

General practice activity in Australia 2001–02

GP Statistics and Classification Unit

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BEACH
***Bettering the Evaluation
and Care of Health***

**General practice activity
in Australia 2001–02**

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Foreword

I am delighted to be able to introduce this publication which provides information on general practice consultations from 983 GPs who took part in the BEACH (Bettering the Evaluation and Care of Health) program between April 2001 and March 2002.

BEACH continues to be the only national data collection program in Australia that is derived from a large random and rolling sample of GPs. It provides an accurate and comprehensive description of general practice in this country today. As such, it is of immense value to general practitioners, policy makers, the pharmaceutical industry, health researchers, the media and the general public who can all make good use of the findings.

The report is certainly comprehensive. It touches on most aspects of the meetings that take place between patients and their doctors. There are numerous topics to draw the attention of readers. The information encapsulated in the flow-charts in the report is of special interest to me as it illustrates the complexity of general practice consultations.

Since BEACH began in 1998, the research team have examined 400,000 doctor-patient encounters and can now demonstrate changes over a 4-year period. This is the first time the reporting of such data has been possible in Australia and my attention was caught by several of these changes. I was not surprised that the proportion of female GPs has risen, but it seems that on average we GPs are also an ageing population, working fewer sessions per week and in larger practices, seeing fewer children and more holders of health care cards, dealing more often with chronic diseases, prescribing fewer medications and doing more counselling. We are changing as GPs, as is our role in as providers of high quality health care to the Australian public.

This year a section of the BEACH report focuses on encounters between Indigenous Australians and their GPs. This section tells us that they are younger on average than our other patients and are more likely to hold a health care card and live in rural areas. The patterns of morbidity we see in our Aboriginal and Torres Strait Islander patients are also different. These findings, which show that general practitioners play a major role in the health care of Indigenous people in Australia, should be a useful addition to the data needed to plan how we better work together to meet future health care needs.

The BEACH study will be invaluable to the profession as a whole, and I would especially like to acknowledge the GP participants in BEACH whose efforts are fundamental to this publication. Their dedication and persistence in their busy practice environments is admirable and my gratitude goes out to them. I note with interest the current trial of active computerised BEACH data collection with GPs who have previously participated in the paper-based version. Comparison of data from the two methods will be a test of the reliability of electronic collection and may allow GP participants a choice of recording methods in the future.

In conclusion, I recommend this report and the high-quality data source on which it draws to anyone with an interest in Australian general practice. It is important that the findings are widely shared.

Professor Michael Kidd MD FRACGP
President
The Royal Australian College of General Practitioners

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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.

Summary

Background

This report provides an overview of results from the fourth year of the BEACH (Bettering the Evaluation and Care of Health) program, a continuous study of general practice activity. It also investigates changes in morbidity and management demonstrated over the 4 years since the program began in March 1998.

Method

A random sample of GPs who claimed at least 375 general practice Medicare items of service in the previous 3 months is regularly drawn from the Health Insurance Commission (HIC) data by the General Practice Branch of the Department of Health and Ageing (DoHA). GPs are approached by letter and followed up by telephone recruitment. Each participating GP completes details about 100 consecutive patient encounters on structured paper encounter forms and provides information about themselves and their practice.

In the 2001-02 BEACH data year a random sample of 983 GPs provided details of 98,300 GP-patient encounters across Australia. 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. Other sub studies covered in the fourth year of BEACH are reported elsewhere (<http://www.fmrc.org.au>).

The participating general practitioners

The 983 participants represented 32.3% of those with whom contact could be established. Males made up 64.2% of participants and GPs aged 45 years or older accounted for 66.0%. Almost half (44.7%) were in practices of five or more GPs and about one-quarter had graduated in a country other than Australia. More than one-third (38.1%) were Fellows of the Royal Australian College of General Practitioners (RACGP) and 2.5% were currently in the Training Program. The majority (69.3%) practised in capital cities and 56.0% provided their own after-hours services or did so through a cooperative arrangement with other practices. Hours spent in direct patient care per week were between 41 and 60 hours for 43.7% of these GPs and 21-40 hours for 41.9%.

A comparison of characteristics of participating GPs with those of the GPs who declined showed that GPs aged less than 35 years were under-represented in the final BEACH GP sample. Post-stratification weighting adjusted for this difference. Participants were also less 'busy' in terms of A1 Medicare item number claims in the previous quarter. The weighting incorporated the differential activity level of each GP to increase the precision of national estimates.

The encounters

After post-stratification weighting for age (stratified by sex) and activity level, there were 96,973 encounters included in the analysis. Comparison of the age-sex distribution of patients at these encounters with that of encounters in the Medicare data demonstrated excellent precision of the final encounter sample.

Most encounters (97.7%) were direct encounters (patient seen). By far the majority (93.9%) were claimable from Medicare or the Department of Veterans' Affairs and 84.1% of these were standard surgery consultations.

The encounters involved 144,654 reasons for encounter, 139,092 problems managed, 101,350 medications, 50,308 non-pharmacological treatments, 10,167 referrals, 30,086 pathology test orders and 7,642 orders for imaging.

The patients

Children accounted for 13.2% of the encounters, 9.5% were with young adults, and 25.1% with elderly patients. The patient was female at 57.4% of encounters, held a health care card at 41.9%, and came from a non-English-speaking background at 9.3% of encounters. The patient identified themselves as an Aboriginal person or a Torres Strait Islander at 1% of encounters.

Patient reasons for encounter (RFEs) were recorded at a rate of 149 per 100 encounters. More than half related to the respiratory, musculoskeletal, skin, circulatory and digestive systems. RFEs were most commonly described in terms of symptoms and complaints. Requests for a prescription, a check-up or for immunisation/vaccination were common RFEs. The remainder of the top ten RFEs were largely symptomatic in nature.

Problems managed

Problems were managed at a rate of 143 per 100 encounters. Problems related to the respiratory, musculoskeletal and circulatory systems accounted for almost 40% of all problems managed. The most common individual problems were hypertension (9.0 per 100 encounters), upper respiratory tract infection (URTI) (6.2 per 100), immunisation/vaccination (4.7 per 100), depression (3.4 per 100) and diabetes (33.1). Together these problems represented almost 20% of all problems managed.

Management

There was no specific treatment recorded for 8.2% of problems managed. The most common treatment was medication alone (39.8% of problems) followed by clinical treatments only (10.1%) and then by medication plus clinical treatment (8.7%).

Medications

There were 105 medications recorded per 100 encounters, or 73 per 100 problems. These medications could be prescribed (84.1% of all medications), advised for over-the-counter purchase (8.5%), or supplied by the GP (7.3%).

- **Prescribed medications:** Medications were prescribed at a rate of 88.0 per 100 encounters or 61.4 per 100 problems managed, at least one being prescribed at 57.5% of encounters and for 49.8% of problems managed. Medication groups most frequently prescribed were antibiotics (16.3% of all prescriptions), cardiovascular (15.8%), central nervous system (12.1%), psychological (8.4%), musculoskeletal (7.3%) and respiratory (6.6%) medications. The most commonly prescribed generic medications were paracetamol (3.5% of all prescriptions), amoxicillin (3.3%), cephalexin (2.3%) and the paracetamol-codeine combination (2.5%).
- **Other medications:** Medications most often recommended for over-the-counter purchase were paracetamol, ibuprofen, loratadine and clotrimazole topical. Of the top ten medications supplied by the GP, eight were vaccines and two were Cox-2 inhibitors.

Non-pharmacological treatments

These were classified as clinical and procedural. At least one non-pharmacological treatment was provided for 31.4% of problems. Clinical treatments were more frequent (38.1 per 100 encounters or 26.5 per 100 problems) than procedures (13.8 and 9.6 respectively). General

advice and education (6.3 per 100 encounters) was the most common clinical treatment followed by counselling about nutrition and weight. The most frequent procedure was excision or removal of tissue (2.7 per 100 encounters).

Referrals, admissions, tests and investigations

At least one referral was given at 10.0% of encounters for 7.0% of problems. Referrals to medical specialists arose at a rate of 7.3 per 100 encounters, the most frequent being to surgeons. Referrals to allied health professionals occurred at a rate of 2.3 per 100 encounters, the majority being to physiotherapists. Admissions to hospital and referral to the emergency department were rare. Diabetes, malignant neoplasms, pregnancy and depression were the problems most often referred to a specialist while sprains/strains, back complaints and diabetes were those most commonly referred to an allied health professional.

Pathology was ordered for one in ten problems (at a rate of 31.0 tests per 100 encounters). Blood chemistry accounted for more than half the pathology tests ordered, but a full blood count was the most commonly ordered individual test. Problems for which pathology was most often ordered were diabetes, hypertension and lipid disorders.

Imaging was ordered for one in twenty problems, at a rate of 7.9 per 100 encounters. Plain x-rays accounted for almost two-thirds of these, chest x-rays being the most common. Fractures, back complaints and osteoarthritis were the problems for which imaging was most frequently ordered.

Encounters with Indigenous people

There were 916 encounters (1.0% of all encounters) at which the patient identified themselves as Aboriginal or Torres Strait Islander people. These patients were significantly younger than the total sample and more likely to hold a health care card. Their encounters represented 0.5% of those in capital cities but 13.0% of those in remote centres and 7.5% of those in other remote areas. There were no statistical differences in the morbidity and management patterns at these encounters but this is likely to be due to the small sample size. However, some interesting trends emerged.

Changes over time

Measurement of changes since 1998–99 demonstrated increased management rates of endocrine and metabolic problems (lipid disorders and diabetes in particular) and general and unspecified problems with decreased management rates of respiratory problems (particularly asthma and acute bronchitis), neurological problems and those related to the ear and the eye. There were measured decreases in overall prescribing rates for antibiotics, respiratory medications and simple and compound analgesics. Increased prescribing rates were demonstrated for medications acting on the musculoskeletal system (particularly NSAIDs). Increases in clinical treatment rates were apparent, particularly the provision of lifestyle counselling and advice.

Selected topics – changes over time

- There was a significant increase in the use of angiotensin II antagonists in the management of hypertension and a move away from ACE inhibitors.
- While there was no increase in the relative prescribing rate of anti-depressants for depression there was a significant increase in prescribing of SSRIs both for depression and for other psychological problems. This was offset by a decrease in rates for tricyclic anti-depressants and monoamine oxidase inhibitors.

- Prescribing of proton pump inhibitors, used in the treatment of oesophageal disease, doubled in this BEACH data year, with a parallel decrease in provision of H2-receptor antagonists.
- Prescribing rates of lipid-lowering medications increased from 1998–99 to 2001–02 but were accompanied by increased management rates of lipid disorders. However there was a significant increase in prescribing rates of statins, suggesting considerable use for preventive care in at-risk cardiovascular patients.
- Last year the management rate of asthma decreased as did the prescribing rate for bronchodilators. This decrease remained in the current year. However, the lower prescribing rate of bronchodilators was not fully explained by lower asthma management rates.
- The provision of non-steroidal anti-inflammatory drugs remained relatively steady from the previous BEACH year but rates of Cox-2 inhibitors continued to increase, with some substitution of Cox-2s for other NSAIDs, particularly in the management of arthritis.
- There was no change in the management rate of upper respiratory tract infection (URTI) but there was a significant decrease in antibiotic prescribing for URTI (particularly cephalosporins) and a marginal decrease in broad-spectrum penicillins for URTI.

Patient health risk behaviours

- *Body mass index:* Of 31,789 adult respondents (aged 18+ years), more than half were considered obese (21.4%) or overweight (33.5%). Men were more likely to be overweight or obese (61.0%) than women (50.9%). Eight per cent were underweight. There was a significant increase in prevalence of obesity over the 4 years (18.4–21.4) at about 1% per year.
BMI was also calculated for 3,692 children aged 2–17 years. Overall, 13.0% of these children were considered obese and a further 17.6% were overweight.
- *Smoking:* Of the 31,966 responding adult patients (aged 18+ years), 18.4% were daily smokers, 4.1% were occasional smokers and 27.8% were previous smokers. Males were more likely to report daily smoking (21.6%) than females (16.4%).
- *Alcohol use:* ‘At-risk’ levels of alcohol intake were reported by 26.1% of the 31,559 adult respondents. Male patients were more likely to be at-risk drinkers (32.0%) than women (22.0%). Prevalence of at-risk drinking decreased with age for both sexes.
- *Risk factor profile:* Data for smoking, alcohol consumption and body mass index were all available for 30,642 patients. Almost half the adults had one of these risk factors, 19.9% had two and 3.7% had all three.

Conclusion

This report has described the contribution made by general practice to the health care of the Australian community, and the usefulness of a continuous data source for the measurement of changes in practice over time.