General practice activity in Australia 2000–01

GP Statistics and Classification Unit

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Bettering the Evaluation and Care of Health

General practice activity in Australia 2000–01

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Foreword

I am very pleased to make some preliminary comments for this report on general practice activity in Australia for 2000–01.

Many of my colleagues in general practice will find such a report daunting, given their time commitments. Despite that, the work undertaken by the General Practice Statistics and Classification Unit, in the Family Medicine Research Centre at the University of Sydney, is of increasing importance to general practitioners.

For the first time, this report is able to look at trends in general practice activity. With three years of data, the authors are able to begin to report on changes in the field.

The profession needs to use the best available evidence, but it also needs to be involved in the creation of high quality evidence. I note that the survey for this report had a lower response rate than previously, and that full-time GPs were less likely to participate. I commend the research team for considering ways in which participation can be maximised. Although the team suggests that the lower participation rate relates to the timing in the triennium for continuing professional development, I am concerned that it may also relate to a growing demand for unpaid work, and greater workforce pressure.

I understand the competing demands on GPs. The ability to participate in such important research needs to be built into our workforce planning and into our assessment of the overheads of general practice. Unless we do this, our ability to create the evidence on which to build improved patient care will be compromised.

I look forward to the results of the research team's trial of active electronic data collection methods. The use of electronic health records is increasingly common, and though it may be some time before the data quality is equivalent to that provided in a paper survey, this trial is a first step in the path that we must tread. I hope it will make our work better, but also easier.

The quality of care provided by GPs is, of course, also an abiding interest of the Royal Australian College of General Practitioners (RACGP). This report begins to analyse data over time to ascertain the quality of some aspects of practice. Although the judgements are inevitably subjective, the conclusions reached will form a starting point for national benchmarks against which GPs can monitor their own practice.

There is some way to go on an investigation of quality. Though no one report can critically appraise all issues, it would be valuable to know if the large proportion of encounters at which a single problem was managed relates to a deliberate practice amongst GPs to work with patients on constraining the 'shopping list' patients sometimes bring. Managing the number of problems to be dealt with conjointly with patients may be a strategy to improve quality, within the constraints of the current rebate structure. Research such as that done by the Sydney University team could begin to shed light on these issues.

Although there is a growing interest in financial incentives for quality care, I believe that most GPs also pursue quality for intrinsic rewards such as feedback from the patients, and the knowledge that they are doing well. It is of interest, in this context, that this report suggests that even without financial incentives, there has been a considerable increase in the use of psychological counselling in the management of depression over the three-years studied, accompanied by no change in the overall medication rate.

Compared with the previous two years, the report estimates 360,000 fewer GP contacts for asthma, nationally, in the 2000–01. We cannot tell whether this change has arisen from better

management. If it has, then the implication for the direct cost to the health system is significant, the implication for improved involvement in the labour-force is important (with substantial time lost by carers taking leave), and the benefit to patients is also important.

The information held by GPs about the quality of their care is very valuable. This report confirms that a substantial opportunity for quality improvement exists, if GPs begin to critically appraise the data that they collect as a part of routine clinical care. The possibility that lipid disorder detection has not improved in the past three years suggests that we can know where we are doing well, but also know where we can improve our care. The report shows however, that GPs must value the data available to them. Disappointing omissions in the recording of some details of prescriptions and repeats confirm that our ability to draw conclusions is highly dependent on our willingness to value data and record it accurately.

Not only are these data useful in the individual clinical encounter, but the BEACH study shows that they will be increasingly useful at a practice level, and, interpreted correctly, at a national level. The value of research such as that reported here will be increased if we are able to use it to strengthen our arguments for the benefit of general practice intervention, and to assist in planning at the national level.

I would like to thank the many GPs who took valuable time from their practice or personal lives to complete the encounter forms. The report points out that the 999 participants in BEACH this year together had over 10,000 years of general practice clinical experience. As President of the RACGP I know that the fruits of GP participation in such research can seem distant, but the contribution of practising GPs to our knowledge about general practice is vital to the future of patient care and the profession.

Paul Hemming MB ChB, FRACGP, FRCGP, FAMA

President

The Royal Australian College of General Practitioners

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Summary

This report details findings from the third year of the BEACH (Bettering the Evaluation and Care of Health) program, a continuous national study of general practice activity in Australia. The collection period reported is April 2000 to March 2001 inclusive.

This third BEACH year provided the opportunity to undertake trend analyses, and presents the first measures of changes in practice patterns over the 3 years 1998–99 to 2000–01.

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 data by the General Practice Branch of the Department of Health and Aged Care. GPs are approached first by letter and then 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 2000–01 BEACH data year a random sample of 999 GPs took part, providing details of 99,900 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 subsamples of patients and the results are included in this publication. Other subsample covered in the third year of BEACH are reported elsewhere (http://www.fmrc.org.au).

The participating general practitioners

Males made up 68.4% of participants and GPs aged 45 years or older accounted for 63.9%. One in five participants was in solo practice and more than one-quarter had graduated in a country other than Australia. Almost one-third were Fellows of the Royal Australian College of General Practitioners (RACGP) and 2.5% were currently in the Training Program.

A comparison of characteristics of participating GPs (29.8% of those with whom contact was established) with those of the GPs who declined to participate showed that GPs aged less than 35 years were under-represented in the final BEACH GP sample. Further, less busy GPs were significantly more likely to participate than those in the highest activity group. The encounter data underwent post-stratification weighting to adjust for these differences. The weighting also 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 99,307 encounters (weighted) 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 (98.1%) were direct encounters (patient seen). By far the majority (94.6%) were claimable from Medicare and 83.9% of these were standard surgery consultations.

The encounters involved 149,962 reasons for encounter, 143,528 problems managed, 107,400 medications, 49,072 non-pharmacological treatments, 10,366 referrals, 29,225 pathology test orders and 8,227 orders for imaging.

The patients

Fourteen per cent of the encounters were with children, 10.3% were with young adults, and 23.0% with elderly patients. The patient was female at 57.1% of encounters, held a health care card at 36.7%, and came from a non-English-speaking background at 7.1% of encounters. The patients identified themselves as an Aboriginal person or a Torres Strait Islander at less than 1%. Only one patient identified themselves as both.

Patient reasons for encounter (RFEs) were recorded at a rate of 151 per 100 encounters. More than half related to the respiratory, musculoskeletal, skin, circulatory and digestive systems. 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 145 per 100 encounters. Problems related to the respiratory system, the skin and the musculoskeletal and circulatory systems accounted for just over half of all problems managed. The most common individual problems were hypertension (8.6 per 100 encounters), upper respiratory tract infection (URTI) (6.9 per 100), immunisation / vaccination (4.6 per 100) and depression (3.7 per 100).

Over the last 3 years (1998–99 to 2000–01) there has been statistically significant increases in the rate of management of problems related to the endocrine and metabolic system, partly explained by an increase in the rate of management of lipid disorders. There was a significant decrease in the rate of management of respiratory problems, in particular of asthma and acute bronchitis. There were also marginal decreases in the rates of management of problems related to the ear, the eye and the neurological system.

Management

There was no specific treatment recorded for 13.6% of problems managed. The most common treatment was medication alone (40.9% of problems) followed by clinical treatments only (9.6%) and then by medication plus clinical treatment (8.6%).

Medications

Medications were recorded at a rate of 108 per 100 encounters, or 75 per 100 problems. These medications could be prescribed (85.2% of all medications), advised for over-the-counter purchase (8.5%), or supplied by the GP (6.3%).

- Prescribed medications: Medications were prescribed at a rate of 92.3 per 100 encounters or 63.9 per 100 problems managed, at least one being prescribed at 59.8% of encounters and for 51.2% of problems managed. Medication groups most frequently prescribed were antibiotics, cardiovascular medications, and central nervous system medications. The most commonly prescribed individual medications were paracetamol (4.2% of all prescriptions), amoxycillin (3.5%), cephalexin (2.4%), the paracetamol-codeine combination (2.4%) and celecoxib (2.3%).
- Other medications: The medications most commonly recommended for over-the-counter purchase were paracetamol, ibuprofen, loratadine and clotrimazole topical. Those supplied by the GP were often vaccines, including the influenza virus vaccine, oral sabin

and triple antigen. However, celecoxib was the second most frequently supplied medication.

Changes in medications over time

Trend analysis demonstrated some significant changes over the last 3 years in some patterns of pharmacological management including:

- a significant increase in the medication rate of angiotensin II antagonists, offset by a decrease in the rates of calcium channel blockers, ACE inhibitors and antihypertensives.
- a significant increase in the serotonin reuptake inhibitor (SSRI) medication rate, offset by a decrease in rates of tricyclic anti-depressants and monoamine oxidase inhibitors while the overall rate of anti-depressants remained constant
- a significant increase in the overall medication rate of non-steroidal anti-inflammatory drugs much of which was explained by the coxibs, accepted onto the Pharmaceutical Benefits Scheme (PBS) in the middle of the BEACH year.
- a significant increase in the rate of lipid-lowering medications, and for the statins in particular
- a significant decrease in the overall medication rate of asthma inhalants.

Non-pharmacological treatments

These were classified into two groups, clinical and procedural. At least one non-pharmacological treatment was provided for almost 30% of problems. Clinical treatments were more frequent (37.2 per 100 encounters or 25.8 per 100 problems) than procedures (12.1 and 8.4 respectively). Advice and education about the treatment of a problem (65.9 per 100 encounters) was the most common clinical treatment. The most frequent procedure was excision or removal of tissue (2.6 per 100 encounters).

There has been a significant increase in the overall rate of provision of non-pharmacological treatments since 1998–99 and this is almost totally due to an increase in the rate of clinical treatments from 31.4 per 100 encounters to 35.1 per 100.

Referrals, admissions, tests and investigations

At least one referral was given at 9.9% of encounters for 6.9% of problems. Referral to medical specialists arose at 7.4 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. Malignant neoplasms, pregnancy, depression and diabetes were the problems most often referred to a specialist while sprains / strains, back complaints and depression were those most commonly referred to an allied health professional.

Pathology was ordered for one in ten problems (at a rate of 29.4 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 include lipid disorders, hypertension and diabetes.

Imaging was ordered for one in twenty problems, at a rate of 7.7 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.

Patient health risk factors

- **Body mass index of adults:** Of 31,957 adult respondents (aged 18+ years), more than half were considered obese (20.2%) or overweight (34.1%). Men were more likely to be overweight or obese (60.2%) than women (50.2%). Eight per cent were underweight.
- **Body mass index of children:** BMI was calculated for 4,465 patients aged 2–17 years. Overall, 11.9% of these children were considered obese and a further 15.3% were overweight.
- **Smoking:** Of the 32,124 responding adult patients (aged 18+ years), 19.3% were daily smokers, 4.4% were occasional smokers and 27.3% were previous smokers. Males were more likely to report daily smoking (22.6%) than females (17.1%).
- **Alcohol use:** 'At-risk' levels of alcohol intake were reported by 24.1% of the 32,543 adult respondents. Male patients were more likely to be at-risk drinkers (30.3%) than women (19.9%). Prevalence of at-risk drinking decreased with age for both sexes.

Changes over time

The proportion of adult patients who reported at-risk levels of alcohol intake, and the proportion who said they smoked daily did not change between 1998–99 and 2000–01. However there was a significant increase in the proportion of adults classed as obese, (18.4% in 1998–99 to 20.2% in 2000–01) and in the proportion classed as overweight (32.8%–34.1%).

Selected topics—changes over time

Multiple linear regression was used to investigate changes in medication management of selected problems over the first 3 years of the BEACH program.

- **Depression and other psychological problems:** The rates of management of depression and anti-depressant medication prescription remained steady. However, SSRIs were increasingly substituted for older types of anti-depressant medication. Psychological counselling increased from 34.2 per 100 depression contacts to 40.8 per 100.
- **Lipid disorders and lipid-lowering agents:** The relative management rate of lipid disorders increased significantly over the 3 years and there was a parallel increase in the prescribing rate of lipid-lowering agents, and of statins in particular, such that the prescribing rate of lipid-lowering agents for lipid problems did not change over the study period.
- **Asthma:** There was a decrease in the management rate of asthma and there was a decrease in the prescribing rate of bronchodilators. Consequently, there was no real change in the medication management of asthma over the 3-year period.
- **Non-steroidal anti-inflammatory drugs (NSAIDs):** There was a marked increase in the prescribing of NSAIDs and the increase was entirely explained by the increase in the rate of coxib prescribing. The increase in prescribing of total NSAIDs, the uptake of the coxibs and the discarding of other NSAIDs were more pronounced in the management of arthritic problems relative to other musculoskeletal problems.

Conclusion

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

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