

1 Overview

This is the 24th report from the Bettering the Evaluation and Care of Health (BEACH) program, described briefly below. This report extensively looks at key changes in the service delivery of general practice in Australia over the decade 1998–2008 in the context of developments in national health priorities and government initiatives, and of a changing GP workforce and workload.

The BEACH program

The BEACH program is a continuous national study of general practice activity, based on new samples each year of about 1,000 general practitioners (GPs), each of whom provides details for 100 consecutive GP–patient encounters. BEACH began in April 1998, and this report uses data collected between then and March 2008, by 9,874 GP participants for 987,400 GP–patient encounters.

BEACH is conducted by the Australian General Practice Statistics and Classification Centre, a collaborating unit of the Australian Institute of Health and Welfare (AIHW) in the Family Medicine Research Centre at the University of Sydney. BEACH is currently supported financially by the Australian government, government instrumentalities and private industry (see Acknowledgments).

This overview chapter draws together the main features and findings of the report. It begins by providing some general background on the Australian population, the general practice system in Australia, GP workforce and workload, and related government policies and initiatives. It then briefly outlines the report's structure. In a final section it summarises chapters that have examined changes in how GPs have managed eight health conditions since 1998, soon after they were declared as National Health Priority Areas by the Australian and state and territory governments. Another chapter summarised here concerns the care provided in general practice to Aboriginal and Torres Strait Islander peoples, because considerable policy attention has been paid to the health of Indigenous Australians over the period looked at. Finally, this chapter provides summaries of chapters on current general practice management of sexual health issues, and management of gastro-oesophageal reflux disease (GORD), which have not been declared priority areas but have been identified as morbidities of increasing prevalence and cost to society.

1.1 Background

Australians, GPs and general practice

- In June 2008, the estimated population of Australia was 21.4 million people.¹
- GPs are the first port of call in the Australian health care system.
- In 2006, there were 97 full-time equivalent practising primary care medical practitioners per 100,000 people in Australia.²
- Payment is on a fee-for-service system, there being no patient lists or registration.

- Currently people are free to visit multiple practitioners and multiple practices of their choice; however a system of voluntary registration with a practitioner or practice (yet to be decided) has been mooted.
- There is a universal Australian Government-funded medical insurance scheme (the Medicare Benefits Schedule or MBS) which covers all direct costs of most GP visits.
- The Australian Government also contributes to the individual's cost of filling prescribed medications that are accepted on the Pharmaceutical Benefits Scheme (PBS). While everyone receives some government contribution, a larger contribution is provided to disadvantaged people holding a Commonwealth concession card.
- About 88% of the Australian population visited a GP at least once in 2005–06.³
- In 2007–08, 109.5 million general practice consultations items of service were paid by Medicare Australia, at an average rate of more than five visits per person per year.⁴ GPs provided an estimated additional 5.5 million services, paid for by other funders (such as workers compensation, state government) or not charged for at all.⁵ The primary cost to Medicare for claims for GP items of service was over \$4.4 billion.⁴
- While data are available from the MBS about the number and cost to government of visits to GPs, and the number and type of medications paid for by the Australian Government through the PBS, BEACH provides some insight into the reasons people attend the GP, the services provided and actions undertaken by the GP within the consultation in the management of each problem, health states, and the relationship these factors have with health service activity.

National Health Priority Areas

These priority areas began as the National Health Priority Areas (NHPA) initiative, Australia's response to the World Health Organization's global strategy, Health for All by the Year 2000, announced in 1978. The NHPAs were established in 1996, as a process of collaborative activity involving the Australian and state and territory governments. The initiative was a further development of the earlier defined National Health Goals and Targets which included cardiovascular health, cancer control, injury prevention and control, and mental health, with diabetes being added to the priority areas.⁶ Since 1996, the following areas have been added: asthma (1999)⁷, arthritis and musculoskeletal conditions (2002)⁸, and obesity (2008).⁹ The initiative also focuses on common health risk factors and health inequalities, such as those in Indigenous communities, as reflected by the priority diseases and conditions.

Conditions selected as priorities were those for which it was thought that a concerted effort could achieve significant gains in the health status of the nation. The initiative was seen as representing a change of focus of accountability in governments with increasing emphasis on measurement of activities and the impact the activities have on the health of the community.⁶

Government initiatives for general practice

Changes to education and training, the ageing of GPs, and higher numbers of female graduates have had an effect on the workforce and led to an apparent shortage of GPs. Responses to this shortage include increased GP training places, employment of international medical graduates and introduction of practice nurses.

Policy measures, particularly those in the Medicare Benefits Scheme, have driven changes in the GP workload. Remuneration for GP management of chronic disease, and for preventive

health checks among at-risk groups have been the focus of recent policies. These have driven changes in diagnostic processes, including pathology ordering.

1.2 Report structure and how results are presented

The methods used in this report are fully described in Chapter 2. Other chapters cover:

- changes in the GP workforce, workload and in GP clinical activity (chapters 3 and 4)
- the pathology test ordering behaviour of GPs (Chapter 5), followed by an overview of the care provided by GPs for Aboriginal and Torres Strait Islander patients (Chapter 6)
- the prevalence of overweight and obesity, and of different levels of obesity among patients attending general practice (Chapter 7)
- other priority area morbidities and their management in general practice (chapters 8–14)
- the management of selected morbidities that are not national priority areas but are of importance to public health – sexual health (Chapter 15) and gastro-oesophageal reflux (Chapter 16).

Each chapter contains an overview of the section (including definitions where relevant) and summarises the policies relevant to GP management of the morbidity covered in the chapter. Suggested chapter citations are provided at the end of each chapter, followed by the references pertaining to the chapter.

The term ‘management rate’ is used frequently. It signifies that the selected problem is managed at an average rate of X times in every 100 GP–patient encounters.

Tabled results include 95% confidence intervals (see Chapter 2) to show statistical significance of differences. In the majority of the figures, error bars are provided representing the 95% confidence interval in each result. Where there are too many variables in a figure for optimum visual reading of the error bars, 95% confidence intervals are provided in the text when significant changes are reported. The national effect of significant change is often estimated by extrapolating the BEACH result to all GP Medicare claimed encounters. The method adopted for extrapolation is described in Chapter 2. The reader can apply this method to any significant change in the data presented, to gain an estimate of the size of the national change in frequency of an event, occurring as a result of the changes in general practice measured by BEACH.

1.3 Key findings

GP workforce and workload

Like the rest of the world, Australia has an ageing population, the median age in 2007 being 37 years. From 1998 to 2007 there was about a 1% decrease in the proportion of the population aged less than 15 years and an extra 1% aged 65 years and over. As life expectancy improves, the median age of the population rises, and a greater part of the GP workload will involve management of older patients.

The highest annual average number of Medicare GP items of service claimed per head of population was in 1998–99, at 5.5 visits per head. Average attendance then steadily decreased to a low of 4.87 visits per head in 2003–04. This decreasing attendance rate raised

questions about equity of access, leading the Australian Government to make substantial changes to laws governing Medicare benefits in 2004 and 2005. These measures appear to have had an effect, as attendance rates are now approaching the 1998–99 levels.

Over the decade examined, and increasing proportion of the general practice (GP) workforce became were female, and older (28% now aged 55 years and over). There was a decrease in supply of full-time-equivalent GPs from 101 per 100,000 people in 2002 to 97 per 100,000 in 2006, partially a result of decreased working hours for many. Solo general practice is now relatively rare, the move to larger practices having been encouraged by the Australian Government's GP Links program. More than half the practising GPs now hold postgraduate general practice qualifications in response to changes instituted in the mid-1990s, which required that new GPs be so qualified.

An increasing proportion of the GPs workload is being spent with older patients and a lesser proportion with children. This is associated with the changing population demographics and decreasing child attendance rate, but whether the latter reflects improved overall children's health or reflects access difficulties cannot be determined (see Chapter 3).

Clinical activity

The reasons patients see a GP have changed, with an increase in the number of reasons given (suggesting an increase in multiple problem management, supported by the results), a move towards more requests for services (for example, check-ups and prescriptions) and away from presentations of symptoms and complaints. The introduction of Medicare item numbers specifically for health assessments of at-risk groups could explain some of the increased requests for check-ups. Publicity campaigns urging skin and cancer checks, and checks for sexually transmitted infections may also have contributed.

In line with the increase in patient requests, GPs are doing more check-ups, and are managing more chronic problems, reflected in higher chronic disease detection rates, which may be the result of more 'well-patient' check-ups for selected groups. There were increases in management rates of many of the commonly managed priority areas, including hypertension, lipid disorders, diabetes and depression. Most chronic diseases, once diagnosed require long-term or life-long ongoing care, so the earlier the disease is detected the more GP services will be used in its management over a lifetime.

A decrease in management rate of infections and in follow-up encounters for non-chronic conditions could be the result of fewer encounters with children, and broad public and GP education campaigns about the self-limiting nature of some acute problems (see Chapter 4).

Pathology ordering

Between 2000–02 and 2006–08, GPs ordered pathology on an increasing number of occasions, and ordered more tests on average on each occasion. In 2000–02, an estimated 33.6 million tests/batteries were ordered per annum, and by 2006–08, this had increased to 51.3 million per annum. Type 2 diabetes was responsible for 8% of the national increase of 17.7 million tests ordered, due to increased management rate, increased likelihood of ordering pathology, and increased number of tests ordered on those occasions.

Other priority areas that contributed significantly to the increase in pathology ordering was cardiovascular disease (13.1% of the total 17.7 million increase), especially hypertension (7.2%) and lipid disorders (4.5%). Other significant contributors included general check-ups (8.2%), blood tests (4.9%) and female genital check-ups (4.4%).

A number of disease-orientated policies aiming to improve patient care are likely to result in increased GP pathology ordering, because they are in line with evidence-based practice. However, while these policies may increase pathology expenditure, they may also reduce long-term health costs in other areas of the health budget (for example, by reducing avoidable hospital admissions) (see Chapter 5).

Aboriginal and Torres Strait Islander patients

Aboriginal and Torres Strait Islander patients are a major priority for all governments in Australia and for general practice. They accounted for 1.2% of all BEACH encounters over eight years. Two-thirds were under the age of 45 years, compared with less than half of non-Indigenous patients. Indigenous patients experienced higher management rates of diabetes, asthma and drug abuse, but lower management rates of cardiovascular disease, lipid disorders, oesophageal disease and preventive check-ups (blood pressure checks and immunisations). Infections were managed 36% more often at Indigenous encounters than at non-Indigenous encounters. Of Indigenous patients, 74% resided in Regional/Remote areas. Encounters with the 26% residing in Major Cities more often involved management of drug abuse, upper respiratory tract infection, and psychological problems. Indigenous patients were twice as likely to have all three measured risk factors (daily smoker, at-risk drinker, overweight/obese) than were non-Indigenous patients. The high prevalence of multiple risk factors reinforces the growing need for early intervention. The first hurdle is the inadequate identification of the Indigenous status of patients, as extra preventive services can only be given if Indigenous status is recognised (see Chapter 6).

Overweight and obesity

The Australian Government has recognised obesity as a major public health problem needing attention, and is allocating resources towards further research and public health campaigns.

Between 1998–00 and 2006–08, there was a steady increase in prevalence of overweight (from 33% to 35%) and obesity (19% to 24%) in adult general practice patients. In 2006–08, 16% of adult GP patients were in Obese Class I (body mass index 30.00–34.99), 5% in Class II (35.00–39.99) and 3% in class III (40.00 and over), the prevalence of each class having increased significantly since 1998–00. The prevalence of overweight/obesity in children (2–17 years) attending general practice did not change between 1998–00 (27.9%) and 2006–08 (28.7%), and this is in line with findings of other recent research (see Chapter 7).

Respiratory problems

The prevalence of asthma among GP patients remained unchanged, but increased use of maintenance therapy, in accordance with recent policies and guidelines, and a decrease in asthma management rates, suggest better asthma control. The management rate of chronic obstructive airways disease did not change, but there was a significant increase in the detection rate of new cases, reflecting improved GP awareness. Management rates decreased over the decade for acute bronchitis, asthma, sinusitis, tonsillitis, and allergic rhinitis, but remained unchanged for chronic obstructive pulmonary disease (COPD), upper respiratory tract infection (URTI), and influenza.

Antibiotic prescribing decreased significantly for children, probably in response to a range of educational interventions, but remained unchanged for adults. Where URTI was managed,

21% of children and 37% of adults received antibiotics. Further attention to prescribing of antibiotics for adults is warranted (see Chapter 8).

Cardiovascular problems

Vascular/lipid problems accounted three quarters of all cardiovascular problems managed, and their management rate increased over time for both males and females and for older patients (75 years and over). Increased pathology ordering corresponded with an increase in management of lipid disorders and of diabetes as the most common comorbidity. The management rate of cardiac problems did not change,, but the management rate of ischaemic heart disease and heart failure decreased and the management rate of atrial fibrillation increased. No changes were noted in the management rates of cerebrovascular problems. Common to all problem groups was the increased prescribing rate of statins, probably due to the changed PBS criteria broadening access to statins. Patients managed for cardiovascular problems were less likely to smoke but more likely to be overweight/obese than average. Further, nearly 30% of males and 20% of females already managed for a cardiovascular/lipid problems drink at at-risk levels (see Chapter 9).

Type 2 diabetes

The prevalence of Type 2 diabetes was estimated to be 5.7% in the GP-attending population and (through extrapolation) 5.0% in the general population. Diabetes patients with one or more additional morbidities constituted 6.1% of the population (1.3 million patients). Over the 10 years, multiple policy initiatives and guideline and regulatory changes have affected the way GPs manage Type 2 diabetes. The management rate of Type 2 diabetes increased by 57%, and the diagnosis rate of new cases doubled. Between 2000–01 and 2007–08 pathology test orders for Type 2 diabetes problems increased by 42% and the HbA1c testing rate by 28%. The rate of referral to allied health doubled in the 10 years. The rate of prescriptions for glucose lowering medications remained constant, but prescription rates for anti-platelet medications, lipid lowering medication and anti-hypertensives increased significantly. Patients with Type 2 diabetes use 50% more GP time per year than average. Changes in GP management of Type 2 diabetes have occurred in line with guideline and policy changes (see Chapter 10).

Musculoskeletal problems

‘Arthritis and musculoskeletal conditions’ was added to the national priority areas in 2002. Subsequently, national frameworks for these conditions were designed. However, policies in this area have not greatly affected the management of these conditions in general practice, with the exception of increased management rates of osteoporosis. However, given the ageing population, it may have been reasonable to expect an increase in the management rate of these morbidities. The lack of measurable change in management rates for the majority of these morbidities may suggest a positive effect of policy (see Chapter 11).

Injuries

The management rate of injuries decreased over the 10 years, with musculoskeletal injuries making up half of all injuries, and skin injuries a further 35%. Adverse effects of a medication (which are internationally regarded in the injury class, but are not in Australia's injury priority area) were the only injury type to increase in frequency. These data suggest that this is an area for future policy consideration. Concerns that arise from this research are the increased use of opioids in GPs' management of physical injuries, and the finding that adverse medical events in older patients are becoming more common (see Chapter 12).

Cancer

The GP management rates of cancer increased over the 10 years by 25% (from 194.6 to 243.2 per 10,000 encounters), and included increases in management of skin malignancies, and cancer of the breast, prostate and cervix. Rates of preventive check-ups (Pap smears, breast and prostate checks) as well as excisions of skin malignancies all showed significant increases. Rates of pathology test ordering, including prostate specific antigen and faecal occult blood test also increased significantly, perhaps resulting from wide public discussion about prostate cancer, and the National Bowel Cancer Screening program.

Policies that involve a widely publicised campaign or include a patient register appear to increase patient demand for screening tests. GPs are becoming more involved in the cancer detection process and in the coordination of the cancer patient's care (see Chapter 13).

Mental health

Multiple initiatives introduced between 1998 and 2008 aimed to improve mental health care (particularly depression). General practice played a central role in many of these initiatives.

There was a significant increase in the management of psychological problems overall between 2002–03 and 2007–08, most notably in depression. A significant increase in psychological counselling for anxiety and depression occurred before the Better Outcomes initiative was introduced, and the rate remained steady after its introduction. The rate at which patients with depression and anxiety problems were referred increased significantly, with a shift in referrals for depression, from psychiatrists to psychologists associated with the introduction of the MBS items for psychologist services. The increase in referrals to psychologists was proportionally larger in rural and disadvantaged areas (see Chapter 14).

Sexual health

While sexual health is not a National Health Priority Area, there have been important Australian Government policy activities in this area. Over the 10 years, the rate of GP sexually transmitted infection (STI) testing and screening increased significantly, and the management rate of diagnosed STIs marginally increased. It is not known whether the increased management of diagnosed STI represents a successful campaign with improved testing for, and recognition and management of, STIs or a failure of safe-sex educational programs resulting in higher prevalence in the population.

In 2004–05, the Australian birth rate rose sharply and there was an increase in pregnancy tests and confirmations in Australian general practice. However, GP management of pregnancy continued to decrease after 2004, suggesting the increased birth rate had no effect on their ongoing move away from obstetrics management (see Chapter 15).

Gastro-oesophageal reflux disease (GORD)

This problem is not a National Health Priority Area, but has high prevalence in Australia (some estimates suggesting 63%), is frequently managed with other chronic problems, particularly in older patients, and is a significant pharmacological cost to the PBS. The main changes in the guidelines and regulations were about endoscopy and the subsequent removal (in 2001) of the requirement for endoscopy, X-ray or surgery, before proton pump inhibitors could be prescribed on the PBS. Over the 10 years, there was a 47% increase in the management rate and a 46% increase in new cases of GORD being diagnosed. Referrals to specialists for GORD fell by half, and referrals for endoscopy fell by over 90%, coinciding with the regulatory changes in 2001 (see Chapter 16).

1.4 Conclusion

This report has shown that GP clinical activity generally correlates strongly with health policy initiatives, and this is particularly apparent in the GP management of Type 2 diabetes. Also, GPs are becoming more involved in the detection and ongoing management of some cancers, suggesting increased sharing of responsibilities with specialists. The introduction of MBS cover for GP-referred psychologist consultations increased referrals dramatically, but did not decrease the GP role in management, suggesting increased multidisciplinary care of psychological problems. In contrast there is no evidence of increased team management with, or use of, allied health professionals in the management of other National Health Priority Areas.

Asthma management rates have decreased, presumably as a result of better asthma control, resulting from the care plan initiatives. In contrast there has been no measurable impact of policies on GP management of: arthritis and other musculoskeletal conditions, with the possible exception of improved detection of osteoporosis; or of cardiovascular disease, though increased lipid monitoring management may be improving secondary prevention, leading to increased quality years of life.

Measurable decreases in rates of injury management may be the result of improved prevention. However, adverse pharmacological events are increasingly being seen in general practice. They may warrant special policy attention, as may sexual health problems and gastro-oesophageal reflux disease, both of which have high social impact.

Initiatives in the area of Indigenous health do not appear to have produced changes in the care received in general practice. Better identification of Indigenous status and concentration on health risk behaviours are the keys to future efforts. Public education initiatives in the area of obesity have begun and policies related to GP care of this problem are currently under development. Measurement of the impact of these policies will be done in the future.

Many policy initiatives rely on increased health checks. A 'well diagnosed' ageing population will over time mean increased diagnosed prevalence of multimorbidity, presenting the GP with more patients with complex health needs. The chronic disease item numbers are therefore likely to become more popular with GPs. This has implications for future GP workforce, as chronic disease items of service are on average far longer than other item encounters. It also has implications for the continued exponential growth of pathology test ordering.

References

1. Australian Bureau of Statistics 2008. Australian demographic statistics, June 2008. Cat. no. 3101.0. Canberra: ABS. Viewed 20 February 2009, <www.abs.gov.au/ausstats/abs@.nsf/mf/3101.0/>.
2. Australian Institute of Health and Welfare 2008. Medical labour force 2006. National health labour force series no. 41. Cat. no. HWL 42. Canberra: AIHW.
3. Knox SA, Harrison CM, Britt HC, Henderson JV 2008. Estimating prevalence of common chronic morbidities in Australia. *Med J Aust* 189(2):66-70.
4. Australian Government Department of Health and Ageing 2008. Medicare statistics, June quarter 2008, Group B tables. Canberra: DoHA. Viewed 9 December 2008, <www.health.gov.au/internet/main/publishing.nsf/Content/medstat-jun08-contents>.
5. Britt H, Miller GC, Charles J, Pan Y, Valenti L, Henderson J et al. 2007. General practice activity in Australia 2005-06. General practice series no. 19. Cat. no. GEP 19. Canberra: Australian Institute of Health and Welfare.
6. Australian Institute of Health and Welfare & Commonwealth Department of Health and Family Services 1997. First report on National Health Priority Areas 1996. Cat. no. PHE 1. Canberra: AIHW & DHFS.
7. Australian Institute of Health and Welfare 2005. National Health Priority Areas. Canberra: AIHW. Viewed 4 September 2008, <<http://www.aihw.gov.au/nhpa/index.cfm>>.
8. Australian Government Department of Health and Ageing 2002. National listing of arthritis to give more focus for national action. Canberra: DoHA. Viewed 20 November 2008, <<http://www.health.gov.au/internet/main/publishing.nsf/Content/health-mediarel-yr2002-kp-kp0210011.htm>>.
9. Australian Government Department of Health and Ageing 2008. Australian Health Ministers' Conference. Canberra: DoHA. Viewed 9 December 2008, <<http://www.health.gov.au/internet/main/publishing.nsf/Content/mr-yr08-dept-dept180408.htm>>.