## Data quality information — Primary and community health, chapter 10

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| Data quality information |
| Data quality information (DQI) provides information against the seven ABS data quality framework dimensions, for a selection of performance indicators in the Primary and community health chapter. DQI for additional indicators will be progressively introduced in future reports.  Technical DQI has been supplied or agreed by relevant data providers. Additional Steering Committee commentary does not necessarily reflect the views of data providers. |
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### Availability of PBS medicines

Data quality information for this indicator has been developed by the Health Working Group with additional Steering Committee comments.

#### Measure 1: People per pharmacy by region

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| Indicator definition and description | | | |  |
| Element | Equity — Access | | | |
| Indicator | Equity of access to PBS medicines | | | |
| Measure/s (computation) | Definition   * The estimated resident population (ERP) divided by the number of pharmacies, in urban areas and in rural areas   Numerator: ERP for urban areas and for rural areas  Denominator: Number of pharmacies in urban and in rural areas  Computation: Numerator ÷ Denominator. | | | |
| Data source/s | University of Adelaide's National Centre for Social Applications of Geographic Information Systems, using Department of Human Services, Medicare pharmacies data and ABS ERP data. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | Australian Government Department of Health, PBS data are an administrative by-product of claims for PBS reimbursement and details on under co-payment scripts submitted by pharmacists: | | | |
| Relevance | Data are presented by State/Territory by urban and rural location.  Urban and rural location for ERP is based on the ABS Australian Statistical Geography Standard 2011 (ASGS) classification as at 30 June preceding the reference year from 2012-13. For previous years, geographical location is based on the ABS Australian Standard Geographical Classification 2006 as at 30 June preceding the reference year. ‘Urban‘ constitutes ASGS ‘Major cities’. Rural constitutes inner regional, outer regional, remote and very remote areas combined.  Urban and rural location for pharmacies is based on the Pharmacy Access/Remoteness Index of Australia (PhARIA) classification. PhARIA is a composite index that incorporates measurements of general remoteness based on the ASGS and previously the ASGC with a professional isolation component represented by the road distance to the five closest pharmacies. ‘Urban‘ is equivalent to the ASGS ‘Major cities’. Rural constitutes the remaining PhARIA categories (2 to 6) combined. | | | |
| Timeliness | Reliable PBS data are available 16 weeks after the close of the reference period. | | | |
| Accuracy |  | | | |
| Coherence | Estimates are compiled the same way across regions and over time.  The ERPs used to derive rates differ across years. For data up to 2010-11 rates are derived using preliminary ERPs based on the 2006 Census. For data from 2011-12 rates are derived using ERPs based on the 2011 Census. Rates derived using ERPs based on different Censuses are not comparable. | | | |
| Accessibility | Information is available for PBS data from www.pbs.gov.au/info/browse/statistics. | | | |
| Interpretability | PBS statistics and explanatory notes are published at www.pbs.gov.au/pbs/home. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data do not include Aboriginal Medical Services that can supply medications to people in remote and very remote areas under s.100 of the *National Health Act 1953* [Cwlth] for the purpose of improving access to medicines for people in those areas. This has particular relevance for the NT, as 43.9 per cent of the population live in remote and very remote areas. * Disaggregation of data by region is limited to ‘Urban’ (equivalent to major cities)  and ‘Rural’ (all other areas). Further disaggregation of rural data would be of value. | | | |

#### Measure 2: PBS expenditure per person by region

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| Indicator definition and description | | | |  |
| Element | Equity — Access | | | |
| Indicator | Equity of access to PBS medicines | | | |
| Measure/s (computation) | Definition:   * Expenditure on Pharmaceutical Benefits Scheme (PBS) medicines divided by the ERP, by remoteness area   Numerator: Expenditure on PBS medicines  Denominator: ERP  Computation: Numerator ÷ Denominator. | | | |
| Data source/s | Numerator: Australian Government Department of Health, PBS Statistics  Denominator: ABS ERP as at 30 June preceding the reference year from 2012-13. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | PBS expenditure data are an administrative by-product of claims for PBS reimbursement and details on under co-payment scripts submitted by pharmacists. | | | |
| Relevance | Expenditure data are reported on a cash basis and are available by region only for general and concessional categories. Therefore, data exclude expenditure on doctor’s bag and other categories administered under special arrangements, such as, medications dispensed to Aboriginal Medical Services in remote and very remote areas under s.100 of the *National Health Act 1953* (Cwlth) for the purpose of improving access to PBS medicines for Indigenous people and others located in those areas. This expenditure, $38.5 million in 2013-14, is not suitable for computation of expenditure per person as ‘catchment’ areas for Aboriginal Medical Services cross regional boundaries.  Geographical location is based on the ABS Australian Statistical Geography Standard 2011 (ASGS) classification from 2012-13. For previous years, geographical location is based on the Rural, Remote and Metropolitan Area (RRMA) classification. This constitutes a break in time series; data from 2012-13 are not comparable with data for previous years. | | | |
| Timeliness | Reliable PBS data are available 16 weeks after the close of the reference period. | | | |
| Accuracy | The supply data has an accuracy of approximately 98 per cent after 16 weeks. | | | |
| Coherence | Estimates are compiled the same way across regions.  The change to ASGS based geographical location from 2012-13 from RRMA based geographical location for previous years constitutes a break in time series. Data from 2012-13 are not comparable with data for previous years.  Data are not directly comparable to data published in the Australian Government Department of Health annual report, which are prepared on an accrual accounting basis and include doctor’s bag and other categories administered under special arrangements (such as medications dispensed to remote and very remote areas under s.100 of the *National Health Act 1953* [Cwlth].) | | | |
| Accessibility | Information is available for PBS data from www.pbs.gov.au/info/browse/statistics. | | | |
| Interpretability | PBS statistics and explanatory notes are published at www.pbs.gov.au/pbs/home. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data are reported only at the national level; reporting by State/Territory is a priority * Data exclude medications supplied to Aboriginal Medical Services in remote and very remote areas under s.100 of the *National Health Act 1953* [Cwlth] for the purpose of improving access for Indigenous people and others located in those areas. * Geographical location is based on the ASGS 2011 classification system from 2012‑13, a key improvement over the classification system used for previous years that was developed in 1994. | | | |

#### Measure 3: Equity of access to PBS medicines

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| Indicator definition and description | | | |  |
| Element | Equity — access | | | |
| Indicator | Equity of access to PBS medicines | | | |
| Measure/s (computation) | Proportion of PBS prescriptions filled at a concessional rate  Definition:   * The number of PBS prescriptions filled at a concessional rate, divided by the total number of prescriptions filled.   Numerator: The number of PBS prescriptions filled at a concessional rate  Denominator: The total number of prescriptions filled  Computation: Numerator ÷ Denominator | | | |
| Data source/s | Australian Government Department of Health, PBS Statistics. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | PBS expenditure data are an administrative by-product of claims for PBS reimbursement and details on under co-payment scripts submitted by pharmacists. | | | |
| Relevance | Data are reported by State/Territory. | | | |
| Timeliness | Reliable PBS supply data are available 16 weeks after the close of the reference period | | | |
| Accuracy | The supply data has an accuracy of approximately 98 per cent after 16 weeks. | | | |
| Coherence | Estimates are compiled the same way across jurisdictions and over time. | | | |
| Accessibility | Information is available for PBS data from www.pbs.gov.au/info/browse/statistics | | | |
| Interpretability | PBS statistics and explanatory notes are published at www.pbs.gov.au/pbs/home | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data do not capture medicines supplied by Aboriginal Medical Services in remote and very remote areas under s.100 of the *National Health Act 1953* [Cwlth] for the purpose of improving access to medicines for Indigenous people and others located in these areas. This has particular relevance for the NT as around 43 per cent of the population live in these areas. | | | |

**Equity of access to GPs**

Data quality information for this indicator has been developed by the Health Working Group with additional Steering Committee comments.

#### Measure 1: Availability of GPs by region

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| Indicator definition and description | | | |  |
| Element | Equity — access | | | |
| Indicator | Equity of access to GPs | | | |
| Measure/s (computation) | Availability of general practitioners (GPs) by region.  Definition:   * The number of Full-time Workload Equivalent (FWE) GPs per 100 000 people, by region.   Numerator: Number of FWE GPs  Denominator: Estimated Resident Population (ERP) by region.  Computation: 100 000 × (Numerator ÷ Denominator). | | | |
| Data source/s | Numerator: Australian Government Department of Human Services (DHS), Medicare data.  Denominator: Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP) as at 31 December in the reference year. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | MBS claims data are an administrative by-product of the DHS, Medicare fee for-service payment systems. DHS, Medicare collects MBS data under the *Human Services (Medicare) Act 1973* (previously *Medicare Australia Act 1973*) and regularly provides the data to Australian Government Department of Health. | | | |
| Relevance | Geographical location based on the ABS Australian Statistical Geography Standard 2011 (ASGS) classification as at 30 June preceding the reference year from 2012-13.  For previous years, geographical location is based on the Rural, Remote and Metropolitan Area (RRMA) classification — urban includes ‘Capital city’ and ‘Other metropolitan area’; rural includes ‘Large rural centres’, ‘Small rural centres’, ‘Other rural areas’, ‘Remote centres’ and ‘Other remote areas’. The RRMA classification was developed in 1994 based on population figures and Statistical Local Area (SLA) boundaries as at the 1991 census. It has not been officially updated and does not reflect population growth or redistribution since 1991 — metropolitan, rural and remote areas are defined as they existed in 1991.  GP headcount and FWE figures include vocationally recognised as well as non vocationally recognised general practitioners.  GP headcount is a count of all GPs who have provided at least one DHS, Medicare service during the reference period and have had at least one claim for a DHS, Medicare service processed during the same reference period.  GP headcount is generally an unreliable measure of workforce supply in Australia due to the high proportion of casual and part-time practitioners accessing DHS, Medicare. FWE is a standardised measure adjusted for the partial contribution of casual and part-time doctors and is a more reliable estimate of the GP workforce.  FWE is calculated by dividing each doctor's DHS, Medicare billing by the average billing of full time doctors for the reference period.  Example 1: A busy GP billing 50 per cent more services than the average full-time GP will be recorded as 1 in the headcount figure and 1.5 in the FWE figure. Example 2: A part-time GP billing half the services of the average for full time GPs will be recorded as 1 in the headcount figure and 0.5 in the FWE figure.  A GP can work at more than one location. Allocation of GP headcount to state or territory and region is based on the practice location at which the GP provided the most DHS, Medicare services during the reference period. FWE allocates activity based on the practice location at which services were rendered within the reference period.  From 2007-08 to 2011-12 under the RRMA based geographical classification, data are reported separately for NSW and the ACT. Data for previous years for NSW and the ACT are combined for confidentiality reasons. The ACT has no rural areas. | | | |
| Timeliness | GP headcount and FWE figures are available 10 weeks after the close of the reference period. | | | |
| Accuracy | GP headcount figures include only those GPs that both claimed and provided a service in the reference period. A small number of GPs may provide services in one year for which all claims are not processed until the next year. As additional months or DHS, Medicare claims data are processed, a small number of providers will become eligible for inclusion in the headcounts. Revision of headcount figures will result in very small differences to published figures each year. FWE figures are not revised each year.  Since the commencement of DHS, Medicare, practitioners have provided demographic information to DHS, Medicare including date of birth and gender. Demographic details are updated when practitioners review, renew or change their registration details with DHS, Medicare Australia. While the demographic data for current practitioners is generally very accurate and complete, there are some instances of missing data.  To overcome the problems and biases posed by missing data, similar practitioners were grouped based on known demographic information and missing demographic field/s were imputed using a standardised method to maintain data integrity. As a result, some minor changes to the distribution of GPs based on GP age or gender may occur when newly released figures are compared with previous versions. | | | |
| Coherence | The change in geographical location classification constitutes a break in time series. Data from 2012-13 are not comparable with data for previous years.  Estimates are compiled the same way across jurisdictions. | | | |
| Accessibility | Information is available for MBS Claims data from http://www.humanservices.gov.au/ corporate/statistical-information-and-data/?utm\_id=9. | | | |
| Interpretability | General practice statistics, including explanatory notes, are published at www.health.gov.au/internet/main/publishing.nsf/Content/General+Practice+Statistics-1 | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * The classification system used to allocate GPs to regions from the reference year 2012-13 is current, a major improvement over data for previous years which were based on a system developed in 1994 * Data are reported for 5 regional categories from 2012-13, compared to only 2 broad regional categories for previous years. | | | |

#### Measure 2: Availability of GPs by sex

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| Indicator definition and description | | | |  |
| Element | Equity — access | | | |
| Indicator | Equity of access to GPs by sex | | | |
| Measure/s (computation) | Availability of general practitioners (GPs) by sex.  Definition:   * The number of Full-time Workload Equivalent (FWE) female GPs per 100 000 females * The number of FWE male GPs per 100 000 males   Numerator: Number of FWE GPs by sex.  Denominator: Estimated Resident Population (ERP) by sex.  Computation: 100 000 × (Numerator ÷ Denominator). | | | |
| Data source/s | Numerator: Australian Government Department of Human Services (DHS), Medicare data.  Denominator: Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP). | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | MBS claims data are an administrative by-product of the DHS, Medicare fee-for-service payment systems. DHS, Medicare collects MBS data under the *Human Services (Medicare) Act 1973* and regularly provides the data to Australian Government Department of Health. | | | |
| Relevance | FWE GP figures include vocationally recognised as well as non‑vocationally recognised general practitioners.  FWE is a standardised measure used to estimate the workforce activity of GPs, adjusting for the partial contribution of casual and part-time doctors.  FWE is calculated by dividing each doctor’s DHS, Medicare billing by the average billing of full-time doctors for the reference period.  Example 1: A busy GP billing 50 per cent more services than the average full-time GP will be recorded as 1 in the headcount figure and 1.5 in the FWE figure.  Example 2: A part-time GP billing half the services of the average for full time GPs will be recorded as 1 in the headcount figure and 0.5 in the FWE figure. | | | |
| Timeliness | FWE figures are available 10 weeks after the close of the reference period. | | | |
| Accuracy | FWE figures are not revised each year.  Since the commencement of DHS, Medicare, demographic information has been provided by practitioners to DHS, Medicare including date of birth and gender. The demographic details are updated when practitioners review, renew or change their registration details with DHS, Medicare. While the demographic data for current practitioners is generally very accurate and complete, there are some instances of missing data.  To overcome the problems and biases posed by missing data, similar practitioners were grouped based on the known demographic information and missing demographic field/s were imputed using a standardised method to maintain data integrity. As a result, some minor changes to the distribution of GPs based on GP age or gender may occur when newly released figures are compared with previous versions. | | | |
| Coherence | Estimates are compiled the same way across jurisdictions and over time.  For data to 2010-11, rates are derived using the ABS 2006 Census based ERP as at 30 June preceding the reference year. From 2011-12, rates are derived using the preliminary ABS 2011 Census based ERP as at 31 December in the reference year.  Rates derived using ERPs based on different Censuses are not comparable. | | | |
| Accessibility | Information is available for MBS Claims data from http://www.humanservices.gov.au/ corporate/statistical-information-and-data/?utm\_id=9. | | | |
| Interpretability | General practice statistics, including explanatory notes, are published at www.health.gov.au/internet/main/publishing.nsf/Content/General+Practice+Statistics-1 | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data are of acceptable accuracy. * Data are reported for the first time for male as well as female GPs. | | | |

### Early detection and early treatment for Indigenous people

Data quality information has been developed for this indicator by the Health Working Group with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Equity — access | | | |
| Indicator | Early detection and early treatment for Indigenous people | | | |
| **Measure/s (computation)** | | | | |
| Measure 1 | Definition:   * The proportion of older people who received a health assessment by Indigenous status.   Numerator:   * The number of people aged 75 years or over with an MBS claim for Items 700, 701, 702, 703, 705 or 707 (Health assessment) and the number of people aged 55 years or over with an MBS claim for Items 704, 706, 708, 710 or 715 (Health Assessment for Aboriginal and Torres Strait Islander People) in the reference period   Denominator:   * The population of Indigenous people aged 55 years or over and the estimated population of non-Indigenous people aged 75 years or over (computed by subtracting the projected population of Indigenous people aged 75 or over from the ERP aged 75 years or over) in the reference period.   Computation: 100 × (Numerator ÷ Denominator), presented as a percentage. | | | |
| Measure 2 | Definition:   * The proportion of older Indigenous people who received a health assessment, time series.   Numerator: The number of people aged 55 years or over with an MBS claim for Items 704, 706, 708, 710 or 715 (Health Assessment for Aboriginal and Torres Strait Islander People) in the reference period.  Denominator: The population of Indigenous people aged 55 years or over in the reference period.  Computation: 100 × (Numerator ÷ Denominator), presented as a percentage. | | | |
| Measure 3 | Definition:   * The proportion of Indigenous people who received a health assessment, by age group.   Numerator:   * The number of people aged 0–14 years, 15–54 years, or 55 years or over with an MBS claim for Items 704, 706, 708, 710 or 715 (Health Assessment for Aboriginal and Torres Strait Islander People) in the reference period   Denominator:   * The population of Indigenous people aged 0–14 years, 15–54 years, and 55 years or over in the reference period.   Computation: 100 × (Numerator ÷ Denominator), presented as a percentage. | | | |
| Data sources (all measures) | Numerator: Australian Government Department of Human Services (DHS), Medicare data.  Denominator: computed by the Secretariat using ERP data from the ABS.   * Total population: ABS various years, *Australian demographic statistics*, Cat. no. 3101.0. * For data by Indigenous status: ABS 2014, *Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026*, Cat. no. 3238.0 (B Series). | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | MBS claims data are an administrative by-product of the DHS, Medicare fee for-service payment systems. DHS, Medicare collects MBS data under the *Human Services (Medicare) Act 1973* and regularly provides the data to Australian Government Department of Health.  The indicator was calculated by the Secretariat using numerator data supplied by the Department of Health (Australian Government) and denominator data from the ABS. | | | |
| Relevance | These measures relate to specific DHS, Medicare services for which claims data are available.  Indigenous status is determined by self-identification. Indigenous people aged 75 years or over may have received a health assessment under the ‘all older people’ MBS items. This is considered unlikely to affect overall proportions significantly because the life expectancy of Indigenous people is, on average, relatively low.  Allocation of clients to state or territory is based on client postcode of residence as recorded by DHS, Medicare at time of processing the final claim in the reference period. This might differ from the client’s residential postcode at the time the service was received, and might not be where the service was provided.  For services provided from 1 May 2010, disaggregation by age is based on client date of birth in DHS, Medicare records at the date the service was received. Prior to 1 May 2010 unique MBS item numbers applied to each age group.  Eligible populations exclude people who are hospital in-patients or living in a residential aged care facility. | | | |
| Timeliness | MBS claims data are available within 14 days of the end of a month. | | | |
| Accuracy | Data include all claims processed up to 12 months after the service is received. Current year data are preliminary and subject to revision in subsequent reports.  Allocation to state and territory does not necessarily reflect the client residence at the time of receiving the service if a change of address prior to receiving the service was not reported to DHS, Medicare in the reference period or a change of address after receiving the service was reported to DHS, Medicare in the reference period.  Health assessment rebate claims that are not processed within 12 months of the reference period are excluded. This does not significantly affect the data.  Clients are counted once only in the reference period.  Data do not include:   * health assessment activity for which practitioners do not claim the rebate * services that qualify under the DVA National Treatment Account and services provided in public hospitals   Data have not been adjusted to account for known under‑identification of Indigenous status in MBS data.  Non-Indigenous population estimates are available for census years only. For inter‑censal years, experimental estimates and projections data for the Indigenous population are derived using various assumptions. These can be used to derive denominators for calculating non-Indigenous rates for the inter censal years. However, such figures have a degree of uncertainty and should be used with caution, particularly as the time from the base year of the projection series increases. | | | |
| Coherence | The following changes to MBS items occurred on 1 May 2010, but are unlikely to impact time-series analysis. As of 1 May 2010:   * MBS Items 704, 706, 708, 710 (age based Health Assessments for Aboriginal and Torres Strait Islander People) have been replaced with one MBS Item that covers Health Assessments for Aboriginal and Torres Strait Islander People of all ages (Item 715) * MBS Items 700 and 702 (Health assessments for older people) have been replaced with four new MBS items that cover Health assessments for all ages and are based on time and complexity of the visit — Items 701 (brief), 703 (standard), 705 (long) and 707 (prolonged).   For services provided from 1 May 2010, disaggregation by age is based on client date of birth in DHS, Medicare records at the date the service was received.  Health assessments for people who are refugees or humanitarian entrants can also be claimed from 1 May 2010 under MBS Items 701, 703, 705 and 707. This is likely to have little impact on the totals reported as the usage rates for these health assessments are low to extremely low. | | | |
| Accessibility | Information is available for MBS Claims data from http://www.humanservices.gov.au/ corporate/statistical-information-and-data/?utm\_id=9. | | | |
| Interpretability | General practice statistics, including explanatory notes, are published at www.health.gov.au/internet/main/publishing.nsf/Content/General+Practice+Statistics-1 | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * No adjustment was made to this indicator to account for under-identification of Indigenous people in DHS, Medicare data. | | | |

### Proportion of children receiving a fourth year developmental health check

Data quality information for this indicator has been prepared based on the Steering Committee’s 2012 report to the COAG Reform Council on the National Healthcare Agreement (data supplied by the AIHW) with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Equity — access | | | |
| Indicator | Developmental health checks. | | | |
| Measure/s (computation) | Proportion of children who have received a 4 year old development health check.  Numerator: The number of people aged 3, 4 or 5 years with an MBS claim for Items 709, 711, 701, 703, 705, 707 and 10 986 (Healthy Kids Check or Health Assessment) or 708 and 715 (Aboriginal and Torres Strait Islander Peoples Health Assessment) in the reference period.  Denominator: The population aged 4 years, estimated using ERP data from the ABS. It was calculated by multiplying the 0-4 years ERP disaggregated by Indigenous status by the percentage of children aged 4 years in this age group nationally.  Calculation: 100 × (Numerator ÷ Denominator), presented as a percentage. | | | |
| Data source/s | Numerator: Australian Government Department of Human Services (DHS), Medicare Statistics data.  Denominator: For total population: 2011 census based Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP) as at 31 December derived by averaging the 30 June population at each end of the reference year.  For data by Indigenous status: 2011 census based ABS Indigenous Experimental Estimates and Projections (Indigenous Population) Series B as at 31 December derived by averaging the 30 June population at each end of the reference year. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | DHS, Medicare processes claims made through the MBS under the *Human Services (Medicare) Act 1973*. These data are then regularly provided to Australian Government Department of Health.  Data for 2009-10 and 2010-11 were calculated by Australian Government Department of Health, using a denominator supplied by the AIHW. Australian Government Department of Health drafted the initial data quality statement (including providing input about the methodology used to extract the data and any data anomalies) and then further comments were added by the AIHW, in consultation with Australian Government Department of Health.  Data from 2011-12 are calculated by the Secretariat using numerator data supplied by Australian Government Department of Health and denominator data sourced from the ABS. | | | |
| Relevance | The measure relates to specific identified DHS, Medicare services for which DHS, Medicare has processed a claim.  The MBS items included in this indicator do not cover all developmental health check activity such as that conducted through state and territory early childhood health assessments in preschools and community health centres. | | | |
| Timeliness | MBS claims data are available within 14 days of the end of a month. The indicator relates to all claims processed in the reference year. | | | |
| Accuracy | As with any administrative system a small degree of error may be present in the data captured.  Analyses by state/territory are based on postcode of residence of the client as recorded by DHS, Medicare at the date the last service was received in the reference period. This postcode may not reflect the current postcode of the patient if an address change has not been notified to DHS, Medicare.  Data to 2010-11 are based on the date the claim was processed. From 2011-12, data are based on the date the service was rendered. From 2012 13, data include only services for which rebates were claimed in the reference year. This has minimal impact on the data.  Children who received more than one type of health check are counted once only in the calculations for this indicator. Where a child received both a healthy kids check and an Aboriginal and Torres Strait Islander people’s health assessment during the reference period, the child was counted once against the Aboriginal and Torres Strait Islander health assessment.  From 2011-12, children are counted only if they have not received a fourth year developmental health check in a previous reference period at the age of 3, 4 or 5 years.  MBS data presented for Aboriginal and Torres Strait Islander Peoples Health Assessments have not been adjusted to account for known under identification of Indigenous status.  Cells have been suppressed where the numerator is less than 10 for confidentiality reasons and where rates are highly volatile (for example, the denominator is very small) or data are known to be of insufficient quality (for example, where Indigenous identification rates are low).  Non-Indigenous population estimates are available for census years only. For inter‑censal years, experimental estimates and projections data for the Indigenous population are derived using various assumptions. These can be used to derive denominators for calculating non-Indigenous rates for the inter censal years. However, such figures have a degree of uncertainty and should be used with caution, particularly as the time from the base year of the projection series increases. | | | |
| Coherence | As of 1 May 2010, the following changes to MBS items occurred:  The Healthy Kids Check Item 709 was replaced with four MBS health assessment items (based on time and complexity) that cover all ages — Items 701 (brief), 703 (standard), 705 (long) and 707 (prolonged). This renders it possible that health assessments for refugees and humanitarian entrants and for people with an intellectual disability (previously claimed under items 714, 718 or 719 and now claimed under the new MBS health assessment items) have been counted. This is likely to have little impact on the totals reported as the usage rates for these health assessments are low to extremely low for children aged 3–5 years.  A Healthy Kids Check provided by a practice nurse or a registered Aboriginal health worker on behalf of a medical practitioner (previously item 711) was replaced with MBS item number 10 986. The change to the MBS item number does not impact time series analysis.  The Aboriginal and Torres Strait Islander Child Health Check (previously item 708) was replaced by the Aboriginal and Torres Strait Islander People’s Health Assessment (715) that has no designated time or complexity requirements and covers all ages. The change to the MBS item number does not impact time series analysis. | | | |
| Accessibility | Information is available for MBS Claims data from http://www.humanservices.gov.au/ corporate/statistical-information-and-data/?utm\_id=9. | | | |
| Interpretability | General practice statistics, including explanatory notes, are published at www.health.gov.au/internet/main/publishing.nsf/Content/General+Practice+Statistics-1 | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data do not include developmental health check activity conducted outside the MBS, for example, in preschools and community health centres. Accordingly, the indicator understates developmental health check activity. * No adjustment was made to this indicator to account for under-identification of Indigenous children in DHS, Medicare data. | | | |

### Effectiveness of access to GPs

#### Measure 1: Bulk billing rates

Data quality information has been developed for this measure by the Health Working Group with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Effectiveness — access | | | |
| Indicator | Effectiveness of access to GPs | | | |
| Measure/s (computation) | Bulk billing rates  Definition: The number of non-referred attendances to GPs that were bulk billed as a proportion of all non-referred attendances to GPs.  Numerator: The number of non-referred attendances to GPs that were bulk billed.  Denominator: The number of non-referred attendances to GPs.  Computation: Expressed as a percentage.  Disaggregations:   * State/Territory by age * Region by age | | | |
| Data source/s | Numerator: Australian Government Department of Human Services (DHS), Medicare data.  Denominator: Australian Government Department of Human Services (DHS), Medicare data. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | MBS claims data are an administrative by-product of the DHS, Medicare fee-for-service payment systems. DHS, Medicare collects MBS data under the *Human Services (Medicare) Act 1973* and regularly provides the data to DoHA. | | | |
| Relevance | These measures relate to DHS, Medicare services for which claims data are available.  Data include non-referred attendances by general practice nurses.  Disaggregation by region:  From 2012-13, disaggregation by region is based on the ABS Australian Statistical Geography Standard 2011 (ASGS) classification. For previous years, disaggregation by region is based on the Rural, Remote and Metropolitan Areas (RRMA) classification. The RRMA classification was developed in 1994 based on population figures and Statistical Local Area (SLA) boundaries as at the 1991 census. It has not been officially updated and does not reflect population growth or redistribution since 1991 — metropolitan, rural and remote areas are defined as they existed in 1991.  RRMA categories are: Capital city — State and Territory capital city statistical divisions; Other metropolitan centre — one or more statistical subdivisions that have an urban centre with a population of 100 000 or more; Large rural centre — statistical local areas (SLAs) where most of the population resides in urban centres with a population of 25 000 or more; Small rural centre — SLAs in rural zones containing urban centres with populations between 10 000 and 24 999; Other rural area — all remaining SLAs in the rural zone; Remote centre — SLAs in the remote zone containing populations of 5000 or more; Other remote area — all remaining SLAs in the remote zone. | | | |
| Timeliness | MBS claims data are available within 14 days of the end of a month. | | | |
| Accuracy | As with any administrative system a small degree of error may be present in the data captured.  Allocation to jurisdiction/region: DHS, Medicare claims data used for statistical purposes are based on enrolment postcode of the client at time of processing the final claim in the reference period. This postcode may not be current if the client changed address but did not notify DHS, Medicare.  Allocation to age group: Allocation to age group is based on client date of birth in DHS, Medicare records at the date the service was received. Where client age is unknown, attendances are included in totals.  Allocation to reference period: Data include all claims processed in the reference period. Data are based on the date on which the MBS claim was processed by DHS, Medicare, not the date on which the service was rendered. The use of data based on when the claim was processed rather than when the service was rendered produces little difference in the total number of services included in the numerator for the reference period. | | | |
| Coherence | Estimates are compiled the same way across jurisdictions.  Disaggregation by State/Territory:  Rates are derived using the ABS ERP as at 30 June preceding the reference year.  From 2012-13, the ERP is based on the ABS 2011 Census.  For data for 2007-08 to 2011-12, the ERP is based on the ABS 2006 Census.  For data to 2006-07, the ERP is based on the ABS 2001 Census.  Rates derived using ERPs based on different Censuses are not comparable.  Disaggregation by region:  The change in geographical location classification constitutes a break in time series. Data from 2012-13 are not comparable with data for previous years. | | | |
| Accessibility | Information is available for MBS Claims data from http://www.humanservices.gov.au/ corporate/statistical-information-and-data/?utm\_id=9. | | | |
| Interpretability | General practice statistics, including explanatory notes, are published at www.health.gov.au/internet/main/publishing.nsf/Content/General+Practice+Statistics-1 | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * The classification system used to allocate data to regions from the reference year 2012-13 is current, a major improvement over data for previous years which were based on a system developed in 1994 * Data are of acceptable accuracy. | | | |

#### Measure 2: People deferring visits to GPs due to financial barriers

Data quality information for this measure has been sourced from the ABS with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Effectiveness — access | | | |
| Indicator | Effectiveness of access to GPs | | | |
| Measure/s (computation) | People deferring access to GPs due to cost.  Definition: Proportion of people that required GP treatment but deferred that treatment due to cost.  Numerator: People reporting delaying/not seeing a GP in the last 12 months due to cost.  Denominator: People aged 15 years or over who needed to see a GP in the last 12 months.  Computation: 100 × (Numerator ÷ Denominator). | | | |
| Data source/s | ABS Patient Experience Survey | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | Data Collector(s): The Patient Experience Survey is a topic on the Multipurpose Household Survey. It is collected, processed, and published by the Australian Bureau of Statistics (ABS). The ABS operates within a framework of the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. These ensure the independence and impartiality from political influence of the ABS, and the confidentiality of respondents.  For more information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment on the ABS website at www.abs.gov.au.  Collection authority: The *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*.  Data Compiler(s): Data are compiled by the Health section of the ABS.  Statistical confidentiality is guaranteed under the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. The ABS notifies the public through a note on the website when an error in data has been identified. The data are withdrawn, and the publication is re‑released with the correct data. Key users are also notified where possible. | | | |
| Relevance | Level of Geography: Data are available by State/Territory, and by Remoteness (major cities, inner and outer regional, remote and, from 2011-12, very remote Australia).  Data Completeness: All data are available for this measure from this source.  Indigenous Statistics: Data are not available by Indigenous status for this measure. The 2012-13 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) collected data on GP waiting times but differences in survey design and collection methodology between the Patient Experience survey and the NATSIHS mean the data are not comparable.  Numerator/Denominator Source: Same data source.  Data for this indicator were collected for all people aged 15 years or over in Australia, excluding the following:   * members of the Australian permanent defence forces * diplomatic personnel of overseas governments, customarily excluded from census and estimated population counts * overseas residents in Australia * members of non-Australian defence forces (and their dependents) * people living in non-private dwellings such as hotels, university residences, boarding schools, hospitals, retirement homes, homes for people with disabilities, and prisons * people living in discrete Indigenous communities.   From 2011-12, the Patient Experience survey included households in very remote areas (although discrete Indigenous communities were still excluded). The inclusion of very remote areas will serve to improve the coverage of the estimates, particularly for the NT. Small differences evident in the NT estimates between 2010-11 and 2011-12 may in part be due to the inclusion of households in very remote areas.  Data were self-reported for this indicator. The definition of 'urgent medical care' was left up to the respondent, although discretionary interviewer advice was to include health issues that arose suddenly and were serious (e.g. fever, headache, vomiting, unexplained rash), and that seeing a GP to get a medical certificate for work for a less serious illness would not be considered urgent. | | | |
| Timeliness | Collection interval/s: Patient Experience data are collected annually.  Data available: The data used for this indicator became available 22 November 2013 for 2012-13 and 28 November 2014 for 2013-14.  Referenced Period: July 2013 to June 2014 (2013-14 data); July 2012 to June 2013 (2012-13 data).  There are not likely to be revisions to these data after their release. | | | |
| Accuracy | Method of Collection: For this iteration of the Patient Experience Survey, an additional sample was selected in particular areas using a separate survey called the Health Services Survey (HSS). The HSS collected the same information as the Patient Experience Survey, with enumeration taking place between September 2013 and December 2013. The additional sample was collected to improve the quality of estimates at the Medicare Local catchment level. Sample from the Patient Experience Survey and HSS were combined to produce output.  The data was predominantly collected by computer assisted telephone interview, although the HSS interviews were predominantly conducted face-to-face. MPHS PEx included one person aged 15 years and over from each household, while the HSS included two persons aged 15 and over from each household.  Analysis was conducted to determine whether there was any difference between the estimates which would have been obtained using the MPHS PEx sample only and estimates obtained using the combined MPHS PEx and HSS sample. This was particularly important given the predominantly different modes used between the two surveys (The majority of MPHS PEx interviews were conducted over the telephone while a larger proportion of HSS interviews were conducted face-to-face and included up to two persons per household). This analysis showed that combining the sample from the two surveys did not produce significantly different estimates. Therefore, estimates can be compared over time with other iterations of the Patient Experience Survey.  Response rate and sample size: The response rate in 2013-14 to the MPHS PEx was 77 per cent (27 327 fully responding persons) while the response rate to HSS was 83 per cent (8541 fully responding persons) resulting in a total sample size of 35 868 fully responding persons. This included 629 proxy interviews for people aged 15 to 17 where permission was not given by a parent or guardian for a personal interview.  Note this is a substantial increase from the 2012-13 sample size of 30 749, which had a response rate 78.9 per cent. This increase will improve the reliability of the data, particularly at finer levels of disaggregation.  Data Adjustments: Data was weighted to represent the total in scope Australian population, and was adjusted to account for confidentiality and non-response. Data for MPHS PEx and HSS were weighted separately and then combined to produce output.  Confidentiality — For the first time in 2013-14, the data has been perturbed. This has been footnoted in the tables. Perturbation is used to minimise the risk of identifying individuals in aggregate statistics. Perturbation involves small random adjustment of the statistics and is considered the most satisfactory technique for avoiding the release of identifiable statistics while maximising the range of information that can be released. These adjustments have a negligible impact on the underlying pattern of the statistics.  After perturbation, a given published cell value will be consistent across all tables. However, adding up cell values to derive a total will not necessarily give the same result as published totals.  As data is drawn from a sample survey, the indicator is subject to sampling error, which occurs because a proportion of the population is used to produce estimates that represent the whole population. Rates should be considered with reference to their corresponding relative standard errors (RSEs) and 95% confidence intervals. Estimates with a relative standard error between 25 per cent and 50 per cent should be used with caution, and estimates with a relative standard error over 50 per cent are considered too unreliable for general use.  The standard errors for the key data items in this indicator are relatively low and provide reliable state and territory data as well as remoteness breakdowns. An exception to this would be data for the “other” remoteness category when cross classified by State, which can result in high RSEs. Caution should be used when interpreting these data.  Known Issues: Data were self-reported.  Explanatory footnotes are provided for each table. | | | |
| Coherence | 2009 was the first year data was collected for this indicator. Questions relating to this indicator were also asked in 2010-11, 2011-12, 2012-13 and 2013-14.  Consistency over time: Data for 2013-14 are comparable to data for 2012-13 but not to data for previous years, due to a change in question ordering in 2012-13 which had a noticeable context effect. As a result, ABS recommends that this data item is not comparable over time. This has been footnoted in the relevant tables.  Numerator/denominator: The numerator and denominator are directly comparable, one being a sub-population of the other.  The numerator and denominator are compiled from a single source.  Jurisdiction estimate calculation: Jurisdiction estimates are calculated the same way, although the exclusion of discrete Indigenous communities in the 2011-12 and 2012-13 surveys, and of very remote communities in the previous surveys, will affect the NT more than it affects other jurisdictions (people usually resident in very remote areas account for about 23 per cent of people in the NT).  Jurisdiction/Australia estimate calculation: All estimates are compiled the same way.  Collections across populations: Data is collected the same way across all jurisdictions.  The Patient Experience survey provides the only national data available for this indicator. At this stage, there are no other comparable data sources.  Due to differences in survey scope, collection methodology and question wording, these data are not comparable to data from the 2012-13 Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS). | | | |
| Accessibility | Data are publicly available in *Health Services: Patient Experiences in Australia, 2009* (Cat. no. 4839.0.55.001), *Patient Experiences in Australia: Summary of Findings, 2010‑11, 2011-12, 2012-13* and *2013-14* (Cat. no. 4839.0).  Data are not available prior to public access.  Supplementary data are available. Additional data from the Patient Experience Survey are available upon request.  Access permission/Restrictions: Customised data requests may incur a charge.  Contact Details: For more information, please call the ABS National Information and Referral Service 1300 135 070. | | | |
| Interpretability | Context: The data were collected from a representative sample of the Australian population and questions were asked in context of the year prior to the survey. The data were collected over a twelve month period which should minimise any seasonality effects in the data.  The 2013-14 ABS Patient Experience data are published in *Patient Experiences in Australia: Summary of Findings*, 2013-14 (Cat. no. 4839.0). The publication includes explanatory and technical notes.  Any ambiguous or technical terms for the data are available from the Technical Note, Glossary and Explanatory Notes in the publication. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data for 2013-14 are comparable to data for 2012-13 but not for previous years. Comparable time series data is a priority. * The inclusion of very remote areas from the 2011-12 survey improves the comparability of NT data, although the exclusion of discrete Indigenous communities will affect the NT more than it affects other jurisdictions. * The sample size increase from 30 749 in 2012-13 to 35 868 in 2013-14 strengthens reliability of the population level estimates. * Data from the Patient Experience survey are not comparable with data from the 2012-13 NATSIHS. Disaggregation of this indicator by Indigenous status is a priority. | | | |

#### Measure 3: GP Waiting times

Data quality information for this measure has been sourced from the ABS with additional Steering Committee comments.

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| Indicator definition and description | | |  |
| Element | Effectiveness — access | | |
| Indicator | Effectiveness of access to GPs | | |
| Measure/s (computation) | GP Waiting Times  Definition  Length of time a patient needs to wait to see a GP for an urgent appointment.  Numerator  Number of people aged 15 years or over who reported seeing a GP for urgent medical care (for their own health) within specified waiting time categories (less than 4 hours, 4 to less than 24 hours, 24 hours or more).  Denominator  Number of people aged 15 years or over who saw a GP for urgent medical care (for their own health) in the last 12 months.  Computation: 100 × (Numerator ÷ Denominator). | | |
| Data source/s | Patient Experience Survey, ABS. | | |
| Data Quality Framework Dimensions | |  | |
| Institutional environment | Data Collector(s): The Patient Experience Survey is a topic on the Multipurpose Household Survey. It is collected, processed, and published by the Australian Bureau of Statistics (ABS). The ABS operates within a framework of the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. These ensure the independence and impartiality from political influence of the ABS, and the confidentiality of respondents.  For more information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment on the ABS website at www.abs.gov.au.  Collection authority: The *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*.  Data Compiler(s): Data are compiled by the Health section of the ABS.  Statistical confidentiality is guaranteed under the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. The ABS notifies the public through a note on the website when an error in data has been identified. The data are withdrawn, and the publication is re released with the correct data. Key users are also notified where possible. | | |

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| Relevance | Level of Geography: Data are available by State/Territory, and by Remoteness (major cities, inner and outer regional, remote and, from 2011-12, very remote Australia).  Data Completeness: All data are available for this measure from this source.  Indigenous Statistics: Data are not available by Indigenous status for this measure. The 2012-13 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) collected data on GP waiting times but differences in survey design and collection methodology between the Patient Experience survey and the NATSIHS mean the data are not comparable.  Numerator/Denominator Source: Same data source.  Data for this indicator were collected for all people aged 15 years or over in Australia, excluding the following:   * members of the Australian permanent defence forces * diplomatic personnel of overseas governments, customarily excluded from census and estimated population counts * overseas residents in Australia * members of non-Australian defence forces (and their dependents) * people living in non-private dwellings such as hotels, university residences, boarding schools, hospitals, retirement homes, homes for people with disabilities, and prisons * people living in discrete Indigenous communities.   From 2011-12, the Patient Experience survey included households in very remote areas (although discrete Indigenous communities were still excluded). The inclusion of very remote areas will serve to improve the coverage of the estimates, particularly for the NT. Small differences evident in the NT estimates between 2010-11 and 2011-12 may in part be due to the inclusion of households in very remote areas.  Data were self-reported for this indicator. The definition of 'urgent medical care' was left up to the respondent, although discretionary interviewer advice was to include health issues that arose suddenly and were serious (e.g. fever, headache, vomiting, unexplained rash), and that seeing a GP to get a medical certificate for work for a less serious illness would not be considered urgent. | |
| Timeliness | Collection interval/s: Patient Experience data are collected annually.  Data available: The data used for this indicator became available 22 November 2013 for 2012-13 and 28 November 2014 for 2013-14.  Referenced Period: July 2013 to June 2014 (2013-14 data); July 2012 to June 2013 (2012-13 data).  There are not likely to be revisions to these data after their release. | |
| Accuracy | Method of Collection: For this iteration of the Patient Experience Survey, an additional sample was selected in particular areas using a separate survey called the Health Services Survey (HSS). The HSS collected the same information as the Patient Experience Survey, with enumeration taking place between September 2013 and December 2013. The additional sample was collected to improve the quality of estimates at the Medicare Local catchment level. Sample from the Patient Experience Survey and HSS were combined to produce output.  The data was predominantly collected by computer assisted telephone interview, although the HSS interviews were predominantly conducted face-to-face. MPHS PEx included one person aged 15 years and over from each household, while the HSS included two persons aged 15 and over from each household.  Analysis was conducted to determine whether there was any difference between the estimates which would have been obtained using the MPHS PEx sample only and estimates obtained using the combined MPHS PEx and HSS sample. This was particularly important given the predominantly different modes used between the two surveys (The majority of MPHS PEx interviews were conducted over the telephone while a larger proportion of HSS interviews were conducted face-to-face and included up to two persons per household). This analysis showed that combining the sample from the two surveys did not produce significantly different estimates. Therefore, estimates can be compared over time with other iterations of the Patient Experience Survey.  Response rate and sample size: The response rate in 2013-14 to the MPHS PEx was 77 per cent (27 327 fully responding persons) while the response rate to HSS was 83 per cent (8541 fully responding persons) resulting in a total sample size of 35 868 fully responding persons. This included 629 proxy interviews for people aged 15 to 17 where permission was not given by a parent or guardian for a personal interview.  Note this is a substantial increase from the 2012-13 sample size of 30 749, which had a response rate 78.9 per cent. This increase will improve the reliability of the data, particularly at finer levels of disaggregation.  Data Adjustments: Data was weighted to represent the total in scope Australian population, and was adjusted to account for confidentiality and non-response. Data for MPHS PEx and HSS were weighted separately and then combined to produce output.  Confidentiality:  For the first time in 2013-14, the data has been perturbed. This has been footnoted in the tables. Perturbation is used to minimise the risk of identifying individuals in aggregate statistics. Perturbation involves small random adjustment of the statistics and is considered the most satisfactory technique for avoiding the release of identifiable statistics while maximising the range of information that can be released. These adjustments have a negligible impact on the underlying pattern of the statistics.  After perturbation, a given published cell value will be consistent across all tables. However, adding up cell values to derive a total will not necessarily give the same result as published totals.  As data is drawn from a sample survey, the indicator is subject to sampling error, which occurs because a proportion of the population is used to produce estimates that represent the whole population. Rates should be considered with reference to their corresponding relative standard errors (RSEs) and 95 per cent confidence intervals. Estimates with a relative standard error between 25 per cent and 50 per cent should be used with caution, and estimates with a relative standard error over 50 per cent are considered too unreliable for general use.  This indicator generally has acceptable levels of sampling error and provides reliable data for most breakdowns. However, RSEs for the waiting time category “4 hours or more but within 24 hours” breakdowns are mostly greater than 25 per cent and should either be used with caution or are considered too unreliable for general use. Similarly, data for the “other” remoteness category has high RSEs when cross classified by State. Caution should be used when interpreting these data.  Known Issues: Data was self-reported and interpretation of urgent medical care was left up the respondent.  The data is self-reported but not attitudinal, as respondents are reporting their experiences of using the health system (in this instance, the time they waited between making an appointment for urgent medical care and the time they got to see the GP).  Explanatory footnotes are provided for each table. | |
| Coherence | Consistency over time: 2009 was the first year data was collected for this indicator. Questions relating to this indicator were also asked in 2010-11, 2011-12, 2012-13 and 2013-14.  Time series issues: 2013-14 is comparable to 2012-13 and 2011-12, but not before this (ie 2013-14 is not comparable to 2010-11 or 2009). This has been footnoted in the relevant tables. The reason for the comparability issues stem from a significant change in question wording and coding methodology in the 2011-12 Patient Experience Survey for the ‘waiting times for GPs’ questions, and this has had an impact on the data.  Numerator/denominator: The numerator and denominator are directly comparable, one being a sub-population of the other.  The numerator and denominator are compiled from a single source.  Jurisdiction estimate calculation: Jurisdiction estimates are calculated the same way, although the exclusion of discrete indigenous communities in the sample will affect the NT more than it affects other jurisdictions.  Jurisdiction/Australia estimate calculation: All estimates are compiled the same way.  Collections across populations: Data is collected the same way across all jurisdictions.  The Patient Experience survey provides the only national data available for this indicator. At this stage, there are no other comparable data sources.  Due to differences in survey scope, collection methodology and question wording, these data are not comparable to data from the 2012-13 Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS). | |
| Accessibility | Data are publicly available in *Health Services: Patient Experiences in Australia, 2009* (Cat. no. 4839.0.55.001), *Patient Experiences in Australia: Summary of Findings, 2010‑11, 2011-12, 2012-13* and *2013-14* (Cat. no. 4839.0).  Data are not available prior to public access.  Supplementary data are available. Additional data from the Patient Experience Survey are available upon request.  Access permission/Restrictions: Customised data requests may incur a charge.  Contact Details: For more information, please call the ABS National Information and Referral Service 1300 135 070. | |
| Interpretability | Context: The data were collected from a representative sample of the Australian population and questions were asked in context of the year prior to the survey. The data were collected over a twelve month period which should minimise any seasonality effects in the data.  The 2013-14 ABS Patient Experience data are published in *Patient Experiences in Australia: Summary of Findings*, 2013-14 (Cat. no. 4839.0). The publication includes explanatory and technical notes.  Any ambiguous or technical terms for the data are available from the Technical Note, Glossary and Explanatory Notes in the publication. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data for 2011-12, 2012-13 and 2013-14 are comparable. * The inclusion of very remote areas from the 2011-12 survey improves the comparability of NT data, although the exclusion of discrete Indigenous communities will affect the NT more than it affects other jurisdictions. * Data are based on waiting times for self-defined urgent medical care. * Disaggregation of this measure by Indigenous status is a priority. * The sample size increase from 30 749 in 2012-13 to 35 868 in 2013-14 strengthens reliability of the population level estimates. | |

#### Measure 4: Selected potentially avoidable GP-type presentations to emergency departments

Data quality information for this indicator has been sourced from the AIHW with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Effectiveness — access | | | |
| Indicator | Attendances at public hospital emergency departments that could have potentially been avoided through the provision of appropriate non‑hospital services in the community. | | | |
| Measure/s (computation) | The number of presentations to public hospital emergency departments in hospitals that were classified as either peer group A (Principal referral and Specialist women’s and children’s hospitals) or peer group B (Large hospitals), where:   * there was a type of visit of Emergency presentation (or, for SA for 2008-09 and 2009-10, Emergency presentation or Not reported) * a triage category of 4 or 5 was allocated * the patient did not arrive by ambulance or police or correctional vehicle; and * the patient was not admitted to the hospital, was not referred to another hospital, and did not die. | | | |
| Data source/s | This indicator is calculated using data from the National Non-admitted Patient Emergency Department Care Database (NNAPEDCD), based on the national minimum data set (NMDS) for Non-admitted patient emergency department care (NAPEDC). | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | The Australian Institute of Health and Welfare (AIHW) is a major national agency set up by the Australian Government under the *Australian Institute of Health and Welfare Act 1987* to provide reliable, regular and relevant information and statistics on Australia’s health and welfare. It is an independent statutory authority established in 1987, governed by a management board, and accountable to the Australian Parliament through the Health portfolio.  The AIHW aims to improve the health and wellbeing of Australians through better health and welfare information and statistics. It collects and reports information on a wide range of topics and issues, ranging from health and welfare expenditure, hospitals, disease and injury, and mental health, to ageing, homelessness, disability and child protection.  The Institute also plays a role in developing and maintaining national metadata standards. This work contributes to improving the quality and consistency of national health and welfare statistics. The Institute works closely with governments and non-government organisations to achieve greater adherence to these standards in administrative data collections to promote national consistency and comparability of data and reporting.  One of the main functions of the AIHW is to work with the states and territories to improve the quality of administrative data and, where possible, to compile national datasets based on data from each jurisdiction, to analyse these datasets and disseminate information and statistics.  The *Australian Institute of Health and Welfare Act 1987*, in conjunction with compliance to the *Privacy Act 1988 (Commonwealth)*, ensures that the data collections managed by the AIHW are kept securely and under the strictest conditions with respect to privacy and confidentiality.  For further information see the AIHW website www.aihw.gov.au  Data for the NNAPEDCD were supplied to the AIHW by state and territory health authorities under the terms of the National Health Information Agreement (see the following links):   * www.aihw.gov.au/nhissc/ * http://meteor.aihw.gov.au/content/index.phtml/itemId/182135   The state and territory health authorities received these data from public hospitals. States and territories use these data for service planning, monitoring and internal and public reporting. Hospitals may be required to provide data to states and territories through a variety of administrative arrangements, contractual requirements or legislation. | | | |
| Relevance | The purpose of the NNAPEDCD is to collect information on the characteristics of emergency department care (including waiting times for care) for non-admitted patients registered for care in emergency departments in selected public hospitals classified as either peer group A (Principal referral and Specialist women’s and children’s hospitals) or B (Large hospitals). In 2012–13, hospitals in peer groups A and B provided about 86 per cent of all public hospital emergency presentations.  The data presented here are not necessarily representative of the hospitals not included in the NNAPEDCD. Hospitals not included do not necessarily have emergency departments that are equivalent to those in hospitals in peer groups A and B.  The indicator includes only peer group A (Principal referral and Specialist women’s and children’s hospitals) and peer group B (Large hospitals).  The definition of potentially avoidable GP type presentations is an interim measure, based on data available in the NNAPEDCD. The AIHW is managing revision work for this indicator under the auspices of the Australian Health Ministers’ Advisory Council. | | | |
| Timeliness | The reference period for these data is 2012-13 and 2013-14. | | | |
| Accuracy | For 2012–13, the coverage of the NNAPEDCD was 100 per cent in all jurisdictions for public hospitals in peer groups A and B. For 2013-14, the preliminary estimate of the proportion of emergency occasions of service reported to the NNAPEDCD was 100 per cent for public hospitals in peer groups A and B although final coverage cannot be calculated until the 2013-14 National Public Hospital Establishments Database (NPHED) data are available.  In the baseline year (2007-08), the Tasmanian North West Regional Hospital comprised the combined activity of its Burnie Campus and its Mersey Campus. This hospital was a Peer Group B hospital. There was then a change in administrative arrangements for Mersey and it became the only hospital in the country owned and funded by the Australian Government and, by arrangement, operated by the Tasmanian Government. This administrative change necessitated reporting of these campuses as separate hospitals from 2008-09 onwards. On its own the North West Regional Hospital (Burnie Campus only) is a Peer Group B hospital, whilst, on its own the Mersey Community Hospital is a Peer Group C hospital. Burnie and Mersey did not substantially change their activity, rather, it is simply a case that activity is now spread across two hospitals. For National Healthcare Agreement purposes, although it is a Peer Group C hospital, the Mersey Community Hospital continues to be included in reporting for Peer Group B hospitals to ensure comparability over time for Tasmania.  From 2009-10, the data for the Albury Base Hospital (previously reported in New South Wales hospital statistics) were reported in Victorian hospital statistics. This change in reporting arrangements should be factored into any analysis of data for New South Wales and Victoria.  States and territories are primarily responsible for the quality of the data they provide. However, the AIHW undertakes extensive validations on data. Data are checked for valid values, logical consistency and historical consistency. Where possible, data in individual data sets are checked against data from other data sets. Potential errors are queried with jurisdictions, and corrections and resubmissions may be made in response to these queries. The AIHW does not adjust data to account for possible data errors or missing or incorrect values.  Comparability across jurisdictions may be impacted by variation in the assignment of triage categories. | | | |
| Coherence | The data reported for 2012-13 and 2013-14 are consistent with data reported for the NNAPEDCD for previous years for individual hospitals.  In addition, the data reported to the NNAPEDCD in previous years has been consistent with the numbers of emergency occasions of services reported to the NPHED for each hospital for the same reference year.  Time series presentations may be affected by changes in the number of hospitals reported to the collection and changes in coverage.  The information presented for this indicator is calculated using the same methodology as data published in Australian hospital statistics: emergency department care (report series) and the National healthcare agreement: performance report 2012-13.  However, 2012-13 data reported previously in these publications are different from the equivalent data published here because the hospitals classified as peer groups A and B were based on 2011-12, rather than 2012-13 peer groups.  Caution should be used in comparing these data with earlier years, as the number of hospitals classified as peer group A or B, or the peer group of a hospital, may vary over time. | | | |
| Accessibility | The AIHW provides a variety of products that draw upon the NNAPEDCD. Published products The AIHW provides a variety of products that draw upon the NNAPEDCD. Published products available on the AIHW website are: Australian hospital statistics suite of products with associated Excel tables. These products may be accessed on the AIHW website at www.aihw.gov.au/hospitals/. | | | |
| Interpretability | Metadata information for the NAPEDC NMDS and the NAPEDC DSS are published in the AIHW’s online metadata repository, METeOR, and the *National health data dictionary*.  The *National health data dictionary* can be accessed online at www.aihw.gov.au/ publication-detail/?id=10737422826  The Data Quality Statement for the 2012-13 NNAPEDCD can be accessed on the AIHW website at http://meteor.aihw.gov.au/content/index.phtml/itemId/546749 | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * The scope of the data used to produce this indicator is non-admitted patients registered for care in emergency departments in public hospitals classified as either peer group A (Principal referral and Specialist women’s and children’s hospitals) or peer group B (Large hospitals). Most of the hospitals in peer groups A and B are in major cities. Therefore, disaggregation by remoteness, socioeconomic status and Indigenous status should be interpreted with caution. * For 2012-13, the coverage of the NNAPEDCD collection is complete for public hospitals in peer groups A and B. It is estimated that 2013-14 has similar coverage, although final coverage cannot be calculated until the 2013-14 NPHED data are available. * The definition of potentially avoidable GP type presentations is an interim measure, based on data available in the NNAPEDCD. The AIHW is managing revision work for this indicator under the auspices of the Australian Health Ministers’ Advisory Council, to be completed by the end of 2013. * Caution should be used in comparing these data with earlier years as the number of hospitals classified as peer group A or B, and the peer group classification for a hospital, may vary over time. | | | |

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### Financial barriers to PBS medicines

Data quality information for this measure has been sourced from the ABS with additional Steering Committee comments.

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| Indicator definition and description | | |  |
| Element | Effectiveness — access | | |
| Indicator |  | | |
| Measure/s (computation) | People deferring purchase of prescribed medicines due to cost.  Definition: Proportion of people that deferred purchase of prescribed medicines due to cost.  Numerator: Number of people who reported delaying or not getting a prescription filled for medication in the last 12 months because of cost.  Denominator: Total number of people aged 15 years or over who received a prescription for medication from a GP in the last 12 months.  Computation: 100 × (Numerator ÷ Denominator). | | |
| Data source/s | ABS Patient Experience Survey | | |
| Data Quality Framework Dimensions | |  | |
| Institutional environment | Data Collector(s): The Patient Experience Survey is a topic on the Multipurpose Household Survey. It is collected, processed, and published by the Australian Bureau of Statistics (ABS). The ABS operates within a framework of the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. These ensure the independence and impartiality from political influence of the ABS, and the confidentiality of respondents.  For more information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment on the ABS website at www.abs.gov.au.  Collection authority: The *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*.  Data Compiler(s): Data are compiled by the Health section of the ABS.  Statistical confidentiality is guaranteed under the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. The ABS notifies the public through a note on the website when an error in data has been identified. The data are withdrawn, and the publication is re released with the correct data. Key users are also notified where possible. | | |
| Relevance | Level of Geography: Data are available by State/Territory, and by Remoteness (major cities, inner and outer regional, remote and, from 2011-12, very remote Australia).  Data Completeness: All data are available for this measure from this source.  Indigenous Statistics: Data are not available by Indigenous status for this measure. The 2012-13 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) collected data on GP waiting times but differences in survey design and collection methodology between the Patient Experience survey and the NATSIHS mean the data are not comparable.  Numerator/Denominator Source: Same data source. | | |

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| Relevance (cont.) | Data for this indicator were collected for all people aged 15 years or over in Australia, excluding the following:   * members of the Australian permanent defence forces * diplomatic personnel of overseas governments, customarily excluded from census and estimated population counts * overseas residents in Australia * members of non-Australian defence forces (and their dependents) * people living in non-private dwellings such as hotels, university residences, boarding schools, hospitals, retirement homes, homes for people with disabilities, and prisons * people living in discrete Indigenous communities.   From 2011-12, the Patient Experience survey included households in very remote areas (although discrete Indigenous communities were still excluded). The inclusion of very remote areas will serve to improve the coverage of the estimates, particularly for the NT. Small differences evident in the NT estimates between 2010-11 and 2011-12 may in part be due to the inclusion of households in very remote areas.  Data were self-reported for this indicator. The definition of 'urgent medical care' was left up to the respondent, although discretionary interviewer advice was to include health issues that arose suddenly and were serious (e.g. fever, headache, vomiting, unexplained rash), and that seeing a GP to get a medical certificate for work for a less serious illness would not be considered urgent. | |
| Timeliness | Collection interval/s: Patient Experience data are collected annually.  Data available: The data used for this indicator became available 22 November 2013 for 2012-13 and 28 November 2014 for 2013-14.  Referenced Period: July 2013 to June 2014 (2013-14 data); July 2012 to June 2013 (2012-13 data).  There are not likely to be revisions to these data after their release. | |
| Accuracy | Method of Collection: For this iteration of the Patient Experience Survey, an additional sample was selected in particular areas using a separate survey called the Health Services Survey (HSS). The HSS collected the same information as the Patient Experience Survey, with enumeration taking place between September 2013 and December 2013. The additional sample was collected to improve the quality of estimates at the Medicare Local catchment level. Sample from the Patient Experience Survey and HSS were combined to produce output.  The data was predominantly collected by computer assisted telephone interview, although the HSS interviews were predominantly conducted face-to-face. MPHS PEx included one person aged 15 years and over from each household, while the HSS included two persons aged 15 and over from each household.  Analysis was conducted to determine whether there was any difference between the estimates which would have been obtained using the MPHS PEx sample only and estimates obtained using the combined MPHS PEx and HSS sample. This was particularly important given the predominantly different modes used between the two surveys (The majority of MPHS PEx interviews were conducted over the telephone while a larger proportion of HSS interviews were conducted face-to-face and included up to two persons per household). This analysis showed that combining the sample from the two surveys did not produce significantly different estimates. Therefore, estimates can be compared over time with other iterations of the Patient Experience Survey.  Response rate and sample size: The response rate in 2013-14 to the MPHS PEx was 77 per cent (27 327 fully responding persons) while the response rate to HSS was 83 per cent (8541 fully responding persons) resulting in a total sample size of 35 868 fully responding persons. This included 629 proxy interviews for people aged 15 to 17 where permission was not given by a parent or guardian for a personal interview.  Note this is a substantial increase from the 2012-13 sample size of 30,749, which had a response rate 78.9 per cent. This increase will improve the reliability of the data, particularly at finer levels of disaggregation.  Data Adjustments: Data was weighted to represent the total in scope Australian population, and was adjusted to account for confidentiality and non-response. Data for MPHS PEx and HSS were weighted separately and then combined to produce output.  Confidentiality:  For the first time in 2013-14, the data has been perturbed. This has been footnoted in the tables. Perturbation is used to minimise the risk of identifying individuals in aggregate statistics. Perturbation involves small random adjustment of the statistics and is considered the most satisfactory technique for avoiding the release of identifiable statistics while maximising the range of information that can be released. These adjustments have a negligible impact on the underlying pattern of the statistics.  After perturbation, a given published cell value will be consistent across all tables. However, adding up cell values to derive a total will not necessarily give the same result as published totals.  As data is drawn from a sample survey, the indicator is subject to sampling error, which occurs because a proportion of the population is used to produce estimates that represent the whole population. Rates should be considered with reference to their corresponding relative standard errors (RSEs) and 95 per cent confidence intervals. Estimates with a relative standard error between 25 per cent and 50 per cent should be used with caution, and estimates with a relative standard error over 50 per cent are considered too unreliable for general use.  This indicator generally has acceptable levels of sampling error and provides reliable data for most breakdowns. However, RSEs for the waiting time category “4 hours or more but within 24 hours” breakdowns are mostly greater than 25% and should either be used with caution or are considered too unreliable for general use. Similarly, data for the “other” remoteness category has high RSEs when cross classified by State. Caution should be used when interpreting these data.  Known Issues: Data was self-reported and interpretation of urgent medical care was left up the respondent.  The data is self-reported but not attitudinal, as respondents are reporting their experiences of using the health system (in this instance, the time they waited between making an appointment for urgent medical care and the time they got to see the GP).  Explanatory footnotes are provided for each table. | |
| Coherence | 2009 was the first year data was collected for this indicator. Questions relating to this indicator were also asked in 2010-11, 2011-12, 2012-13 and 2013-14.  Consistency over time: Data for 2013-14 are comparable to data for 2012-13, 2011‑12 and 2010-11, but not before this (ie not comparable to 2009). This is due to changes in question wording/sequencing in the patient experience survey. As a result, a time series can be started from 2010-11 onwards. This has been footnoted in the relevant tables.  Numerator/denominator: The numerator and denominator are directly comparable, one being a sub-population of the other.  The numerator and denominator are compiled from a single source.  Jurisdiction estimate calculation: Jurisdiction estimates are calculated the same way, although the exclusion of discrete Indigenous communities in the 2011-12 and 2012-13 surveys, and of very remote communities in the previous surveys, will affect the NT more than it affects other jurisdictions (people usually resident in very remote areas account for about 23 per cent of people in the NT).  Jurisdiction/Australia estimate calculation: All estimates are compiled the same way.  Collections across populations: Data is collected the same way across all jurisdictions.  The Patient Experience survey provides the only national data available for this indicator. At this stage, there are no other comparable data sources.  Due to differences in survey scope, collection methodology and question wording, these data are not comparable to data from the 2012-13 Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS). | |
| Accessibility | Data are publicly available in *Health Services: Patient Experiences in Australia, 2009* (Cat. no. 4839.0.55.001), *Patient Experiences in Australia: Summary of Findings, 2010-11, 2011-12, 2012-13* and *2013-14* (Cat. no. 4839.0).  Data are not available prior to public access.  Supplementary data are available. Additional data from the Patient Experience Survey are available upon request.  Access permission/Restrictions: Customised data requests may incur a charge.  Contact Details: For more information, please call the ABS National Information and Referral Service 1300 135 070. | |
| Interpretability | Context: The data were collected from a representative sample of the Australian population and questions were asked in context of the year prior to the survey. The data were collected over a twelve month period which should minimise any seasonality effects in the data.  The 2013-14 ABS Patient Experience data are published in *Patient Experiences in Australia: Summary of Findings*, 2013-14 (Cat. no. 4839.0). The publication includes explanatory and technical notes.  Any ambiguous or technical terms for the data are available from the Technical Note, Glossary and Explanatory Notes in the publication. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data from the Patient Experience survey are not comparable with data from the NATSIHS. Disaggregation of this indicator by Indigenous status is a priority. * The inclusion of very remote areas from the 2011-12 survey improves the comparability of NT data, although the exclusion of discrete Indigenous communities will affect the NT more than it affects other jurisdictions. * The sample size increase from 30 749 in 2012-13 to 35 868 in 2013-14 strengthens reliability of the population level estimates. | |

### Public dentistry waiting times

Data quality information for this measure has been sourced from the ABS with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Effectiveness — access | | | |
| Indicator | Public dentistry waiting times. | | | |
| Measure/s (computation) | Definition Waiting time between being placed on a public dentistry waiting list and being seen by a dental professional.  Numerator: Number of people aged 15 years or over on a public dental waiting list who reported seeing a dental professional at a government dental clinic or, from 2013-14, attending a private dental clinic for a public dental service (for their own health) within specified waiting time categories (less than 1 month, 1 month or more).  Denominator: Number of people aged 15 years or over who were on a public dentistry waiting list (for their own health) in the last 12 months.  Computation: 100 × (Numerator ÷ Denominator). | | | |
| Data source/s | ABS Patient Experience Survey | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | Data Collector(s): The Patient Experience Survey is a topic on the Multipurpose Household Survey. It is collected, processed, and published by the Australian Bureau of Statistics (ABS). The ABS operates within a framework of the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. These ensure the independence and impartiality from political influence of the ABS, and the confidentiality of respondents.  For more information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment on the ABS website at www.abs.gov.au.  Collection authority: The *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*.  Data Compiler(s): Data are compiled by the Health section of the ABS.  Statistical confidentiality is guaranteed under the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. The ABS notifies the public through a note on the website when an error in data has been identified. The data are withdrawn, and the publication is re released with the correct data. Key users are also notified where possible. | | | |
| Relevance | Level of Geography: Data are available by State/Territory, and by Remoteness (major cities, inner and outer regional, remote and, from 2011-12, very remote Australia).  Data Completeness: All data are available for this measure from this source.  Indigenous Statistics: Data are not available by Indigenous status for this measure. The 2012-13 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) collected data on public dentistry waiting times but differences in survey design and collection methodology between the Patient Experience survey and the NATSIHS mean the data are not comparable.  Numerator/Denominator Source: Same data source.  Data for this indicator were collected for all people aged 15 years or over in Australia, excluding the following:   * members of the Australian permanent defence forces * diplomatic personnel of overseas governments, customarily excluded from census and estimated population counts * overseas residents in Australia * members of non-Australian defence forces (and their dependents) * people living in non-private dwellings such as hotels, university residences, boarding schools, hospitals, retirement homes, homes for people with disabilities, and prisons * people living in discrete Indigenous communities.   From 2011-12, the Patient Experience survey included households in very remote areas (although discrete Indigenous communities were still excluded). The inclusion of very remote areas will serve to improve the coverage of the estimates, particularly for the NT. Small differences evident in the NT estimates between 2010-11 and 2011-12 may in part be due to the inclusion of households in very remote areas.  Data were self-reported for this indicator. | | | |
| Timeliness | Collection interval/s: Patient Experience data are collected annually.  Data available: The data used for this indicator became available 22 November 2013 for 2012-13 and 28 November 2014 for 2013-14.  Referenced Period: July 2013 to June 2014 (2013-14 data); July 2012 to June 2013 (2012-13 data).  There are not likely to be revisions to these data after their release. | | | |
| Accuracy | Method of Collection: For this iteration of the Patient Experience Survey, an additional sample was selected in particular areas using a separate survey called the Health Services Survey (HSS). The HSS collected the same information as the Patient Experience Survey, with enumeration taking place between September 2013 and December 2013. The additional sample was collected to improve the quality of estimates at the Medicare Local catchment level. Sample from the Patient Experience Survey and HSS were combined to produce output.  The data was predominantly collected by computer assisted telephone interview, although the HSS interviews were predominantly conducted face-to-face. MPHS PEx included one person aged 15 years and over from each household, while the HSS included two persons aged 15 and over from each household.  Analysis was conducted to determine whether there was any difference between the estimates which would have been obtained using the MPHS PEx sample only and estimates obtained using the combined MPHS PEx and HSS sample. This was particularly important given the predominantly different modes used between the two surveys (The majority of MPHS PEx interviews were conducted over the telephone while a larger proportion of HSS interviews were conducted face-to-face and included up to two persons per household). This analysis showed that combining the sample from the two surveys did not produce significantly different estimates. Therefore, estimates can be compared over time with other iterations of the Patient Experience Survey.  Response rate and sample size: The response rate in 2013-14 to the MPHS PEx was 77 per cent (27 327 fully responding persons) while the response rate to HSS was 83 per cent (8541 fully responding persons) resulting in a total sample size of 35 868 fully responding persons. This included 629 proxy interviews for people aged 15 to 17 where permission was not given by a parent or guardian for a personal interview.  Note this is a substantial increase from the 2012-13 sample size of 30 749. This increase will improve the reliability of the data, particularly at finer levels of disaggregation.  Data Adjustments: Data was weighted to represent the total in scope Australian population, and was adjusted to account for confidentiality and non-response. Data for MPHS PEx and HSS were weighted separately and then combined to produce output.  Confidentiality:  For the first time in 2013-14, the data has been perturbed. This has been footnoted in the tables. Perturbation is used to minimise the risk of identifying individuals in aggregate statistics. Perturbation involves small random adjustment of the statistics and is considered the most satisfactory technique for avoiding the release of identifiable statistics while maximising the range of information that can be released. These adjustments have a negligible impact on the underlying pattern of the statistics.  After perturbation, a given published cell value will be consistent across all tables. However, adding up cell values to derive a total will not necessarily give the same result as published totals.  As data is drawn from a sample survey, the indicator is subject to sampling error, which occurs because a proportion of the population is used to produce estimates that represent the whole population. Rates should be considered with reference to their corresponding relative standard errors (RSEs) and 95 per cent confidence intervals. Estimates with a relative standard error between 25 per cent and 50 per cent should be used with caution, and estimates with a relative standard error over 50 per cent are considered too unreliable for general use.  RSEs for this indicator are often greater than 25 per cent and should either be used with caution or are considered too unreliable for general use. Specifically, data for the “less than one month” waiting time category have high RSEs and should be used with caution.  Known Issues: This indicator may not cover those who saw a public dental professional but were not placed on a public dental waiting list.  Explanatory footnotes are provided for each table. | | | |
| Coherence | Consistency over time: Data are not comparable over time, due to significant changes in question wording and sequencing in both the 2012-13 and 2013-14 surveys.   * In 2011-12, respondents were: * limited to those whose most recent dental visit was to a government clinic * instructed to exclude treatment for urgent dental care. * From 2012-13: * treatment for urgent dental care was not excluded * respondents included all people who needed to see a dental professional * In 2013‑14, respondents: * were asked for the first time to include public dental services provided at a private dental clinic.   As a result, time series comparisons are not possible. This has been footnoted in the relevant tables.  Numerator/denominator: The numerator and denominator are directly comparable, one being a sub-population of the other.  The numerator and denominator are compiled from a single source.  Jurisdiction estimate calculation: Jurisdiction estimates are calculated the same way, although the exclusion of discrete Indigenous communities in the sample will affect the NT more than it affects other jurisdictions.  Jurisdiction/Australia estimate calculation: All estimates are compiled the same way.  Collections across populations: Data is collected the same way across all jurisdictions.  The Patient Experience survey provides the only national data available for this indicator. At this stage, there are no other comparable data sources.  Due to differences in survey scope, collection methodology and question wording, these data are not comparable to data from the 2012-13 Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS). | | | |
| Accessibility | Data publicly available. Tables showing waiting times for dental professionals are available in *Patient Experiences in Australia: Summary of Findings, 2011-12, 2012-13* and *2013-14* (Cat. no. 4839.0).  The dental data available in 4839.0 are shown by SEIFA, remoteness, country of birth, self-assessed health status and whether has a long term health condition. Jurisdictional data are not currently publically available but may be made available in the future.  Data are not available prior to public access.  Supplementary data are available. Additional data from the Patient Experience Survey are available upon request.  Access permission/Restrictions: Customised data requests may incur a charge.  Contact Details: For more information, please call the ABS National Information and Referral Service on 1300 135 070. | | | |
| Interpretability | Context: The data were collected from a representative sample of the Australian population and questions were asked in context of the year prior to the survey. The data were collected over a twelve month period and therefore should minimise any seasonality effects in the data.  Other Supporting information: The ABS Patient Experience data are published in Patient Experiences in Australia: Summary of Findings,  2011-12 and 2012-13 (Cat. no. 4839.0). This publication includes explanatory and technical notes. Any ambiguous or technical terms for the data are available from the Technical Note, Glossary and Explanatory Notes in that publication. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data for 2013-14 are not comparable with data for prior years due to changes in question wording and sequencing in the 2013-14 survey. Comparable time series data is a priority. * The inclusion of very remote areas from the 2011-12 survey improves the comparability of NT data, although the exclusion of discrete Indigenous communities will affect the NT more than it affects other jurisdictions. * Data from the Patient Experience survey are not comparable with data from the AATSIHS. Disaggregation of this indicator by Indigenous status is a priority. * The sample size increase from 30 749 in 2012-13 to 35 868 in 2013-14 strengthens reliability of the population level estimates. | | | |

### GPs with vocational registration

Data quality information has been developed by the Health Working Group for this indicator with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Appropriateness | | | |
| Indicator | GPs with vocational registration | | | |
| Measure/s (computation) | The proportion of general practitioners (GPs) with vocational registration.  Definition: The number of Full-time Workload Equivalent (FWE) vocationally registered GPs divided by the number of FWE GPs and Other medical practitioners (OMP).  Numerator: Number of FWE vocationally registered GPs.  Denominator: Number of FWE vocationally registered GPs and OMPs.  Computation: 100 x (Numerator ÷ Denominator).  Disaggregations:   * State/Territory * Region | | | |
| Data source/s | Australian Government Department of Human Services (DHS), Medicare data. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | MBS data are an administrative by-product of the DHS, Medicare fee for-service payment systems. DHS, Medicare collects MBS data under the *Human Services (Medicare) Act 1973* (previously *Medicare Australia Act 1973*) and regularly provides the data to the Department of Health. | | | |
| Relevance | Data capture all vocationally registered GPs and OMPs.  A vocationally registered GP is a medical practitioner who is vocationally registered under s.3F of the *Health Insurance Act 1973* (Cwlth), holds Fellowship of the RACGP, ACRRM, or equivalent, or holds a recognised training placement, and who has at least half of the schedule fee value of his/her DHS Medicare billing from non-referred attendances.  An OMP is a medical practitioner other than a vocationally registered GP who has at least half of the schedule fee value of his/her DHS Medicare billing from non-referred attendances.  Allocation of FWE GPs and OMPs to state or territory and region is based on the practice location at which services were rendered within the reference period.  Disaggregation by region:  From 2012-13, disaggregation by region is based on the ABS Australian Statistical Geography Standard 2011 (ASGS) classification. For previous years, disaggregation by region is based on the Rural, Remote and Metropolitan Areas (RRMA) classification. The RRMA classification was developed in 1994 based on population figures and Statistical Local Area (SLA) boundaries as at the 1991 census. It has not been officially updated and does not reflect population growth or redistribution since 1991 — metropolitan, rural and remote areas are defined as they existed in 1991.  RRMA categories are: Capital city — State and Territory capital city statistical divisions; Other metropolitan centre — one or more statistical subdivisions that have an urban centre with a population of 100 000 or more; Large rural centre — statistical local areas (SLAs) where most of the population resides in urban centres with a population of 25 000 or more; Small rural centre — SLAs in rural zones containing urban centres with populations between 10 000 and 24 999; Other rural area — all remaining SLAs in the rural zone; Remote centre — SLAs in the remote zone containing populations of 5000 or more; Other remote area — all remaining SLAs in the remote zone.FWE is a standardised measure adjusted for the partial contribution of casual and part-time doctors and is a reliable estimate of the GP workforce. FWE is calculated by dividing each doctor's DHS, Medicare billing by the average billing of full time doctors for the reference period. | | | |
| Timeliness | GP FWE figures are available 10 weeks after the close of the reference period. | | | |
| Accuracy | As with any administrative system a small degree of error may be present in the data captured. | | | |
| Coherence | Estimates are compiled the same way across jurisdictions.  For data by region, there is a break in time series between 2011-12 and 2012-13 due to the change in geographical location classification. Data from 2012-13 are not comparable with data for previous years. | | | |
| Accessibility | Information is available for MBS Claims data from http://www.humanservices.gov.au/ corporate/statistical-information-and-data/?utm\_id=9. | | | |
| Interpretability | General practice statistics, including explanatory notes, are published at www.health.gov.au/internet/main/publishing.nsf/Content/General+Practice+Statistics-1 | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * The classification system used to allocate GPs to regions from the reference year 2012-13 is current, a major improvement over data for previous years which were based on a system developed in 1994. | | | |

### Management of upper respiratory tract infections

Data quality information has been developed by the Health Working Group for one of the measures for this indicator with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Effectiveness — appropriateness | | | |
| Indicator | Management of upper respiratory tract infections | | | |
| Measure/s (computation) | Definition: The number of prescriptions for selected antibiotics (those oral antibiotics most commonly prescribed to treat upper respiratory tract infection [URTI]) that are provided per 1000 people.  Numerator: The number of prescriptions for selected antibiotics (those oral antibiotics most commonly prescribed to treat URTI) that are provided and dispensed.  Denominator: ERP  Computation: 1000 × (Numerator ÷ Denominator), presented as a rate. | | | |
| Data source/s | Numerator: Australian Government Department of Health Pharmaceutical Benefits Scheme (PBS) Statistics data.  Denominator: ABS preliminary ERP based on the 2011 Census at 31 December in the reference year. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | PBS claims data is a record of all dispensed prescriptions subsidised by the Australian Government. The PBS is managed by Australian Government Department of Health and administered by the Department of Human Services (DHS), Medicare. Provisions governing the operation of the PBS are contained in the National Health Act 1953.  The indicator was calculated by the Secretariat using the numerator data supplied by Australian Government Department of Health and ABS ERP. | | | |
| Relevance | These measures relate to PBS subsidised oral antibiotics used most commonly in treating URTI: phenoxymethylpenicillin (penicillin V); amoxycillin; erythromycin; roxithromycin; cefaclor; amoxycillin+clavulanic acid; doxycycline; clarithromycin; and cefuroxime. All active PBS item codes associated with each of these generic names that were ordered by GPs and dispensed to patients were extracted for each reference period.  These antibiotics are used to treat a range of conditions in addition to URTI. Data disaggregated by the condition being treated are not available. The proportion of these antibiotics prescribed for treatment of URTI is unknown.  Allocation to state or territory is based on the state or territory of the pharmacy supplying the prescription. | | | |
| Timeliness | PBS claims data are available within three working days of the end of a month. | | | |
| Accuracy | PBS data from 2012-13 are complete. For previous years, PBS data for general patients was available only for items priced above the PBS general co payment ($35.40 in 2012) and therefore, the majority of script data for these patients was missing.  Data include only prescriptions provided by GPs and OMPs. | | | |
| Coherence | Data from 2012-13 are not comparable to data for previous years which were available only for concession card holders. | | | |
| Accessibility | PBS Claims data is available from www.medicareaustralia.gov.au/provider/pbs/stats.jsp. | | | |
| Interpretability | Information on PBS data is available from www.medicareaustralia.gov.au/provider/ pbs/stats.jsp at the PBS item reports and PBS group reports links. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * URTI is one of a range of conditions for which these antibiotics are prescribed. Data are not able to be disaggregated by condition. * The availability of complete data on the selected antibiotics dispensed in the general population significantly improves data quality from 2012-13. | | | |

### Chronic disease management

#### Management of diabetes — HbA1c level

Data quality information for this measure has been sourced from the ABS with additional Steering Committee comments.

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| Indicator definition and description | | |  |
| Element | Effectiveness — Appropriateness | | |
| Indicator | Chronic disease management | | |
| Measure/s (computation) | Management of diabetes — HbA1c.  Numerator: Number of people aged between 18 and 69 years with known diabetes, as determined by a fasting plasma glucose test, who have an HbA1c level of less than or equal to 7.0 per cent.  Denominator: Number of persons aged between 18 and 69 years with known diabetes, as determined by a fasting plasma glucose test.  Computation: 100 × (Numerator ÷ Denominator). | | |
| Data source/s | For the 2014 reporting cycle, the denominator and numerator for this indicator use data from the 2011–12 National Health Measures Survey (NHMS) component of the Australian Bureau Statistics (ABS) Australian Health Survey (AHS), which is weighted to benchmarks for the total AHS in-scope population derived from ERP.  For information on scope and coverage, see the *Australian Health Survey: Users’ Guide* (Cat. no. 4363.0.55.001) on the ABS website, www.abs.gov.au. | | |
| Data Quality Framework Dimensions | |  | |
| Institutional environment | The 2011–12 NHMS was collected, processed, and published by the Australian Bureau of Statistics (ABS). The ABS operates within a framework of the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. These ensure the independence and impartiality from political influence of the ABS, and the confidentiality of respondents.  For more information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment. | | |
| Relevance | For this measure, the fasting plasma glucose test is used in the determination of people with known diabetes and the HbA1c test is used in the determination of effective management of diabetes.  The 2011-12 NHMS uses a combination of blood test results for fasting plasma glucose and self-reported information on diabetes diagnosis and medication use to measure prevalence of known diabetes.  A respondent to the survey is considered to have known diabetes if they had ever been told by a doctor or nurse that they have diabetes and:   * they were taking diabetes medication (either insulin or tablets)   or   * their blood test result for fasting plasma glucose was greater than or equal to 7.0 mmol/L.   Persons with known diabetes who have an HbA1c result of less than or equal to  7.0 per cent are considered to be managing their diabetes effectively.  The estimates exclude persons who did not fast for 8 hours or more prior to their blood test. Excludes women with gestational diabetes. | | |

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| Timeliness | The NHMS was conducted for the first time in 2011–13. Results from the 2011-12 NHMS were released in August 2013. | |
| Accuracy | The AHS was conducted in all States and Territories, excluding very remote areas. Non‑private dwellings such as hotels, motels, hospitals, nursing homes and short-stay caravan parks were also not included in the survey. The exclusion of persons usually residing in very remote areas has a small impact on estimates, except for the Northern Territory, where such persons make up approximately 23 per cent of the population. The final response rate for the ‘core’ component of the AHS was 82 per cent.  All selected persons aged 5 years and over were invited to participate in the voluntary NHMS. Of all of those who took part in the AHS, 38 per cent went on to complete the biomedical component.  Analysis of the sample showed that the characteristics of persons who participated in the NHMS were similar with those for the AHS overall. The only significant difference was for smoking, where the NHMS sample had a lower rate of current smokers than the AHS sample (12.0 per cent compared with 17.6 per cent). For more information, see the Explanatory Notes in Australian Health Survey: Biomedical Results for Chronic Disease (cat. no. 4364.0.55.005).  In order to get an accurate reading for the fasting plasma glucose test, participants were asked to fast for 8 hours before their test. The results presented for this indicator refer only to those people who did fast (approximately 79 per cent of adults who participated in the NHMS). Analysis of the characteristics of people who fasted compared with those who did not fast showed no difference between fasters and non-fasters.  As they are drawn from a sample survey, data for the indicator are subject to sampling error. Sampling error occurs because only a small proportion of the population is used to produce estimates that represent the whole population. Sampling error can be reliably estimated as it is calculated based on the scientific methods used to design surveys. Rates should be considered with reference to their Relative Standard Error (RSE). Estimates with RSEs between 25 per cent and 50 per cent should be used with caution. Estimates with RSEs greater than 50 per cent are generally considered too unreliable for general use.  This indicator produces high levels of sampling error for some States and Territories when split by sex. Estimates for males and females in Victoria have RSEs greater than 50 per cent and should be considered unreliable for general use. Likewise, estimates for males in the Northern Territory and females in the Australian Capital Territory also have RSEs greater than 50 per cent.  Data for several State and Territories also have RSEs greater than 25 per cent, including the total for Victoria, SA, the ACT and the NT, and these estimates should be used with caution. | |
| Coherence | The AHS collected a range of other health-related information that can be analysed in conjunction with diabetes management.  The 2009-10 Victorian Health Monitor (VHM) reported estimates of diabetes management based on the proportion of people with known diabetes meeting the HbA1c management target of less than or equal to 7.0 nmol/L. The VHM age-standardised rate (39 per cent) was similar to the NHMS rate for Victoria (36 per cent). | |
| Accessibility | See *Australian Health Survey: Biomedical Results for Chronic Disease* (Cat. no. 4364.0.55.005). Other information from this survey is also available on request. | |
| Interpretability | Information to aid interpretation of the data is available from the Australian Health Survey: Users’ Guide on the ABS website.  Many health-related issues, including diabetes, are closely associated with age. However, numbers across age ranges were too few to do any meaningful age standardisation at the State/Territory level for this measure. Therefore the data presented are based on crude rates. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data by Indigenous status are not available for this measure. * The 2011-12 National Health Measures Survey (NHMS) was conducted for the first time as part of the 2011–13 Australian Health Survey (AHS), with participation voluntary in the NHMS. Of those who took part in the AHS, 38 per cent took part in the NHMS. The NHMS sample was found to be representative of the AHS population. * The NHMS does not include people living in very remote areas, which affects the comparability of the NT results. | |

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#### Measure 2: Management of asthma

Data quality information for this measure has been sourced from the ABS with additional Steering Committee comments.

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| Indicator definition and description | | |  |
| Element | Effectiveness — Appropriateness | | |
| Indicator | Chronic disease management | | |
| Measure/s (computation) | Management of asthma  Definition   * Proportion of people with asthma who have a written asthma action plan.   Numerator:   * Estimated number of people with asthma with a written asthma action plan.   Denominator: Estimated number of people with asthma.  Computation: 100 × (Numerator ÷ Denominator). | | |
| Data source/s | Data reported for 2011–13 are from the ABS 2011–13 Australian Health Survey (AHS) (2011-12 National Health Survey (NHS) component) and the ABS 2012-13 Australian Aboriginal and Torres Strait Islander Health Survey (NATSIHS component). Data reported for 2007-08 are from the ABS 2007-08 NHS. Data reported for 2004-05 are from the ABS 2004-05 NHS and the ABS 2004-05 NATSIHS.  NHS data are weighted to benchmarks for the total NHS in‑scope population, derived from the ERP. For information on NHS scope and coverage, see ABS *Australian Health Survey: Users’ Guide* (Cat. no. 4363.0.55.001) on the ABS website, www.abs.gov.au.  NATSIHS data are benchmarked to the estimated population of Aboriginal and Torres Strait Islander Australians (adjusted for the scope of the survey). | | |
| Data Quality Framework Dimensions | |  | |
| Institutional environment | The NHS and NATSIHS are collected, processed, and published by the Australian Bureau of Statistics (ABS). The ABS operates within a framework of the Census and Statistics Act 1905 and the Australian Bureau of Statistics Act 1975. These ensure the independence and impartiality from political influence of the ABS, and the confidentiality of respondents.  For more information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment. | | |

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| Relevance | The NHS 2011-12 and 2007-08 asked all respondents whether they had ever been told by a doctor or nurse that they have asthma, whether symptoms were present or they had taken treatment in the 12 months prior to interview, and whether they still had asthma. Those who answered yes to these questions were asked whether they had “a written asthma action plan, that is, written instructions of what to do if your asthma is worse or out of control”. A very small number of respondents who were sequenced around these questions may have reported current long-term asthma in response to later general questions about medical conditions. These people are included in and contribute to estimates of the prevalence of asthma, but information about written action plans was not collected from them.  In the 2012-13 NATSIHS, non-remote respondents who reported they have been told by a doctor that they have asthma, and who still get asthma or have had symptoms of asthma in the last 12 months were asked about written asthma action plans. In the 2004-05 NATSIHS, non-remote respondents who answered questions about having asthma ‘yes’ were asked about written asthma action plans.  In both the 2004-05 NHS and NATSIHS, respondents were asked if they had “a written asthma action plan”. If they queried the interviewer about what to include, they were told to include management plans developed in consultation with a doctor, cards associated with peak flow meters and medication cards distributed through chemists. In 2007, if they queried the interviewer, respondents were asked to include plans that were worked out in consultation with a doctor, but not cards associated with peak flow meters or medications cards handed out by chemists.  Ideally this indicator would relate to the proportion of people with moderate to severe asthma, as people with only very mild asthma are unlikely to require planned care. Consequently, there is no clear direction of improvement in this indicator: a lower proportion of people with asthma with an asthma care plan may simply mean that those people with asthma have less severe asthma (which would actually be a positive outcome). | |
| Timeliness | The NHS is conducted every three years over a 12 month period. Results from the 2011-12 NHS component of the AHS were released in October 2012.  The NATSIHS is conducted every six years. Results from the 2012‑13 survey were released in November 2013. | |
| Accuracy | The NHS is conducted in all States and Territories, excluding very remote areas. Non-private dwellings such as hotels, motels, hospitals, nursing homes and short-stay caravan parks were also not included in the survey. The exclusion of people usually resident in very remote areas has a small impact on estimates, except for the Northern Territory, where such people make up approximately 23 per cent of the population. Results are weighted to account for non-response.  The response rate for the 2011-12 NHS was 85 per cent and for the 2007‑08 NHS was 91 per cent.  The NATSIHS is conducted in all States and Territories and includes remote and non‑remote areas. The 2012-13 sample was 9317 people/5371 households, with a response rate of 80 per cent. The 2004‑05 sample was 10 000 people/5200 households, with a response rate of 81 per cent of households. Results are weighted to account for non-response.  As it is drawn from a sample survey, the indicator is subject to sampling error. Sampling error occurs because only a small proportion of the population is used to produce estimates that represent the whole population. Sampling error can be reliably estimated as it is calculated based on the scientific methods used to design surveys. Rates should be considered with reference to their Relative Standard Error (RSE). Estimates with RSEs between 25 per cent and 50 per cent should be used with caution. Estimates with RSEs greater than 50 per cent are generally considered too unreliable for general use. | |
| Coherence | Questions used in the 2011-12 and 2007-08 NHS to collect data for this indicator are consistent with the questions recommended for use by the Australian Centre for Asthma Monitoring (ACAM). Data for 2011-12 and 2007-08 are comparable over time (except for the Northern Territory) but are not comparable to data from the 2004‑05 survey due to better alignment of questions and concepts with the ACAM recommendations since 2004-05.  Data for the NT in 2011-12 are not comparable to previous years due to the increase in sample size in 2011-12.  The NHS and NATSIHS collect a range of other health-related information (for example, information on smoking) that can be analysed in conjunction with data on asthma and asthma plans. | |
| Accessibility | See *Australian Health Survey: First Results* (Cat. no. 4364.0.55.001) and *Australian Health Survey: Health Service Usage and Health Related Actions* (Cat. no. 4364.0.55.002) for an overview of results from the NHS component of the AHS. Other information from this survey is also available on request.  See *Aboriginal and Torres Strait Islander Health Survey: First Results, Australia, 2012‑13* (Cat. no. 4727.0.55.001) for an overview of results from the 2012-13 NATSIHS. Other information from the survey is available on request. | |
| Interpretability | Information to aid interpretation of the data is available from the *Australian Health Survey: Users’ Guide* and the *Australian Aboriginal and Torres Strait Islander Health Survey: Users’ Guide* on the ABS website.  Many health-related issues are closely associated with age, therefore data for this indicator have been age-standardised to the 2001 total Australian population to account for differences in the age structures of the States and Territories and the Indigenous and non-Indigenous population. Age standardised rates should be used to assess the relative differences between groups, not to infer the rates that actually exist in the population. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * The data provide relevant information on the proportion of asthmatics who have an asthma management plan. However, there is no information about the severity of the condition and people with mild asthma are unlikely to require a written plan. * NATSIHS data are only collected every six years. An assessment of the relative speed of change in outcomes is required to determine whether more regular data collection is necessary. * The NHS does not include people living in very remote areas which affects the comparability of the NT results. | |

### Use of pathology tests and diagnostic imaging

Data quality information has been developed for this measure by the Health Working Group with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Effectiveness — Appropriateness | | | |
| Indicator | Use of pathology tests and diagnostic imaging | | | |
| Measure 1 | MBS items rebated through Department of Human Services (DHS), Medicare for pathology tests requested by general practitioners (GP), and Other Medical Practitioners (OMP), per person (age-standardised)  Definition: The number of MBS items rebated through DHS, Medicare for pathology tests requested by specialist GPs and OMPs, per person (age standardised)  Numerator: The number of MBS items rebated through DHS, Medicare for pathology tests requested by GPs and OMPs  Denominator: Estimated Resident Population (ERP)  Computation: Numerator ÷ Denominator, age-standardised | | | |
| Measure 2 | Diagnostic imaging services provided on referral from specialist GPs and OMPs and rebated through DHS, Medicare, per person (age standardised)  Definition: The number of MBS items rebated through DHS, Medicare for diagnostic imaging services referred by GPs and OMPs, per person (age standardised)  Numerator: The number of MBS items rebated through DHS, Medicare for diagnostic imaging services referred by GPs and OMPs  Denominator: Estimated Resident Population (ERP)  Computation: Numerator ÷ Denominator, age-standardised | | | |
| Measure 3 | DHS, Medicare benefits paid per person for pathology tests requested by GPs and OMPs (age-standardised).  Data are deflated using the General Government Final Consumption Expenditure (GGFCE) chain price deflator (2013-14 = 100) to provide real expenditure, comparable over time. | | | |
| Measure 4 | DHS, Medicare benefits paid per person for diagnostic imaging referred by GPs and OMPs (age-standardised).  Data are deflated using the General Government Final Consumption Expenditure (GGFCE) chain price deflator (2013-14 = 100) to provide real expenditure, comparable over time. | | | |
| Data source/s | Numerator:   * For MBS data: DHS, Medicare data. * For DVA data: Australian Government Department of Veterans’ Affairs (DVA) Statistical Services and Nominal Rolls using the Departmental Management Information System (DMIS). These data are known as Treatment Account System (TAS) data.   Denominator: ABS ERP. For reference periods prior to and including 2009-10, ERP as at 30 June, based on the 2006 Census. From the 2010-11 reference year ABS ERP as at 31 December, based on the 2011 Census. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | DHS, Medicare processes and collects MBS data for:   * claims made through the MBS under the *Health Insurance Act 1973*. These data are regularly provided to Australian Government Department of Health. * claims for DVA Treatment Card holders, also made through the MBS, under the *Veterans’ Entitlements Act 1986*; *Military Rehabilitation and Compensation Act 2004* and *Human Services (Medicare) Act 1973*. All claims data are regularly provided to DVA as per the Memorandum of Understanding between DHS, Medicare and DVA.   MBS claims data are an administrative by-product of DHS, Medicare’s fee for-service payment systems.  For reference periods to 2009-10, Australian Government Department of Health provided raw data and rates inclusive of DVA data.  From 2010-11, DHS, Medicare and DVA data are provided separately to the Secretariat. The Secretariat collates the data and computes rates. | | | |
| Relevance | The measure relates to specific identified MBS services for which DHS, Medicare has processed a claim:   * Pathology tests — all items in Broad Type of Service (BTOS) ‘N’ or ‘F’. * Diagnostic imaging services — all items in BTOS ‘G’.   Claims are allocated to state/territory based on location at which the service was rendered.  Expenditure data reflect only the benefits paid by the Australian Government. Contributions made by insurance companies and/or individuals are excluded. | | | |
| Timeliness | Data include all claims processed in the reference period. | | | |
| Accuracy | Data are limited to claims for services requested/referred by GPs and, for MBS data, OMPs (DVA data include only services requested/referred by specialist GPs). Data do not include claims for services requested/referred by other medical specialists.  Data include all claims processed in the reference period.  Pathology tests  The pathology episode cone applies to services requested by general practitioners for non-hospitalised patients:  when more than three MBS pathology items are requested by a GP in a patient episode, the benefits payable will be equivalent to the sum of the benefits for three items — those with the highest schedule fees (there are some items exempted from the episode cone). Where additional tests performed in a patient episode are not rebated through DHS, Medicare, they are not included in the data. This results in some underreporting of the number of pathology tests conducted on request by GPs and OMPs.  Data include Patient Episode Initiated Items.  Diagnostic imaging  Diagnostic imaging services provided and rebated through DHS, Medicare can differ from the services requested by GPs and OMPs.  In certain circumstances, as defined by legislation, a radiologist can identify the need for, and perform, more or different diagnostic imaging services than are requested by a GP/OMP. The data reflect the services provided and rebated through DHS, Medicare, rather than the services requested by GPs/OMPs. | | | |
| Coherence | Rates from 2012-13 are age-standardised to the 2001 Australian Standard Population. These data are not comparable to crude rates reported for previous years.  Data were computed by Australian Government Department of Health for this indicator for reference years prior to and including 2009-10, using the 2006 Census based ERP as at 30 June preceding the reference year.  From 2010-11, data are computed by the Secretariat from numerator data obtained separately from Australian Government Department of Health and the DVA, using the ERP as at 31 December based on the 2011 Census. Rates derived using ERPs based on different Censuses are not comparable. | | | |
| Accessibility | Information is available for MBS Claims data from http://www.humanservices.gov.au/ corporate/statistical-information-and-data/?utm\_id=9.  DVA data are not publically accessible. | | | |
| Interpretability | General practice statistics, including explanatory notes, are published at www.health.gov.au/internet/main/publishing.nsf/Content/General+Practice+Statistics-1 | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Age-standardisation of rates from 2012-13 is a significant improvement. However, rates are not comparable with crude rates reported for previous years. * This is a proxy measure — data are limited to those services rebated through DHS, Medicare that were provided in response to request/referral by GPs/OMPs. * Provides information about relative requests/referrals for pathology tests and diagnostic imaging across jurisdictions and over time, but not the appropriateness thereof. | | | |

### Patient satisfaction

Data quality information for this measure has been sourced from the ABS with additional Steering Committee comments.

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| Indicator definition and description | | |  |
| Element | Quality — responsiveness | | |
| Indicator | Patient satisfaction/experience around key aspects of care they received. | | |
| Measure/s (computation) | Measure a: people who saw a GP in the last 12 months reporting the GP always or often: listened carefully, showed respect, and spent enough time with them  Definition: Proportion of people satisfied with selected aspects of GP/dentist care.  Numerator: People who saw a GP/dentist in the last 12 months reporting the GP/dentist always or often: listened carefully; showed respect; spent enough time with them.  Denominator: People who saw a GP/dentist for their own health in the last 12 months, excluding people who were interviewed by proxy. | | |
| Data source/s | ABS Patient Experience Survey | | |
| Data Quality Framework Dimensions | |  | |
| Institutional environment | Data Collector(s): The Patient Experience Survey is a topic on the Multipurpose Household Survey. It is collected, processed, and published by the Australian Bureau of Statistics (ABS). The ABS operates within a framework of the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. These ensure the independence and impartiality from political influence of the ABS, and the confidentiality of respondents.  For more information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment on the ABS website at www.abs.gov.au.  Collection authority: The *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*.  Data Compiler(s): Data are compiled by the Health section of the ABS.  Statistical confidentiality is guaranteed under the *Census and Statistics Act 1905* and the *Australian Bureau of Statistics Act 1975*. The ABS notifies the public through a note on the website when an error in data has been identified. The data are withdrawn, and the publication is re released with the correct data. Key users are also notified where possible. | | |
| Relevance | Level of Geography: Data are available by State/Territory, and by Remoteness (major cities, inner and outer regional, remote and, from 2011-12, very remote Australia).  Data Completeness: All data are available for this measure from this source.  Indigenous Statistics: Data are not available by Indigenous status for this measure. The 2012-13 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) collected data on GP waiting times but differences in survey design and collection methodology between the Patient Experience survey and the NATSIHS mean the data are not comparable.  Numerator/Denominator Source: Same data source. | | |

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| Relevance (cont.) | Data for this indicator were collected for all people aged 15 years or over in Australia, excluding the following:   * members of the Australian permanent defence forces * diplomatic personnel of overseas governments, customarily excluded from census and estimated population counts * overseas residents in Australia * members of non-Australian defence forces (and their dependents) * people living in non-private dwellings such as hotels, university residences, boarding schools, hospitals, retirement homes, homes for people with disabilities, and prisons * people living in discrete Indigenous communities.   From 2011-12, the Patient Experience survey included households in very remote areas (although discrete Indigenous communities were still excluded). The inclusion of very remote areas will serve to improve the coverage of the estimates, particularly for the NT. Small differences evident in the NT estimates between 2010-11 and 2011-12 may in part be due to the inclusion of households in very remote areas.  Data were self-reported for this indicator. | |
| Timeliness | Collection interval/s: Patient Experience data are collected annually.  Data available: The data used for this indicator became available 22 November 2013 for 2012-13 and 28 November 2014 for 2013-14.  Referenced Period: July 2013 to June 2014 (2013-14 data); July 2012 to June 2013 (2012-13 data).  There are not likely to be revisions to these data after their release. | |
| Accuracy | Method of Collection: For this iteration of the Patient Experience Survey, an additional sample was selected in particular areas using a separate survey called the Health Services Survey (HSS). The HSS collected the same information as the Patient Experience Survey, with enumeration taking place between September 2013 and December 2013. The additional sample was collected to improve the quality of estimates at the Medicare Local catchment level. Sample from the Patient Experience Survey and HSS were combined to produce output.  The data was predominantly collected by computer assisted telephone interview, although the HSS interviews were predominantly conducted face-to-face. MPHS PEx included one person aged 15 years and over from each household, while the HSS included two persons aged 15 and over from each household.  Analysis was conducted to determine whether there was any difference between the estimates which would have been obtained using the MPHS PEx sample only and estimates obtained using the combined MPHS PEx and HSS sample. This was particularly important given the predominantly different modes used between the two surveys (the majority of MPHS PEx interviews were conducted over the telephone while a larger proportion of HSS interviews were conducted face-to-face and included up to two persons per household). This analysis showed that combining the sample from the two surveys did not produce significantly different estimates. Therefore, estimates can be compared over time with other iterations of the Patient Experience Survey.  Response rate and sample size: The response rate in 2013-14 to the MPHS PEx was 77 per cent (27 327 fully responding persons) while the response rate to HSS was 83 per cent (8541 fully responding persons) resulting in a total sample size of 35 868 fully responding persons. This included 629 proxy interviews for people aged 15 to 17 where permission was not given by a parent or guardian for a personal interview.  Note this is a substantial increase from the 2012-13 sample size of 30 749. This increase will improve the reliability of the data, particularly at finer levels of disaggregation.  Data Adjustments: Data was weighted to represent the total in scope Australian population, and was adjusted to account for confidentiality and non-response. Data for MPHS PEx and HSS were weighted separately and then combined to produce output.  Confidentiality — For the first time in 2013-14, the data has been perturbed. This has been footnoted in the tables. Perturbation is used to minimise the risk of identifying individuals in aggregate statistics. Perturbation involves small random adjustment of the statistics and is considered the most satisfactory technique for avoiding the release of identifiable statistics while maximising the range of information that can be released. These adjustments have a negligible impact on the underlying pattern of the statistics.  After perturbation, a given published cell value will be consistent across all tables. However, adding up cell values to derive a total will not necessarily give the same result as published totals.  As data is drawn from a sample survey, the indicator is subject to sampling error, which occurs because a proportion of the population is used to produce estimates that represent the whole population. Rates should be considered with reference to their corresponding relative standard errors (RSEs) and 95 per cent confidence intervals. Estimates with a relative standard error between 25 per cent and 50 per cent should be used with caution, and estimates with a relative standard error over 50 per cent are considered too unreliable for general use.  This indicator generally has acceptable levels of sampling error and provides reliable data for most breakdowns. However, RSEs for remote/very remote breakdowns are mostly greater than 25 per cent and should either be used with caution or are considered too unreliable for general use. Similarly, data for the “other” remoteness category has high RSEs when cross classified by State. Caution should be used when interpreting these data.  The data for this indicator is attitudinal, as it collects whether people felt they waited too long to get an appointment with a GP, and whether the person felt the health professional in question spent enough time with them, listened carefully and showed them respect (the ‘patient satisfaction’ questions).  Data is used from personal interviews only (i.e. excluding proxy interviews).  Explanatory footnotes are provided for each table. | |
| Coherence | 2009 was the first year data was collected for this indicator. Questions relating to this indicator were also asked in 2010-11, 2011-12, 2012-13 and 2013-14.  Consistency over time: Data are comparable over time.  Numerator/denominator: The numerator and denominator are directly comparable, one being a sub-population of the other.  The numerator and denominator are compiled from a single source.  Jurisdiction estimate calculation: Jurisdiction estimates are calculated the same way, although the exclusion of discrete Indigenous communities in the 2011-12 and 2012-13 surveys, and of very remote communities in the previous surveys, will affect the NT more than it affects other jurisdictions (people usually resident in very remote areas account for about 23 per cent of people in the NT).  Jurisdiction/Australia estimate calculation: All estimates are compiled the same way.  Collections across populations: Data is collected the same way across all jurisdictions.  The Patient Experience survey provides the only national data available for this indicator. At this stage, there are no other comparable data sources.  Due to differences in survey scope, collection methodology and question wording, these data are not comparable to data from the 2012-13 Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS). | |
| Accessibility | Data are publicly available in *Health Services: Patient Experiences in Australia, 2009* (Cat. no. 4839.0.55.001), *Patient Experiences in Australia: Summary of Findings, 2010-11, 2011-12, 2012-13* and *2013-14* (Cat. no. 4839.0).  Data are not available prior to public access.  Supplementary data are available. Additional data from the Patient Experience Survey are available upon request.  Access permission/Restrictions: Customised data requests may incur a charge.  Contact Details: For more information, please call the ABS National Information and Referral Service 1300 135 070. | |
| Interpretability | Context: The data were collected from a representative sample of the Australian population and questions were asked in context of the year prior to the survey. The data were collected over a twelve month period which should minimise any seasonality effects in the data.  The 2013-14 ABS Patient Experience data are published in *Patient Experiences in Australia: Summary of Findings*, 2013-14 (Cat. no. 4839.0). The publication includes explanatory and technical notes.  Any ambiguous or technical terms for the data are available from the Technical Note, Glossary and Explanatory Notes in the publication. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data from the Patient Experience survey are not comparable with data from the 2012‑13 NATSIHS. Disaggregation of this indicator by Indigenous status is a priority. * The inclusion of very remote areas from the 2011-12 survey improves the comparability of NT data, although the exclusion of discrete Indigenous communities will affect the NT more than it affects other jurisdictions. * The sample size increase from 30 749 in 2012-13 to 35 868 in 2013-14 strengthens reliability of the population level estimates. | |

### Health assessments for older people

Data quality information has been developed for this indicator by the Health Working Group with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Quality — Continuity | | | |
| Indicator | Health assessments for older people | | | |
| Measure/s (computation) | Definition: The proportion of older people who received a health assessment.  Numerator: The number of people aged 75 years or over with an MBS claim for Items 700, 701, 702, 703, 705 or 707 (Health assessment) and the number of Indigenous people aged 55 years or over with an MBS claim for Items 704, 706 (Health assessment for older Aboriginal and Torres Strait Islander People) or 715 (Health Assessment for Aboriginal and Torres Strait Islander People) in the reference period.  Denominator: The population of Indigenous people aged 55 years or over and the estimated population of non-Indigenous people aged 75 years or over (computed by subtracting the projected population of Indigenous people aged 75 or over from the ERP aged 75 years or over) in the reference period.  Computation: 100 × (Numerator ÷ Denominator), presented as a percentage. | | | |
| Data source/s | Numerator: Australian Government Department of Human Services (DHS), Medicare data.  Denominator – computed by the Secretariat using Australian Bureau of Statistics (ABS) 2011 Census based ERP:   * ABS various years, *Australian demographic statistics*, Cat. no. 3101.0. * ABS 2014, *Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians,* *2001 to 2026*, Cat. No. 3238.0 (B Series). | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | MBS claims data are an administrative by-product of the DHS, Medicare fee-for-service payment systems. DHS, Medicare collects MBS data under the *Human Services (Medicare) Act 1973* and regularly provides the data to Australian Government Department of Health.  The indicator was calculated by the Secretariat using the numerator data supplied by Australian Government Department of Health and denominator data sourced from the ABS. | | | |
| Relevance | These measures relate to specific DHS, Medicare services for which claims data are available.  Indigenous status is determined by self-identification. Indigenous people aged 75 years or over may have received a health assessment under the ‘all older people’ MBS items. This is considered unlikely to affect overall proportions significantly because the life expectancy of Indigenous people is, on average, relatively low.  Allocation of clients to state or territory is based on client postcode of residence as recorded by DHS, Medicare at time of processing the final claim in the reference period. This might differ from the client’s residential postcode at the time the service was received.  For services provided from 1 May 2010, age is based on client date of birth in DHS, Medicare records at the date the service was received. Prior to 1 May 2010 unique MBS item numbers applied to health assessments for older people and health assessments for older Indigenous people.  Eligible populations exclude people who are hospital in-patients or living in a residential aged care facility.  In the NT, MBS statistics do not necessarily fully reflect services supplied to Indigenous people as the claim rate is low due to a smaller number of GPs in remote areas. | | | |
| Timeliness | MBS claims data are available within 14 days of the end of a month. | | | |
| Accuracy | Data include only the services for which claims were processed in the reference year. This is not expected to significantly affect the data.  Allocation to state and territory does not necessarily reflect the client residence at the time of receiving the service if a change of address prior to receiving the service was not reported to DHS, Medicare in the reference period or a change of address after receiving the service was reported to DHS, Medicare in the reference period.  Health assessment rebate claims that are not processed within 12 months of the reference period are excluded. This does not significantly affect the data.  Clients are counted once only in the reference period.  Data do not include:   * health assessment activity where practitioners do not claim the rebate * services that qualify under the DVA National Treatment Account and services provided in public hospitals * people living in residential aged care facilities.   Non-Indigenous population estimates are available for census years only. For inter-censal years, experimental estimates and projections data for the Indigenous population are derived using various assumptions. These can be used to derive denominators for calculating non-Indigenous rates for the inter-censal years. However, such figures have a degree of uncertainty and should be used with caution, particularly as the time from the base year of the projection series increases. | | | |
| Coherence | The following changes to MBS items occurred on 1 May 2010, but are unlikely to impact time-series analysis.  As of 1 May 2010:   * MBS Items 704 and 706 (Health Assessments for older Aboriginal and Torres Strait Islander People) have been replaced with one MBS Item that covers Health Assessments for Aboriginal and Torres Strait Islander People of all ages (Item 715) * MBS Items 700 and 702 (Health assessments for older people) have been replaced with four new MBS items that cover Health assessments for all ages and are based on time and complexity of the visit — Items 701 (brief), 703 (standard), 705 (long) and 707 (prolonged).   For services provided from 1 May 2010, disaggregation by age is based on client date of birth in DHS, Medicare records at the date the service was received.  Health assessments for people who are refugees or humanitarian entrants can also be claimed from 1 May 2010 under MBS Items 701, 703, 705 and 707. This is likely to have little impact on the totals reported as the usage rates for these health assessments are low to extremely low. | | | |
| Accessibility | Information is available for MBS Claims data at www.humanservices.gov.au/corporate/ statistical-information-and-data/?utm\_id=9. | | | |
| Interpretability | DHS, Medicare claims statistics are available at ww.health.gov.au/internet/main/ publishing.nsf/Content/Medicare+Statistics-1 | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data are of acceptable accuracy. | | | |

### Cost to government of general practice per person

Data quality information has been developed for this indicator by the Health Working Group with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Efficiency | | | |
| Indicator | Cost to government of general practice per person | | | |
| Measure/s (computation) | Government Expenditure on GPs per person  Definition: Cost to government of general practice per person in the population  Numerator: Nominal expenditure on services rendered by GPs and OMPs.  Denominator: Estimated Resident Population (ERP).  Computation: Numerator ÷ Denominator, directly age-standardised from 2012-13; crude rates for previous years.  Data are deflated using the General Government Final Consumption Expenditure (GGFCE) chain price deflator (2013-14 = 100) to provide real expenditure, comparable over time. | | | |
| Data source/s | Numerator:   * For MBS data: Department of Human Services (DHS), Medicare data sourced by the Australian Government Department of Health * For DVA data: Australian Government Department of Veterans’ Affairs (DVA) Statistical Services and Nominal Rolls using the Departmental Management Information System (DMIS). These data are known as Treatment Account System (TAS) data.   Denominator: Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP) as at 31 December. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | DHS, Medicare processes and collects MBS data for:   * claims made through the MBS under the *Health Insurance Act 1973*. These data are regularly provided to Australian Government Department of Health. * claims for DVA Treatment Card holders, also made through the MBS, under the *Veterans’ Entitlements Act 1986*; *Military Rehabilitation and Compensation Act 2004* and *Human Services (Medicare) Act 1973*. All claims data are regularly provided to DVA as per the Memorandum of Understanding between DHS, Medicare and DVA.   MBS claims data are an administrative by-product of the DHS, Medicare fee for-service payment systems. | | | |
| Relevance | The measure relates to:   * services provided by GPs and, for MBS data, OMPs (DVA data include only services provided by specialist GPs) for which DHS, Medicare has processed a claim.   Claims allocated to state/territory based on location at which service rendered.  Data exclude costs for primary healthcare services provided by salaried GPs in community health settings, particularly in rural and remote areas, through emergency departments, and Indigenous-specific primary healthcare services. Consequently, this indicator will understate costs for primary care in jurisdictions with larger proportions of rural and remote populations, where a salaried GP services delivery model is used.  From 2012-13, data exclude expenditure on services provided under the Practice incentive program (PIP), Medicare Locals and the General Practice Immunisation Incentive Scheme (GPII) as these data cannot be subjected to age-standardisation. | | | |
| Timeliness | Data include all claims processed in the reference period. | | | |
| Accuracy | From 2012-13, DHS, Medicare data include claimed services by GPs and OMPs as well as by practice nurses or registered Aboriginal health workers for and on behalf of the GMP/OMP. For previous years, DHS, Medicare data also include services rendered under PIP, DGPP and GPII. DVA data are limited to claims for services provided by specialist GPs.  Data include all claims processed in the reference period. | | | |
| Coherence | Age-standardised rates reported from 2012-13 are not comparable with crude rates reported for previous years due to the effect of age standardisation and the exclusion of services rendered under PIP, DGPP and GPII from age standardised rates.  Nominal State and Territory total expenditure data were computed by Australian Government Department of Health for the reference periods 2006-07 to 2009-10. From the 2010-11 reference period, DHS, Medicare and DVA nominal expenditure data are provided separately to and compiled by the Secretariat. These changes are expected to have negligible impact on the data.  Expenditure per person data computed by the Secretariat using the 2011 Census‑based ERP as at 31 December for all reference periods. | | | |
| Accessibility | Information is available for MBS Claims data at www.humanservices.gov.au/corporate/ statistical-information-and-data/?utm\_id=9.  DVA data are not publically accessible. | | | |
| Interpretability | DHS, Medicare claims statistics are available at www.health.gov.au/internet/main/ publishing.nsf/Content/Medicare+Statistics-1 | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Data exclude costs for primary healthcare services provided by salaried GPs in community health settings, particularly in rural and remote areas, through emergency departments, and Indigenous specific primary healthcare services. Consequently, this indicator will understate costs for primary care in jurisdictions with larger proportions of rural and remote populations, where a salaried GP services delivery model is used. | | | |

### Child immunisation coverage

Data quality information has been developed for this indicator by the Health Working Group with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Outcome | | | |
| Indicator | Child immunisation coverage. | | | |
| Measure/s (computation) | Proportion of children who are fully vaccinated at the age of:   * 12 months to less than 15 months * 24 months to less than 27 months * 60 months to less than 63 months.   Definition: Proportion of children who are fully vaccinated at the specified ages.  Numerator: children who turned 1, 2 and 5 years of age in the reference year who were recorded as fully vaccinated on the Australian Childhood Immunisation Register (ACIR) in the reference year.  Denominator: number of children who turned 1, 2 and 5 years in the reference year registered on ACIR.  Computation: 100 × (Numerator ÷ Denominator), presented as a rate per 100 children aged 1, 2 and 5 years. | | | |
| Data source/s | The Australian Childhood Immunisation Register (ACIR). | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | The ACIR is administered and operated by Australian Government Department of Human Services (DHS), Medicare. DHS, Medicare provides Australian Government Department of Health with quarterly coverage reports at the national and state level.  Immunisations are notified to DHS, Medicare by a range of immunisation providers including General Practitioners, Councils, Aboriginal Medical Services, State and Territory Health departments.  For information on the institutional environment of the ACIR, including the legislative obligations of the ACIR, financing and governance arrangements, and mechanisms for scrutiny of ACIR operations, please see www.humanservices.gov.au/customer/ services/medicare/australian-childhood-immunisation-register.  The tables for this indicator were prepared by DHS, Medicare and quality assessed by Australian Government Department of Health. Australian Government Department of Health drafted the initial data quality statement (including providing input about the methodology used to extract the data and any data anomalies). | | | |
| Relevance | The ACIR records details of vaccinations given to children under seven years of age who live in Australia.  Children assessed as fully immunised at one year of age are immunised against diphtheria, tetanus, pertussis (whooping cough), polio, hepatitis B, Haemophilus influenzae type b and, from the quarter ending 31 December 2013, pneumococcal.  Children assessed as fully immunised at two years of age are immunised against diphtheria, tetanus, pertussis (whooping cough), polio, hepatitis B, Haemophilus influenzae type b and measles, mumps and rubella.  A child is assessed as fully immunised at five years of age if they have received immunisations against diphtheria, tetanus, pertussis, polio, measles, mumps and rubella.  There are possible gaps in coverage due to unknown vaccination status of children less than 5 years migrating to Australia. The extent of this is not currently quantifiable.  The analyses by state/territory are based on postcode of residence of the child as recorded on ACIR. | | | |
| Timeliness | ACIR data are reported quarterly. Data are processed on 30 June in the reference year as a minimum 3-month lag period is allowed for late notification of immunisations to ACIR. | | | |
| Accuracy | Vaccination coverage rates calculated using ACIR data are believed to underestimate actual vaccination rates because of under-reporting by immunisation providers. However, the extent of any under-reporting has not been estimated.  Provider notification payments and links to family assistance payments for parents have helped minimise under-reporting by providing a financial incentive for parents to vaccinate their children and for providers to notify the ACIR.  The data contains minimal if any duplication of immunisations, as children are identified via their DHS, Medicare number. Approximately 99 per cent of children are registered with DHS, Medicare by 12 months of age.  The ACIR covers virtually all children, particularly because participation in the ACIR is via an ‘opt-out’ arrangement. | | | |
| Coherence | The definitions of numerators and denominators have been consistent since the inception of the ACIR in 1996. | | | |
| Accessibility | Information contained in the indicator for disaggregation by Indigenous status and remoteness are not publicly accessible. Current total percentage and total numbers can be viewed on the DHS, Medicare web site.  DHS, Medicare publishes current immunisation coverage from the ACIR on its website, www.medicareaustralia.gov.au/provider/patients/acir/statistics.jsp.  Authorised immunisation providers can access detailed reports via a secured area of the DHS, Medicare web site.  Immunisation coverage data derived from the ACIR have been reported in Communicable Disease Intelligence since early 1998. Data for 3 key milestone ages (12 months, 24 months and 5 years [6 years prior to 2008]), nationally and by jurisdiction are published quarterly. | | | |
| Interpretability | Further information on the ACIR can be found at www.humanservices.gov.au/customer/ services/medicare/australian-childhood-immunisation-register.  Information on the National Immunisation Program and vaccinations can be found at www.immunise.health.gov.au. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * The data used to calculate this indicator are from an administrative data collection — the Australian Childhood Immunisation Register (ACIR) —for which there is an incentive payment for notification, and there are further incentives for parents to have their child’s vaccination status up to date. The Register is linked to the DHS, Medicare enrolment register, and approximately 99 per cent of children are registered with DHS, Medicare by 12 months of age. * Data have been reported using the program definition of fully immunised for children aged 12 to 15 months; that is, children who have received vaccinations against diphtheria, tetanus, pertussis (whooping cough), polio, hepatitis B, Haemophilus influenzae type b and, from 2013-14, pneumococcal disease. * Data have been reported using the program definition of fully immunised for children aged 24 to 27 months; that is, children who have received vaccinations against diphtheria, tetanus, pertussis (whooping cough), polio, hepatitis B, Haemophilus influenzae type b, and measles, mumps, and rubella. * Data have been reported using the program definition of fully immunised for children aged 60 to 63 months; that is, children who have received vaccinations against diphtheria, tetanus, pertussis, polio, measles, mumps and rubella. * From 31 December 2014, reporting of vaccination coverage will be amended to include meningococcal C and varicella in the 24 to < 27 month cohort. * From 31 December 2017, reporting of vaccination coverage will be amended to remove the assessment of MMR in the 60 to < 63 month cohort. * Given these changes, trends in vaccination coverage rates over time need to be interpreted carefully. | | | |

### Notifications of selected childhood diseases

Data quality information has been developed for this indicator by the Health Working Group with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Outcome | | | |
| Indicator | Notifications of selected childhood diseases. | | | |
| Measure/s (computation) | Measures:   * Notifications of measles for children aged 0–14 years * Notifications of whooping cough (pertussis) for children aged 0–14 years * Notifications of invasive Haemophilus influenzae type b (Hib) for children aged 0–14 years   Definition: Number of notifications reported to the National Notifiable Diseases Surveillance System (NNDSS) by State and Territory health authorities for children aged 0–14 years by date of diagnosis, per 100 000 children aged 0–14 years for:   * measles * whooping cough (pertussis) * invasive Haemophilus influenzae type b (Hib).   Numerator: number of notifications reported to the NNDSS for children aged 0–14 years in the reference period.  Denominator: estimated resident population of children aged 0–14 years at 31 December in the reference period.  Computation: 100 × (Numerator ÷ Denominator), presented as a rate per 100 000 children aged 0–14 years. | | | |
| Data source/s | Numerator: The National Notifiable Diseases Surveillance System (NNDSS)  Denominator: Australian Bureau of Statistics (ABS) Estimated Resident Population (ERP) at 31 December in the reference period (ABS Australian Demographic Statistics (various years), Cat. no. 3101.0). | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | The NNDSS is administered and operated by the Department of Health.  Notifiable diseases are notified to the relevant State/Territory government health departments by clinicians and laboratories under jurisdictional public health legislation. The Department of Health receives data for these notifiable diseases under the National Health Security Act 2007.  For information on the institutional environment of the NNDSS, including the legislative obligations of the NNDSS, financing and governance arrangements, and mechanisms for scrutiny of NNDSS operations, please see www.health.gov.au/internet/main/ publishing.nsf/Content/cda-cdi2903q.htm. | | | |
| Relevance | Nationally notifiable diseases require notification of the relevant State/Territory health authority upon diagnosis. Cases are defined on the basis of the Communicable Diseases Network Australia (CDNA) NNDSS case definitions. State/Territory health authorities notify the NNDSS of notified cases.  Allocation to State/Territory is by postcode of residence of the case as provided by the notifying doctor or laboratory. | | | |
| Timeliness | State/Territory health authorities notify data to the NNDSS on a daily basis. Data include all notifications for the selected diseases for each reference period (financial year). | | | |
| Accuracy | Measles and invasive Hib  The 'notified fraction' represents the proportion of total cases for which notification is made. This is expected to be high for measles and invasive Hib as it is uncommon for either disease to go undiagnosed, due to the often severe presentations of the disease. Comprehensive follow up of the contacts of all cases also enables identification of cases.  Pertussis (whooping cough)  The notified fraction for whooping cough is likely to be only a proportion of the total number of cases that occur, as identification of pertussis is limited by patient and physician awareness, testing practices and in some cases, the united sensitivity of diagnostics tests. Pertussis is generally believed to be significantly under-diagnosed.  ERPs to 31 December 2010 are the ABS’ final 2011 Census rebased ERPs. ERPs from 31 December 2011 are ABS first preliminary estimates based on the 2011 Census.  Data for the number of notifications are suppressed for confidentiality reasons where the number of notifications was less than 3.  Data for notification rates are suppressed where there were less than 5 notifications. | | | |
| Coherence | Data are reported for each financial year in the period 2006-07 to 2012-13.  Changes in surveillance and testing methods over time and by jurisdiction may make comparisons both over time and across jurisdictions difficult. Changes in the national case definition criteria for establishing a case may affect the coherence of the data over time. The current NNDSS case definition, including historical edits, can be found at www.health.gov.au/casedefintions. | | | |
| Accessibility | The Department of Health publishes aggregated levels of data from the NNDSS on its website www9.health.gov.au/cda/source/cda-index.cfm. Data are updated on a daily basis. | | | |
| Interpretability | The current NNDSS case definitions, including edits, can be found at www.health.gov.au/internet/main/publishing.nsf/Content/cdna-casedefinitions.htm. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Whooping cough notifications may undercount the actual number of cases that occur as diagnosis cannot always be confirmed using currently available diagnostic tools. | | | |

### Participation rates for women in cervical screening

Data quality information for this indicator has been drafted by the AIHW, with additional Steering Committee comments.

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| Indicator definition and description | | |  |
| Element | Outcome | | |
| Indicator | Participation rates for women in cervical screening. | | |
| Measure/s (computation) | Definition:  This indicator presents the number of women within the national target age group  (20–69 years) screened in a 2 year period as a proportion of the eligible female population and age standardised to the Australian standard population at 30 June 2001.  The eligible female population is the average of the Australian Bureau of Statistics (ABS) estimated resident female population for the 2 year reporting period. This population is adjusted for the estimated proportion of women who have had a hysterectomy using national hysterectomy fractions derived from the AIHW National Hospitals Morbidity Database.  Numerator: Total number of women aged 20–69 years who were screened in the 2 year period.  Denominator: Average number of women aged 20–69 years in the same 2 year period, adjusted using national hysterectomy fractions to exclude the estimated number of women who have had a hysterectomy.  Computation/s: 100 × (Numerator ÷ Denominator) and age-standardised to the Australian population at 30 June 2001. | | |
| Data source/s | Numerator: State and territory cervical cytology registers.  Denominator: ABS estimated resident population 2011 Census based (ERP) for females aged 20–69 years adjusted using national hysterectomy fractions derived from the AIHW National Hospitals Morbidity Database. | | |
| Data Quality Framework Dimensions | |  | |
| Institutional environment | The National Cervical Screening Program (NCSP) is a joint program of the Australian Government and State and Territory governments. The target age group is women aged 20–69 years.  Cervical cytology registries in each state and territory are maintained by jurisdictional Program managers. Data are supplied to the registries from pathology laboratories. Data from cervical cytology registers are provided to the Australian Institute of Health and Welfare (AIHW) annually in an aggregated format.  The NCSP is monitored annually. Results are compiled and reported at the national level by the AIHW in an annual Cervical screening in Australia report.  The Institute is an independent statutory authority within the Health and Ageing portfolio. It is accountable to the Parliament of Australia through the Minister for Health. For further information see the AIHW website (www.aihw.gov.au). | | |
| Relevance | The data used to calculate this indicator are accurate and of high quality. The cervical cytology registers collect information on all Pap tests undertaken in Australia except where women advise the clinician they do not wish to have their data collected. The use of ERP based on Census data for denominators provide the most comprehensive data coverage possible. The data are entirely appropriate for this indicator.  For participation by state and territory, the numerator is the number of women aged 20–69 years screened in each state and territory in the reference period, except for Victoria and the ACT where data are for residents (and some immediate border residents) of the jurisdiction only. Data are supplied as aggregated data by each state and territory. The denominator is the average of the ABS ERP for women aged 20–69 years in each State | | |

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|  | and Territory, adjusted to exclude the estimated number of women who have had a hysterectomy, using national hysterectomy fractions.  Caution is required when examining differences across states and territories of Australia due to the substantial differences in population, area, geographic structure, policies and other factors. | |
| Timeliness | The most recent data available for the 2015 RoGS report are based on the two-year calendar period 1 January 2012 to 31 December 2013. Data are presented as a rate for the two-year period to reflect the recommended screening interval. | |
| Accuracy | This indicator is calculated on data that have been supplied to the AIHW by individual state and territory registers. Prior to publication, the results of analyses are referred back to states and territories for checking and clearance. Any errors found by states and territories are corrected once confirmed. Thus participation by state and territory, based on the state or territory in which the woman was screened, is both robust and readily verified.  Women who opt off the cervical cytology register are not included in the participation data, but this is thought to only exclude around 1 per cent of all women screened. | |
| Coherence | Some of these data are published annually in Program monitoring reports prepared by the AIHW and are consistent across reports published at similar times.  Rates may differ from those presented in reports published in 2011 or previous years which are derived from ABS 2006 Census based ERPs. | |
| Accessibility | The NCSP annual reports are available via the AIHW website where they can be downloaded free of charge. | |
| Interpretability | While numbers of women screened are easy to interpret, calculation of age standardised rates with allowance for the proportion of the population who have had a hysterectomy is more complex and the concept may be confusing to some users. Information on how and why age-standardised rates have been calculated and how to interpret them as well as the hysterectomy fraction is available in all AIHW NCSP monitoring reports, example, Cervical screening in Australia 2011–2012. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Hysterectomy fractions are derived from the AIHW National Hospitals Morbidity Database. * Indigenous status is not collected by cervical cytology registers. | |

### Selected potentially preventable hospitalisations

#### Measure 1: Selected potentially preventable hospitalisations for vaccine preventable, acute and chronic conditions

Data quality information for this measure has been sourced from the AIHW with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Outcome — Australians receive appropriate high quality and affordable hospital and hospital related care. | | | |
| Indicator | Selected potentially preventable hospitalisations — Admissions to hospital that could have potentially been prevented through the provision of appropriate non-hospital services. | | | |
| Measure/s (computation) | Selected potentially preventable hospitalisations for vaccine-preventable, acute and chronic conditions.  The numerator is the number of separations for selected potentially preventable hospitalisations, for each of the following three groups and their sub-categories:   * Vaccine-preventable conditions * Pneumonia and influenza (vaccine-preventable) * Other vaccine preventable conditions (for example, tetanus, measles, mumps, rubella) * Total. * Acute conditions * Cellulitis * Convulsions and epilepsy * Dental conditions * Ear, nose and throat infections * Eclampsia * Gangrene * Pelvic inflammatory disease * Perforated/bleeding ulcer * Pneumonia (not vaccine-preventable) * Urinary tract infections, including pyelonephritis * Total acute conditions * Chronic conditions * Angina * Asthma * Bronchiectasis * Chronic obstructive pulmonary disease * Congestive heart failure * Diabetes complications (principal diagnosis only) * Hypertension * Iron deficiency anaemia * Nutritional deficiencies * Rheumatic heart disease * Total * Total selected potentially preventable hospitalisations.   The denominator is the Estimated Resident Population (ERP).  A separation is an episode of care for an admitted patient, which can be a total hospital stay (from admission to discharge, transfer or death), or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute care to rehabilitation).  Potentially preventable hospitalisations are defined by International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) diagnosis codes and/or Australian Classification of Health Interventions (ACHI) procedure codes in scope for each category of potentially preventable hospitalisations (see METeOR id 559032).  Calculation is 1000 × (Numerator ÷ Denominator), presented as a number per 1000 and age standardised to the Australian population as at 30 June 2001 using 5-year age groups to 84 years, with ages over 84 combined. Indigenous population data are not available for all states and territories for 5-year age groups beyond 64 years, so the Indigenous disaggregation was standardised to 64 years, with ages over 64 combined. | | | |
| Data source/s | Numerator: This indicator is calculated using data from the NHMD, based on the National Minimum Data Set for Admitted Patient Care.  Denominators:   * For total population: ABS ERP as at 30 June 2012. * For data by Indigenous status: ABS *Aboriginal and Torres Strait Islander Experimental Estimates and Projections* Series B as at 30 June 2012. * For data by remoteness: ABS ERP as at 30 June 2011, by remoteness areas, as specified in the Australian Statistical Geography Standard 2011 (ASGS). * For data by socioeconomic status: calculated by AIHW using the ABS Socio‑Economic Indexes For Areas (SEIFA) Index of Relative Socio-economic Disadvantage (IRSD) 2011 and ERP by Statistical Area 2 (SA2) as at 30 June 2012. Each SA2 in Australia is ranked and divided into quintiles and deciles in a population-based manner, such that each quintile has approximately 20 per cent of the population and each decile has approximately 10 per cent of the population.   Computation: 1000 × (Numerator ÷ Denominator), presented as a rate. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | The Australian Institute of Health and Welfare (AIHW) has calculated this indicator.  The AIHW is a major national agency set up by the Australian Government under the Australian Institute of Health and Welfare Act 1987 to provide reliable, regular and relevant information and statistics on Australia’s health and welfare. It is an independent statutory authority established in 1987, governed by a management board, and accountable to the Australian Parliament through the Health portfolio.  The AIHW aims to improve the health and wellbeing of Australians through better health and welfare information and statistics. It collects and reports information on a wide range of topics and issues, ranging from health and welfare expenditure, hospitals, disease and injury, and mental health, to ageing, homelessness, disability and child protection.  The Institute also plays a role in developing and maintaining national metadata standards. This work contributes to improving the quality and consistency of national health and welfare statistics. The Institute works closely with governments and non-government organisations to achieve greater adherence to these standards in administrative data collections to promote national consistency and comparability of data and reporting.  One of the main functions of the AIHW is to work with the states and territories to improve the quality of administrative data and, where possible, to compile national datasets based on data from each jurisdiction, to analyse these datasets and disseminate information and statistics.  The *Australian Institute of Health and Welfare Act 1987*, in conjunction with compliance to the *Privacy Act 1988 (Commonwealth)*, ensures that the data collections managed by the AIHW are kept securely and under the strictest conditions with respect to privacy and confidentiality.  For further information see the AIHW website www.aihw.gov.au  Data for the NHMD were supplied to the AIHW by state and territory health authorities under the terms of the National Health Information Agreement (see the following links):   * http://www.aihw.gov.au/nhissc/ * http://meteor.aihw.gov.au/content/index.phtml/itemId/182135   The state and territory health authorities received these data from public hospitals. States and territories use these data for service planning, monitoring and internal and public reporting. Hospitals may be required to provide data to states and territories through a variety of administrative arrangements, contractual requirements or legislation. | | | |
| Relevance | The purpose of the NMDS for Admitted patient care is to collect information about care provided to admitted patients in Australian hospitals. The scope of the NMDS is episodes of care for admitted patients in essentially all hospitals in Australia, including public and private acute and psychiatric hospitals, free-standing day hospital facilities, alcohol and drug treatment hospitals and dental hospitals. Hospitals operated by the Australian Defence Force, corrections authorities and in Australia's off-shore territories are not included. Hospitals specialising in ophthalmic aids and other specialised acute medical or surgical care are included.  The hospital separations data do not include episodes of non-admitted patient care provided in outpatient clinics or emergency departments.  The analyses by state and territory, remoteness and socioeconomic status are based on the Statistical Area 2 (SA2) of usual residence of the patient, not the location of the hospital. Hence rates represent the number separations for patients living in each state/territory, remoteness area or Socio-Economic Indexes for Areas (SEIFA) population group (regardless of the jurisdiction of the hospital they were admitted to) divided by the total number of people living in that remoteness area or SEIFA group in the state/territory.  The SEIFA categories for socioeconomic status represent approximately the same proportion of the national population, but do not necessarily represent that proportion of the population in each state or territory (each SEIFA decile or quintile represents 10 per cent and 20 per cent respectively of the national population). The SEIFA scores for each SA2 are derived from 2011 Census data and represent the attributes of the population in that SLA in 2011.  Other Australians includes separations for non-Indigenous people and those for whom Indigenous status was not stated. | | | |
| Timeliness | The reference period for this data set is 2012-13. | | | |
| Accuracy | For 2012-13, almost all public hospitals provided data for the NHMD, with the exception of all separations for a mothercraft hospital in the ACT. The majority of private hospitals provided data, with the exception of the private day hospital facilities in the ACT.  States and territories are primarily responsible for the quality of the data they provide. However, the AIHW undertakes extensive validations on receipt of data. Data are checked for valid values, logical consistency and historical consistency. Where possible, data in individual data sets are checked against data from other data sets. Potential errors are queried with jurisdictions, and corrections and resubmissions may be made in response to these edit queries. The AIHW does not adjust data to account for possible data errors or missing or incorrect values.  The AIHW report *Indigenous identification in hospital separations data: quality report* (AIHW 2013) found that nationally, about 88 per cent of Indigenous Australians were identified correctly in hospital admissions data in the 2011-12 study period, and the ‘true’ number of separations for Indigenous Australians was about 9 per cent higher than reported. The report recommended that the data for all jurisdictions are used in analysis of Indigenous hospitalisation rates, for hospitalisations in total in national analyses of Indigenous admitted patient care. However, these data should be interpreted with caution as there is variation among jurisdictions in the quality of the Indigenous status data.  Variations in admission practices and policies lead to variation among providers in the number of admissions for some conditions.  Cells have been suppressed to protect confidentiality where the presentation could identify a patient or a service provider or where rates are likely to be highly volatile, for example where the denominator is very small. The following rule was applied:  Rates were suppressed where the numerator was less than 5 and/or the denominator was less than 1000. | | | |
| Coherence | The specification for this performance indicator was revised for the 2015 reporting period. The AIHW recalculated this indicator for the period 2007-08 to 2012-13 using the new specification. Therefore, the data are not comparable to data calculated in previous reporting periods.  For ICM-10-AM coding details, please refer to the specification for National Healthcare Agreement Performance Indicator 18 - Selected potentially preventable hospitalisations, 2015 (http://meteor.aihw.gov.au/content/index.phtml/itemId/559032)  The information presented for this indicator is calculated using the same methodology as data published in the *National healthcare agreement: performance report 2012–13*.  However, caution should be used when comparing data across reporting periods as changes between the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) 5th edition (used in 2007-08), ICD-10-AM 6th edition (used in 2008-09 and 2009-10) and ICD-10-AM 7th edition (used in 2010-11, 2011-12 and 2012-13) and the associated Australian Coding Standards that resulted in fluctuations in the reporting of diagnoses for diabetes.  In addition, Tasmanian data are not comparable over time as 2008-09 data for Tasmania does not include two private hospitals that were included in 2007-08 and 2009-10 data reported in the National Healthcare Agreement performance reports.  Interpretation of the related performance benchmark over time is also problematic because the benchmark is specified as a proportion of separations rather than a population rate, and admission practices vary across jurisdictions and over time. Changes in a jurisdiction’s denominator (separations) can artificially increase or decrease the results of the benchmark. Therefore the data provided in 2012-13 (and interim years) may not be directly comparable to the baseline data from which the target is based.  Methodological variations also exist in the application of SEIFA to various data sets and performance indicators. Any comparisons of the SEIFA analysis for this indicator with other related SEIFA analysis should be undertaken with careful consideration of the methods used, in particular the SEIFA Census year, the SEIFA index used and the approach taken to derive quintiles and deciles.  National level data disaggregated by Indigenous status for 2007-08 to 2009-10 include data from NSW, Vic, Qld, WA, SA and NT. National level data disaggregated by Indigenous status for 2010-11 and subsequent years includes data from all eight states and territories. Therefore, data disaggregated by Indigenous status from 2007-08, 2008‑09 and 2009-10 are not comparable to data for 2010-11 and subsequent years.  In 2011, the ABS updated the Socio-Economic Indices for Areas (SEIFA), based on the 2011 ABS Census of Population and Housing. The new SEIFA will be referred to as SEIFA 2011, and the previous SEIFA as SEIFA 2006. Data for 2007-08 through to 2010-11 reported for SEIFA quintiles and deciles are reported using SEIFA 2006 at the Statistical Local Area (SLA) level. Data for 2011-12 are reported using SEIFA 2011 at the SLA level. Data for 2012-13 are reported using SEIFA 2011 at the SA2 level. The AIHW considers the change from SEIFA 2006 to SEIFA 2011, and the change from SLA to SA2 to be series breaks when applied to data supplied for this indicator. Therefore, SEIFA data for 2010-11 and previous years are not directly comparable with SEIFA data for 2011-12, and SEIFA data for 2011-12 and previous years are not directly comparable with SEIFA data for 2012-13 and subsequent years. | | | |
| Accessibility | The AIHW provides a variety of products that draw upon the NHMD. Published products available on the AIHW website are:   * *Australian hospital statistics* with associated Excel tables. * Interactive data cubes for Admitted patient care (for Principal diagnoses, Procedures and Diagnosis Related Groups).   These products may be accessed on the AIHW website at: www.aihw.gov.au/hospitals/. | | | |
| Interpretability | Supporting information on the quality and use of the NHMD are published annually in *Australian hospital statistics* (technical appendixes), available in hard copy or on the AIHW website. Readers are advised to note caveat information to ensure appropriate interpretation of the performance indicator. Supporting information includes discussion of coverage, completeness of coding, the quality of Indigenous data, and variation in service delivery that might affect interpretation of the published data. Metadata information for the NMDS for Admitted patient care is published in the AIHW’s online metadata repository, METeOR, and the *National health data dictionary*.  The *National health data dictionary* can be accessed online at www.aihw.gov.au/ publication-detail/?id=10737422826  The Data Quality Statement for the NHMD can be accessed on the AIHW website at http://meteor.aihw.gov.au/content/index.phtml/itemId/568730. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * The National Hospital Morbidity Database (NHMD) is a comprehensive data set that has records for all separations of admitted patients from essentially all public and private hospitals in Australia * The specification for this performance indicator was revised for the 2015 reporting period. The AIHW recalculated this indicator for the period 2007-08 to 2012-13 using the new specification. Therefore, the data are not comparable to data calculated in previous reporting periods. * Caution should be used in comparing data across reporting periods as changes between the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) 5th edition (used in 2007-08), ICD-10-AM 6th edition (used in 2008-09 and 2009-10) and ICD-10-AM 7th edition (used in 2010-11, 2011-12 and 2012-13) and the associated Australian Coding Standards resulted in fluctuations in the reporting of diagnoses for diabetes (chronic category affected). These changes should also be taken into consideration in interpretation of these data against the National Healthcare Agreement performance benchmark for potentially preventable hospitalisations. * In addition, interpretation of the related performance benchmark over time is problematic because the benchmark is specified as a proportion of separations rather than a population rate, and admission practices vary across jurisdictions and over time. * The hospital separations data do not include episodes of non-admitted patient care provided in outpatient clinics or emergency departments. * Variations in admission practices and policies lead to variation among providers in the number of admissions for some conditions. * Remoteness data for 2011-12 and previous years are not directly comparable to remoteness data for 2012-13 and subsequent years. * SEIFA data for 2010-11 and previous years are not directly comparable with SEIFA data for 2011-12, and SEIFA data for 2011-12 and previous years are not directly comparable with SEIFA data for 2012-13 and subsequent years. | | | |

#### Measure 2: Selected potentially preventable hospitalisations for diabetes

Data quality information for this measure has been sourced from the AIHW with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Outcome | | | |
| Indicator | Selected potentially preventable hospitalisations. | | | |
| Measure/s (computation) | Selected potentially preventable hospitalisations for diabetes.  The numerator is the number of hospitalisations for type 2 diabetes mellitus (as principal or additional diagnosis), divided into seven groups:   * Circulatory complications (E11.5x) * Renal complications (E11.2x) * Ophthalmic complications (E11.3x) * Other specified complications (E11.0x, E11.1x, E11.4x, E11.6x) * Multiple complications (E11.7x) * No complications (E11.9x) * Total.   The denominator is the Estimated Resident Population.  A separation is an episode of care for an admitted patient, which can be a total hospital stay (from admission to discharge, transfer or death), or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute care to rehabilitation).  Potentially preventable hospitalisations for diabetes are defined by ICD-10-AM diagnosis codes.  Calculation is 100 000 × (Numerator ÷ Denominator), presented as a number per 100 000 and age-standardised to the Australian population as at 30 June 2001 using 5‑year age groups to 84 years, with ages over 84 years combined. | | | |
| Data source/s | Numerator: This indicator is calculated using data from the NHMD, based on the National Minimum Data Set for Admitted Patient Care.  Denominator: For total population: ABS Estimated Resident Population (ERP) as at 30 June 2011.  Computation: 1000 × (Numerator ÷ Denominator), presented as a rate. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | The Australian Institute of Health and Welfare (AIHW) has calculated this indicator.  The Institute is an independent statutory authority within the Health and Ageing portfolio, which is accountable to the Parliament of Australia through the Minister for Health. For further information see the AIHW website.  The data were supplied to the Institute by state and territory health authorities. The state and territory health authorities received these data from public hospitals. States and territories use these data for service planning, monitoring and internal and public reporting. Hospitals may be required to provide data to states and territories through a variety of administrative arrangements, contractual requirements or legislation.  States and territories supplied these data under the terms of the National  Health Information Agreement, available online at: www.aihw.gov.au/WorkArea/ DownloadAsset.aspx?id=6442472807&libID=6442472788 | | | |
| Relevance | The purpose of the NMDS for Admitted patient care is to collect information about care provided to admitted patients in Australian hospitals.  The scope of the NMDS is episodes of care for admitted patients in essentially all hospitals in Australia, including public and private acute and psychiatric hospitals, free-standing day hospital facilities, alcohol and drug treatment hospitals and dental hospitals. Hospitals operated by the Australian Defence Force, corrections authorities and in Australia's off-shore territories are not included. Hospitals specialising in ophthalmic aids and other specialised acute medical or surgical care are included.  The hospital separations data do not include episodes of non-admitted patient care provided in outpatient clinics or emergency departments. | | | |
| Timeliness | The reference period for this data set is 2012-13. | | | |
| Accuracy | Reporting of diabetes increased by on average 29.6 per cent for diabetes as a principal diagnosis and 247 per cent for diabetes as an additional diagnosis, between 2011-12 and 2012-13 — in large part due to changes in Australian Coding Standards. Accordingly, data for 2012-13 are not comparable with data for previous years.  For 2012-13 almost all public hospitals provided data for the NHMD, with the exception of all separations for a mothercraft hospital in the ACT. The majority of private hospitals provided data, with the exception of the private day hospital facilities in the ACT.  States and territories are primarily responsible for the quality of the data they provide. However, the Institute undertakes extensive validations on receipt of data. Data are checked for valid values, logical consistency and historical consistency. Where possible, data in individual data sets are checked with data from other data sets. Potential errors are queried with jurisdictions, and corrections and resubmissions may be made in response to these edit queries. The AIHW does not adjust data to account for possible data errors or missing or incorrect values.  Variations in admission practices and policies lead to variation among providers in the number of admissions for some conditions. Variations in both admission and administration practices and policies mean that dialysis treatments may be counted as separations with diabetes complications by some hospitals and not others, reducing the comparability of the data at state and territory level. This is particularly significant for Indigenous people because of the high prevalence of diabetes in that population.  Cells have been suppressed to protect confidentiality (where the presentation could identify a patient or a single service provider) or where rates are likely to be highly volatile (for example, the denominator is very small). | | | |
| Coherence | The information presented for this indicator is calculated using the same methodology as other potentially preventable hospitalisations data published in Australian hospital statistics 2012-13 and the National healthcare agreement: performance report 2011-12.  Reporting of diabetes increased by on average 29.6 per cent for diabetes as a principal diagnosis and 247 per cent for diabetes as an additional diagnosis, between 2011-12 and 2012-13 — in large part due to changes in Australian Coding Standards. Accordingly, data for 2012-13 are not comparable with data for previous years.  Changes between the ICD-10-AM 5th edition (used in 2007-08), ICD 10-AM 6th edition (used in 2008-09 and 2009-10) and ICD-10-AM 7th edition (used in 2010-11 and 2011-12) and the associated Australian Coding Standards apparently resulted in decreased reporting of additional diagnoses for diabetes. | | | |
| Accessibility | The AIHW provides a variety of products that draw upon the NHMD. Published products available on the AIHW website are:   * Australian hospital statistics with associated Excel tables. * Interactive data cube for Admitted patient care (for Principal diagnoses, Procedures and Diagnosis Related Groups).   Some data are also included on the MyHospitals website. | | | |
| Interpretability | Supporting information on the quality and use of the NHMD are published annually in Australian hospital statistics (technical appendixes), available in hard copy or on the AIHW website. Readers are advised to read caveat information to ensure appropriate interpretation of the performance indicator. Supporting information includes discussion of coverage, completeness of coding, the quality of Indigenous data, and changes in service delivery that might affect interpretation of the published data. Metadata information for the NMDS for Admitted patient care are published in the AIHW’s online metadata repository — METeOR, and the National health data dictionary. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * Further work is required to improve the comparability of data due to changes across editions of the ICD-10-AM. * The hospital separations data do not include episodes of non-admitted patient care provided in outpatient clinics or emergency departments. * Variations in admission practices and policies lead to variation among providers in the number of admissions for some conditions. * Changes to Australian Coding Standards mean that data for 2012-13 are not comparable to data for previous years. | | | |

#### Measure 3: Potentially preventable hospitalisations of older people for falls

Data quality information for this measure has been sourced from the AIHW with additional Steering Committee comments.

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| Indicator definition and description | | | |  |
| Element | Outcome | | | |
| Indicator | Selected potentially preventable hospitalisations. | | | |
| Measure/s (computation) | Potentially preventable hospitalisations of older people for falls.  The number of hospitalisations for people aged 65 years or over with a reported external cause of falls, per 1000 people.  The numerator is the number of hospitalisations for people aged 65 years or over with a reported external cause of falls.  The denominator is the Estimated Resident Population.  A separation is an episode of care for an admitted patient, which can be a total hospital stay (from admission to discharge, transfer or death), or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute care to rehabilitation).  Potentially preventable hospitalisations for falls are defined by ICD-10-AM external cause codes (W00–W19).  Calculation is 1000 × (Numerator ÷ Denominator), presented as a number per 1000 and age standardised to the Australian population as at 30 June 2001 using 5-year age groups to 84 years, with ages over 84 combined. | | | |
| Data source/s | Numerator: This indicator is calculated using data from the NHMD, based on the National Minimum Data Set for Admitted Patient Care.  Denominator: ABS Estimated Resident Population (ERP) as at 30 June in the year preceding the reference period.  Computation: 1000 × (Numerator ÷ Denominator), presented as a rate. | | | |
| Data Quality Framework Dimensions | |  | | |
| Institutional environment | The Australian Institute of Health and Welfare (AIHW) has calculated this indicator.  The Institute is an independent statutory authority within the Health and Ageing portfolio, which is accountable to the Parliament of Australia through the Minister for Health. For further information see the AIHW website.  The data were supplied to the Institute by state and territory health authorities. The state and territory health authorities received these data from public hospitals. States and territories use these data for service planning, monitoring and internal and public reporting. Hospitals may be required to provide data to states and territories through a variety of administrative arrangements, contractual requirements or legislation.  States and territories supplied these data under the terms of the National  Health Information Agreement, available online at:www.aihw.gov.au/WorkArea/ DownloadAsset.aspx?id=6442472807&libID=6442472788 | | | |
| Relevance | The purpose of the NMDS for Admitted patient care is to collect information about care provided to admitted patients in Australian hospitals. The scope of the NMDS is episodes of care for admitted patients in essentially all hospitals in Australia, including public and private acute and psychiatric hospitals, free-standing day hospital facilities, alcohol and drug treatment hospitals and dental hospitals. Hospitals operated by the Australian Defence Force, corrections authorities and in Australia's off-shore territories are not included. Hospitals specialising in ophthalmic aids and other specialised acute medical or surgical care are included.  The hospital separations data do not include episodes of non-admitted patient care provided in outpatient clinics or emergency departments. | | | |
| Timeliness | The reference periods for this data set are 2005-06, 2006-07, 2007-08, 2008-09, 2009‑10, 2010-11, 2011-12, 2012-13. | | | |
| Accuracy | For 2006-07 almost all public hospitals provided data for the NHMD, with the exception of a mothercraft hospital in the ACT. The great majority of private hospitals also provided data, the exceptions being the private day hospital facilities in the ACT, the single private free standing day hospital facility in the NT, and a small private hospital in Victoria.  For 2007-08 almost all public hospitals provided data for the NHMD, with the exception of a mothercraft hospital in the ACT. The great majority of private hospitals also provided data, the exceptions being the private day hospital facilities in the ACT, the single private free-standing day hospital facility in the NT, and a small private hospital in Victoria.  For 2008-09 , almost all public hospitals provided data for the NHMD, with the exception of a mothercraft hospital in the ACT. The great majority of private hospitals also provided data, the exceptions being the private day hospital facilities in the ACT, the single private free-standing day hospital facility in the NT, and two private hospitals in Tasmania.  For 2009-10 almost all public hospitals provided data for the NHMD, with the exception of all separations for a mothercraft hospital in the ACT and about 2400 separations for one public hospital in Western Australia. The majority of private hospitals provided data, with the exception of the private day hospital facilities in the Australian Capital Territory and the Northern Territory. In addition, Western Australia was not able to provide about 10 600 separations for one private hospital.  For 2010-11 and 2011-12, almost all public hospitals provided data for the NHMD, with the exception of all separations for a mothercraft hospital in the ACT. The majority of private hospitals provided data, with the exception of the private day hospital facilities in the Australian Capital Territory and the Northern Territory. However, 2010-11 data were not available for the NT.  For 2012-13, almost all public hospitals provided data for the NHMD, with the exception of all separations for a mothercraft hospital in the ACT. The majority of private hospitals provided data, with the exception of the private day hospital facilities in the ACT.  States and territories are primarily responsible for the quality of the data they provide. However, the Institute undertakes extensive validations on receipt of data. Data are checked for valid values, logical consistency and historical consistency. Where possible, data in individual data sets are checked with data from other data sets. Potential errors are queried with jurisdictions, and corrections and resubmissions may be made in response to these edit queries. The AIHW does not adjust data to account for possible data errors or missing or incorrect values.  Variations in admission practices and policies lead to variation among providers in the number of admissions for some conditions.  Cells have been suppressed to protect confidentiality (where the presentation could identify a patient or a single service provider) or where rates are likely to be highly volatile (for example, the denominator is very small). | | | |
| Coherence | NT data are not available for 2010-11, and are excluded from the Australian total for that year. With this exception, data for this indicator are comparable over time. | | | |
| Accessibility | The AIHW provides a variety of products that draw upon the NHMD. Published products available on the AIHW website are:   * Australian hospital statistics with associated Excel tables. * Interactive data cube for Admitted patient care (for Principal diagnoses, Procedures and Diagnosis Related Groups).   Some data are also included on the MyHospitals website. | | | |
| Interpretability | Supporting information on the quality and use of the NHMD are published annually in Australian hospital statistics (technical appendixes), available in hard copy or on the AIHW website. Readers are advised to read caveat information to ensure appropriate interpretation of the performance indicator. Supporting information includes discussion of coverage, completeness of coding, the quality of Indigenous data, and changes in service delivery that might affect interpretation of the published data. Metadata information for the NMDS for Admitted patient care are published in the AIHW’s online metadata repository — METeOR, and the National health data dictionary. | | | |
| Data Gaps/Issues Analysis | | |  | |
| Key data gaps /issues | The Steering Committee notes the following issues:   * NT data were not available for 2010-11. * The hospital separations data do not include episodes of non-admitted patient care provided in outpatient clinics or emergency departments. | | | |