

# **General practice activity in Australia 2005–06**

**Australian GP Statistics and Classification Centre**

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# *BEACH*

## *Bettering the Evaluation And Care of Health*

# **General practice activity in Australia 2005–06**

**Helena Britt, Graeme C Miller, Janice Charles, Ying Pan, Lisa Valenti,  
Joan Henderson, Clare Bayram, Julie O'Halloran, Stephanie Knox**

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# Foreword

The English philosopher Sir Francis Bacon penned the phrase 'Knowledge is Power'. The absolute truth of this statement is reflected in the impact the BEACH survey has on planning and management of primary health care in Australia.

The information provided through the continuing collection and analysis of general practice data by BEACH has been invaluable in creating a clear picture of where, how and what type of services are delivered by general practitioners. This research has allowed the profession to identify and respond to trends and gaps in service delivery and monitor and regulate its own performance. It is a reliable and renowned tool in the kit bag of general practice which of necessity has to prove its central coordinating role in the health of the individual and the nation.

Without BEACH general practitioners would be operating in a vacuum with no uniform picture of how their consulting, prescribing and investigating and referring practices compared to their peers. With this information available, the profession as a whole can gauge and benchmark Australian general practice and make appropriate changes if needed.

Because knowledge is power, the Australian Medical Association believes BEACH is one of the most important tools available to general practice and policy makers. The primary care led model of health care delivery is patient centred, cost effective, responsive, exhibits quality and safety in practice and is what keeps the Australian health system effective.

It is a great honour to be able to make some introductory remarks to the eighth annual report on General Practice Activity in Australia. As a general practitioner and a past participant I am aware of the contribution of each participant, the value of the analysis and feedback to practices. As President of the AMA, the data collected are of tremendous value in making and re-enforcing the reality that Australian general practice delivers. I hope this vital work will continue unabated into the future and provide the power for effective renewal.

The 2005–06 report has made some very significant findings on general practice activity that highlight recent successes by the profession and areas that still need work. What BEACH provides is evidence to back up the profession's anecdotal beliefs on what wins have been achieved and what shortcomings exist.

General practice's ongoing commitment to quality, safe, evidence-based prescribing is reflected in the continual decline in the total medication rate. In particular, the rate of prescriptions has fallen by almost 13% between 1999–00 and 2005–06. Contributing to this is a combination of general practitioners embracing ongoing education, providing non-pharmacological interventions to patients, and having a historical record of prescription decisions provided by BEACH.

Other findings will strengthen the profession's resolve to address problem areas that centre on workforce shortages and patient access to care.

Over recent years it has been increasingly difficult to provide after-hours care to patients. This is due to a number of factors including the growing demands on the general practice workforce, reduced participation rates in the workforce, safety issues, and lifestyle requirements of all doctors. This has led to the declining sustainability of after-hours services. BEACH has tracked the decline in GPs providing their own or cooperative after-hours care and this continued in 2005–06. Having these data strengthens arguments that

more must be done to support modern general practice to provide around the clock medical care without risk to GPs' health, safety or business.

GPs are spending more of their time caring for older patients. An increasing proportion of encounters are with patients aged 45 years and over. This group of patients is more likely to have multiple, chronic and complex illnesses and will benefit from spending more time with their doctor. This is reflected in the growing management rates of chronic conditions reported by BEACH since 1999–00. Our health system needs to recognise this change and adapt to ensure older Australians receive the care they need and deserve, by doctors working with teams, where many disciplines are brought together to care for patients in collaboration, in a suitable setting recognising the importance of these patients.

The health profession relies on evidence to support calls for improvements in service delivery. BEACH is a definitive source of this evidence for general practice.

I commend all those who contributed to this report, both BEACH staff and GPs who gave of their time to the survey. I encourage GPs to continue to be involved in this crucial work.

Dr Mukesh Haikerwal

President

Australian Medical Association

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Ethics approval for this study was obtained from the Human Ethics Committee of the University of Sydney and the Ethics Committee of the Australian Institute of Health and Welfare.

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# Executive summary

In describing the health of the Australian community, mortality statistics and hospital statistics are important markers of population health. However, although the majority of the population do not die or have a hospital stay in any given year, most people do see their general practitioner (GP) – about 85% of the 20.3 million people in Australia visit a GP at least once in any year. BEACH data suggest that in the 12 months 2001–02, people in Australia spent on average 83 minutes with a GP per head of population. This compares with about 56 minutes per head in New Zealand and about 30 minutes in the United States during the same period. The extent to which this affects health outcomes for the populations is as yet unclear. However, considering this high use of general practice care, information about the problems dealt with and how they are managed by GPs is essential.

General practitioners are the first port of call in the Australian health care system. They act as gatekeepers to the secondary and tertiary sectors, and in 2005 conducted more than 90 million consultations, most of which were claimed through Medicare (a national health insurance system). The BEACH (Bettering the Evaluation And Care of Health) program provides information about the content of these GP–patient encounters and of the services and treatments provided by GPs to the Australian community.

BEACH is a continuous national study of general practice activity that began in April 1998. It is the only continuous randomised study of general practice activity in the world, and the only national program which provides direct linkage of management actions (such as prescriptions, referrals, investigations) to the problem under management.

This report provides an overview of results from the eighth year of the program (April 2005 to March 2006). It also investigates changes in morbidity and management demonstrated over the last seven years. Summaries of results for each of the past five years are provided in Appendix 4.

The report provides a timely opportunity to measure the impact of practice nurses on general practice clinical activity since the introduction of specific Medicare item numbers in late 2004 for some defined activities by practice nurses. Practice nurse activity was recorded for the first time in 2005–06, the BEACH encounter form having been altered to capture this information. In summary: multiple item numbers (up to 3) could be recorded; and a tick box was added to the other treatments section to indicate that the practice nurse had provided the treatment. General practice clinical activity reported here includes that provided by the practice nurse. However, sections of the report also specifically describe the activities of these nurses and consider the implications of this work on the clinical activities of the general practitioners.

The BEACH program relies on the cooperation of randomly selected GPs across the country. Each completes details for 100 consecutive GP–patient encounters on structured paper encounter forms (Appendix 1). They also provide information about themselves and their practice (Appendix 2). About 1,000 GPs participate in BEACH each year and the sample is ever-changing. Participants gain points towards their quality assurance requirements for continued vocational registration.

The sample frame for the study is all vocationally registered GPs who claimed at least 375 A1 Medicare items of service from Medicare Australia in the most recent data quarter. The Australian Government Department of Health and Ageing draws the GP samples from Medicare claims data. The GPs are approached by letter with telephone follow-up.

In the 2005–06 BEACH data year, 1,017 GPs (representing 31.1% of those who were contacted and were currently practising in Australia) provided details for 101,700 encounters. Results are reported in terms of GP and patient characteristics, patient reasons for encounter, problems managed and management techniques used. Questions about selected patient health risk factors were asked of a subsample of patients, and the results are included in this publication. Abstracts for all other substudies covered in the eighth year of BEACH are reported at <[www.fmrc.org.au/publications/SAND\\_abstracts.htm](http://www.fmrc.org.au/publications/SAND_abstracts.htm)>.

This report provides a summary of the results for BEACH 2005–06 (Chapter 2) and these results are compared with data from the previous seven years to assess changes over time (Chapter 3). The implications of some of these results are discussed in Chapter 4 and the methods are detailed and discussed in Chapter 5.

The GPs who participated in BEACH 2005–06 were found to be largely representative of all GPs in the original sample frame. There was an under-representation of younger GPs (aged <35 years). This could be due to the fact that over 25% of the younger GPs (compared with less than 10% of all other ages) drawn in the sample were not traceable, having moved to other practices without a forwarding address since the time the sample was drawn.

The raw encounter data were weighted for GP age and sex to ensure any discrepancies in the age–sex distribution of the sample were dealt with. The raw encounter data were also weighted according to the activity level of each participating GP (as measured by the number of Medicare items claimed) to ensure each set of 100 encounter forms represents the relative contribution of each participating GP to the total encounters across the country. As has been the case in previous years, the final sample of GP–patient encounters demonstrated excellent precision in representing the age–sex distribution of patients for all Medicare-claimed A1 items of service.

The feminisation and ageing of the GP workforce continues. In 2005–06 more than one-third (37%) of BEACH participants were female. Four in ten participants were aged 55 or more years, an increase of about 50% since 1999–00. The decrease in the number of clinical sessions worked per week detected over recent years appears to have steadied, the 2005–06 results aligning broadly with those of the previous year. The decrease in the likelihood of GPs providing their own or cooperative after-hours care of their patients continued in 2005–06, so that now more than half rely on deputising or emergency services.

The significant move away from solo practice reported in 2004–05 appears to have stabilised with approximately 12–13% of participants in each of the last two years being solo practitioners. The proportion of participants working in larger practices of five or more GPs, which increased dramatically between 1999–00 and 2003–04, has since then remained relatively constant at about 52%.

The proportion of participants who gained their primary medical degree in Australia sits at about 70% but overseas graduates from Asia, Europe and Africa make up an increasing proportion of the general practice workforce. The proportion of GPs who reported being Fellows of the RACGP (41%) aligned with last year's result, being an increase of about 25% since 1999–00 (31%).

Last year we found there had been an increase between 1998–99 and 2004–05 in the proportion of Medicare encounters claimed as long consultations. This year the rate did not differ from that found in 1999–00. However, there have been many changes in Medicare items claimable by GPs over the last few years. Addition of new item numbers means that some of the more complex consultations are now claimed under specific chronic disease management item numbers, and this influences the number of claims for long surgery consultations.

In the subsample study of 32,489 encounters that included start and finish times for A1 Medicare-claimable encounters, there was no significant change in length of consultation (mean 14.9 minutes, median 13 minutes) since it was first measured in 2000–01 (14.8, 13 minutes).

The distribution of the GPs' workload across patient age groups is changing, with a decreasing proportion of their encounters being with patients aged less than 45 years. There were about 3 million fewer encounters with children (<15 years) and 5.8 million fewer with people of 15–44 years in 2005–06 than in 1999–00. An increasing proportion of encounters were with older patients (particularly those aged 75 years or more) and 'baby boomers', currently aged 45–64 years.

Between 1999–00 and 2001–02 there was a significant increase in the proportion of encounters with patients who hold a Commonwealth concession card, but since then the proportion has remained relatively constant at about 42%.

As in the past, the majority of patients present with only one reason for encounter (RFE), but there has been an increase in the rate of RFEs of a general nature, of those associated with the endocrine/metabolic system and of the male genital system, with fewer of a respiratory and neurological nature. Visits to obtain the results of tests and investigations continued to increase although growth appears to have diminished.

In light of the changing age distribution of the patients encountered, it is surprising there has not been an increase in the number of problems managed at the encounter. It has remained steady at 146 problems per 100 encounters. However, as in previous years, there was a significant increase in the overall management rate of chronic problems from 1999–00 to 2005–06. More specifically, there have been increases in management rates of specific types of chronic conditions including hypertension, diabetes, lipid disorders, osteoarthritis and oesophageal disease, which may reflect the morbidity of the ageing patient population.

In 2005–06, upper respiratory tract infection (URTI) remained the second most common problem managed in general practice, a position it has held since problem management rates were first measured in the Australian Morbidity and Treatment Survey 1990–91. However, while it remains in second position, the management rate has decreased since 1999–00 in line with the decrease in the proportion of encounters that are with children. The rate increased marginally between 2004–05 and 2005–06, reverting to the level managed in 2002–03. This could represent a higher incidence of URTI in the community in 2005–06 than in the previous year. The management rates of other acute respiratory conditions (including acute bronchitis, allergic rhinitis and sinusitis) have also decreased since 1999–00.

As previously mentioned, there has been an increase in the rate at which patients present to their GP for results of tests and investigations. In parallel, the rate at which GPs record 'test results' as the problem being managed also increased significantly. Considered in combination with the decreasing number of encounters where the patient was not seen (e.g. telephone encounters, provision of repeat prescription) it would appear that patients are being asked more often to return to the surgery in person to receive results and that many of these results are found to be clear, so that no diagnostic label is provided by the GP.

In 2005–06 at least one management action was recorded by the GP for 86% of the problems managed. At least one medication was prescribed, supplied or advised (most commonly prescribed) for over half the problems managed. GPs used at least one form of counselling and/or advice in the management of about one in five problems and undertook at least one procedure for one in ten problems managed. Only about 11% of patients were referred elsewhere for their problem, and most of these referrals were to specialists. Ordering of tests

and investigations was more likely than referral. For 18% of problems the GP placed orders for tests, by far the majority being for pathology tests.

Some of these management activity patterns have altered since 1999–00. The total medication rate (prescribed, supplied and advised for over-the-counter purchase) decreased by about 5%. The decline has been greatest in the rate of prescriptions, which fell by almost 13%, from 94 prescriptions per 100 encounters in 1999–00 to 86 per 100 in 2005–06. Although a 13% fall may not seem large, if this change is extrapolated to general practice across Australia it represents an average annual national decrease of 2.4 million prescriptions (i.e. there being an estimated 14.3 million fewer prescriptions given by GPs in 2005–06 than in 1999–00). Note that this is a decrease in the number of occasions a prescription is written and does not consider the number of repeats involved or whether the prescription was filled. Reasons for this decrease may be a combination of wider availability of some medications for over-the-counter purchase, the increasing polyvalence of some medications, and broadening of some government initiatives in terms of free supply of selected vaccines.

The decreasing prescription rate was not consistent across all drug types. The largest decreases were seen in the prescribing of celecoxib (with a concomitant increase in meloxicam), ranitidine and omeprazole (counteracted by an increase in prescriptions for esomeprazole), diuretics (with a concomitant increase in combination ACE inhibitors and diuretics), levonorgestrel/ethinylloestradiol (perhaps in reaction to publicity about the possible negative effect of hormone replacement therapy in menopause), and salbutamol (counteracted by an increase in prescriptions for fluticasone/salmeterol combination). The overall rate of antibiotic prescribing has not changed significantly since 2001–02 but the prescribing rate of the antibiotics amoxicillin and cephalexin also continued to increase.

It is worth noting that the extent to which GPs are providing medication directly to the patient is increasing. The types of medications supplied include vaccines (reflecting changes in the supply chain for vaccines, such as the meningococcal vaccine) and relatively high direct supply rates of meloxicam, esomeprazole, paracetamol and celecoxib.

Provision of clinical treatments such as advice, education and counselling form an essential part of general practice activity. Last year we reported a steady increase in the rate of clinical treatments given by GPs between 1998–00 and 2004–05. In 2005–06, recorded clinical treatments given by either the GP or the practice nurse at the encounter, decreased by 25% in a single year. This result suggests there were about 10 million fewer clinical treatments given by GPs in 2005–06 than in 2004–05, and about 6 million fewer than in 1999–00.

The decrease was reflected in various specified types of treatments. General advice and education decreased from 7.0 per 100 encounters in 2004–05 to 4.8 per 100 in 2005–06. Advice and education about medication more than halved over the same period. Significant decreases were also demonstrated in the rates of advice and education about nutrition and weight, counselling about exercise, and advice and education about the treatment being provided. A decrease did not occur in the rate of psychological counselling recorded.

This sudden decrease follows the introduction of Medicare item numbers in November 2004 for some practice nurse services. It is possible that these item numbers have facilitated increased access to practice nurses, so that practice nurses rather than GPs are taking up responsibility for providing patients with advice and education. This relationship will be investigated further through more complex analysis.

Procedural work done by the GPs remained at last year's level and appear to have been steady since 2002–03 at about 15 per 100 encounters. However, due to a rise in this rate between 1999–00 and 2002–03, GPs would have undertaken some 900,000 additional procedures in 2005–06 than they did in 1999–00.

The proportion of encounters generating at least one referral increased significantly between 1999–00 and 2005–06. This suggests that in 2005–06 there were about 60,000 more encounters at which the GP decided to refer the patient than in 1999–00. However, the total number of referrals did not change. There was a significant increase in the referral rate to specialists and a significant decrease in referrals to hospitals, with no measurable change in referrals to allied health services.

The largest change in management activity over the last five years has been in the ordering of pathology tests. GPs are now more likely to order pathology at the encounters. The proportion of encounters generating pathology test orders increased between 1999–00 and 2005–06 from 14% to 16% of encounters. The suggested effect is an additional 5.9 million encounters at which pathology was ordered in 2005–06 than five years ago in 2001–02. The effect on total test ordering is that GPs ordered about 25% more tests (or batteries of tests) per 100 encounters in 2005–06 (38.6 per 100 encounters) than in 2001–02 (31.0 per 100). Previous research has demonstrated that in the late 1990s an increase in pathology test ordering was due not to increased likelihood of testing but to increased numbers of tests ordered at any one time. It appears this is no longer the case; the data suggest that the number of tests ordered when the decision to order has been made has settled at an average of two per problem tested.

There has also been an increase in the likelihood of GPs ordering imaging tests. In 2005–06 GPs ordered imaging tests at a rate of 8.8 per 100 encounters compared with 7.4 per 100 in 1999–00. This change was apparent in the ordering rates of ultrasound and computerised tomography.

There were 1,696 practice nurse Medicare items recorded in BEACH, the majority (79.5%) for the provision of immunisations and a further 30% for wound treatment.

At least one practice nurse activity was recorded at 4,013 encounters – 3.9% of all encounters. They were involved in the management of 2.8% of all problems managed by the participating GPs. Total other treatments given by practice nurses represented 9.0% of all other treatments recorded at BEACH encounters. The majority (95.2%) of the practice nurse activity was procedural in nature. These procedures represented almost a quarter (22.7%) of all procedures recorded. In contrast, practice nurses undertook less than 1% of all clinical treatments (such as advice, education and counselling) recorded.

Injections represented 40% of procedures recorded (mainly for immunisations) and a further 23.2% were dressing/pressure/compression/tamponade procedures. General advice/education was the most common clinical treatment recorded (17.1% of the clinical treatments provided by the nurse) followed by counselling about the problem under management (16.7%).

Treatments provided by a practice nurse were most often in the management of immunisation (30.2% of all problems managed with involvement of a practice nurse), followed by chronic skin ulcer (6.7%) and laceration/cut (6.3%).

The patient risk factors of smoking, BMI and alcohol intake are investigated for a subsample of patients. There were no significant changes between 2001–02 and 2005–06 in the proportion of adults who were overweight, the proportion of adults who were obese, the proportion of adults who were underweight, the proportion of children who were overweight or obese, the prevalence of current daily smoking among adults, and the proportion of adults who reported consuming alcohol at 'at risk' levels.

