

# Reference list

1. Medicare Australia. 2006. Medicare Benefits Schedule (MBS) statistics reports. Viewed 1-7-2006, [http://www.medicareaustralia.gov.au/providers/health\\_statistics/statistical\\_reporting/medicare.htm](http://www.medicareaustralia.gov.au/providers/health_statistics/statistical_reporting/medicare.htm)
2. Britt H, Bindman AB, Forrest C, Crampton P, Majeed A. Cross-national comparison of primary care practice in Australia, New Zealand and the United States: a Commonwealth fund project. Presented at the 2005 General Practice and Primary Care Research Conference; July 2005, Adelaide.
3. Australian Institute of Health and Welfare 2006. Australia's health 2006: the tenth biennial health report of the Australian Institute of Health and Welfare. AIHW cat. no. AUS 73. Canberra: AIHW.
4. Australian Institute of Health and Welfare 2005. Medical labour force 2003. AIHW cat. no. HWL 32. Canberra: AIHW.
5. Australian Government Department of Health and Ageing 2005. General practice in Australia: 2004. Canberra: DoHA.
6. Commonwealth Department of Health and Aged Care 2001. Medicare Benefits Schedule Book. Canberra: DHAC.
7. Australian Government Department of Health and Ageing 2006. Medicare Benefits Schedule Book. Canberra: DoHA.
8. Australian Government Department of Health and Ageing 2004. Health Fact Sheet 2 – Continuing to provide a high quality health system. Viewed 7-9-2005, <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-budget2004-hbudget-hfact2.htm>.
9. Commonwealth Department of Health and Ageing 2003. Medicare Benefits Schedule book, explanatory notes. Canberra: DoHA, 30.
10. Britt H, Miller GC, Knox S, Charles J, Valenti L, Bayram C et al. 2004. General practice activity in the states and territories of Australia 1998–2003. AIHW cat. no. GEP 15. Canberra: AIHW.
11. Knox S, Britt H, Pan Y, Miller GC, Bayram C, Valenti L et al. 2005. Locality matters: the influence of geography on general practice activity in Australia 1998–2004. AIHW cat. no. GEP 17. Canberra: AIHW.
12. Meza RA, Angelis M, Britt H, Miles DA, Seneta E, Bridges-Webb C 1995. Development of sample size models for national general practice surveys. *Aust J Pub Health* 19(1):34–40.

13. Robertson J, Fryer JL, O'Connell DL, Smith AJ, Henry DA 2002. Limitations of Health Insurance Commission (HIC) data for deriving prescribing indicators. *Med J Aust* 176(9):149-424.
14. Wilkinson D, McElroy H, Beilby J, Mott K, Price K, Morey S et al. 2002. Characteristics of general practitioners that provided health assessments, care plans or case conferences, as part of the enhanced primary care program. *Aust Health Rev* 25(6):137-44.
15. Britt H, Miller GC, McGeechan K, Sayer GP 1999. Pathology ordering by general practitioners in Australia 1998. AIHW cat. no. GEP 4. Canberra: Department of Health and Aged Care. Viewed 30-10-2000, <http://www.health.gov.au:80/haf/docs/pathorder.htm>.
16. Britt H, Knox S, Miller GC 2003. Changes in pathology ordering by general practitioners in Australia 1998-2001. AIHW cat. no. GEP 13. Canberra: AIHW.
17. Britt H, Miller GC, Knox S 2001. Imaging orders by general practitioners in Australia 1999-00. AIHW cat. no. GEP 7. Canberra: AIHW.
18. Donner A, Birkett N, Buck C 1981. Randomization by cluster. Sample size requirements and analysis. *Am J Epidemiol* 114(6):906-14.
19. Kerry SM, Bland JM 1998. Sample size in cluster randomisation. *BMJ* 316(7130):549.
20. Slymen DJ, Hovell MF 1997. Cluster versus individual randomization in adolescent tobacco and alcohol studies: illustrations for design decisions. *Int J Epidemiol* 26(4):765-71.
21. Cosby RH, Howard M, Kaczorowski J, Willan AR, Sellors JW 2003. Randomizing patients by family practice: sample size estimation, intracluster correlation and data analysis. *Fam Pract* 20(1):77-82.
22. Family Medicine Research Centre 2006. ICPC-2 PLUS: origins and current uses. Viewed 24-10-2006, <http://www.fmrc.org.au/icpc2plus/origins.htm>
23. Classification Committee of the World Organization of Family Doctors (WICC) 1998. ICPC-2: International Classification of Primary Care, 2nd edn. Oxford: Oxford University Press.
24. SNOMED International 2006. SNOMED CT. Viewed 24-10-2006, <http://www.snomed.org/snomedct/index.html>.
25. Crombie DL 1990. The problem of variability in general practitioner activities. Yearbook of research and development. London: Her Majesty's Stationary Office, 21-4.
26. Henderson J, Britt H, Miller G 2006. Extent and utilisation of computerisation in Australian general practice. *Med J Aust* 185(2):84-7.

27. Britt H, Miller GC, Valenti L, Charles J 2003. Computer BEACH: a general practice computerised active data collection validation study. Viewed 24-10-2006, [http://www.fmrc.org.au/research\\_old.htm](http://www.fmrc.org.au/research_old.htm).
28. McWhinney IR 1986. Are we on the brink of a major transformation of clinical method? *Can Med Assoc J* 135:873-8.
29. O'Halloran J, Miller GC, Britt H 2004. Defining chronic conditions for primary care with ICPC-2. *Fam Pract* 21(4):381-6.
30. World Health Organization Collaborating Centre for Drug Statistics Methodology (WHO) 1997. Anatomical Therapeutic Chemical (ATC) classification index with Defined Daily Doses (DDDs). January 1998 ed. Oslo: WHO.
31. Health Insurance Commission. 2000. 1999/2000 Annual report financial year statistics. Canberra: HIC.
32. Mathers C, Vos T, Stevenson C 1999. The burden of disease and injury in Australia. AIHW cat. no. PHE 17. Canberra: AIHW.
33. Dunstan D, Zimmet P, Welborn T, Sicree R, Armstrong T, Atkins R et al. 2001. Diabetes and associated disorders in Australia 2000: the accelerating epidemic. Melbourne: International Diabetes Institute.
34. World Health Organization 2006. Global database on body mass index. Viewed 9-8-2006, [http://www.who.int/bmi/index.jsp?introPage=intro\\_3.html](http://www.who.int/bmi/index.jsp?introPage=intro_3.html).
35. Britt H, Miller GC, Knox S, Charles J, Valenti L, Henderson J et al. 2002. General practice activity in Australia 2001-02. AIHW cat. no. GEP 10. Canberra: AIHW.
36. Australian Bureau of Statistics 2002. National Health Survey: summary of results, Australia, 2001. Canberra: ABS.
37. Ridolfo B, Stevenson C 2001. The quantification of drug-caused mortality and morbidity in Australia, 1998. AIHW cat. no. PHE 29. Canberra: AIHW, Drug Statistics Series.
38. Australian Institute of Health and Welfare 2002. 2001 National Drug Strategy Household Survey: first results. AIHW cat. no. PHE 35. Canberra: AIHW, Drug Statistics Series.
39. National Health and Medical Research Council 2001. Australian alcohol guidelines: health risks and benefits. Canberra: NHMRC.
40. Charles J, Britt H, Valenti L 2004. The evolution of the general practice workforce in Australia, 1991-2003. *Med J Aust* 181(2):85-90.
41. Britt H, Miller G, Knox S, Charles J, Pan Y, Henderson J et al. 2005. General practice activity in Australia 2004-05. Canberra: AIHW.

42. Joint Advisory Group (JAG) on General Practice and Population Health 2001. Smoking, Nutrition, Alcohol, Physical Activity (SNAP) framework for general practice. Viewed 7-9-2005, [http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-publth-about-gp-snap-cnt.htm/\\$FILE/snap.pdf](http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-publth-about-gp-snap-cnt.htm/$FILE/snap.pdf).
43. Britt H, Bhasale A, Miles DA, Meza A, Sayer GP, Angelis M 1996. The sex of the general practitioner. A comparison of characteristics, patients, and medical conditions managed. *Med Care* 34(5):403-15.
44. Britt H, Valenti L, Miller G 2002. Time for care. Length of general practice consultations in Australia. *Aust Fam Physician* 31(9):876-80.
45. Britt HC, Valenti L, Miller GC 2005. Determinants of consultation length in Australian general practice. *Med J Aust* 183(2):68-71.
46. Australian Medical Workforce Advisory Committee 2005. The general practice workforce in Australia: supply and requirements to 2013, 2nd edn. AMWAC Report 2005. Sydney.
47. Australian Government Department of Health and Ageing 2006. General practitioner types and place of qualification. Viewed 24-10-2006, <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pcd-statistics-gpquals.htm>.
48. Britt H, Miller GC, Knox S, Charles J, Valenti L, Henderson J et al. 2003. General practice activity in Australia 2002-03. AIHW cat. no. GEP 14. Canberra: AIHW.
49. Charles J, Pan Y, Britt H 2004. Trends in childhood illness and treatment in Australian general practice, 1971-2001. *Med J Aust* 180(5):216-19.
50. Britt H, Miller GC, Knox S, Charles J, Valenti L, Pan Y et al. 2004. General practice activity in Australia 2003-04. AIHW cat. no. GEP 16. Canberra: AIHW.
51. Rossouw JE, Anderson GL, Prentice RL, LaCroix AZ, Kooperberg C, Stefanick ML et al. 2002. Risks and benefits of estrogen plus progestin in healthy postmenopausal women: principal results from the Women's Health Initiative randomized controlled trial. *JAMA* 288(3):321-33.
52. Henderson J, Knox S, Pan Y, Britt H 2004. Changes in asthma management in Australian general practice. *Primary Care Respiratory Journal* 13(3):138-43.
53. Australian Government Department of Health and Ageing 2006. Pharmaceutical Benefits Safety Net Arrangements. Viewed 24-10-2006, <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pbs-general-pbs-phbensna.htm>.

54. National Asthma Council 2002. Combination therapy: its role in asthma management. Viewed 24-10-2006, [http://www.nationalasthma.org.au/html/management/other\\_resources/combination\\_therapy/index.asp](http://www.nationalasthma.org.au/html/management/other_resources/combination_therapy/index.asp).
55. Australian Government Department of Health and Ageing 2004. Medicare Benefits Schedule Book. Canberra: DoHA.
56. SAS Proprietary Software Release 9.1 2003. Cary: SAS Institute Inc.
57. Donner A, Klar N 2004. Pitfalls of and controversies in cluster randomization trials. *Am J Public Health* 94(3):416-22.
58. Kish L 1965. Survey sampling. New York: John Wiley & Sons.
59. SAS Proprietary Software Release 6.12 1996. Cary: SAS Institute Inc.
60. World Health Organization (WHO) 2004. Family of international classifications. Viewed 11-10-2004, <http://www.who.int/classifications/en/WHOFICFamily.pdf>.
61. Classifications and Terminologies Working Group 2002. Australian family of health and related classifications matrix. Viewed 24-10-2006, <http://www.aihw.gov.au/committees/simc/nhimg/matrix/index.cfm>.
62. Britt H 1997. A new coding tool for computerised clinical systems in primary care-ICPC plus [see comments]. *Aust Fam Physician* 26(Suppl 2):S79-S82.
63. Bridges-Webb C, Britt H, Miles DA, Neary S, Charles J, Traynor V 1992. Morbidity and treatment in general practice in Australia 1990-1991. *Med J Aust* 157(19 Oct Spec Sup):S1-S56.
64. Cole TJ, Bellizzi MC, Flegal KM, Dietz WH 2000. Establishing a standard definition for child overweight and obesity worldwide: international survey. *BMJ* 320(7244):1240-3.
65. Saunders JB, Aasland OG, Babor TF, de la Fuente JR, Grant M 1993. Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption – II. *Addiction* 88(6):791-804.
66. Centre for Drug and Alcohol Studies 1993. The alcohol use disorders identification test. Sydney: Royal Prince Alfred Hospital and the University of Sydney.
67. Driver B, Britt H, O'Toole B, Harris M, Bridges-Webb C, Neary S 1991. How representative are patients in general practice morbidity surveys? *Fam Pract* 8:261-8.
68. Britt H, Harris M, Driver B, Bridges-Webb C, O'Toole B, Neary S 1992. Reasons for encounter and diagnosed health problems: convergence between doctors and patients. *Fam Pract* 9:191-4.

69. Britt H 1998. Reliability of central coding of patient reasons for encounter in general practice, using the International Classification of Primary Care. *Informatics* (May):3-7.
70. Britt H 1997. A measure of the validity of the ICPC in the classification of reasons for encounter. *Informatics* (November):8-12.
71. Bentsen BG 1976. The accuracy of recording patient problems in family practice. *J Med Educ* 51:311-16.
72. Barsky AJ 1981. Hidden reasons why some patients visit doctors. *Ann Intern Med* 94(1):492-8.
73. Morrell D, Gage HG, Robinson NA 1971. Symptoms in general practice. *J R Coll Gen Pract* 21:32-43.
74. Anderson JE 1980. Reliability of morbidity data in family practice. *J Fam Pract* 10: 677-83.
75. Marsland DW, Wood M, Mayo F 1980. *Content of family practice*. New York: Appleton-Century-Crofts.
76. Bensing J 1983. The use of the RFE classification system in observation studies – some preliminary results. Presented at the the Tenth WONCA Conference on Family Medicine.
77. Howie JGR 1972. Diagnosis: the achilles heel? *J R Coll Gen Pract* 22:310-5.
78. Alderson M 1988. *Morbidity and health statistics*. 1 ed. Southampton: Stickton Press.
79. Knottnerus JA 1991. Medical decision making by general practitioners and specialists. *Fam Pract* 8:305.
80. Britt H, Meza RA, Del Mar C 1996. Methodology of morbidity and treatment data collection in general practice in Australia: a comparison of two methods. *Fam Pract* 13(5):462-7.
81. Gehlbach SH 1979. Comparing methods of data collection in an academic ambulatory practice. *J Med Educ* 54:730-2.
82. Britt H, Angelis M, Harris E 1998. The reliability and validity of doctor-recorded morbidity data in active data collection systems. *Scand J Prim Health Care* 16:50-5.

# Glossary

*A1 Medicare items:* Medicare item numbers 1, 2, 3, 4, 13, 19, 20, 23, 24, 25, 33, 35, 36, 37, 38, 40, 43, 44, 47, 48, 50, 51, 601, 602.

*Aboriginal:* The patient identifies himself or herself as an Aboriginal person.

*Activity level:* The number of general practice A1 Medicare items claimed during the previous 3 months by a participating GP.

*Allied and other health professionals:* Those who provide clinical and other specialised services in the management of patients, including physiotherapists, occupational therapists, dietitians, dentists and pharmacists.

*Chapters (ICPC-2):* The main divisions within ICPC-2. There are 17 chapters primarily representing the body systems.

*Commonwealth concession card:* An entitlement card provided by the Commonwealth which entitles the holder to reduced cost medicines under the Pharmaceutical Benefits Scheme and a limited number of other concessions from state and local government authorities.

*Complaint:* A symptom or disorder expressed by the patient when seeking care.

*Component (ICPC-2):* In ICPC-2 there are seven components which act as a second axis across all chapters.

*Consultation:* See *Encounter*.

*Diagnosis/problem:* A statement of the provider's understanding of a health problem presented by a patient, family or community. GPs are instructed to record at the most specific level possible from the information available at the time. It may be limited to the level of symptoms.

- *New problem:* The first presentation of a problem, including the first presentation of a recurrence of a previously resolved problem but excluding the presentation of a problem first assessed by another provider.
- *Old problem:* A previously assessed problem that requires ongoing care. Includes follow-up for a problem or an initial presentation of a problem previously assessed by another provider.

*Encounter (enc):* Any professional interchange between a patient and a GP.

- *Indirect:* Encounter where there is no face-to-face meeting between the patient and the GP but a service is provided (e.g. prescription, referral).
- *Direct:* Encounter where there is a face-to-face meeting of the patient and the GP.

Direct encounters can be further divided into:

- *Medicare-claimable*
  - *Surgery consultations:* Encounters identified by any one of MBS item numbers 3, 23, 36, 44, 52, 53, 54, 57, 5000, 5020, 5040, 5060, 5200, 5203, 5207, 5208.
  - *Home visits:* Encounters identified by any one of MBS item numbers 4, 24, 37, 47, 58, 59, 60, 65, 5003, 5023, 5043, 5063, 5220, 5223, 5227, 5228.
  - *Hospital encounters:* Encounters identified by any one of MBS item numbers 19, 33, 40, 50, 87, 89, 90, 91.

- *Residential aged care facility*: Encounters identified by any one of MBS item numbers 20, 35, 43, 51, 92, 93, 95, 96, 5010, 5028, 5049, 5067, 5260, 5263, 5265, 5267.
- *Health assessments*: Encounters identified by any one of MBS item numbers 700, 702, 704, 706, 708, 710, 712.
- *Chronic disease management items*: Encounters identified by any one of MBS item numbers 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731.
- *Case conferences*: 734, 736, 738, 740, 742, 744, 746, 749, 757, 759, 762, 765, 768, 771, 773, 775, 778, 779.
- *Incentive payments*: 2497, 2501, 2503, 2504, 2506, 2507, 2509, 2517, 2518, 2521, 2522, 2525, 2526, 2546, 2547, 2552, 2553, 2558, 2559, 2574, 2575, 2577, 2578, 2598, 2600, 2603, 2606, 2610, 2613, 2616, 2620, 2622, 2624, 2631, 2633, 2635, 2664, 2666, 2668, 2673, 2675, 2677, 2704, 2705, 2707, 2708.
- *Other MBS encounters*: Encounters identified by an MBS item number that does not identify place of encounter (see *A1 Medicare items*).
- *Workers compensation*: Encounters paid by workers compensation insurance.
- *Other paid*: Encounters paid from another source (e.g. state).

*General practitioner (GP)*: A medical practitioner who provides primary comprehensive and continuing care to patients and their families within the community (Royal Australian College of General Practitioners).

*Medication*: Medication that is prescribed, provided by the GP at the encounter or advised for over-the-counter purchase.

*Medication rates*: The rate of use of all medications including medications that were prescribed, supplied by the GP and advised for over-the-counter purchase.

*Medication status*:

- *New*: The medication prescribed/provided at the encounter/advised is being used for the management of the problem for the first time.
- *Continuation*: The medication prescribed/provided at the encounter/advised is a continuation or repeat of previous therapy for this problem.
- *Old*: See *Continuation*.

*Morbidity*: Any departure, subjective or objective, from a state of physiological wellbeing. In this sense, sickness, illness and morbid conditions are synonymous.

*Patient status*: The status of the patient to the practice.

- *New patient*: The patient has not been seen before in the practice.
- *Old patient*: The patient has attended the practice before.

*Prescribed rates*: The rate of use of prescribed medications (i.e. does not include medications that were GP-supplied or advised for over-the-counter purchase).

*Problem managed*: See *Diagnosis/problem*.

*Provider*: A person to whom a patient has access when contacting the health care system.

*Reasons for encounter (RFEs)*: The subjective reasons given by the patient for seeing or contacting the general practitioner. These can be expressed in terms of symptoms, diagnoses or the need for a service.

*Recognised GP*: A medical practitioner who is:

- vocationally recognised under Section 3F of the Health Insurance Act, *or*



- a holder of the Fellowship of the Royal Australian College of General Practitioners who participates in, and meets the requirements for, quality assurance and continuing medical education as defined in the RACGP Quality Assurance and Continuing Medical Education Program, *or*
- undertaking an approved placement in general practice as part of a training program for general practice leading to the award of the Fellowship of the Royal Australian College of General Practitioners or undertaking an approved placement in general practice as part of some other training program recognised by the RACGP as being of equivalent standard.<sup>6</sup>

*Referral:* The process by which the responsibility for part or all of the care of a patient is temporarily transferred to another health care provider. Only new referrals to specialists and allied health professionals and for hospital and residential aged care facility admissions arising at a recorded encounter are included. Continuation referrals are not included. Multiple referrals can be recorded at any one encounter.

*Repatriation health card:* An entitlement card provided by the Department of Veterans' Affairs which entitles the holder to access a range of Repatriation health care benefits, including access to prescription and other medications under the Pharmaceutical Benefits Scheme.

*Rubric:* The title of an individual code in ICPC-2.

*Torres Strait Islander:* The patient identifies himself or herself as a Torres Strait Islander person.

# Abbreviations

ACE	Angiotensin converting enzyme
AGPSCC	Australian General Practice Statistics and Classification Centre, University of Sydney, a collaborating unit of the Australian Institute of Health and Welfare
AIHW	Australian Institute of Health and Welfare
ATC	Anatomical Therapeutic Chemical (classification)
AUDIT	Alcohol Use Disorders Identification Test
BEACH	Bettering the Evaluation And Care of Health
BMI	Body mass index
CAPS	Coding Atlas for Pharmaceutical Substances
CI	Confidence interval (in this report 95% CI is used)
C&S	Culture and sensitivity
CT	Computerised tomography
DoHA	Australian Government Department of Health and Ageing
DVA	Australian Department of Veterans' Affairs
EHRs	Electronic health records
Enc	Encounter
ESR	Erythrocyte sedimentation rate
EUC	Electrolytes, urea and creatinine
FRACGP	Fellow of the Royal Australian College of General Practitioners
GORD	Gastro-oesophageal reflux disorder
GP	General practitioner
GPSCU	General Practice Statistics and Classification Unit (now the Australian General Practice Statistics and Classification Centre, AGPSCC)
HbA1c	Haemoglobin, type A1c
ICPC	International Classification of Primary Care
ICPC-2	International Classification of Primary Care (Version 2)
ICPC-2 PLUS	A terminology classified according to ICPC-2
LCL	Lower confidence limit
MBS	Medicare Benefits Schedule
MC&S	Microscopy, culture and sensitivity
N/A	Not applicable
NAv	Not available
NEC	Not elsewhere classified

NESB	Non-English-speaking background (i.e. a language other than English is spoken at home)
NHMRC	National Health and Medical Research Council
NOS	Not otherwise specified
N/S	Not significant
NSAID	Non-steroidal anti-inflammatory drug
OTC	Over-the-counter (i.e. medications advised for over-the-counter purchase)
PBS	Pharmaceutical Benefits Scheme
QA	Quality assurance (in this case the Quality Assurance Program of the Royal Australian College of General Practitioners)
RACGP	Royal Australian College of General Practitioners
RFE(s)	Reason(s) for encounter (see Glossary)
RRMA	Rural, Remote and Metropolitan Areas (classification)
SAND	Supplementary Analysis of Nominated Data
SAS	Statistical Analysis System
SRS	Simple random sample
UCL	Upper confidence limit
URTI	Upper respiratory tract infection
WHO	World Health Organization
Wonca	World Organization of Family Doctors