Bettering the Evaluation And Care of Health A Study of General Practice Activity

The Australian Institute of Health and Welfare is an independent health and welfare statistics and information agency. The Institute's mission is to inform community discussion and decision making though national leadership in the development and provision of authoritative and timely information on the health and welfare of Australians.

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 Unit 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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BEACH

Bettering the Evaluation And Care of Health
A study of general practice activity

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Six-month interim report

April 1999

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Foreword

General practitioners play an important role in the provision of primary health care services and in providing access for their patients to pharmaceuticals, specialists, hospitals and other health care services. The substantially uncapped public expenditure on the services they provide comprised 7.9% of government health expenditure and 5.4% of total health expenditure in Australia in 1996–97.

Despite this, there have been no regular data collections on the activities of general practitioners, with the limited Medicare data being the sole source of national, routinely collected information. The only national data available on the 'casemix' of general practitioners, that is, on the characteristics of their patients, the problems managed, and the nature of the management, have been from previous relatively short term studies, now of mainly historical interest.

The first national survey of general practice in Australia was conducted in 1962–63 when 85 general practitioners throughout the country recorded information about every patient seen for a 12-month period. The second national survey, information was recorded for one week several times per year between 1969 and 1974, with over 1,000 general practitioners taking part at various times. The most recent study was the Australian Morbidity and Treatment Survey undertaken by the Department of General Practice at the University of Sydney in 1990–91, with 495 general practitioners throughout Australia each recording data for two weeks on a rotating basis throughout the year.

National health information has improved over the years, both in quality and timeliness, but general practice had remained a substantial gap. This was highlighted in the 1995 National Health Information Development Plan, in which the development and collection of standardised information on primary and other non-institutional health care encounter data was identified as one of the eight highest-priority health information issues. In response, the Australian Institute of Health and Welfare and the University of Sydney are collaborating with a national, continuing survey of general practitioner activity, titled 'Bettering the Evaluation And Care of Health', or *BEACH*. The survey is being undertaken by the General Practice Statistics and Classification Unit, a collaborating unit of the Institute, located within the Department of General Practice at the University.

BEACH builds on the experience of the Australian Morbidity and Treatment Survey and more recent studies in the western Sydney area and in Victoria. The AMTS data proved to be an essential source of data of the activity of general practitioners and the characteristics of their patients but are now out of date. *BEACH* provides an invaluable source of timely data to describe general practice activity and inform improvements in primary health care service provision. This interim report of the project describes the project's methods in detail and includes a summary of the data collected during the first six months of the collection.

BEACH's financing is innovative, with funding provided through a consortium of government agencies and pharmaceutical companies. We are grateful for the support of these organisations, without which the project would not be possible.

We trust that this report will provide a useful introduction to the project and invite comments from readers on its use in meeting their needs for information about general practice activity.

Richard Madden
Director, Australian Institute of Health and Welfare

Charles Bridges-Webb
Emeritus Professor of General Practice, the University of Sydney

April 1999

Tables

Acknowledgments

This report would not have been possible without the valued cooperation and effort of the first 476 participating general practitioners who provided the data.

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- the Commonwealth Department of Health and Aged Care
- Astra Pharmaceuticals
- the Commonwealth Department of Veterans Affairs
- Roche Products Pty Ltd
- the National Occupational Health and Safety Commission
- Rhône Poulenc Rorer 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 and the Consumers Health Forum, and the contribution of their representatives to the *BEACH* Advisory Board.

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Background

General practice is the usual point of entry into the Australian medical care system. Lack of patient registration with a practitioner or a practice means that patients may visit multiple general practitioners in multiple practices at any time. The costs of general practice consultations are largely borne by government with a rebate equal to 85% of the scheduled fee for service (Department of Human Services and Health 1995). Between 1990–91 and 1996–97 the number of claims for general practice consultations rose by approximately 21%, from 85 million to 103 million (AIHW 1998). Population growth over the same period was only 6.4% (ABS 1990, HIC 1999). In 1995–96 Medicare payments for general practice services totalled more than $2.3 billion and general practice generated secondary costs of a further
$3 billion (AIHW 1998). However, there has been no ongoing system of monitoring the clinical activities of general practice.

Recently some monitoring of general practice has been undertaken using data from the Pharmaceutical Benefits Scheme and/or the Medicare Benefits Schedule. For example, the Health Insurance Commission (HIC) can provide data estimates based on service item number; patient age and gender; the number of different GPs seen by groups of the population; and, more recently, the prescribing and test-ordering patterns of individual GPs. However, the Commission has no data relating such variables to the morbidity under management or other patient socio-demographics. With very few exceptions (which rely on the assumption of diagnosis on the basis of drug prescribed), the HIC data cannot describe the problems dealt with by GPs or how these problems are being managed.

Australian general practice data

Over the last two decades only three major studies of general practice service provision in Australia have been undertaken (National Morbidity Survey Sub-committee 1966, 1969; Royal Australian College of General Practitioners 1976; Bridges-Webb et al. 1992). The most recent was the survey of morbidity and treatment in general practice in Australia in 1990–91 (the Australian Morbidity and Treatment Survey 1990–91), funded by the National Health and Medical Research Council and the General Practice Evaluation Program and conducted by the Family Medicine Research Unit at the University of Sydney. The study involved a national random sample of 495 GPs (stratified by State) who each recorded details of all surgery and home consultations for two periods of one week, six months apart. Encounter details were recorded on structured paper forms and GP recording weeks were evenly spread throughout the year. The resulting database incorporated records of over 110,000 doctor–patient encounters and included more than 160,000 problem contacts (Bridges-Webb et al. 1992).

While the Australian Morbidity and Treatment Survey data have been extensively analysed in past years, the data are now well out of date, particularly those pertaining to pharmaceutical prescribing. Federal and State government departments, university and other researchers, postgraduate research students, government instrumentalities and industry need up-to-date information.

Recognising the need for timely, quality data that can describe the activities of general practice, the Australian Institute of Health and Welfare and the University of Sydney created a new collaborating unit called the General Practice Statistics and Classification Unit (GPSCU).which is situated within the University's Family Medicine Research Unit, Department of General Practice, at Westmead Hospital. The GPSCU has three responsibilities:

- to fill the void in information about the activities of general practice, the patients seen, the problems managed and the management techniques utilised;
- to further develop classification systems for primary care;
- to further develop data collection and analytical techniques required for future collection of longitudinal patient-based data through direct download of de-identified general practice electronic health records.

The first of these objectives is being satisfied by the introduction of the *BEACH* (*B*ettering the *E*valuation *A*nd *C*are of *H*ealth) program, continuous data collection in general practice.

BEACH: Bettering the Evaluation And Care of Health

BEACH is a collaborative study between the Australian Institute of Health and Welfare and the University of Sydney and is being conducted under the Australian Institute of Health and Welfare Act 1987. It is being supported by a consortium of government instrumentalities and the pharmaceutical industry and is part of the National Health Information Management Work Program.

Organisations contributing financially to the conduct of this study are

- the Commonwealth Department of Health and Aged Care
- Astra Pharmaceuticals
- the Commonwealth Department of Veterans Affairs
- Roche Products Pty Ltd
- the National Occupational Health and Safety Commission
- Rhône-Poulenc Rorer Australia Pty Ltd

The program is overseen by the *BEACH* Advisory Board, consisting of representatives of the General Practice Statistics and Classification Unit and the Australian Institute of Health and Welfare, each of the contributing organisations, the Royal Australian College of General Practitioners, the Australian Medical Association, the Consumers Health Forum and the Australian Divisions of General Practice.

BEACH combines health services research with traditional epidemiological research, as patient risk factors or health states are assessed in parallel with health care delivery. This information will provide general practice population estimates of the incidence and prevalence of conditions and risk factors. It will also serve to investigate the relationships between risk factors and health states and other aspects of the consultation (for example, problems managed).

Aims

The *BEACH* program has three primary aims:

- to provide a reliable and valid data-collection process for general practice which is responsive to the ever-changing needs of information users,
- to establish an ongoing database of GP–patient encounter information,
- to assess patient risk factors and health states and the relationship these factors have with health service activity.

Method

Summary

Each individual in a random sample of recognised GPs records details of 100 consecutive GP–patient encounters of all types (including indirect consultations which resulted in clinical action) on structured paper encounter forms. In a full-data collection year 1,000 GPs will participate and this will provide details of approximately 100,000 encounters.

Ethics approval for this study was obtained from the Human Ethics Committee of the University of Sydney and the Health Ethics Committee of the Australian Institute of Health and Welfare.

The *BEACH* program began on 1 April 1998. Data from the first six months have been entered, cleaned and analysed.

Data elements

BEACH includes three inter-related data collections: encounter data, patient risk factors and health states, and GP characteristics. An example of the form used to collect the encounter data and the data on patient risk factors and health states is included as Appendix 1. The GP characteristics form is included as Appendix 2.

1. Encounter data

The consultation

- Date of consultation
- Type of consultation

    Direct (face to face)

        Medicare item number (where applicable)

        Workers compensation paid

        Other paid

        No charge

    Indirect (patient not seen); action(s) resulting

        Script

        Referral

        Certificate

        Other

The patient

- Date of birth
- Gender
- Status to the practice (new / seen before)
- Postcode of residence
- Health Care Card status (yes / no)
- Veterans Affairs status (Gold / White)
- Non-English speaking background (yes / no)
- Aboriginal (yes / no) (self-identification)
- Torres Strait Islander (yes / no) (self-identification)
- Patient reasons for encounter (up to three)

Problems and their management at this encounter

- Diagnoses / problems managed at the encounter (up to four)
- Status of each problem (new to patient / managed before)
- Whether the problem was work related

Management for each problem

- Medications prescribed, over-the-counter drugs advised and other drugs supplied by the GP
    - Brand name
    - Form (where required)
    - Strength
    - Regimen
    - Status (new drug for this problem for this patient / continuation of previous script)
    - Number of repeats
- Other treatments, procedures, counselling (up to two per problem) undertaken at the consultation
- Referrals to specialist / health professional / emergency department / hospital admission (multiple allowed each problem)
- Pathology and imaging ordered

2. Patient risk factors and health states

Supplementary analysis of nominated data (SAND)

A section on the bottom of each recording form investigates aspects of patient health or health care delivery in general practice not covered by the consultation-based information (see Appendix 1).

The year-long data-collection period is divided into 10 blocks, each of five weeks and designed to include data from 100 GPs. Each GP's recording pack of 100 forms is made up of

- **40 A (Alcohol/BMI) forms,** which include questions about the patient's self-reported wellbeing, height and weight and alcohol intake (Appendix 1);
- **40 S (Short) forms,** which include a single question about the patient's smoking status together with questions on other subjects nominated for that block;
- **20 L (Long) forms,** which include questions on other subjects nominated for that block.

The order of these components is randomised so that 40 A forms may appear first, second or third in the pad. The aim is to ensure there is no order effect on the quality of the information collected.

3. GP characteristics data

Each participating GP completes a GP profile questionnaire, which includes the following data elements:

- age and gender
- years in general practice
- number of GP sessions worked per week
- number of full-time and part-time GPs working in the practice
- consultations in languages other than English
- postcode of major practice address
- country of graduation
- postgraduate general practice training and FRACGP status
- membership of professional organisations
- brand substitution behaviour.

An example of the GP profile questionnaire form is attached as Appendix 2.

The GP sample

The sample frame

The source population includes all recognised GPs who have claimed a minimum of 375 general practice Medicare items (items 1–51) in the most recently available three-month Health Insurance Commission data period. This equates with a cut-off of 1,500 Medicare claims a year and ensures inclusion of the majority of part-time GPs whilst excluding those who are not in private practice but claim for a few consultations a year. It also ensures cost-effective data collection because the maximum recording period for any GP will be approximately 3.5 weeks, while most will finish in less than one week.

Sample size

In collecting information about patients it is often easier, cheaper and more appropriate to enlist the support of a number of GPs who provide access to a number of patients. This type

of sampling is called 'cluster sampling' as clusters or groups of patients around a GP are used for the investigation (Sayer 1999). However, patients around GPs tend to have a degree of similarity in some characteristics, so it is important that sample size estimates consider the differential clustering effect for the different variables under investigation. Previous research (Meza et al. 1995) utilising the Australian Morbidity and Treatment Survey showed that GPs should only provide information on 100 consecutive encounters and that 1,000 GPs would provide reliable estimates of the most frequent problems managed and the most frequent medications prescribed. Experience with the AMTS has also shown that reliable estimates for the most frequent management practices are gained for most conditions with a sample of this size.

Drawing the sample

Arrangements were made with the General Practice Branch of the Commonwealth Department of Health and Aged Care to draw a sample of 600 GPs per quarter, anticipating an overall response rate of 50%. Data elements supplied by the Department include

- age and gender
- year and place of graduation
- years in general practice
- number of Medicare claims in the previous 12 months and previous quarter.

These data allow for

- later comparison of the characteristics of participants with non-participants
- adjustment of results for any differences identified between the two groups
- weighting of individual GP results according to level of activity to ensure the encounter data represent encounters across Australia.

GP recruitment

The GP recording weeks are spread as evenly as possible over 50 weeks of the year. Data are not collected for two weeks over the Christmas - New Year period. GPs are recruited several weeks ahead throughout the year and constitute a rolling ever-changing sample.

As each of the random samples is received, GPs are approached in their randomised order by letter at a rate of approximately 50 per week. The letter outlines the study aims and method with particular reference to the time and work each doctor will need to contribute. The GPs are also informed about the benefits they will receive in return for their participation. A copy of the approach letter is attached as Appendix 3.

Approximately 10 days after the approach letter is posted a trained research assistant contacts each GP by telephone, inviting their participation in the study and answering any questions.

Where the GP agrees to take part in *BEACH* a date to begin recording is agreed by telephone. The GP is then allocated an individual GP identification number and their details are entered into the GP database as a participant.

Data collection

Approximately 10 days prior to the agreed recording dates a research pack is posted to each GP. This allows sufficient time for them to absorb the instructions and review the recording form prior to commencement of recording.

The research pack contains

- a covering letter
- a project information sheet
- a GP profile questionnaire
- a pad of 105 recording forms (to allow for some error)
- a detailed set of instructions (see Appendix 4)
- a height and weight measure conversion (to metric) chart (for body mass index)
- a sample completed form with explanation
- a pictorial 'standard drinks' chart to help patients answer the SAND questions on alcohol
- additional instructions for completing each of the SAND questions
- a reply-paid envelope.

Also included are several copies of a patient information sheet to show each patient as they enter the waiting room. It summarises the project and offers the opportunity for the patients to 'opt out' by informing their GP if they do not wish to have their unidentified data included in the study.

On the agreed start date for recording a research assistant re-contacts the participating GP to remind him or her to begin recording and to answer any questions which may have arisen. The *BEACH* program also has a 'free call' phone number to allow GPs to ring the research team about any aspect of the study. Upon completion of the encounter forms the GP returns the pack together with the completed GP characteristics form in the reply-paid envelope to the General Practice Statistics and Classification Unit.

When a pack is not returned to the Unit within two weeks of the recording period, the GP is again contacted by telephone and asked to return the pack as soon as possible. Follow-up of non-returns continues for five phone calls over the ensuing weeks. Where the forms are not returned after three months the GP is regarded as a 'drop-out' from the program and is so informed.

Data entry and classification

Data are directly entered into an Access database designed specifically for this study.

Classification of data

Patient reasons for encounter, problems managed, therapeutic procedures, other non-pharmacological treatments, referrals, and pathology and imaging ordered are classified using ICPC-2 PLUS (Britt 1997). This is an extended vocabulary of terms classified according to the International Classification of Primary Care (Version 2) (ICPC-2), a product of the World Organisation of Family Doctors (WONCA) (WONCA 1998). The ICPC is regarded as the international standard for data classification in primary care. The extended

vocabulary of PLUS terms is derived from those used by GPs in over 800,000 encounter records completed in multiple studies by the Family Medicine Research Unit.

Pharmaceuticals prescribed or provided and over-the-counter drugs advised by the GP are coded and classified according to an in-house classification developed over the past 15 years by the Family Medicine Research Unit. The Coding Atlas for Pharmaceutical Substances (CAPS) is a hierarchical structure which facilitates analysis of data at a variety of levels, for example, drug class, drug group and generic brand name. Strength and regimen are independent fields which, when combined with the CAPS code, give an opportunity to derive prescribed daily dose for any drug or group of drugs.

The data elements are automatically coded and classified by the computer as staff enter key words or word fragments and select the required term or label from a pick list.

Data quality assurance program

A quality assurance program to ensure reliability of data entry has been established using multiple approach methods.

Checking of data entered into the database

A number of standardised data-checking and cleaning methods that have proved successful in previous studies have been adopted. These methods (e.g. a query to identify encounters which included the same drug prescribed twice) were hard coded into the data entry database and are run at regular intervals to detect clearly definable coding or GP transcription errors.

Checking of data against the encounter form

A random one in every five records is checked against the encounter form for any coding and transcription errors. This ongoing process identifies areas where further coder staff education and data-cleaning reports are required.

A full data check and clean is undertaken every three months utilising the above methods in addition to randomised one-off data searches (e.g. new problems for which the drug prescribed has a 'continued' status). Ad hoc data searches as requested by the ***BEACH*** project team are also run at regular intervals and hard coded into the standardised checking process wherever necessary.

Statistical methods

BEACH results are reported in SAS (SAS 1996). In general, reports present number of observations (n), rate per 100 patients, 95% confidence intervals and relative standard error (RSE) for each data element. The standard error calculations incorporate the study design (single-stage clustered study design) according to Kish's formula (Kish 1965). SAS is limited in its capacity to calculate the standard error for the current study design, so additional programming has been required.

The RSE, commonly used by the Australian Bureau of Statistics, is a function of the standard error and the rate estimate and also provides a measure of reliability of the rate estimate. For general purposes an RSE of 0–15 can be regarded as reliable, 16–33 as slightly unreliable, and 34–50 as extremely unreliable. A RSE of 51–100 indicates that the estimate

should not be used. However, there is considerable argument that the 95% confidence interval provides the best estimate of utility of the finding.

Limitations of *BEACH*

General practitioners participating in this survey are all recognised GPs who work in private practice on a fee-for-service basis. No salaried practitioners in either the public or private sector are included.

The study provides a cross-sectional view of the management of problems in general practice. No conclusions can be drawn in terms of disease episodes, nor in terms of long-term treatment of patients with chronic conditions.

The survey is largely an encounter-based study of the patients for whom a general practice service is provided. Except where SAND specifically addresses the question of co-morbidity not managed during the course of the recorded encounter, the morbidity patterns reflect only the problems managed during the recorded encounters. There may be other co-morbidity managed at other encounters not occurring during the recording period.

Prescription and drugs advised or provided include only those medications that were prescribed, given or advised for over-the-counter purchase during the course of the recorded encounter. If a prescription was not provided for a given problem it does not necessarily mean that the patient was not already taking medication for the problem. Similarly, the absence of a procedure or a referral does not preclude the possibility that these events occurred at a prior encounter or might happen at a subsequent encounter.

Data output

The participating GPs

Each participating GP receives an analysis of their own results compared with those of nine other unidentified practitioners who recorded at approximately the same time. Comparison with the national average is also made for their interest. GPs also receive some educational material related to the management of patients who smoke or who have reported hazardous levels of alcohol consumption.

Interim sampling results

GP characteristics: participants compared with non-participants

Due to the rolling nature of the recruitment process it is impossible to have a clear cut-off point to calculate response rates and to compare the characteristics of participants and non-participants. This is because a GP approached in the fifth month of the program may agree to participate in month seven.

The following interim recruitment results and comparison of the characteristics of the two groups were undertaken at the end of the eighth month and are included only as an indication of the trends. A final comparison of those who actually finished the program

with those who refused or dropped out will be undertaken at the end of the first year of data collection, when a clear cut-off date can be established.

At the end of the eighth month of study, contact had been established and a definite decision regarding participation obtained from 2,241 of the randomly selected GPs. Of these, 977 (43.6%) agreed to participate and 1,264 (56.4%) declined.

The chi square statistic (for categorical data) and Anova (for continuous data) were used to measure the significance of differences between the two groups. Results indicated there were no significant differences (at the 5% level) between participants and non-participants in terms of age, gender, years in general practice, and level of service activity (Table 1).

Table 1: Comparison of GP characteristics: GPs who agreed to participate and those who refused (at the end of the eighth month of the study)

Characteristic	GPs agreed (n= 977)	GPs refused (n=1,264)
Gender [a)]		
% female	28.9	26.6
Age group (%)[(a)]		
<35 years	8.9	11.5
35–44 years	31.6	30.4
45–54 years	30.7	29.9
55+ years	28.8	28.2
Years since graduation (%)[(a)]		
< 6 years	1.8	1.7
6–10 years	8.5	9.1
>10 years	89.7	89.2
Services the previous year (n) [(b)]		
Mean	5,737.7	5,545.1
Standard deviation	3,046.5	2,868.5
Range	467–20,698	397–18,780
Services in the previous quarter (n) [(b)]		
Mean	1,425.7	1,369.6
Standard deviation	759.8	689.5
Range	376–5,808	377–5,253

(a) Chi square statistic demonstrated no significant differences in any of these characteristics between participants and non-participants at the 95% level.

(b) Anova demonstrated no significant differences between participants and non-participants at the 95% level

Interim summary of results

The following results are based on records completed by the first 476 GPs and received by the General Practice Statistics and Classification Unit in time for inclusion in this six-month interim report. Included are data on the characteristics of the participating GPs and the 47,600 encounters they reported. Patient risk factor and health state information will be reported elsewhere.

The participating general practitioners

GP profile questionnaires were completed by 471 of the 476 participating GPs. For the remaining five GPs, data on age group, gender and, for some, country of graduation were gained from information provided by the Commonwealth Department of Health and Aged Care. Of the 476 participants, 73.3% were male and 59.5% were aged 45 years or older. Three-quarters (75.8%) of these GPs had been in general practice for more than 10 years, and only 12.2% could be regarded as practising part time (fewer than six sessions per week). Less than 20% of respondents were in solo practice. The majority (76.5%) had graduated in Australia and 127 (27.5%) were Fellows of the Royal Australian College of General Practitioners (Table 2).

Encounters

An overview of the database at the end of the first six months of ***BEACH*** data collection is provided in Table 3. The first 476 GPs had submitted 47,600 encounter records by the cut-off date for this report.

The type of encounter was indicated on 44,874 (94.3%) of the 47,600 records. Direct encounters (face to face) represented 95.6% of these, surgery consultations being most common, representing 82.7% of all specified consultations and 86.5% of all direct encounters. Only 3.3% of all specified encounters were conducted in hospitals, nursing homes or the patient's home. Consultations which were covered by organisations other than Medicare accounted for 6.4% of encounters, 28.1% of these being covered by workers compensation.

The patients were more likely to be female (58.2%) and 9.5% were new to the practice. The GPs' workload was almost evenly distributed between four patient age groups. A quarter of the encounters were with patients aged less than 25 years, a quarter were 25–44 years, a quarter 45–64 years, and the remaining quarter aged 65 years or more. Almost half the patients (47.5%) held a Health Care Card and 3.5% held a Department of Veterans Affairs card. While 13.6% of these patients came from a non-English speaking background, only 1.4% stated they were Aboriginal and / or Torres Strait Islander.

The morbidity managed and treatments provided in these encounters are summarised in Table 4. The 69,991 patient reasons for encounter (RFEs) were reported at an average rate of 147.0 per 100 encounters. An average 144.6 problems were managed per 100 encounters providing a total of 68,845 recorded problems / diagnoses. Where the status of the problem (new / old to the patient) was reported (in 75.6% of cases), 47.9% of problems were said to be

new to the patient. The consulting GP regarded 2.7% of all problems managed as being work related.

Table 2: GP characteristics:–*BEACH*, April–September 1998

GP characteristic	n	%[a]
Gender		
Male	349	73.3
Age distribution		
<35 years	32	6.7
35–44 years	161	33.8
45–54 years	155	32.6
55+ years	128	26.9
Years in general practice		
< 6 years	30	6.3
6–10 years	79	16.8
11–19 years	157	33.4
20+ years	204	43.4
Missing	6	
Sessions per week		
< 6 per week	57	12.2
6–10 per week	322	68.7
11+ per week	90	19.2
Missing	7	
Size of practice		
Solo	75	17.6
2–4 GPs	191	44.7
5+ GPs	161	37.7
Missing	49	
Place of graduation		
Australia	364	76.5
United Kingdom	48	10.1
Asia	42	8.8
Other	22	4.6
More than 50% consultations in languages other than English	**57**	**12.1**
Currently in RACGP training program	**13**	**2.9**
Hold FRACGP	**127**	**27.5**

(a) Missing data removed.

Table 3: Summary of services and patients:–*BEACH*, April–September 1998

Variable	Number	Rate per 100 encs[a]	Lower 95% CI	Upper 95% CI	Relative SE[b]
Encounter type					
Direct (patient seen)	42,885	95.6	95.0	96.1	0
No charge	758	1.7	1.1	2.3	17
Medicare paid	39,722	88.5	87.0	90.1	1
Short surgery consults	649	1.5	0.8	2.1	23
Standard surgery consults	33,038	73.6	71.8	75.4	1
Long surgery consults	3,103	6.9	6.1	7.7	6
Prolonged surgery consults	323	0.7	0.0	3.2	100
Home visits	863	1.9	1.0	29	26
Hospital	217	0.5	0	2.6	100
Nursing home	419	0.9	0	2.3	72
Other Medicare items	1,110	2.5	1.6	3.3	18
Workers compensation	807	1.8	1.3	2.3	14
Other paid (State, hospital etc)	2,060	4.6	1.3	7.9	36
Indirect (patient not seen)	1,989	4.4	3.7	5.2	8
Script	1,136	2.5	1.9	3.1	12
Referral	257	0.6	0.2	0.9	30
Certificate	64	0.1	0.0	0.5	100
Other	569	1.3	0.7	1.8	23
Missing	2,726				
Patients					
Gender					
Males	19,578	41.8	40.1	42.2	1
Females	27,257	58.2	56.2	58.3	1
Missing	765				
Age group					
<1 year	1,087	2.3	2	2.5	6
1–4 years	2574	5.4	5	5.8	4
5–14 years	3481	7.4	6.9	7.7	3
15–24 years	4,764	10.1	9.5	10.6	3
25–44 years	12,139	25.7	24.5	26.5	2
45–64 years	11,317	24.0	23.1	24.5	2
65–74 years	5,935	12.6	11.8	13.2	3
75+ years	5,853	12.4	11.3	13.3	4
Missing	447				

(continued)

Table 3 (continued): Summary of services and patients:–*BEACH*, April–September 1998

Variable	Number	Rate per 100 encs[a]	Lower 95% CI	Upper 95% CI	Relative SE[b]
		Patients			
Other characteristics					
New patient to practice	4,514	9.5	8.6	10.1	5
Health Care Card	20,467	43.0	41.3	44.7	2
Veterans Affairs Gold Card	1,442	3.0	2.6	3.4	7
Veterans' Affairs White Card	205	0.4	0.2	0.7	29
Non-English speaking background	6,282	13.2	11.1	15.3	8
Aboriginal	588	1.2	0.1	2.4	46
Torres Strait Islander	48	0.1	0	0.5	100
Aboriginal and Torres Strait Islander	30	0.1	0	1	100

(a) Missing data removed.

(b) Relative SE: 0–15 reliable; 16–33 slightly unreliable; 34–50 extremely unreliable; 51–100 should not be used.

Table 4: Summary of morbidity and management:–*BEACH*, April–September 1998

Variable	Number	Per 100 encs	Lower 95% CI	Upper 95% CI	Relative SE[(a)]	Per 100 problems	Lower 95% CI	Upper 95% CI	Relative SE[(a)]
Reasons for encounter	69,991	147.0	145.0	149.1	1				
Problems managed	68,845	144.6	142.3	147.0	1				
Problem status									
New problems	24,859	52.2	50.4	54.0	2	36.1	34.9	37.4	2
Old problems	27,091	56.9	54.5	59.3	2	39.4	38.1	40.6	2
Missing data	16,895								
Work related	1,825	3.8	3.4	4.3	6	2.7	2.3	3.0	6
Medications	52,382	110.1	106.8	113.3	2	76.1	74.2	78.0	1
Prescribed	44,954	94.4	91.0	97.9	2	65.3	63.2	67.4	2
Advised OTC	4,139	8.7	7.8	9.6	5	6.0	5.4	6.6	5
GP supplied	3,289	6.9	5.6	8.2	10	4.8	3.9	5.6	9
Other treatments	20,039	42.1	39.7	44.5	3	29.1	27.6	30.6	3
Clinical	13,956	29.3	27.2	31.4	4	20.3	18.9	21.6	3
Procedural	6,083	12.8	11.9	13.7	4	8.8	8.2	9.5	4
Referrals (at least one)	5,030	10.6	10.0	11.1	3	7.3	7.0	7.7	2
Emergency department	22	0.1	0.0	1.0	100	0.03	0.0	0.6	100
Hospital	352	0.7	0.5	1.0	15	0.5	0.4	0.7	14
Specialist	3,642	7.7	7.3	8.0	3	5.3	5.0	5.5	2
Allied health services	1,412	3.0	2.7	3.2	5	2.1	1.9	2.2	4
Pathology (at least one)	11,343	23.8	22.4	25.3	3	16.5	15.5	17.4	3
Imaging (at least one)	3,373	7.1	6.6	7.6	4	4.9	4.5	5.3	4

(a) Relative SE: 0–15 reliable; 16–33 slightly unreliable; 34–50 extremely unreliable; 51–100 should not be used.

Medications were prescribed, advised for over-the-counter purchase (OTC) or supplied by the GP at a rate of 110.1 per 100 encounters, or 76.1 per 100 problems managed. The majority (85.8%) of these medications were prescribed, at a rate of 94.5 per 100 encounters or 65.3 per 100 problems managed. Advised OTCs accounted for 7.7% of all medications (advised at a rate of 8.7 per 100 encounters or 6.0 per 100 problems). Drugs supplied by the GP accounted for the remaining 6.3% of medications and were provided at a rate of 6.9 per 100 encounters or 4.8 per 100 problems managed.

Other clinical or procedural treatments were provided by the GP at a rate of 42.1 per 100 encounters. The majority (69.6%) of these management activities were of a clinical nature (e.g. advice, counselling).

Referrals to other services were made at 10.6 per 100 encounters. The majority (67.1%) were referrals to a specialist and 26.0% were to an allied health professional. Very few referrals to hospitals or emergency departments were recorded.

At least one pathology test was ordered at 23.8% of encounters while at least one order for imaging was placed at 7.1% of encounters.

Patient reasons for encounter

The top 10 reasons for encounter (RFEs) accounted for 30.6% of the 69,991 RFEs recorded. The most frequent RFE was a request for a prescription (either a specific type or unspecified, either a repeat or new), which arose at a rate of 8.1 per 100 encounters. Requests for a cardiovascular check-up (usually blood pressure check) were relatively frequent (5.3 per 100), as were patient presentations for immunisation or vaccination (5.1 per 100). The most commonly described symptoms where cough (7.3 per 100 encounters), throat symptoms (3.9 per 100) and back problems (3.5 per 100 encounters) (Table 5).

Table 5: Most frequent patient reasons for encounter:–*BEACH*, April–September 1998

Reason for encounter	Number	% of total RFEs	Per 100 encs	Lower 95% CI	Upper 95% CI	Relative SE[(b)]
Prescription all[(a)]	3,869	5.5	8.1	7.5	8.8	4
Cough	3,474	5.0	7.3	6.8	7.8	4
Cardiac check-up[(a)]	2,517	3.6	5.3	4.7	5.9	6
Immunisation[(a)]	2,425	3.5	5.1	4.5	5.7	6
Throat symptom/complaint	1,856	2.7	3.9	3.6	4.2	4
Back complaint[(a)]	1,684	2.4	3.5	3.2	3.8	4
Upper respiratory tract infection	1,553	2.2	3.3	2.9	3.7	6
Rash[(a)]	1,500	2.1	3.2	2.9	3.4	3
General check-up[(a)]	1,437	2.1	3.0	2.7	3.3	6
Hypertension[(a)]	1,119	1.6	2.4	1.9	2.8	11
Total top 10	**21,435**	**30.6**				

(a) Includes multiple ICPC–2 codes.

(b) Relative SE: 0–15–reliable; 16–33–slightly unreliable; 34–50–extremely unreliable; 51–-100 should not be used.

Problems managed

The 10 most frequently managed problems accounted for 28.5% of all problems managed at these encounters. Hypertension was managed at a rate of 8.2 cases per 100 encounters, followed by upper respiratory tract infections (7.4 per 100 encounters), and immunisation (5.4 per 100). Acute bronchitis arose at a rate of 4.0 per 100 encounters and depression at 3.6 per 100. Asthma (3.3 per 100 encounters), back complaints (2.0), diabetes (1.7), lipid disorders (1.5) and osteoarthritis (1.4) were also common conditions managed in general practice (Table 6).

Table 6: Most frequent problems managed:–*BEACH*, April–September 1998

Problem	Number	% of total problems	Rate per 100 encs	Lower 95% CI	Upper 95% CI	Relative SE[(b)]
Hypertension[(a)]	3,888	5.7	8.2	7.6	8.7	4
URTI	3,529	5.1	7.4	6.9	8.0	4
Immunisation[(a)]	2,553	3.7	5.4	4.7	6.0	6
Acute bronchitis	1,881	2.7	4.0	3.6	4.3	5
Depression[(a)]	1,700	2.5	3.6	3.2	3.9	5
Asthma	1,555	2.3	3.3	3.0	3.5	4
Back complaint[(a)]	1,362	2.0	2.9	2.6	3.1	5
Diabetes mellitus[(a)]	1,154	1.7	2.4	2.2	2.7	5
Lipid disorder	1,025	1.5	2.2	1.9	2.4	6
Osteoarthritis[(a)]	946	1.4	2.2	1.9	2.4	6
Total top 10	**19,593**	**28.5**				

(a) Includes multiple ICPC-2 codes.

(b) Relative SE: 0–15 reliable; 16–33 slightly unreliable; 34–50 extremely unreliable; 51–100 should not be used.

Medications prescribed

Sixteen generic drugs were prescribed at a rate of one or more per 100 encounters and these accounted for one-third of all drugs prescribed. Paracetamol was most often prescribed, at a rate of 4.1 scripts per 100 encounters or 2.8 per 100 problems managed. Amoxycillin was prescribed at a rate of 3.3 per 100 problems managed, and this was followed by paracetamol and codeine (1.7 per 100 problems managed), cefaclor monohydrate 1.7 per 100) and salbutamol (1.7 per 100). GPs made a decision to administer influenza vaccine at a rate of 2.2 per 100 encounters or 2.0 per 100 problems managed. The remainder of the top 16 generic drugs are listed in descending order of frequency in Table 7. The top 16 drugs accounted for 32.3% of all prescribed drugs (N=44,954).

Table 7: Most frequently prescribed medications (>1 prescriptions per 100 encounters, analysed at the generic level):–*BEACH,* April–September 1998

Generic drug name	Number	Per 100 encs	Lower 95% CI	Upper 95% CI	Relative SE[(a)]	Per 100 problems	Lower 95% CI	Upper 95% CI	Relative SE[(a)]
Paracetamol	1,927	4.1	3.6	4.5	6	2.8	2.5	3.1	6
Amoxycillin	1,585	3.3	2.9	3.7	6	2.3	2.0	2.6	6
Paracetamol and codeine	1,183	2.5	2.2	2.8	6	1.7	1.5	1.9	5
Salbutamol	1,155	2.4	2.2	2.7	5	1.7	1.5	1.8	5
Cefaclor monohydrate	1,140	2.4	2.0	2.8	9	1.7	1.3	2.0	9
Influenza vaccine	1,046	2.2	0.8	3.6	33	1.5	0.6	2.5	32
Roxithromycin	1,043	2.2	1.9	2.5	7	1.5	1.3	1.7	7
Cephalexin	984	2.1	1.8	2.4	7	1.4	1.2	1.6	7
Amoxycillin/potassium clavulanate	881	1.9	1.5	2.2	8	1.3	1.1	1.5	8
Temazepam	694	1.5	1.3	1.7	7	1.1	0.9	1.1	7
Doxycycline HCl	603	1.3	1.0	1.5	10	0.9	0.7	1.0	10
Erythromycin	585	1.3	0.9	1.6	15	0.9	0.6	1.1	15
Diazepam	559	1.2	0.9	1.4	10	0.8	0.7	1.0	10
Levonorgestrel/ethinyl	558	1.2	1.0	1.4	8	0.8	0.7	0.9	9
Diclofenac sodium	516	1.1	0.9	1.3	10	0.8	0.6	0.9	10
Ranitidine	491	1.0	0.9	1.2	8	0.7	0.6	0.8	8
Subtotal: top 16 generics	14,950								

(a) Relative SE: 0–15 reliable; 16–33 slightly unreliable; 34–50 extremely unreliable; 51–100 should not be used.

Discussion

The sample size for the *BEACH* program was calculated on the basis of a 12-month data-collection period. While this interim report covers only the first six months of the program the vast majority of the relative standard errors shown in the above tables are less than 10, indicating very high reliability for the more frequent events in general practice. The exceptions are where relative frequency of the event is very low (e.g. consultations in hospitals—see Table 3).

This analysis has served to identify several areas for which data collection could be improved.

- The high level of missing data in the 'problem status' field is of some concern, especially since the number of 'new cases' can be used to estimate incidence of many specific disease types in the population attending general practice. The format of the recording form for this section is being revised to encourage higher completion rates.
- The format and design of the imaging questions also presented GPs with a problem where multiple X-rays of a single type (e.g. multiple contrast/special X-rays) were ordered. Again, this section of the form is under revision and will be improved for the *BEACH* program 1999–2000.

Access to the *BEACH* data

Public domain

In line with the standard Australian Institute of Health and Welfare's practice, an annual publication will provide a comprehensive view of general practice activity in Australia.

Participating organisations

Organisations providing funding for the *BEACH* program receive quarterly summary reports of the encounter data and standard reports about their subjects of interest. Analysis of the data is a complex task. The General Practice Statistics and Classification Unit has therefore designed standard report formats that cover most aspects of the subject under investigation.

Standard reports have multiple possible entry points. For example,

- population based (e.g. the elderly; non-English speaking background patients)
- encounter type (e.g. long consultations)
- GP type (e.g. those with FRACGP)
- test ordering (e.g. pathology of any sort; a specific pathology test ordered)

- referral (e.g. those patients and problems for which a referral to a specialist was made)
- drug-based analyses for individual drugs (brand or generic), drug subgroups or drug groups
- diagnostically based analyses for individual ICPC-2 PLUS codes (hypertension), ICPC individual code (e.g. hypertension; nephropathy), ICPC grouper (e.g. all hypertension), ICPC chapter components (e.g. musculoskeletal symptoms), or ICPC chapters (e.g. all cardiovascular).

Individual data analyses are conducted where the specific research question is not adequately answered through standard reports.

External purchasers of standard reports

Non-contributing organisations may purchase standard reports or other ad hoc analyses. Charges are available on request. The General Practice Statistics and Classification Unit should be contacted for further details.

Conclusion

This report details the methods adopted in the *BEACH* program and provides a brief overview of the results of the first six months' data. A more detailed report of results and an investigation of changes since the Australian Morbidity and Treatment Survey 1990–91 will be prepared after the first year's data have been received. The report will be available later in 1999.

Glossary and abbreviations

Aboriginal The patient identifies himself or herself as an Aboriginal.

AIHW Australian Institute of Health and Welfare

AMA Australian Medical Association

AMTS Australian Morbidity and Treatment Survey 1990–91

BEACH Bettering the Evaluation And Care of Health

BMI body mass index

CAPS Coding Atlas for Pharmaceutical Substances

CI confidence interval (in this report 95% CIs are reported)

Consultation see Encounter

Diagnosis/problem managed A statement of the provider's understanding of a health problem presented by a patient, family or community. GPs are instructed to record at the most specific level possible from the information available at the time. It may be limited to the level of symptoms.

- **New problem** The first presentation of a problem, including the first presentation of a recurrence of a previously resolved problem but excluding the presentation of a problem first assessed by another provider.
- **Old problem** A previously assessed problem which requires ongoing care. Includes follow-up for a problem or an initial presentation of a problem previously assessed by another provider.

Drug Medication which is prescribed, advised for over-the-counter purchase or provided by the GP at the encounter.

Drug status

- **New** The drug prescribed / advised / provided at the encounter is being used for the management of the problem for the first time.
- **Continuation** The drug prescribed / advised / provided at the encounter is a continuation or repeat of previous therapy for this problem.

Encounter (enc) Any professional interchange between a patient and a general practitioner:

- **Indirect** where there is no physical or face-to-face meeting between the patient and the general practitioner but a service is provided (eg: prescription, referral).
- **Direct** where there is a face-to-face meeting of the patient and the general practitioner. Direct encounters can be further divided into encounters covered by
    - Medicare, including

      – surgery consultations: encounters identified by any one of MBS item numbers 3; 23; 36; 44

      – home visits: encounters identified by any one of MBS item numbers 4; 24; 37; 47

– hospital encounter: encounters identified by any one of MBS item numbers 19; 33; 40; 50

– nursing home visits: encounters identified by any one of MBS item numbers 20; 35; 43; 51

– other institutional visits: encounters identified by any one of MBS item numbers 13; 25; 38; 40

– other encounters: encounters identified by an MBS item number which does not identify place of encounter

- workers compensation insurance
- other payment systems (e.g. State health departments).

FMRU Family Medicine Research Unit, Department of General Practice, the University of Sydney

General practitioner A medical practitioner who provides primary comprehensive and continuing care to patients and their families within the community' (Royal Australian College of General Practitioners).

GP general practitioner

GPSCU General Practice Statistics and Classification Unit, a collaborating unit of the Australian Institute of Health and Welfare

HCC A person who holds a Health Care Card from the Commonwealth Government

HIC Health Insurance Commission

ICPC-2 International Classification of Primary Care (Version 2)

ICPC-2 PLUS An extended vocabulary of terms classified according to ICPC-2

MBS Medicare Benefits Schedule

NESB The patient reports coming from a non-English speaking background

NHMRC National Health and Medical Research Council

OTCs Drugs advised for over-the-counter purchase

Patient status

- **New** The patient has not been seen before in the practice.
- **Old** The patient has attended the practice before.

PBS Pharmaceutical Benefits Scheme

Problem managed see Diagnosis

Provider A person to whom a patient has access when contacting the health care system.

RACGP Royal Australian College of General Practitioners

Reason for encounter (RFE) The subjective reason given by the patient for seeing or contacting the general practitioner. Can be expressed in terms of symptoms, diagnoses or the need for a service.

Recognised GP A medical practitioner who is

- vocationally recognised under Section 3F of the Health Insurance Act, or
- a holder of the Fellowship of the Royal Australian College of General Practitioners who participates in, and meets the requirements for, quality

assurance and continuing medical education as defined in the RACGP Quality Assurance and Continuing Medical Education Program, or

- undertaking an approved placement in general practice as part of a training program for general practice leading to the award of the Fellowship of the Royal Australian College of General Practitioners or undertaking an approved placement in general practice as part of some other training program recognised by the RACGP as being of equivalent standard.

(Medicare Benefits Schedule book, 1 November 1998).

Referral The process by which the responsibility for part or all of the care of a patient is temporarily transferred to another health care provider. Only new referrals to specialist, allied health professional, and hospital and nursing home admissions arising at a recorded encounter are included. Continuation referrals are not included. Multiple referrals can be recorded at any one encounter.

RFE reason for encounter

RSE Relative standard error

SAND Supplementary analysis of nominated data

Torres Strait Islander The patient identifies himself or herself as a Torres Strait Islander.

VA Gold A person who holds a Gold Card from the Department of Veterans Affairs.

VA White A person who holds a White Card from the Department of Veterans Affairs.

WONCA World Organisation of Family Doctors

Work related Irrespective of the source of payment for the consultation, it is likely in the GP's view that the symptom or problem has resulted from work-related activity or workplace exposures or that a pre-existing condition has been significantly exacerbated by work activity or workplace exposure.

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SAS Proprietary Software Release 6.12. SAS Institute Inc., Cary, NC, USA.

The Classification Committee of the World Organisation of National Colleges, Academies and Academic Associations of General Practitioners / Family Physicians (WONCA) 1998. ICPC-2 International Classification of Primary Care, 2nd edn. Oxford: Oxford University Press.

Appendix 1

BEACH (Bettering the Evaluation And Care of Health) - Morbidity and Treatment Survey - National
DOCID:
Date of encounter
Date of Birth
Sex
Patient status
Old
Patient Postcode
NESB?
Aboriginal?
Torres Strait Islander?
Encounter Number:
Patient Reasons for Encounter (up to three)
HCC Status
Veterans Affairs
Gold card
White card
PATIENT SEEN
Item no.
W/C paid
Other paid
No charge
PATIENT NOT SEEN
Script
Referral
Certificate
Other
1. Diagnosis/problem
2. Diagnosis/problem
3. Diagnosis/problem
4. Diagnosis/problem
Problem status
New
Old
Work Related
Medications for this problem: (up to four)
Strength
Regimen
No. Rpts
Drug status
Cont.
Procedures, other treatment, counselling
New referrals, admissions
Pathology for problem(s)
Test/Body Site for problem(s)
Plain X-ray
USCTC/ultrasound
Other Imaging
To the patient:
In general would you say your health is:
Excellent
Very good
Good
Fair
Poor
Patient's
Height:
cm
Weight:
kg
To the patient if 18+:
How often do you have a drink containing alcohol?
Never
Monthly
Once a week
2-4 times a week
5+ times a week
How many standard drinks do you have on a typical day when you are drinking?
How often do you have 6 or more standard drinks on one occasion?
Never
Monthly or less
Once a week
2-4 times a week
5+ times a week

Appendix 2

The University of Sydney
at Westmead Hospital

General Practice Statistics and Classification Unit

Family Medicine Research Unit
Department of General Practice

A collaborating unit of the
Australian Institute of Health and Welfare

Please fill in boxes or circle answers where appropriate

1. Doctor Identification Number: ☐☐☐☐

2. Sex: Male / Female 3. Age ☐

4. How many years have you spent in general practice? ☐

5. Number of general practice sessions you usually work per week? ☐

6. How many **full-time** (>5 sessions per week) general practitioners work with you at this practice? (Practice= shared medical records) ☐

7. How many **part-time** (<6 sessions per week) general practitioners work with you at this practice? (Practice= shared medical records) ☐

8. Do you conduct more than **50%** of consultations in a language other than English? Yes / No

9. What is the postcode of your major practice address? ☐☐☐☐

10. Country of graduation: Aust NZ Asia UK Other:

11. General Practice training status (CSCT or RACGP training programme)? Presently training / Completed training / Not applicable

12. Do you hold FRACGP? Yes / No

13. Are you a member of any of the following organisations? AMA RACGP RDAA

14. How do you routinely instruct pharmacists on the substitution of generic drugs? No substitute allowed / Substitute allowed

15. Special interests: *(up to three)*

1. Acupuncture	7. Dermatology	13. Paediatrics
2. Anaesthetics	8. Diabetes	14. Preventive medicine
3. Asthma	9. Geriatrics/aged care	15. Psychiatry
4. Cardiology	10. Nutrition	16. Sports medicine
5. Computers	11. Obstetrics/antenatal	17. Surgery
6. Counselling	12. Occup./indust.med.	18. Women's Health

Other _____

Appendix 3

BETTERING THE EVALUATION AND CARE OF HEALTH (BEACH©)

A NATIONAL SURVEY OF MORBIDITY AND ITS MANAGEMENT IN GENERAL PRACTICE

Your name was drawn from a random sample of all practising recognised GPs in Australia and we invite you to work with us on this study. The project is called *BEACH©*, and uses the new version of the Morbidity and Therapeutic Index (MTI) which we have offered throughout the 90s as a quality assurance option through the RACGP's QA program. **Participation in *BEACH©* earns you 25 clinical audit points. It is free of charge** because this National survey is funded by a consortium (see below).

What would you need to do? Complete a form for each of 100 consecutive patients, recording such details as age and sex of patient, reasons for encounter, diagnoses, medications and other treatments provided. In this study we are also gathering extremely valuable data on the health status of patients attending general practice, so at the bottom of each form there are a few varying questions to ask the patient.

An example of a recording form is enclosed for your information. Please do not be daunted by its seeming complexity. Although there are four boxes for problems managed, at most encounters you will have only one or two to record. Likewise, although there are four spaces to record medications for each problem, in many cases there will be only one or two, or in fact none, to record. It is estimated that each form would take you between one and two minutes to complete. A clear and comprehensive set of instructions will be included with your pad of forms.

What would you gain from the study? In return for your time you will receive a report containing a detailed profile of your practice, a comparison with nine other de-identified participants and the cumulative average of the results from all participants. We will also provide some resource material related to alcohol consumption and smoking. Then you will need to fill in a short final questionnaire about your results to satisfy the RACGP requirements for points allocation.

Why do we need to carry out this study? There are over 100 million consultations conducted in Australia by general practitioners every year. What do we know about the problems managed at these consultations or about the treatments and other services provided by general practitioners? Very little! We conducted the last study eight years ago. National general practice data is vital to the future of general practice in its negotiations with government.

The General Practice Statistics and Classification Unit is a collaborating Unit of the University of Sydney and the Australian Institute of Health and Welfare. The Unit's major objective is to ensure sufficient information is available about the problems managed and treatments provided in general practice in Australia. To that end we are collecting de-identified data from a "rolling" random sample of GPs across the country at a rate of 20 per week – about 1,000 GPs per year.

BEACH© follows methods similar to those of the Australian Morbidity and Treatment Survey which we conducted in 1990-91. Each GP completes details about 100 consecutive encounters (wherever they may occur) on structured encounter forms, resulting in a database of 100,000 consultations. The uses to which this large de-identified data base will be put are varied. Firstly an overall report of the activities of general practice will be published each year as part of the AIHW annual publication, *Australia's Health*. We will be investigating changes which have occurred in general practice since the last National study. The data will be used by all organisations contributing to the BEACH© program costs. In order to support further research and development in general practice and to aid planning for better health, data may be supplied to other interested parties. At no time will any data be supplied in a form which could identify an individual GP.

In about a week a research assistant from the Unit will contact you by telephone to ascertain your availability and willingness to take part in this study. If you prefer, please ring us on our toll free number **1800 62 73 75.** Thank you for taking the time to read this letter. We would greatly appreciate your involvement in this project.

Yours sincerely

Dr Helena Britt
Director
General Practice Statistics and Classification Unit, The University of Sydney

The Royal Australian College of General Practitioners encourages GP participation in Beach©.

The Beach© program is endorsed by the Australian Medical Association.

- This project has been approved by the Health Ethics Committee of the Australian Institute of Health and Welfare and the Human Ethics Committee of the University of Sydney.
- The data is being collected under the AIHW ACT 1987 and in accordance with the Privacy Act 1988.
- BEACH© is overseen by a Program Advisory Board comprising representatives of the University of Sydney, the AIHW, each contributing organisation, the RACGP, the AMA, Divisions of General Practice and the Consumer Health Forum.

Organisations contributing to the considerable cost of the BEACH© program are:

- *The National Occupational Health and Safety Commission*
- *The Commonwealth Department of Health and Family Services*
- *The Department of Veterans' Affairs*
- *Astra Pharmaceuticals*
- *Roche Products Pty Ltd*
- *Rhône-Poulenc Rorer*

Research Team: Dr Helena Britt, Geoff Sayer, Jan Charles, Dr Graeme Miller, Sharon Scahill, Fiona Horn

Any person with concerns or complaints about the conduct of this study can contact the Manager of Ethics and Biosafety Administration, University of Sydney on (02) 9351 4811

Appendix 4

B E A C H - BETTERING THE EVALUATION AND CARE OF HEALTH

NATIONAL MORBIDITY AND TREATMENT STUDY

INSTRUCTIONS FOR PARTICIPATING DOCTORS

In your research pack there are three copies of a laminated notice which informs the patients of the study and of their right to refuse to allow inclusion of their unidentified data. Could you ask your reception staff to ensure your patients read the notice. If you have patients who consult with you in another language, please make them aware of their options regarding the study. In the case of indirect encounters, home visits and palliative care, please use your professional discretion in this matter.

Reading these instructions will decrease the variation among practitioners in their recording techniques. The recording forms should be completed during the course of the consultation as it will result in a better description of your activity and there is also some information that needs to be asked of the patient. Patient information questions at the bottom of the form vary and are presented in blocks within the pad, so please read carefully the instructions relating to these questions.

Fill out one form for each of 102 consecutive encounters including both direct (face-to-face) or indirect consultations which result in an action. The recording pad contains 105 forms to allow for recording errors. If a form becomes illegible draw a line through it and continue with the next sheet.

RECORDING FORM ITEMS:

DOCID: Each form has been stamped with your identification number for the purpose of this study. This is only used to keep track of the records in a de-identified manner and to ensure you receive an analysis of your results.

ENCOUNTER NUMBER: Each form in your recording pad has already been stamped with a consecutive encounter number 001-105. This is not a patient identification number, so if you see the same patient twice or more during the recording period, you will complete a new form at each of the encounters. No linking of forms is required. The audit is encounter-based, not patient-based.

ENCOUNTER INFORMATION

DATE: Enter day, month and year of encounter. BIRTH: Enter day, month and year of patient's birth. When a patient was born in the 19th century, please specify. SEX: Tick box for sex of patient.

PATIENT STATUS: If this is the patient's first visit to your practice, tick the NEW box. If the patient has been seen previously at this practice by you or one of your associates tick the OLD box.

PATIENT POSTCODE: Enter postcode of patient's home address.
VETERANS' AFFAIRS: Tick box for Gold Card status (all illnesses covered) of the patient or White Card status (partial cover) if applicable, irrespective of the source of payment for this consultation.
HCC STATUS: If the patient is a Health Care Card holder eg unemployed or pensioner, then tick Yes, otherwise tick No. It is possible for a patient to hold both Veterans' and HCC cards.

NESB: Does the patient come from a Non-English Speaking Background (NESB) i.e. is the primary language spoken at home not English?; or does the patient identify themselves as an Aboriginal or as a Torres Strait Islander? Tick the appropriate boxes.

PATIENT SEEN: These are direct encounters which occur either in the surgery, at home, in a hospital or nursing home. Write Medicare item number or tick the appropriate box for encounters covered by Hospital, State paid, Workers Compensation or those that are not charged. Where there are multiple item numbers involved, record the consultation item, eg 23, as procedures and tests are recorded elsewhere on the form.
PATIENT NOT SEEN: For indirect encounters where the patient is not seen (e.g. telephone consult) but some action is generated (script, referral etc), tick the appropriate boxes. Multiple responses are allowed.

PATIENT REASON FOR ENCOUNTER: At least one and up to three patient reasons for the encounter taking place can be recorded. They are the patient's view of the reasons he/she is consulting you. They can be in terms of symptoms e.g. "*runny nose*", a diagnosis e.g. "*diabetes*", request for service e.g. "*script for BP*", "*referral*". "*Worried about...*", "*follow-up*", "*check-up circulatory*" and "*pap smear*" are more examples of the many possible reasons for the encounter. If the body system is not stated by the patient but is understood between you, please record it.

PROBLEM MANAGEMENT INFORMATION

DIAGNOSIS/PROBLEM: At least one and up to four problems can be recorded. For each problem you manage, details are recorded on the problem's status, medications ordered, procedures/other treatment/ counselling carried out and referrals made. In each box, record one diagnosis/problem actually dealt with at that encounter, including ill-defined conditions (e.g. "*cough*"), preventive care (e.g. "*papsmear*" or "*checkup*"), and social problems (e.g. "problems with spouse"). Diagnose at the highest level possible with the information available. The order in which you record the problems is not significant. If there are more than four problems managed at the consultation, record the four problems which best describe the breadth of the consultation.

For each problem:

WORK RELATED: Irrespective of the source of payment for the consultation, if it is likely in your view that the symptom or problem has resulted from work-related activity or workplace exposures, tick the box. Where there is uncertainty but it is more likely than not that the condition is work-related, then the box should be ticked. If there is a pre-existing condition which is thought to have been significantly exacerbated by work activity or workplace exposures, the box should be ticked.

PROBLEM STATUS: Tick NEW if the patient has not been treated for that problem by any medical practitioner before. Tick OLD if the patient has been seen before by ANY medical practitioner for this chronic problem or this episode of an acute problem.

Management:

MEDICATIONS: Record any medication for which a prescription is written at this encounter, or any medication that you administer or recommend the patient to buy "over the counter" (OTC).
For written prescriptions: the **strength** is the quantity and unit of measure, e.g. 100 mg. If the Strength is difficult to measure, as in the case of topical skin creams, leave the Strength box blank. The **regimen** can be recorded in the accepted abbreviations of "bds", "tds", etc. If the drug is to be taken "as required", write PRN. **RPTS:** number of repeats should be recorded.
If a medication is an advised OTC then tick the corresponding OTC box otherwise leave blank,

GP SUPPLY: tick box if medication is from the practice supplies eg drug sample or vaccine from refrigerator. Otherwise, leave blank.

DRUG STATUS: if the medication is being used for the management of this problem for the first time then tick the NEW box, otherwise if it is a continuation , or repeat, of previous therapy for this problem then tick the CONT. box.

PROCEDURES, OTHER TREATMENTS, COUNSELLING ETC.: Record up to two procedures, other treatments or counselling for each problem or leave blank if none was provided.

NEW REFERRALS/ADMISSIONS: If a new referral to a specialist or allied health professional is made or a hospital admission arranged for this problem, please specify, eg: dermatologist or hospital emergency etc. Multiple responses are possible.

TESTS ORDERED/UNDERTAKEN: **Pathology**: Please give details of any pathology tests ordered or undertaken and circle the associated problem number(s) next to them. If it is just a single test, write the test name (e.g. *HBAIC, pap smear*). If ordering a set of tests such as a FBC, LFT, lipids, thyroid function, record them in this grouped form. You don't need to list each of the individual tests incorporated in (e.g.) LFT. **Imaging:** If any imaging is ordered, specify the **Body site** under the applicable category (e.g. X-ray *chest,* CT *head*). Lateralization is not required. Circle associated problem number(s).