

# **General practice activity in Australia 2003–04**

**GP Statistics and Classification Unit**

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The General Practice Statistics and Classification Unit is a collaborating unit of the Australian Institute of Health and Welfare and the University of Sydney, situated within the Family Medicine Research Centre at Westmead Hospital. It fulfils the obligation of the Australian Institute of Health and Welfare to collect statistics regarding general practitioners, their patients and their patients' care.

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Britt H, Miller GC, Knox S, Charles J, Valenti L, Henderson J, Pan Y, Bayram C, Harrison C 2003. General practice activity in Australia 2002–03. AIHW Cat. No. GEP 14. Canberra: Australian Institute of Health and Welfare (General Practice Series No. 14).

Britt H, Knox S, Miller GC 2003. Changes in pathology ordering by general practitioners in Australia, 1998–2001. AIHW Cat. No. GEP 13. Canberra: Australian Institute of Health and Welfare (General Practice Series No. 13).

O'Halloran J, Britt H, Valenti L, Harrison C, Pan Y, Knox S 2003. Older patients attending general practice 2000–02. AIHW Cat. No. GEP 12. Canberra: Australian Institute of Health and Welfare (General Practice Series No. 12).

Bayram C, Britt H, Kelly Z, Valenti L 2003. Male consultations in general practice in Australia 1999–00. AIHW Cat. No. GEP 11. Canberra: Australian Institute of Health and Welfare (General Practice Series No. 11).

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: Australian Institute of Health and Welfare (General Practice Series No. 10).

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Britt H, Miller GC, Knox S, Charles J, Valenti L, Henderson J, Kelly Z, Pan Y 2001. General practice activity in Australia 2000–01. AIHW Cat. No. GEP 8. Canberra: Australian Institute of Health and Welfare (General Practice Series No. 8).

General Practice Statistics and Classification Unit 2000 [cited 01–12–2004]. SAND abstracts from the BEACH program. Sydney: AIHW & University of Sydney. Available from internet: [http://www.fmrc.org.au/publications/SAND\\_abstracts](http://www.fmrc.org.au/publications/SAND_abstracts).

A full list of publications emanating from the BEACH program are listed in Appendix 6.

GENERAL PRACTICE SERIES

Number 16

# *BEACH*

## *Bettering the Evaluation and Care of Health*

# General practice activity in Australia 2003-04

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December 2004

A joint report by the University of Sydney and the Australian Institute of Health and Welfare  
AIHW Cat. No. GEP 16

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This is the sixteenth publication of the General Practice Series, from the General Practice Statistics and Classification Unit, a collaborating unit of the University of Sydney and the Australian Institute of Health and Welfare. A complete list of the Institute's publications is available from the Publications Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601, or via the Institute's website: <<http://www.aihw.gov.au>>.

ISBN 1 74024 4281

ISSN 1442-3022

### **Suggested citation**

Britt H, Miller GC, Knox S, Charles J, Valenti L, Pan Y, Henderson J, Bayram C, O'Halloran J, Ng A 2004. General practice activity in Australia 2003–04. AIHW Cat. No. GEP 16. Canberra: Australian Institute of Health and Welfare (General Practice Series No. 16).

**Keywords:** Australia, Delivery of Health Care/statistics & numerical data, Family Practice/statistics & numerical data, Health Care Surveys/methods.

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Published by the Australian Institute of Health and Welfare

Printed by Pirion

# Foreword

There is an urgent need in all countries for accurate and detailed data on the contribution of family doctors to health care. Information on the role and value of primary care doctors in health care services is essential to assess and support calls for increased training of family doctors, and for shifts in budget allocations from high-tech specialist services to possibly more efficient and less costly primary care services, especially in developing countries. Unfortunately in most countries, unlike Australia, such information is not available.

Information on our patients, our workloads and how we behave in the clinical encounter is an essential starting point for meaningful quality improvement and management, and can also contribute to designing curricula for family medicine training.

The six annual reports on General Practice Activity in Australia by the BEACH program have demonstrated the enormous value of systematic collection of practice data from general practitioners. The 2003–04 report of 100 consecutive patient encounters managed by each of 1000 randomly recruited GPs across Australia once again sets a standard for surveys which can and should be duplicated across the globe. The data itself provides a benchmark against which national cross-sectional GP activity data collection and analysis can be compared and measured. The value of a database of over 600,000 patient encounters over 6 years cannot be over-emphasised. Similar but more limited personal gathering of data on an annual basis in South Africa has, for example, dramatically emphasised the changing profile of family practice in the wake of the HIV/AIDS epidemic. The extensive expertise and experience gained over the years by the team of BEACH researchers is immense, and hopefully can be tapped by others around the world wishing to embark on similar studies.

This 2003–04 report emphasises and, in many instances, mirrors the global burden of disease and the role of GPs in the management of health conditions. Of importance are the figures of common chronic/non infective conditions which also affect millions of people globally. Of concern is that over half (56.5%) of Australian adults and 31.2% of children aged 2–17 years are either overweight or obese, representing a 15.3% increase since the 2000–01 report. Hypertension, URTI, immunisation/vaccination, depression and diabetes accounted for almost 20% of problems managed by GPs.

For a global analytical perspective on the nature of general practice, it is essential that data be internationally comparable. Hence the use of a classification system which is able to easily define the elements of the primary care encounter, including reasons for encounter, diagnosis, and processes is fundamental. The system must also be user-friendly but with sufficient specificity to embrace the scope and domains of general practice/primary care. It should also be easily linked through cross-walks to other systems such as ICD10 which are used for national and international morbidity and mortality data coding and classification. The International Classification of Primary Care, Version 2 (ICPC-2) developed by Wonca (The World Organisation of Family Doctors) is such a tool and has recently been embraced by WHO as a member of its family of classification systems.

The ongoing activities of Wonca Collaborating Centres such as The Family Medicine Research Centre (FMRC) at Sydney University are essential for the continued development and support of ICPC-2 and its successors, to enable internationally standardised data sets and data linkages. The use of ICPC-2 as the basis for the reporting in this BEACH report makes international comparison of the data valid and reliable.

I personally look forward to the 7th annual report!

Professor Bruce Sparks

President, World Organisation of Family Doctor (Wonca)

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# Acknowledgments

The General Practice Statistics and Classification Unit wishes to thank the 1,000 general practitioners who participated in BEACH between April 2003 and March 2004. This report would not have been possible without their valued cooperation and effort in providing the data.

We also thank the following organisations for their financial support and their contribution to the ongoing development of the BEACH program:

- Australian Government Department of Health and Ageing
- AstraZeneca (Australia)
- Roche Products Pty Ltd
- Janssen-Cilag Pty Ltd
- Merck Sharp & Dohme (Australia) Pty Ltd.

We acknowledge the support of the Royal Australian College of General Practitioners, the Australian Medical Association, the Australian Divisions of General Practice, the Australian College of Rural and Remote Medicine, and the Consumers Health Forum, and the contribution of their representatives to the BEACH Advisory Board.

The research team is grateful to Clare Bayram for her co-ordination and editing of this report, Dulcie Bucksath for the preparation of the appendices, the IT support of Timothy Chambers, the administrative support of Gervaise Woods, and the valuable contribution of the general practitioner recruitment staff (Errol Henderson, Jan Fitzgerald and Simone Rawson) and data entry staff. We recognise the contribution of past members of the BEACH team.

We appreciate the cooperation of Anthony Lawrence of the General Practice Branch of the Australian Government Department of Health and Ageing in regularly supplying general practitioner random samples and national Health Insurance Commission data. At the Australian Institute of Health and Welfare, Ken Tallis edited the report and Ainsley Morrissey coordinated the printing and publication process.

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 sixth 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 last 5 years from March 1999. Summaries of results for each year are provided in Appendix 5.

## Method

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

In the 2003–04 BEACH data year, a random sample of 1,000 GPs from across Australia provided details of 100,000 GP–patient 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. Other substudies covered in the sixth year of BEACH are reported elsewhere: <[http://www.fmrc.org.au/publications/SAND\\_abstracts.htm](http://www.fmrc.org.au/publications/SAND_abstracts.htm)>.

## The participating general practitioners

The 1,000 participants represented 23.7% of those with whom contact could be established. Males made up 67.3% of participants and GPs aged 45 years or older accounted for 69.2%. Most (82.6%) had been in general practice for more than ten years. The majority (73.5%) had graduated in Australia and two-thirds (62.4%) practised in capital cities. One-third (33.5%) were Fellows of the Royal Australian College of General Practitioners, and 4.4% were currently in a general practice vocational training program. One in ten (10.6%) were in solo practice, and four out of five (81.0%) worked in an accredited practice. More than half the practices (59.6%) provided their own after-hours services or worked through a cooperative arrangement with other practices. Hours spent in direct patient care per week were between 41 and 60 hours for 42.3% of these GPs and 21–40 hours for 42.4%. Computers were used in 95.0% of practices, mainly for prescribing (83.0%) and billing (79.9%) purposes.

A comparison of characteristics of participating GPs with those of GPs who declined showed that GPs aged less than 35 years were under-represented in the final BEACH GP sample. Participants also claimed significantly fewer Medicare items of service in the previous quarter. To increase the precision of national estimates post-stratification weighting corrected for under-representation of younger GPs and incorporated the differential activity level of each GP.

## **The encounters**

After post-stratification weighting for age (stratified by sex) and activity level, there were 98,877 encounters included in the analysis. Comparison of the age–sex distribution of patients at the Medicare-claimable encounters with that of encounters in the Medicare data demonstrated excellent precision of the final encounter sample. Most encounters (97.0%) were direct encounters (patient seen). Almost all (93.8%) encounters were claimable from Medicare or the Department of Veterans’ Affairs, and 82.4% of these services were standard surgery consultations. The encounters involved 148,521 reasons for encounter (RFEs), 144,674 problems managed, 103,210 medications, 50,775 non-pharmacological treatments, 11,495 referrals, 34,831 pathology test orders and 8,121 orders for imaging.

## **The patients**

Children accounted for 12.3% of the encounters, 9.6% were with young adults and 26.8% with elderly patients. The patient was female at 57.4% of encounters, held a Commonwealth concession card at 42.5%, and came from a non-English-speaking background at 9.7% of encounters. Patients identified themselves as an Aboriginal person and/or a Torres Strait Islander at 1.6% of encounters.

Patient RFEs were recorded at a rate of 150 per 100 encounters. Approximately half the RFEs related to the respiratory, musculoskeletal, skin, digestive and circulatory systems. RFEs were most commonly described in terms of symptoms and complaints. Requests for a check-up, a prescription, or test results were also common.

## **Problems managed**

Problems were managed at a rate of 146.3 per 100 encounters. Those relating to the respiratory system, musculoskeletal system, circulatory system and skin accounted for almost half of all problems managed. The most common individual problems were hypertension (9.2 per 100 encounters), upper respiratory tract infection (5.5 per 100), immunisation/vaccination (4.7 per 100), depression (3.7 per 100) and diabetes (3.3 per 100). Together these represented almost 20% of all problems managed.

## **Management**

There was no specific treatment recorded for 13.2% of problems managed. At least one medication was prescribed for 47.8% of problems and at least one clinical treatment given for 22.2%. The most common treatment was medication alone (38.9% of problems), followed by clinical treatment alone (9.9%) then by medication plus clinical treatments (7.6%).

### *Medications*

There were 104 medications recorded per 100 encounters, or 71 per 100 problems. These medications could be prescribed (82.4% of all medications), advised for over-the-counter purchase (9.4%) or supplied by the GP (8.2%).

*Prescribed medications:* Medications were prescribed at a rate of 86.0 per 100 encounters or 58.8 per 100 problems managed, at least one being prescribed at 55.7% of encounters and for 47.8% of problems managed. Medication groups most frequently prescribed were cardiovascular (16.8% of all prescriptions), antibiotics (16.5%), central nervous system (12.2%), psychological (8.8%), hormones (6.6%) and musculoskeletal (6.5%). The most commonly prescribed generic medications were amoxicillin (3.8% of all prescriptions), paracetamol (3.3%), the paracetamol–codeine combination (2.4%) and cephalexin (2.3%).

*Other medications:* Medications most often recommended for over-the-counter purchase were paracetamol, ibuprofen, loratadine and diclofenac topical. The medications most often supplied by the GP were the influenza, polio and meningitis vaccines, and amoxycillin.

#### *Non-pharmacological treatments*

These were classified as clinical and procedural. At least one non-pharmacological treatment was provided for 30.5% of problems. Clinical treatments were more frequent (36.6 per 100 encounters or 25.0 per 100 problems) than procedures (14.7 and 10.1 respectively). General advice and education (6.8 per 100 encounters) was the most common clinical treatment, followed by counselling about the problem managed. The most frequent procedure was excision or removal of tissue (3.1 per 100 encounters).

#### *Referrals, admissions, tests and investigations*

At least one referral was given at 11.0% of encounters for 7.5% of problems. Referrals to medical specialists arose at a rate of 7.9 per 100 encounters, the most frequent being to surgeons. Referrals to allied health professionals were made at a rate of 2.6 per 100 encounters, the majority being to physiotherapists. Admissions to hospital and referrals to the emergency department were rare. Malignant neoplasms of the skin, diabetes, pregnancy and back complaints were the problems most often referred to a specialist; back complaints, sprains/strains and depression were those most commonly referred to an allied health professional.

Pathology was ordered for more than one in ten problems (at a rate of 35.2 tests per 100 encounters). Blood chemistry accounted for more than half the 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 8.2 per 100 encounters. Plain x-rays accounted for over half of these, chest x-rays being the most common. Back complaints, fractures and osteoarthritis were the problems for which imaging was most frequently ordered.

#### **Selected topics – changes over time**

The rate of non-steroidal anti-inflammatory drugs (NSAIDs) prescribed or supplied rose significantly over the period 1999–00 to 2000–01, but since then declined slowly over the three years 2001–02 to 2002–04. The increase in NSAIDs was explained by the rapid uptake of coxibs between 1999–00 and 2000–01. It appears that the level of coxibs prescribed or supplied by the GP has reached a plateau, with a slight decrease in the rates of coxibs since 2001–02. The pattern of NSAID medication rates was similar for both arthritis and other musculoskeletal problems, although the initial uptake of coxibs was more pronounced for arthritis.

The rate of anti-depressant medications for depression increased slightly from 1998–99 to 2003–04. This increase was explained by an increase in the rate of selective serotonin re-uptake inhibitors, which was partly offset by a decrease in the rates of tricyclic anti-depressants.

The management rate of asthma has decreased significantly since 1998–99. This has been accompanied by a significant decrease in the rates of bronchodilators prescribed, supplied or advised by the GP for asthma problems. The medication rates of asthma preventers has remained steady.

The management of lipid disorders increased significantly from 1998–99 to 2003–04, accompanied by a commensurate increase in the prescription and supply of statin medications. There has been a significant increase in the management rate of diabetes problems from 1998–99 to 2003–04.

### **Patient health risk factors**

*Body mass index:* Of 31,890 adult respondents (aged 18 years and over), more than half (56.5%) were considered obese (22.0%) or overweight (34.5%). Approximately 7% were underweight. Men were more likely to be overweight or obese (62.9%) than women (52.3%). There was a significant increase in prevalence of obesity from 19.4% in 1999–00 to 22.0% in 2003–04. The increase in prevalence of being overweight (from 33.1% to 34.5%) just failed to reach significance. Body mass index was calculated for 3,301 children aged 2–17 years. Overall, 13.2% of these children were classed as obese and a further 19.0% as overweight. The proportion classified as overweight has increased significantly since 2000–01 (15.3%).

*Smoking:* Of the 32,718 responding adult patients (aged 18 years and over), 17.6% were daily smokers, 4.3% were occasional smokers and 28.0% were previous smokers. Males were more likely to report daily smoking (21.0%) than females (15.4%).

*Alcohol consumption:* ‘At-risk’ levels of alcohol intake were reported by 26.7% of the 31,721 adult respondents. Male patients were more likely to be at-risk drinkers (33.1%) than women (22.6%). Prevalence of at-risk drinking decreased with increasing age for both sexes.

*Risk factor profile:* Smoking status, alcohol consumption and body mass index were available for 30,713 adult patients. Almost half of these patients had one of these three risk factors, 19.8% had two and 4.0% had all three. These results are remarkably consistent with those reported last year.

### **Discussion**

Some of the findings earlier reported are discussed in Chapter 15. While this report provides an overview of the clinical activity of general practitioners, the BEACH database now contains records of more than 600,000 GP–patient encounters. The size of the database allows detailed analysis of any specific topic, whether the subject be problem or morbidity or a particular type of management (e.g. GP use of a selected medication type). Access to the database and issues to consider when triangulating BEACH data with that from other sources (e.g. Pharmaceutical Benefits Scheme) are also outlined in Chapter 15, Section 15.2.

### **Conclusion**

This report has described the clinical activities of GPs and their contribution to the health care of the Australian community. It has described some of the changes that have occurred over the last 5 years.