-of-pocket cost per diagnostic imaging service
- Patients' out-of-pocket cost per obstetric attendance.

Data source	
	Medicare Benefits Schedule (MBS) claims data 2016–17
Indicator description and calculation	
Eligible claims	***Specialist attendances*** A claim is classified as a specialist attendance if the following conditions are true: • the item is in the Broad Type of Service group: – Specialist attendance (C/200) • the service is not conducted in a hospital to an admitted patient. Specialist attendances are Medicare-subsidised referred patient/doctor encounters, such as visits, consultations, and attendances by video conference, involving medical practitioners who have been recognised as specialists or consultant physicians for Medicare benefits purposes. Specialist attendances exclude obstetric attendances, which are included in the 'Obstetrics' Broad Type of Service group in official MBS claims data. ***GP attendances*** A claim is classified as a GP attendance if the following conditions are true: • the item is in any of the following Broad Type of Service groups: – non-referred attendances – GP/VR GP (A/101) – non-referred attendances – Enhanced Primary Care (M/102) – non-referred attendances – Other (B/103). • the service is not conducted in a hospital to an admitted patient. GP attendances are Medicare-subsidised patient/doctor encounters, such as visits and consultations, for which the patient has not been referred by another doctor. GP attendances exclude services provided by practice nurses and Aboriginal and Torres Strait Islander health practitioners on a GP's behalf.

Diagnostic imaging services

A claim is classified as a diagnostic imaging service if the following conditions are true:

- the item is in the Broad Type of Service group:
  – Diagnostic Imaging (G/600)
- the service is not conducted in a hospital to an admitted patient.

Diagnostic imaging services are Medicare-subsidised diagnostic imaging procedures such as x-rays, computerised tomography scans, ultrasound scans, magnetic resonance imaging scans and nuclear medicine scans.

Obstetric attendances

A claim is classified as an obstetric attendance if the following conditions are true:

- the item is in the Broad Type of Service group:
  – Obstetrics (D/300)
- the service is not conducted in a hospital to an admitted patient.

Obstetric attendances are Medicare-subsidised services for the purpose of planning and managing a pregnancy. These services can be provided by an obstetrician or GP; or by a midwife, nurse or Aboriginal and Torres Strait Islander health practitioner when the service is provided on behalf of, and under the supervision of, a medical practitioner.

Obstetric attendances do not include Midwifery Services, which are included in the M13 group in official MBS claims data (Table 2, page 21).

Calculation

Each patients' annual out-of-pocket cost (fee charged minus benefit paid) for each type of attendance claimed between 1 July 2016 and 30 June 2017 divided by the number of corresponding attendances claimed by that patient in the period.

The amount that patients spent per attendance at the 25th, 50th (median), 75th and 90th percentile was identified at each geographic disaggregation, for patients with an annual out-of-pocket cost greater than zero. This includes patients who had some, but not all of their services bulk-billed.

Geographic disaggregation

PHN area and SA3 identified from patients' enrolment postcode.

Notes

Data are reported by the financial year in which they were processed.

If a service was flagged as bulk-billed, then the fee charged was set to equal the benefit paid (so there was no out-of-pocket cost for that service).

Patients were excluded if the sum of eligible services in the year was less than one, or if their annual out-of-pocket expenditure on the eligible services was equal to or less than zero.

Cost barriers to specialist, GP, imaging and/or pathology

Percentage of people who delayed or did not see a medical specialist, GP, get an imaging test and/or get a pathology test due to cost in the last 12 months, by PHN area, 2016–17.

Data source	
	Australian Bureau of Statistics (ABS) Patient Experiences in Australia Survey, 2016–17
Indicator description and calculation	
Numerator	Sum of calibrated sample weights for people aged 15 years or over who reported delaying or not accessing either a medical specialist, GP, imaging and/or pathology test when needed due to cost and who were enumerated within the particular PHN area.
Denominator	All people aged 15 years or older who reported that they needed to see/have a medical specialist, GP, imaging and/or pathology test within the PHN area. Note: The denominator was calculated as the sum of calibrated sample weights for adults who were enumerated within the PHN area.
Calculation	(Numerator ÷ denominator) x 100
Protection of confidential data	Percentages are calculated based on counts that have been randomly adjusted by the ABS to avoid the release of confidential data.
Confidence intervals	As an indication of the accuracy of estimates, 95% confidence intervals were produced. These were calculated by the ABS using standard error estimates of the proportion.
Notes	Excludes pathology and imaging tests conducted in hospital, and any dental imaging tests. If respondents sought clarification on the definition of medical specialist, interviewers were instructed to advise that medical specialists provide services which are covered, at least in part, by Medicare (e.g. dermatologists, cardiologists, neurologists and gynaecologists). Imaging tests or diagnostic imaging include all tests that produce images or pictures of the inside of the body in order to diagnose diseases. Tests involve the use of radiant energy, including x-rays, sound waves, radio waves, and radioactive waves and particles that are recorded by photographic films or other types of detectors. Pathology tests refer to laboratory tests that includes analysis of specimens such as urine and blood in order to diagnose disease. For further information refer to Patient Experiences in Australia: Summary of Findings, 2016–17 (ABS, 2017a).

Non-hospital Medicare attendances and expenditure per patient

This specification applies to the following measures, which are available in the accompanying Excel download:

- Average out-of-pocket costs for all non-hospital Medicare services per patient
- Average Medicare benefits expenditure on all non-hospital Medicare services per patient
- Average number of all non-hospital Medicare services per patient.

Data source	
	Medicare Benefits Schedule (MBS) claims data 2016–17
Indicator description and calculation	
Eligible claims	All non-hospital Medicare services (including services that were bulk-billed and services with out-of-pocket costs). A claim is classified as a non-hospital attendance if the following condition is true: • The service is not conducted in a hospital to an admitted patient. Non-hospital Medicare-subsidised services include: GP and practice nurse attendances, specialist attendances, obstetric attendances, pathology tests and collection items, diagnostic imaging, optometry, allied health attendances, radiotherapy and therapeutic nuclear medicine, operations, assistance at operations and other MBS services that were provided to patients not admitted to hospital. This includes eligible telehealth services. This does not include services from the Child Dental Benefits Schedule.
Numerator	*Average out-of-pocket cost:* Sum of fees charged minus sum of benefits paid for eligible claims. This includes costs associated with bulk-billing incentive items or other top-up items. *Medicare benefits expenditure:* Sum of benefits paid for eligible claims. This includes costs associated with bulk-billing incentive items or other top-up items. *Non-hospital Medicare attendances:* Sum of services from eligible claims. This does not include any bulk-billing incentive items or other top-up items.
Denominator	Number of patients who claimed at least one non-hospital Medicare service processed between 1 July 2016 and 30 June 2017.
Calculation	Numerator ÷ denominator
Geographic disaggregation	PHN area identified from patients' enrolment postcode.
Notes	Data are reported by the financial year in which they were processed. If a service was flagged as bulk-billed, then the fee charged was set to equal the benefit paid (so there was no out-of-pocket cost for that service). Patients were excluded if the sum of eligible services in the year was less than one, or if their annual out-of-pocket expenditure was less than zero.

Table 2. Medicare Benefits Schedule group, subgroups and items included in the Broad Type of Service (BTOS) groups

Description	BTOS	Letter	Group/ Sub-group /Item
Non-referred attendances GP/VR GP	101	A	A1, A7(193, 195, 197), A11(597, 599), A18, A22
Non-referred attendances - Enhanced Primary Care	102	M	A14, A15(721-758), A17, A20(subgroup 1)
Non-referred attendances - Other	103	B	A2, A5, A6, A7(173), A11(598, 600), A19, A20(subgroup 2), A23, A27, A30
Non-referred attendances - Practice Nurse Items	110	O	M12
Allied Health	150	P	M3, M6, M7, M8, M9, M10, M11, M15
Specialist attendances	200	C	A3, A4, A8, A9, A12, A13, A15(820-880), A21, A24, A26, A28, A29, A31, A32, T6(17609-17690)
Obstetrics	300	D	T4
Anaesthetics	400	E	T7, T10
Pathology Episode Initiation	501	N	P10, P11, P13
Pathology Tests	502	F	P1-P9, P12
Diagnostic Imaging	600	G	I1-I6
Operations	700	H	T8
Assistance at Operations	800	I	T9
Optometry	900	J	A10
Radiotherapy and Therapeutic Nuclear Medicine	1000	K	T2, T3
Other MBS Services	1100	L	C1, C2, C3, D1, D2, M1, M13, M14, O1-O11, T1(subgroups 1-13), T11

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