



Australian Government

**Australian Institute of
Health and Welfare**

*Better information and statistics
for better health and wellbeing*

GENERAL PRACTICE SERIES

Number 24

General practice in Australia, health priorities and policies 1998 to 2008

Helena Britt & Graeme C Miller (Eds)

July 2009

A joint report by the University of Sydney and the Australian Institute of Health and Welfare

Cat. no. GEP 24

The Australian Institute of Health and Welfare is Australia's national health and welfare statistics and information agency. The Institute's mission is better information and statistics for better health and wellbeing.

© Australian Institute of Health and Welfare and the University of Sydney 2009

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced without prior written permission from the Australian Institute of Health and Welfare. Requests and enquiries concerning reproduction and rights should be directed to the Head, Media and Communications Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601.

This publication is part of the Australian Institute of Health and Welfare's General practice series, from the Australian General Practice Statistics and Classification Centre (AGPSCC), a collaborating unit of the Family Medicine Research Centre (FMRC) of the University of Sydney and the Australian Institute of Health and Welfare (AIHW). A complete list of the Institute's publications is available from the Institute's website <www.aihw.gov.au>.

ISSN 1442-3022

ISBN 978 1 74024 9348

Suggested report citation

Britt H & Miller GC (eds) 2009. General practice in Australia, health priorities and policy 1998 to 2008. General practice series no. 24. Cat. no. GEP 24. Canberra: AIHW.

Chapter citations are provided in each chapter, immediately before the reference list.

Keywords

Australia, delivery of health care/statistics and numerical data, family practice/statistics and numerical data, health policy, health priorities.

Australian Institute of Health and Welfare

Board Chair

Hon. Peter Collins, AM, QC

Director

Penny Allbon

Any enquiries about or comments on this publication should be directed to:

The Australian General Practice Statistics and Classification Centre

School of Public Health

University of Sydney

Acacia House, Westmead Hospital

Westmead NSW 2145

Phone: +61 2 9845 8151

Fax: +61 2 9845 8155

Email: gpstats@fmrc.org.au

Published by the Australian Institute of Health and Welfare

Printed by Blue Star Print Group

**Please note that there is the potential for minor revisions of data in this report.
Please check the online version at <www.aihw.gov.au> for any amendments.**

Editors

Helena Britt

Graeme C Miller

Chapter authors (in alphabetical order)

Clare Bayram

Joan Henderson

Helena Britt

Graeme C. Miller

Janice Charles

Julie O'Halloran

Salma Faradin

Ying Pan

Christopher Harrison

Lisa Valenti

Peer reviewers

The Australian General Practice Statistics and Classification Centre wish to thank the following individuals for their review of chapters in *General practice in Australia, health priorities and policies 1998 to 2008*. Their critical and constructive comments added to the quality of this publication and their valuable contribution is gratefully acknowledged.

Chapters 3 and 4: General practice workforce and workload & GP clinical activity

Mr David Braddock, Australian Institute of Health and Welfare

Prof Charles Bridges-Webb, Director, NSW Projects, Research and Development Unit
Royal Australian College of General Practitioners

Judy Daniel, Primary and Ambulatory Care Division, Department of Health and Ageing

Dr Winston Lo, NSW Projects, Research and Development Unit,
Royal Australian College of General Practitioners

Dr Robyn Napier, Medical Secretary and Medical Director,
Australian Medical Association (NSW) Limited

Chapter 5: GP pathology ordering

Dr David Barton

Dr Michael Harrison, Sullivan Nicolaides Pathology

Chapter 6: Aboriginal and Torres Strait Islander patients

A/Prof Ngaire Brown, Poche Centre for Indigenous Health, University of Sydney

Chapter 7: Overweight and obesity

Prof Louise Baur, Discipline of Paediatrics and Child Health, University of Sydney

Ms Ilona Brockway, Australian Institute of Health and Welfare

Mr Mark Cooper-Stanbury, Australian Institute of Health and Welfare

Chapter 8: Respiratory problems

Prof Guy Marks, Woolcock Institute of Medical Research

Chapter 9: Cardiovascular problems

Dr Andrew Boyden, National Heart Foundation

Dr Paul Magnus, Australian Institute of Health and Welfare

Prof Mark Nelson, Menzies Research Institute, University of Tasmania

Susana Senes, Australian Institute of Health and Welfare

Chapter 10: Type 2 diabetes

Prof Mark F Harris, Centre for Primary Health care and Equity, UNSW

Dr Jerry Greenfield, St Vincent's Hospital and
the Garvan Institute of Medical Research, Sydney

Ms Lynelle Moon, Australian Institute of Health and Welfare

Ms Anne-Marie Waters, Australian Institute of Health and Welfare

Ms Bronwyn West, Merck, Sharp and Dohme (Australia) Pty Ltd

Chapter 11: Arthritis and musculoskeletal conditions

Dr Kuldeep Bhatia, Australian Institute of Health and Welfare

Tracy Dixon, Australian Institute of Health and Welfare

Prof Graeme Jones, Arthritis Australia

Chapter 13: Cancer

Dr Monica Robotin, Cancer Council NSW

Ms Chris Sturrock, Australian Institute of Health and Welfare

Dr Valda Struwig, Pfizer Australia

Chapter 14: Mental Health

Ms Alissa Brown, Pfizer Australia

Jenny Hargreaves, Australian Institute of Health and Welfare

Chapter 15: Sexual Health

Dr E Lynne Conway, CSL Biotherapies

Prof Adrian Mindel, Sexually Transmitted Infections Research Centre,
University of Sydney

Chapter 16: Gastro-oesophageal reflux disease

Dr Melvyn G. Korman, Director Emeritus, GI and Liver Unit, Monash Medical Centre

Foreword

General practice has always served as the cornerstone of the Australian health care system, and contributes greatly to Australia's high international health and health service rankings. The US-based Commonwealth Fund, in an international study, has shown that when adults have a 'medical home,' their access to necessary care, receipt of effective preventive screening, and management of chronic conditions improve substantially and disparities in access and quality are reduced¹. The medical home, as provided by general practitioners, contributes to the high approval ratings for the Australian health care system in the Commonwealth Fund survey.

Dependable statistics about process and outcome are essential when making judgements about the quality of the health care system, and this report demonstrates and summarises the substantial contribution to the statistical base in general practice made by the Bettering the Evaluation and Care of Health (BEACH) program.

Over the past decade the BEACH program has provided a unique insight into the clinical encounters between general practitioners and their patients. As the only continuous national study of general practice activity in Australia, indeed in the world, it is an extraordinarily valuable and important resource. The strength of BEACH data lies first in the sheer sample size and second, that it provides a reliable, independent and continuous measure of changes in general practice since 1998.

As this report shows, there have been substantial changes in the activities of general practice in that time, both in numbers of services delivered and the focus of these services. These changes have occurred in parallel with the progressive ageing of our population, a consequent rise in demand by patients for treatment and management of chronic illnesses, changes in the provision of bulk billing, practice and service incentive payments through Medicare, a rising awareness of the need for accountable and evidence-based practice, and a push for greater patient involvement and responsibility in their own health care.

General practice can serve as a platform for preventive care and this has attracted the interest of those determining the Medicare schedule of fees for the provision of general practice services. Likewise the coordinating role that general practitioners may play in the care of patients with chronic illnesses has been reflected in Medicare items to encourage the development of chronic care plans and the better coordination of the range of services that these patients need.

This report provides statistical evidence that general practitioners are doing more check-ups, providing more lifestyle advice and managing more chronic problems than previously. Many of the changes identified can be readily linked to policy changes that have occurred over the time of the study. However, some policies appear to have had little or no impact on general practice patterns of care, and this should raise questions in the minds of policy makers as to their value.

1 A. C. Beal, M. M. Doty, S. E. Hernandez, K. K. Shea, and K. Davis. Closing the Divide: How Medical Homes Promote Equity in Health Care: Results From The Commonwealth Fund 2006 Health Care Quality Survey, The Commonwealth Fund, June 2007.

Unfortunately a method for linking the measured changes in the process of care to improved health outcomes is yet to be developed and applied in Australia. In the absence of outcome measurements, the data in this report provide a means to assess the impact of past and current policies and programs in general practice, and can be used to help guide the development and implementation of new recommendations and policies.

General practice, alongside hospital care and health services more generally, is currently under review by several government-sponsored commissions and committees. These reviews are necessarily looking at how general practice might contribute to the achievement of a range of preventive and therapeutic health care goals for the future, whether in a suburban setting or as part of the effort to reduce health inequalities in Indigenous communities. Future changes in government policies affecting general practice seem certain.

Regardless of whether these imminent reports recommend revolution or evolution in the way health services are delivered, the new policies and programs that will be implemented to replace or stand alongside current policies and programs will demand evaluation of their costs and benefits, including those in general practice. The current economic environment demands that health care dollars are properly targeted and spent as effectively as possible.

The Australian Government has enunciated its support for evidence-based policy making, and the basis for this is the collection and analysis of data and the public distribution of the findings which can then be used, in a virtuous cycle, to respond to current needs and plan for the future.

This was recognised in 1994 by Canadian researchers who wrote: *“we believe that it would be useful for researchers to keep up databases ... over several years so that changes over time and their consequences on quality of care and practice patterns can be quantified... Such a model could be used for projecting changes to the system and for planning for the future.”*²

BEACH is valuable and important work, an excellent investment that surely should continue into the future. Indeed, necessary health care reforms will make this future work imperative if we are to preserve the honourable place, well deserved, that general practice occupies in health care in Australia.

Lesley Russell BSc(Hons), BA, PhD

Menzies Foundation Fellow

&

Stephen Leeder AO, MD, PhD, BSc (Med), FRACP, FAFPHM, FRACGP (Hon)

Director

Menzies Centre for Health Policy

University of Sydney / Australian National University

2 P.G. Norton, E.V Dun, and L. Soberman, L. Family practice in Ontario: How physician demographics affect practice patterns. *Canadian Family Physician*, 2004; 40: 249–256

Contents

Foreword	v
Acknowledgments.....	xii
Abbreviations.....	xiii
Symbols	xiv
Executive summary	xv
1 Overview.....	1
1.1 Background.....	1
1.2 Report structure and how results are presented	3
1.3 Key findings.....	3
1.4 Conclusion	8
References.....	9
2 Methods	10
2.1 Data elements	10
2.2 Statistical methods.....	11
2.3 Changes over time	12
2.4 Extrapolated national estimates.....	12
2.5 Classification and coding of data.....	14
2.6 Changes to data elements	17
2.7 Understanding BEACH encounter data	17
2.8 Supplementary Analysis of Nominated Data.....	18
References.....	20
3 General practice workforce and workload.....	22
3.1 General practice workforce	22
3.2 General practice workload: policy, population and patients	27
3.3 Conclusion	34
References.....	34
4 GP clinical activity	38
4.1 Patient reasons for encounter.....	38
4.2 Problems managed at GP encounters	42
4.3 Management actions at encounter.....	48
4.4 Length of consultation	50
4.5 Discussion	52
4.6 Conclusion	55
References.....	55

5	GP pathology ordering	57
5.1	Background.....	57
5.2	Method	58
5.3	Changes in pathology ordering 2000-02 to 2006-08.....	60
5.4	National Health Priority Areas	64
5.5	Other problems with high rates of pathology ordering	78
5.6	Implications of high volume of tests.....	81
5.7	Conclusion	84
	References.....	85
6	Aboriginal and Torres Strait Islander patients	87
6.1	The Indigenous population	87
6.2	Policies and initiatives.....	88
6.3	BEACH encounters with Indigenous patients.....	89
6.4	Encounters by patient residential location.....	95
6.5	Aboriginal Community Controlled Health Services	97
6.6	Patient risk factors	97
6.7	Discussion	99
6.8	Conclusion	102
	References.....	103
7	Overweight and obesity	105
7.1	Background.....	105
7.2	Method	107
7.3	BEACH prevalence of overweight/obesity in adults.....	108
7.4	BEACH prevalence of overweight/obesity in children aged 2-17 years	111
7.5	Length of consultation by patient BMI	114
7.6	Discussion	115
7.7	Conclusion	117
	References.....	118
8	Respiratory problems	121
8.1	Background.....	121
8.2	Most common respiratory problems managed	123
8.3	Influenza vaccinations.....	124
8.4	Asthma	125
8.5	Chronic obstructive pulmonary disease.....	130
8.6	Antibiotic use in respiratory problems.....	133
8.7	Upper respiratory tract infection (URTI).....	137
	References.....	139

9	Cardiovascular problems.....	142
9.1	Background.....	142
9.2	Cardiac problems.....	145
9.3	Vascular and lipid problems	149
9.4	Cerebrovascular problems.....	153
9.5	Health risk behaviours among patients with cardiovascular and/or lipid problems managed	156
9.6	Management of hypertension 2007-08	161
9.7	Management of ischaemic heart disease	164
9.8	Discussion	166
	References.....	169
10	Type 2 diabetes	171
10.1	Background.....	171
10.2	Prevalence of Type 2 diabetes in general practice patients.....	172
10.3	Multimorbidity occurring with diabetes	172
10.4	Investigations	173
10.5	Management	174
10.6	Time use of patients with Type 2 diabetes	178
10.7	Management of Type 2 diabetes in 2007-08.....	179
10.8	Discussion	182
10.9	Conclusion	183
	References.....	183
11	Arthritis and musculoskeletal conditions	185
11.1	Background.....	185
11.2	Overview of musculoskeletal problems managed.....	187
11.3	Arthritis	191
11.4	Osteoporosis	197
11.5	Back complaints	200
11.6	Work-related musculoskeletal problems.....	203
11.7	Discussion	204
11.8	Conclusion	205
	References.....	205

12 Injury	207
12.1 Background.....	207
12.2 Policies and initiatives.....	207
12.3 Management rates in general practice	208
12.4 Age and sex distribution.....	210
12.5 Management.....	211
12.6 Groups at risk of an injury.....	214
12.7 Discussion	216
12.8 Conclusion	217
References.....	218
13 Cancer	219
13.1 Background.....	219
13.2 Policies and initiatives.....	219
13.3 Management rates in general practice	220
13.4 Management rates by patient sex	222
13.5 Human Papillomavirus vaccine	223
13.6 Referrals to medical specialists	223
13.7 Procedural treatments	224
13.8 Pathology test orders.....	225
13.9 Discussion	225
13.10 Conclusion	226
References.....	226
14 Mental health	229
14.1 Background.....	229
14.2 Management of psychological problems at BEACH encounters	234
14.3 Management of depression	237
14.4 Management of anxiety.....	242
14.5 Management of drug and alcohol problems.....	245
14.6 Management of schizophrenia in 2007-08	247
14.7 Management of bipolar disorder in 2005-08	249
14.8 Discussion	251
References.....	252

15 Sexual health	254
15.1 Background.....	254
15.2 Sexual dysfunction in men	255
15.3 Sexual dysfunction in women.....	259
15.4 Pregnancy and family planning.....	259
15.5 Sexually transmitted infections.....	261
15.6 Discussion	266
References.....	267
16 Gastro-oesophageal reflux disease	269
16.1 Background, policies and initiatives	269
16.2 Prevalence in general practice patients.....	269
16.3 Multimorbidity occurring with GORD.....	270
16.4 Management in general practice.....	270
16.5 Therapeutic management	272
16.6 Overview of management of GORD in 2006–08	273
16.7 Discussion	276
16.8 Conclusion	277
References.....	277
Glossary	279
Appendices	282
Appendix 1: Example of a 2007–08 recording form	282
Appendix 2: GP characteristics questionnaire, 2007–08	284
Appendix 3: Code groups from ICPC-2 and ICPC-2 PLUS	285
List of tables	286
List of figures	288

Acknowledgments

The Australian General Practice Statistics and Classification Centre (formerly the General Practice Statistics and Classification Unit) wishes to thank the general practitioners who participated in Bettering the Evaluation And Care of Health (BEACH) between April 1998 and March 2008. 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 since it began in April 1998:

- AstraZeneca Pty Ltd (Australia) (1998–2009)
- Janssen-Cilag Pty Ltd (2000–2009)
- Merck, Sharp and Dohme (Australia) Pty Ltd (2002–2009)
- Pfizer Australia (2003–2009)
- National Prescribing Service Ltd (2005–2009)
- Australian Government Department of Health and Ageing (1998–2004, 2007–2009)
- Abbott Australasia (2006–2009)
- Sanofi-Aventis Australia Pty Ltd (2006–2009)
- Wyeth Australia Pty Ltd (2008–2009)
- Roche Products Pty Ltd (1998–2006)
- Aventis Pharma Pty Ltd (1998–2002)
- National Occupational Health and Safety Commission (1998–2000)
- Australian Government Department of Veterans' Affairs (1998–2000).

Some financial support for the program was also provided by:

- Australian Government Department of Veterans' Affairs (2004–2009)
- The Office of the Australian Safety and Compensation Council, Department of Employment and Workplace Relations (2004–2006).

We acknowledge the support of the Royal Australian College of General Practitioners, the Australian Medical Association, the Australian General Practice Network, 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 for the strong IT support of Timothy Chambers and the administrative support of Denise Barratt and Gervaise Woods, and for the valuable contribution of the recruitment staff (Errol Henderson, Jan Fitzgerald and David Went) and data entry staff. We recognise the contribution of past members of the BEACH team. We appreciate the cooperation of the Primary and Ambulatory Care Division of the Australian Government Department of Health and Ageing in regularly supplying general practitioner random samples and national Medicare data. We also appreciate the contribution of Dr Penny Allbon, Susan Killion and Dr Paul Magnus of the AIHW in the final review of this report.

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.

Abbreviations

ABS	Australian Bureau of Statistics
ACCHS	Aboriginal Community Controlled Health Service
ACE	angiotensin-converting enzymes
AIDS	acquired immune deficiency syndrome
AIHW	Australian Institute of Health and Welfare
ASGC	Australian Standard Geographical Classification
ATC	Anatomical Therapeutic Chemical (classification)
AUDIT	Alcohol Use Disorders Identification Test
BEACH	Bettering the Evaluation And Care of Health
BMI	body mass index
BOIMHC	Better Outcomes in Mental Health Care
CAPS	Coding Atlas for Pharmaceutical Substances
Children's survey	National Children's Nutritional and Physical Activity Survey
CI	confidence interval (in this report 95% CI is used)
COPD	chronic obstructive pulmonary (airways) disease
CT	computerised tomography
CVD	cardiovascular disease
DVA	Australian Government Department of Veterans' Affairs
ED	erectile dysfunction
encs	encounters
FRACGP	Fellowship of the Royal Australian College of General Practitioners
GORD	gastro-oesophageal reflux disease
GP	general practitioner
H2RA	H2 receptor antagonist
HbA1c	haemoglobin, type A1c
HIV	human immunodeficiency virus
HPV	Human Papillomavirus
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
ICS	inhaled corticosteroids
IHD	ischaemic heart disease
IMG	international medical graduate

INR	international normalised ratio
LABA	long-acting beta-agonist
MBS	Medicare Benefits Schedule
NHPA	National Health Priority Area
NHS	National Health Survey
NSAID	non-steroidal anti-inflammatory drug
OTC	over-the-counter (that is, medications advised for over-the-counter purchase)
OTD	overseas trained doctor
PBS	Pharmaceutical Benefits Scheme
RACGP	Royal Australian College of General Practitioners
RFE	reason for encounter
SAND	Supplementary Analysis of Nominated Data
SAS	Statistical Analysis System
SPANS	New South Wales Schools Physical Activity and Nutrition Survey
STI	sexually transmitted infection
URTI	upper respiratory tract infection
UTI	urinary tract infection
WHO	World Health Organization
Wonca	World Organization of Family Doctors

Symbols

↑/↓	indicates a statistically significant linear change
↑/↓	indicates a marginally significant linear change
§	indicates a non-linear significant or marginal change
—	indicates no change
<	less than
>	more than
N/A	not applicable
NAv	not available
NEC	not elsewhere classified
no.	number
NOS	not otherwise specified

Executive summary

This report looks at changes in the clinical activities of general practice in Australia over the decade 1998 to 2008, in the context of numerous government initiatives, changes in the general practitioner (GP) workforce and changes in the population.

General practice activities are measured by the Bettering the Evaluation and Care of Health (BEACH) program, a continuous national study based on data collected from new samples each year of about 1,000 GPs. Each GP provides details for 100 consecutive GP-patient encounters. BEACH began in April 1998 and this report uses data collected from then to March 2008, covering about 9,900 GP participants and 990,000 GP-patient encounters.

The report focuses on general practice activities for eight health conditions declared as National Health Priority Areas in recent times by the Australian and state and territory governments and two emerging health areas – sexual health and gastro-oesophageal reflux disease. It also summarises care provided to the Aboriginal and Torres Strait Islander population by GPs.

Australians and their GPs

- Both the Australian population and its GPs are ageing.
- GPs are spending an increasing proportion of their time with older patients and less with children.
- An increasing proportion of GPs are female (almost 4 in 10).
- Most GPs are in group practices; the average GP is working fewer hours.
- Based on the number of doctors and the hours they work, there has been an apparent GP shortage, and recognised geographic maldistribution.
- Over the period of 1998–2008, visits to GPs fell from a peak of 5.5 visits per head of population at the start to a low of 4.9 in 2003–04, then rose towards the earlier level to 5.2 in 2007–08.

General government measures

- To improve equity of access to GPs, the Australian Government took steps in 2004 and 2005 to increase certain GP payments and reduce patient costs.
- Government also encouraged GP management of chronic diseases, and increased preventive health checks among at-risk groups, by creating payment incentives through the Medicare scheme.
- Responding to the GP shortage, governments have created more training places, encouraged employment of doctors from overseas, and supported use of nurses to help GPs in their clinical work, by providing Medicare rebates for some nurse activities.

Why patients visit GPs and what GPs are doing

- The number of reasons patients give for seeing the GP have increased over time and changed, with a move towards more requests for services (such as check-ups and prescriptions) and away from descriptions of symptoms.

- GPs are more often doing check-ups and detecting and managing chronic diseases, such as diabetes, hypertension (high blood pressure) and other cardiovascular problems, cholesterol disorders and depression.
- They are increasingly likely to order pathology tests at a visit and to order more tests when they have decided to test.

Where has disease management improved?

There have been numerous special government initiatives over the decade, and some new clinical guidelines, aiming to help GPs improve their management of a range of priority health problems. The initiatives have mainly been to ensure that GPs are appropriately reimbursed when they adopt what are considered to be best practice methods of clinical care. This is done by devising new items for services that can be claimed under the Medicare scheme. The causal effect of policies is often difficult to assess because of the complexity and breadth of general practice, and because some policies have been in existence longer than others, having less time to have had an effect. However, this report has shown that GP clinical activity generally correlates strongly with health policy initiatives

Positive developments include increased:

- detection and management of Type 2 diabetes
- involvement in detecting and managing cancers of the breast, cervix, skin and prostate, suggesting greater sharing of responsibility with specialists for the care of these problems
- referrals of psychological problems to psychologists but no decrease in GP involvement in management, again suggesting more sharing of care between these professions
- use of asthma maintenance therapy for adults, in line with recent policies and guidelines
- prescribing of the cholesterol-lowering statin drugs and monitoring of patients' cholesterol levels, particularly those at risk through Type 2 diabetes, in line with guidelines for reducing the risk of heart disease and stroke.

So far there has been *no measurable impact of policies* on:

- multidisciplinary team management with, and use of, allied health professionals by GPs in the management of priority health areas, except for psychological problems and Type 2 diabetes
- management of arthritis and other musculoskeletal conditions, except osteoporosis
- management of heart disease and stroke, except for cholesterol-lowering activities, though the lack of an increase in the incidence of stroke in an ageing population suggests better preventive care
- how health problems among Aboriginal and Torres Strait Islander patients are managed.

And the study raises *concerns* about:

- the cost of the continued rapid growth in the ordering of pathology testing
- an increase in the management rate of adverse medical events in older patients and younger women
- the increasing number of patients who will be diagnosed with complex health needs, the time that will be needed to care for them and the effect this will have on the future GP workforce.