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BEACH
Bettering the Evaluation And Care of Health

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

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Abbreviations

ABS	Australian Bureau of Statistics
ACE	angiotensin-converting enzymes
AIHW	Australian Institute of Health and Welfare
ASGC	Australian Standard Geographical Classification
ATC	Anatomical Therapeutic Chemical (classification)
AUDIT	Alcohol Use Disorders Identification Test
BEACH	Bettering the Evaluation And Care of Health
BMI	body mass index
CAPS	Coding Atlas for Pharmaceutical Substances
CI	confidence interval (in this report 95% CI is used)
CT	computerised tomography
DVA	Australian Government Department of Veterans' Affairs
encs	Encounters
FRACGP	Fellowship of the Royal Australian College of General Practitioners
GORD	gastro-oesophageal reflux disease
GP	general practitioner
HbA1c	haemoglobin, type A1c
ICPC	International Classification of Primary Care
ICPC-2	International Classification of Primary Care—Version 2
ICPC-2 PLUS	a terminology classified according to ICPC-2
INR	international normalised ratio
MBS	Medicare Benefits Schedule
NHS	National Health Survey
NSAID	non-steroidal anti-inflammatory drug
OTC	over-the-counter (i.e. medications advised for over-the-counter purchase)
PBS	Pharmaceutical Benefits Scheme
PN	practice nurse
RACGP	Royal Australian College of General Practitioners
RFE	reason for encounter
SAND	Supplementary Analysis of Nominated Data
SAS	Statistical Analysis System
URTI	upper respiratory tract infection
WHO	World Health Organization

N/A	not applicable
NAv	not available
NEC	not elsewhere classified
n	number
NOS	not otherwise specified

Symbols

🡅/🡇	indicates a statistically significant linear change
↑/↓	indicates a marginally significant linear change
§	indicates a non-linear significant or marginal change
–	indicates no change
<	less than
>	more than

Executive summary

This report compares results from each of the last 10 years of the BEACH (Bettering the Evaluation And Care of Health) program, and highlights changes in the characteristics of general practitioners (GPs) and their patients, and in GP clinical activities in Australia over the decade 1999–00 to 2008–09.

BEACH is a continuous national study of general practice in which data are collected from a new sample each year of about 1,000 GPs. Each GP provides details for 100 consecutive GP–patient encounters. BEACH began in April 1998 and this report uses data collected between April 1999 and March 2009 inclusive, from about 9,900 GP participants, covering about 990,000 GP–patient encounters.

Changes in the population influence GP clinical work. Since 1999 the estimated population of Australia increased by 13.7% to 21.64 million in December 2008. More than 85% of the population visit a GP at least once in any year. From March 2008 to April 2009, there were about 112 million general practice consultations paid for by Medicare, up from 101 million in 1999–00; an average of 5.1 per person, a similar visit rate to 1999–00 (5.4 visits per head).

The GPs

- The feminisation of the GP workforce is reflected in the growing proportion of GP BEACH participants who are female, increasing from 30% in 1999–00 to 33% in 2008–09.
- The GP workforce is ageing—those aged 55 years or more at the time they participated increased from 27% of the final sample in 1999–00 to 46% in 2008–09.
- Most GPs are in group practices and the average GP is working fewer hours.
- In 2008–09 about 40% of GPs h old specialist GP qualifications, an increase from 30% 10 years earlier.
- Almost 60% of GPs work in practices that do not provide their own or cooperative practice coverage of after-hours care compared with 40% in 2000.

Why do the patients see their GP?

- In 1999–00 about half the GP–patient encounters were with people aged <45 years but with the ageing population and increased prevalence of diagnosed chronic disease, in 2008–09 patients aged 45+ years accounted for 60% of all GP–patient encounters.
- Compared with 1999–00 fewer patients went to their GP for only one reason.
- There were increases in patient requests for prescriptions, immunisations, blood tests, tests results, and administrative actions such as medical certificates. In 2008–09 patients also presented more often about their diabetes, depression and hypertension.
- In contrast, patient presentations of symptoms and complaints such as ear pain, throat complaints and headaches decreased by about a 25% over the 10 years.

Have the problems that GPs manage changed?

- GPs managed increasing numbers of problems per encounter and this applied to both newly diagnosed problems and chronic conditions. We estimate 24.7 million more problems were managed at GP encounters in Australia in 2008–09 than in 1999–00.

- Respiratory problems were the most common type of problem managed throughout the decade but were managed less often in 2008–09 (21 per 100 encounters) than in 1999–00 (24 per 100). The decrease was mainly due to drops in upper respiratory tract infection, acute bronchitis, allergic rhinitis, tonsillitis and asthma. This suggests that nationally GPs managed 1.2 million fewer respiratory problems in 2008–09 than 10 years earlier.
- Hypertension was the most common individual problem managed throughout the decade but was managed with increasing frequency, resulting in 2.8 million more visits nationally in 2008–09 than in 1999–00. Other problems managed more often in 2008–09 than 10 years earlier included general check-ups, immunisations/vaccinations, depression, diabetes, cholesterol, osteoarthritis oesophageal disease, atrial fibrillation, pregnancy, and malignant skin neoplasms.

How has disease management changed?

- The major change in management was a decrease in the number of prescribed medications (down from 64 to 56 per 100 problems managed by the GP). There was an increase in the number of medications supplied directly by the GP (from 5 to 7 per 100 problems managed) and these were mostly vaccinations. However the increase in GP-supplied medications did not fully counteract the decrease in prescriptions. Consequently there was a decrease from 75 to 69 per 100 problems managed for all medications prescribed, supplied or advised for over-the-counter purchase.
- The decrease in prescribing did not apply to all types of medications. Increased prescribing rates were apparent for some, particularly cholesterol-lowering agents and drugs for acid-related digestive problems.
- In 2008–09 GPs provided clinical treatments (such as advice, education and psychological counselling) at a similar rate to 1999–00, after a sudden decrease in these activities at the time of the introduction of practice nurse item numbers in 2004.
- GPs undertook more procedures in 2008–09 than 10 years earlier.
- GPs referred their patients more often, particularly to specialists, with a smaller increase in referrals to allied health services.
- The number of orders for pathology tests increased by more than 50%, from 30 test orders per 100 encounters to 46 per 100.
- There was also a significant but smaller increase in orders for imaging.
- Since first measured in 2005–06, practice nurse involvement in GP–patient encounters increased—they were involved in 6.4% of encounters (compared with 4.2% in 2005–06), but in all years only about 40% of these activities were claimable from Medicare. The increase in nurse activity was particularly notable in the number of INR blood tests and check-ups they did. In all years, they were most often involved in immunisations/vaccinations.

Patient risk factors

- In adult patients aged 18 years and over, between 1999–00 and 2008–09 prevalence of overweight increased from 33% to 36%, obesity from 19% to 25%, daily smoking decreased from 19% to 15% and at-risk alcohol consumption remained static at 26%.
- In children aged 2–17 years prevalence of overweight and obesity remained static at about 11% obese and 17% overweight.

1 Introduction

This publication is the 26th book in the series from the BEACH program. This report includes summary results from the most recent 10 years of the program, from 1999–00 to 2008–09 inclusive.

BEACH is a continuous national study of general practice activity conducted by the Australian General Practice Statistics and Classification Centre (AGPSCC). The AGPSCC is a collaborating unit of the Family Medicine Research Centre (FMRC) at the University of Sydney and the Australian Institute of Health and Welfare (AIHW). BEACH is currently supported financially by government instrumentalities and private industry (see Acknowledgments).

BEACH began in April 1998, and at the end of its 11th year (March 2009) the BEACH database included records for almost 1.1 million encounters from 10,885 participants representing more than 7,824 individual general practitioners (almost half of the practising recognised GP population in Australia).

Annual results from the BEACH study are published each year. The most recent of these, released in parallel with this book, is *General practice activity in Australia 2008–09*.[1] This book brings the last 10 years of data together to provide a reference document for those interested in changes that have occurred over the decade 1999–00 to 2008–09 in the GP workforce, the patients consulting them, the problems managed and the treatments provided by GPs.

Like the rest of the developed world, Australia has an ageing population—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.[2] As life expectancy improves, people are living longer with disease, so that a greater part of the GP workload will involve management of older patients with multiple chronic diseases.

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. General practice attendance rates are now approaching the 1998–99 levels.[3]

The structure of this report follows the usual approach of the annual BEACH reports. 10 years of results are provided for the GPs, the patients and the problems managed, together with an overview of management, specific chapters for each management action and a chapter on practice nurse activity. Changes in the prevalence of some risk factors among patients at GP encounters are also presented.

Each chapter contains an overview of the section (including definitions where relevant), the results tables and a brief description of each table. In the tables, statistically significant changes in results between 1999–00 (or 2000–01 if relevant) and 2008–09 are marked. The national effect of significant change can be estimated by extrapolating the BEACH results to all GP Medicare claimed encounters. The method adopted for extrapolation of the effect of a change is described in Section 2.8. Examples of extrapolation of a measured change are also provided in each chapter, from Chapter 5 to 13 inclusive. 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 changes in general practice.

In this report we do not investigate changes in (for example) the GP use of medications, referrals and investigations in the management of a specific problem, or changes in the problems presented by selected groups of patients. Such work was undertaken for morbidities classed in the National Health Priority Areas[4] and published in July 2009 in *General practice in Australia, health priorities and policies 1998 to 2008*.[5]

1.1 Background—general practice in Australia

- In December 2008 the estimated population of Australia was 21.64 million people.[6]
- GPs are the first port of call in the Australian health care system.
- There were 97 full-time equivalent practising primary care practitioners per 100,000 people in Australia in 2006.[7]
- About 88% of the Australian population visited a GP at least once in 2005–06.[8]
- Payment is on a fee-for-service system, there being no patient lists or registration.
- People are free to visit multiple practitioners and multiple practices of their choice.
- There is a universal medical insurance scheme (managed by Medicare Australia), which covers all or most of an individual's costs for a GP visit.
- In 2008–09, 112 million general practitioner items of services were paid by Medicare Australia at an average rate of more than five visits per person per year.[9] GPs provided an estimated additional 5.4 million services paid for by other funders (such as workers compensation, state government) or not charged for at all.[10] In 2008–09, the primary cost to Medicare for GP items was over $4.5 billion.[9]

BEACH gives us some understanding of the content of these encounters and of the services and treatments that GPs provide. The BEACH program aims to:

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

Users of the BEACH data might wish to consolidate information from multiple national data sources. Integration of data from multiple sources can provide a more comprehensive picture of the health and health care of the Australian community. It is therefore important that readers are aware of how the BEACH data differ from those drawn from other sources. A summary of differences between those data collected in BEACH compared with those in the Medicare Benefits Schedule, the Pharmaceutical Benefits Scheme and the National Health survey is available in *General practice activity in Australia 2008–09* (see Section 1.3).[1]

The BEACH program has generated many papers on a wide range of topics in journals and professional magazines. Appendix 3 lists all published material from BEACH.

2 Methods

In summary:

- each year BEACH involves a random sample of approximately 1,000 GPs
- each GP records details about 100 doctor–patient encounters of all types
- the GP sample is a rolling (ever-changing) sample, with approximately 20 GPs participating in any one week, 50 weeks a year
- each GP can be selected only once per quality assurance (QA) triennium (that is once every 3 years)
- the encounter information is recorded by the GPs on structured paper encounter forms (Appendix 1)
- each GP participant also completes a questionnaire about themselves and their practice (Appendix 2).

2.1 Sampling methods

The source population includes all vocationally registered GPs and all general practice registrars who claimed a minimum of 375 general practice A1 Medicare items in the most recently available 3-month Medicare data period (which equates to 1,500 A1 Medicare claims a year). This ensures inclusion of the majority of part-time GPs while excluding those who are not in private practice but claim for a few consultations a year.

On a quarterly basis the Primary and Ambulatory Care Division of the Department of Health and Ageing (DoHA) updates the sample frame from the Medicare records, leaving out of the sample frame any GPs already randomly sampled in the current triennium, and draws a new sample from those currently in the sample frame. This ensures the timely addition of new entries to the profession, and timely exclusion of those GPs who have stopped practising.

2.2 Recruitment methods

The randomly selected GPs are approached by letter posted to the address provided by DoHA.

- Over the following 10 days the telephone numbers generated from the Medicare data are checked using the electronic white and yellow pages. This is necessary because many of the telephone numbers provided from the Medicare data are incorrect.
- The GPs are then telephoned in the order they were approached and, referring to the approach letter, asked whether they will participate.
- This initial telephone contact with the practice often indicates that the selected GP has moved elsewhere, but is still in practice. Where the new address and/or telephone number can be obtained, these GPs are followed up at their new address.
- GPs who agree to participate are set an agreed recording date several weeks ahead.
- A research pack is sent to each participant about 10 days before the planned start date.

- Each GP receives a telephone reminder in the first days of the agreed recording period—this also provides the GP with an opportunity to ask questions about the recording process.
- GPs can use a 'freecall' (1800) number to ring the research team with any questions during their recording period.
- Non-returns are followed up by regular telephone calls for up to 3 months after the set recording time.
- Participating GPs earn Clinical Audit points towards their QA requirements through the Royal Australian College of General Practitioners (RACGP). As part of this QA process, each receives an analysis of his or her results compared with those of nine other de-identified GPs who recorded at approximately the same time. Comparisons with the national average and with targets relating to the National Health Priority Areas are also provided. In addition, GPs receive some educational material related to the identification and management of patients who smoke or consume alcohol at hazardous levels. Additional points can be earned if the participant chooses to do a follow-up audit of smoking and alcohol consumption among a sample of patients about 6 months later.

2.3 Data elements

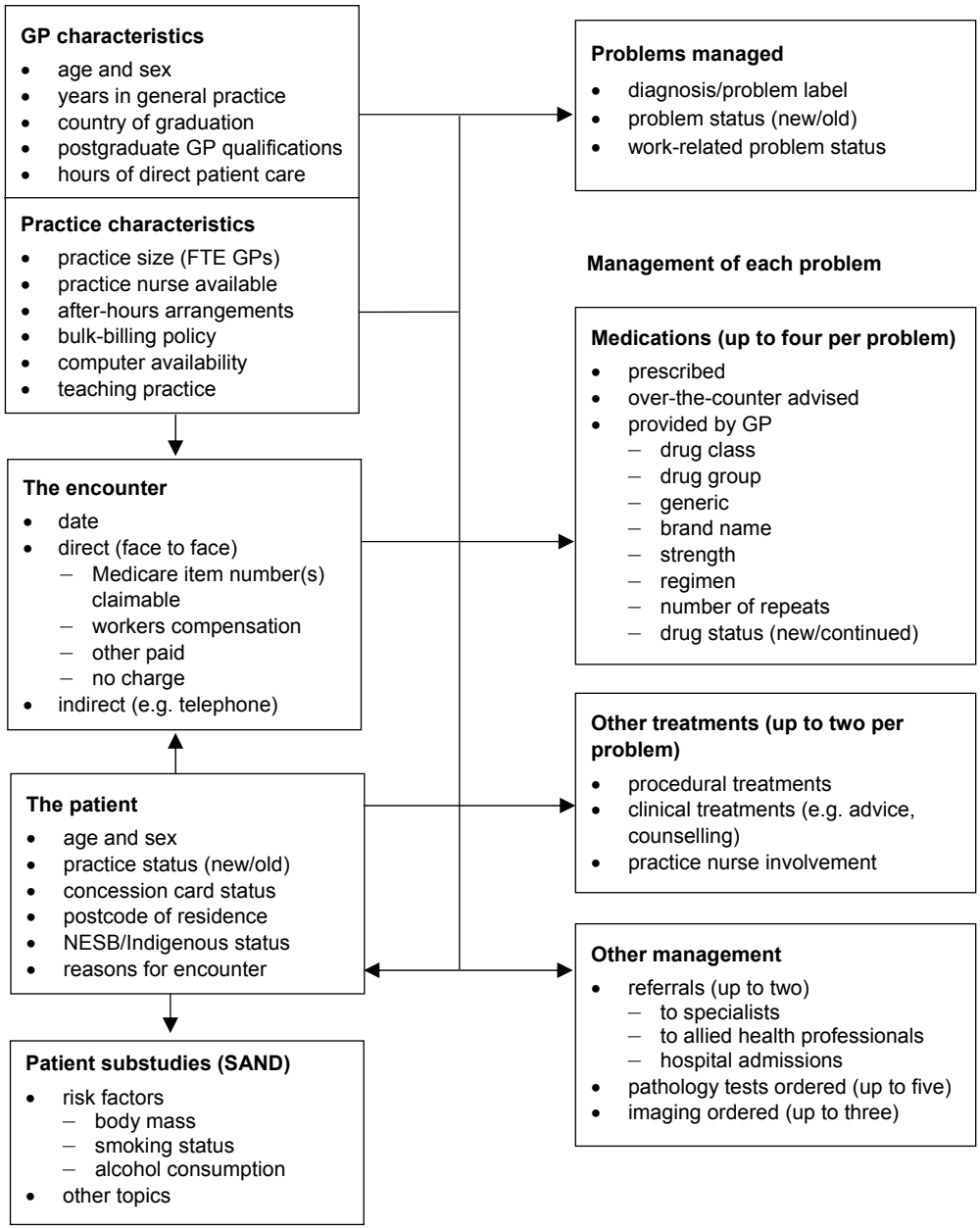
BEACH includes three interrelated data collections: encounter data, GP characteristics and patient health status. An example of the form used to collect the encounter data and the data on patient health status in 2008–09 is included in Appendix 1. The GP characteristics questionnaire (2008–09) is provided in Appendix 2. The data collected include the following:

- **Encounter data:** date of consultation, type of consultation (direct/indirect), up to three MBS/DVA item numbers (where applicable) and other payment source (where applicable) (tick boxes).
- **Patient data:** date of birth, sex and postcode of residence. Tick boxes are provided for Commonwealth concession cardholder, holder of a Repatriation health card (from DVA), non-English-speaking background (patient self-report—a language other than English is the primary language at home), Aboriginal person (self-identification) and Torres Strait Islander person (self-identification). Space is provided for up to three patient reasons for encounter (RFEs).
- **The problems managed** at encounter (at least one and up to four). Tick boxes are provided to denote the status of each problem as new or continuing for the patient
- **Management of** each problem, including:
  - medications prescribed, supplied by the GP and advised for over-the-counter purchase including brand name, form (where required), strength, regimen, status (if new or continuing medication for this problem for this patient) and number of repeats
  - other treatments provided for each problem including counselling, advice and education, and procedures undertaken; and if other treatment was provided by practice nurse (tick box)
  - new referrals to medical specialists, allied health professionals and hospital
  - investigations including pathology tests, imaging and other investigations ordered at the encounter.

- **GP characteristics:** age and sex, years in general practice, number of GP sessions worked per week, number of full-time equivalent GPs working in the practice, postcode of major practice address, country of graduation, postgraduate general practice training and Fellow of the RACGP status, after-hours care arrangements, use of computers in the practice, whether the practice is accredited, whether it is a teaching practice, work undertaken in other clinical settings and hours worked in direct patient care.

2.4 The BEACH relational database

The BEACH relational database is described diagrammatically in Figure 2.1.



Note: FTE—full-time equivalent; NESB—non-English-speaking background; SAND—Supplementary Analysis of Nominated Data.

Figure 2.1: The BEACH relational database

Note that:

- all variables can be directly related to GP and patient characteristics, and to the encounter
- RFEs have only an indirect relationship with problems managed, as a patient may describe one RFE (such as 'repeat prescriptions') that is related to multiple problems managed, or several RFEs (such as 'runny nose' and 'cough') that relate to a single problem (such as upper respiratory tract infection) managed at the encounter
- all types of management are directly related to the problem being treated.

2.5 Supplementary Analysis of Nominated Data

A section at the bottom of each recording form investigates aspects of patient health or health care delivery in general practice not covered by the consultation-based data. These additional substudies are known as Supplementary Analysis of Nominated Data (SAND).

- The year-long data period is divided into 10 blocks, each of 5 weeks with three substudies per block. The research team aims to include data from about 100 GPs in each block.
- Each GP's pack of 100 forms is made up of 40 forms that ask for the start and finish times of the encounter, and include questions about patient risk factors, patient height and weight (used to calculate body mass index (BMI)), alcohol intake and smoking status (patient self-report). The results of topics in the SAND substudies for alcohol consumption, smoking status and BMI are reported in Chapter 14. The start and finish times collected on these encounters is used to calculate the length of consultation. The length of consultation for Medicare-claimable encounters is reported in Chapter 5.
- The remaining 60 forms in each pack are divided into two blocks of 30. Different questions are asked of the patient in each block and these vary throughout the year.
- The order of SAND sections is rotated in the GP recording pack, so that 40 patient risk factor forms may appear first, second or third in the pad. Rotation of ordering ensures there was no order effect on the quality of the information collected.

Abstracts of results and the research tools used in all SAND substudies from April 1998 to March 2009 have been published. Those from:

- April 1998–99 were published in *Measures of health and health care delivery in general practice in Australia*[11]
- April 1999 to July 2006 were published in *Patient-based substudies from BEACH: abstracts and research tools 1999–2006*[12]
- August 2006 to March 2007 were published in *General practice activity in Australia 2006–07*[13]
- April 2007 to January 2008 were published in *General practice activity in Australia 2007–08*[10]
- February 2008 to January 2009 are included in Chapter 15 of *General practice activity in Australia 2008–09*.[1]

Abstracts of results for all SAND substudies are also available on the FMRC's website <www.fmrc.org.au/publications/SAND_abstracts.htm>.

Patient risk factor substudy methods

Body mass index

Patient BMI was investigated for a subsample of 40 of the 100 patient encounters. Each GP was instructed to ask the patient (or their carer in the case of children):

- What is your height in centimetres (without shoes)?
- What is your weight in kilograms (unclothed)?

Metric conversion tables (feet and inches; stones and pounds) were provided to the GP.

The BMI for an individual was calculated by dividing weight (kilograms) by height (metres) squared. The recent World Health Organization (WHO) recommendations[14] for BMI groups were used, which specify that an adult (18 years and over) with a BMI:

- less than 18.5 is underweight
- greater than or equal to 18.5 and less than 25 is normal
- greater than or equal to 25 and less than 30 is overweight
- of 30 or more is obese.

The reported height for adult patients was checked against sex-appropriate upper and lower height limits from the Australian Bureau of Statistics (ABS).[15] Encounters with adults whose reported heights were outside the sex-appropriate limits were excluded from the analysis.

The division between underweight and normal was, in reports published before 2006, set at a BMI of 20. In tables 14.1 to 14.3 patient BMI have been recalculated for all years and are reported according to the current WHO criteria.

The standard BMI cut-offs described above are not appropriate in the case of children. Cole et al. (2000, 2007) developed a method which calculates the age–sex-specific BMI cut-off levels for overweight and obesity specific to children aged 2–17 years.[16,17] This method, based on international data from developed Western cultures, is applicable in the Australian setting. The reported height of children was checked against age–sex-appropriate upper and lower height limits from the ABS and Centres for Disease Control (CDC).[15,18] Encounters with children whose reported heights were outside either of the age–sex-appropriate limits were excluded from the analysis. In reports published prior to 2009 the BMI categories of underweight and normal were grouped together for children. In Table 14.1 the BMI have been recalculated for all years for children.

The BEACH data on BMI are presented separately for adults (aged 18 years and over) and children (aged 2–17 years). The standard BMI cut-offs have been applied for the adult sample, and the method described by Cole et al. (2000, 2007) has been used for defining overweight and obesity in children (aged 2–17 years).[16,17]

Smoking

GPs were instructed to ask adult patients (18 years and over):

- What best describes your smoking status?
  - Smoke daily
  - Smoker occasionally
  - Previous smoker
  - Never smoked

Respondents were limited to adults aged 18 years and over because there are ethical concerns about approaching the younger patient group to ask for information about smoking for survey purposes. In addition, the reliability of this information from patients aged less than 18 years may be compromised if a parent or carer is present at the consultation.

Alcohol consumption

To measure alcohol consumption, BEACH uses three items from the WHO Alcohol Use Disorders Identification Test (AUDIT)[19], with scoring for an Australian setting.[20] Together, these three questions assess 'at-risk' alcohol consumption. The scores for each question range from zero to four. A total (sum of all three questions) score of five or more for males or four or more for females suggests that the person's drinking level is placing him or her at risk.[20]

GPs were instructed to ask adult patients (18 years and over):

- How often do you have a drink containing alcohol?
  Never
  Monthly or less
  Once a week/fortnight
  2–3 times a week
  4+ times a week
- How many standard drinks do you have on a typical day when you are drinking?
  _____
- How often do you have six or more standard drinks on one occasion?
  Never
  Less than monthly
  Monthly
  Weekly
  Daily or almost daily

A standard drinks chart was provided to each GP to help the patient identify the number of standard drinks consumed.

Respondents were limited to adults aged 18 years and over because there are ethical concerns about approaching the younger patient group to ask for information about alcohol consumption for survey purposes. In addition, the reliability of this information from patients aged less than 18 years may be compromised if a parent or carer is present at the consultation.

The wording of the responses to the first and third questions was changed from 2001–02 onwards to reflect exactly the AUDIT instrument from which the responses are derived. This update, along with a data entry change enabling more specific entry for the second question, slightly increased the rates of at-risk drinking. The data collected from 2001–02 onwards are a more accurate reflection of the alcohol consumption of general practice patients and these are the years compared in this report.

2.6 Statistical methods

The analysis of all BEACH data was conducted with Statistical Analysis System (SAS) version 9.1.3.[21] When originally published, data from 1999–00 to 2004–05 were analysed using SAS version 6.12[22] (with additional programming to adjust for the cluster sample study design). In this report (and others published since 2007) these data have been re-analysed using SAS version 9.1.3 (which adjusts for the cluster design without the need for additional programming). This has resulted in slightly tighter confidence intervals and minor variations in point estimates (of up to 0.1) when compared with data published in earlier annual reports for the 1998–04 data years.

BEACH is a single stage cluster sample study design, each 100 encounters forming a cluster around each GP participant. In cluster samples, variance needs to be adjusted to account for the correlation between observations within clusters. Procedures in SAS version 9.1.3 are used to calculate the intracluster correlation and adjust the confidence intervals accordingly.[21]

Post-stratification weighting of encounter data adjusts for any variance in the characteristics of the participating GPs from those of the sample frame from which they were drawn, and for the varying activity level of each GP (measured by the number of claims each has made in the previous 12 months from Medicare Australia). The final sample of encounters shows excellent precision when the age–sex distribution of the patients is compared with the distribution in all Medicare-claimed services of this type.[1]

The encounter is the primary unit of inference. Proportions (%) are used when describing the distribution of an event that can arise only once at a consultation (for example, age, sex), or to describe the distribution of events within a class of events (for example, problem A as a percentage of total problems). Rates per 100 encounters are used when an event can occur more than once at the consultation (for example, RFEs, problems managed or medications).

Rates per 100 problems are also used when a management event can occur more than once per problem managed. In general, the results present the number of observations (n), the rate per 100 encounters and the 95% confidence interval.

The statistical significance of changes in characteristics of the GPs is tested using the chi-square test statistic. However, in general, the results for events occurring at GP–patient encounters present the rate per 100 encounters and the 95% confidence interval.

- Changes over time, in the frequency of these events are judged significant (that is, a real change has occurred) if the two sets of confidence intervals do not overlap. For example, Result A: 11.5 per 100 encounters (95% CI: 11.3–11.7) is significantly less than Result B: 11.9 per 100 encounters (95% CI: 11.8–12.0).
- If the two sets of confidence intervals butt together the difference is regarded as marginal. For example, Result A: 11.5 per 100 encounters (95% CI: 11.3–11.7) is marginally lower than Result B: 11.9 (95% CI: 11.7–12.1).
- If they overlap, then no change has been measured.

2.7 Changes over time

While in this report SAS version 9.1.3[21] was used for all analyses, changes in method or approach have occurred on occasion over the 10 years of results. Data presented in this report are comparable for each result across all data years. Where methodological changes have occurred, the data have either:

- been recalculated using the new method (for example, body mass index was recalculated due to a change in the World Health Organization body mass index groupings)
- been regrouped for comparability (where this occurs, it is has been noted in the footnotes of the table)
- been omitted from this report (if recalculation or grouping was not possible). Where data are omitted, this is noted as not applicable (N/A) or not available (NAv), as appropriate.

Readers should be aware that there may be discrepancies between data in this report and data published in earlier BEACH reports.

In measuring changes over time, the 2008–09 results are compared with those from 1999–00 wherever possible. However, as in any long-term research program, changes occur over the years. For example, in response to requests from DoHA (then the Department of Health and Aged Care), more detailed coding systems for pharmaceuticals, pathology and imaging test orders were developed, and these were applied from year 3 (2000–01) onwards. In these cases, change is measured from 2000–01 because earlier years are not comparable. Practice nurse activity data were not collected until 2005–06, so the changes are only considered between 2005–06 and 2008–09.

Each table includes the most frequent events occurring in 2008–09 and the comparative results for each of the earlier years have been provided. In addition, each table includes data for events that were more frequent in past year(s) that are no longer as frequent in 2008–09. All results are presented in decreasing order of frequency by the 2008–09 data.

The direction and type of change between 1999–00 (or 2000–01 where appropriate) and 2008–09 is indicated for each result in the far right column of the tables:

- ↑/↓ indicates a statistically significant linear change
- ↑/↓ indicates a marginally significant linear change
- § indicates a non-linear significant or marginal change
- — indicates there was no change.

2.8 Extrapolated national estimates

Extrapolations can be used to estimate the number of GP encounters in Australia involving a selected event at a single time point or to estimate the total national effect of changes.

Where the results demonstrate a significant change over time, the estimated national change across total GP Medicare services from 1999–00 (or where appropriate 2000–01) to 2008–09 can be calculated using the method detailed below. An example of an extrapolated national change is given in each chapter in the report from chapters 5 to 13 inclusive.

- The national estimates are calculated by dividing the rate per 100 encounters of the selected event for 1999–00 (or 2000–01 where appropriate) by 100, and then multiplying by the total number of GP services claimed through Medicare in that year (rounded to

the nearest 100,000, see Table 2.1) to give the estimated annual number of events in 1999–00 (or 2000–01). The process is then repeated for 2008–09. The difference between the two estimates (to the nearest 10,000) gives the estimated national change in the rate of encounters for that event over the period of interest.

- This is expressed as the estimated increase or decrease over the study period (between 1999–00 or 2000–01 and 2008–09), in the number of general practice contacts for that event. For example, an increase or decrease in the number of GP management contacts with problem X occurring in Australia in 2008–09 when compared with 1999–00 (or 2000–01).

Table 2.1 provides the total number of general practice professional service items claimed from Medicare in each financial year from 1999–00 to 2008–09. In this report extrapolations are calculated using the number of GP Medicare items claimed rounded to the nearest 100,000. The rounded number is also provided in Table 2.1. Readers can use the method described above to calculate the national effect of any significant change in a single result over any two time points. Extrapolations can also be made using data from a single time point to estimate the number of GP encounters in Australia in a specific year that involve a selected event.

Example of extrapolation

A significant increase in the number of problems managed at encounter (Chapter 7), from 146.7 per 100 encounters in 1999–00 to 154.6 in 2008–09:

- (146.7/100) x 101.5 million = 148.9 million problems managed in general practice nationally in 1999–00, and (154.6/100) x 112.3 million = 173.6 million problems managed in 2008–09.

This suggests there were 24.7 million (173.6 million minus 148.9 million) more problems managed at GP encounters in Australia in 2008–09 than in 1999–00.

Table 2.1: Number of general practice professional services claimed from Medicare Australia each financial year, 1999–00 to 2008–09 ('000)

	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09[(a)]
Number of GP MBS items	101,517	100,645	99,921	96,919	96,330	98,180	101,095	103,433	109,518	112,275
Rounded no. of GP MBS items	101,500	100,600	99,900	96,900	96,300	98,200	101,100	103,400	109,500	112,300

(a) Medicare data for the 2008–09 year included data from the March 2008 to April 2009 quarters because the 2008–09 financial year data were not available at the time of preparation of this report.

Source: Medicare statistics, Table B1 – Medicare: Number of services ('000) by quarter and financial year of processing by broad type of service. Available at <www.health.gov.au/internet/main/publishing.nsf/Content/Medicare+Statistics-1>.

Limitations of extrapolations

The extrapolations to the total encounters occurring nationally in any one year are only estimates. They are likely to provide:

- an underestimate of the true 'GP workload' of a condition/treatment because the extrapolations are made to GP Medicare items claimed, not to the total number of GP encounters per year (approximately 5% of BEACH encounters annually which include indirect encounters and those paid by sources other than Medicare, such as DVA, state governments, work cover, employers)

- an overestimate of the management rate of a group of conditions (for example, cardiovascular disease) because there is a chance that more than one problem of this type will be managed at a single encounter. In the extrapolations, two cardiovascular problems managed at one encounter will be counted as two encounters.

Further, the base numbers used in the extrapolations are rounded to the nearest 100,000 and extrapolation estimates are rounded to the nearest 100,000 if more than a million and to the nearest 10,000 if below a million. However, the rounding has been applied to all years, so the effect on measures of change will be very small. The extrapolations therefore still provide an indication of the size of the effect of measured change nationally.

2.9 Changes to data elements and reporting methods

Changes in data elements and reporting methods have occurred on occasion since the BEACH study began in April 1998:

- More detailed coding systems for pharmaceuticals, pathology and imaging test orders were developed, and these were applied from year 3 (2000–01) onwards. In these cases, change is measured from 2000–01 because earlier years are not comparable.
- Two changes were made to the BEACH form from 2005–06 onwards to capture practice nurse activity associated with the GP–patient consultations. From 2005–06 onwards:
  - GPs could record multiple (up to three) Medicare item numbers
  - in the 'other treatments' section, for each problem managed, the GP was asked to tick the practice nurse box if the treatment recorded was provided by the practice nurse rather than by the GP. If the box was not ticked, the research team assumed that the GP gave the treatment.

  These two changes have implications for the reporting of Medicare/DVA-claimable encounters (Chapter 5), practice nurse activity (Chapter 13) and other treatments (Chapter 10).

Medicare/DVA-claimable encounters

For the first 7 years of the BEACH program (1998–99 to 2004–05), where a Medicare item number was claimable for the encounter, the GP was instructed to record only one item number. Where multiple item numbers (for example, an A1 item such as 'standard surgery consultation' and a procedural item number) were claimable for an encounter, the GP was instructed to record the lower of these (usually an A1 item number). For reporting purposes Medicare-claimable encounters were broken down according to the item number recorded by the GP as claimable (either through Medicare or through DVA) for the encounter.

In this report the Medicare/DVA claimable encounters count only one item number per Medicare/DVA-claimable encounter for comparability with previous years (see Chapter 5). Practice nurse Medicare-claimable encounters are not reported in Chapter 5.

The selection of one item number was undertaken on a priority basis: consultation item numbers override incentive item numbers, which override procedural item numbers, which override other Medicare item numbers.

Practice nurse activity

The research team began to capture practice nurse activity (in 2005–06) due to the introduction of four new MBS item numbers in November 2004 which covered some selected activities conducted by a practice nurse on behalf of a medical practitioner.[23]

The primary aim of BEACH is to describe general practice activity. Before 2005–06, 'general practice activity' has been described in terms of GP–patient encounters and this was considered close to equivalent to 'general practitioner activity'. However, the introduction of the practice nurse item numbers meant that, if practice nurse activity associated with the GP–patient encounter was not included, the content of the consultation was not fully described.

Chapter 13 provides a breakdown of the practice nurse Medicare items claimed, the morbidity managed with the assistance of the practice nurse, and the other treatments given by the practice nurse as recorded by the GP participants from 2005–06 to 2008–09.

When viewing these results, it must be remembered that these practice nurse data do not include activities undertaken by the practice nurse during the GP's BEACH recording period that were performed outside the recorded encounter. These could include Medicare-claimable activities (for example immunisations/vaccinations) provided under instruction from the GP but not provided at the time of the encounter recorded in BEACH, or provision of other activities not currently claimable from Medicare (for example dietary advice on a one-to-one basis, or in a group situation).

Other treatments

In the chapter on other treatments (Chapter 10), all recorded clinical and procedural treatments are included, irrespective of whether they were provided by the GP or by the practice nurse.

2.10 Classification of data

The following data elements are classified according to the International Classification of Primary Care—Version 2 (ICPC-2), a product of the World Organization of Family Doctors (Wonca)[24]:

- patient reasons for encounter (RFEs)
- problems managed
- clinical treatments (for example, counselling, advice)
- procedural treatments
- referrals
- investigations ordered (including pathology, imaging and other investigations).

The ICPC-2 is used in more than 45 countries as the standard for data classification in primary care. It is accepted by the World Health Organization (WHO) in the WHO Family of International Classifications[25], and is the declared national standard in Australia for reporting of health data from general practice and patient self-reported health information.[26]

The ICPC-2 has a biaxial structure, with 17 chapters on one axis (each with an alphabetic code) and seven components on the other (numeric codes) (Figure 2.2). Chapters are based on body systems, with additional chapters for psychological and social problems. Component 1 includes symptoms and complaints. Component 7 covers diagnoses. These are independent in each chapter and both can be used for patient RFEs or problems managed.

Components 2 to 6 cover the process of care, and are common throughout all chapters. The processes of care, including referrals, other (non-pharmacological) treatments and orders for pathology and imaging, are classified in these process components of ICPC-2. Component 2 (diagnostic, screening and prevention) is also often applied in describing the problem managed (for example, check-up, immunisation).

The ICPC-2 is an excellent epidemiological tool. The diagnostic and symptomatic rubrics have been selected for inclusion on the basis of their relative frequency in primary care settings, or because of their relative importance in describing the health of the community. It has approximately 1,370 rubrics and these are sufficient for meaningful analyses. However, reliability of data entry, using ICPC-2 alone, requires a thorough knowledge of the classification for correct classification of a concept to be ensured.

Components	A	B	D	F	H	K	L	N	P	R	S	T	U	W	X	Y	Z
1. Symptoms, complaints																	
2. Diagnostic, screening, prevention																	
3. Treatment, procedures, medication																	
4. Test results																	
5. Administrative																	
6. Other																	
7. Diagnoses, disease																	

A	General	L	Musculoskeletal	U	Urinary
B	Blood, blood-forming	N	Neurological	W	Pregnancy, family planning
D	Digestive	P	Psychological	X	Female genital
F	Eye	R	Respiratory	Y	Male genital
H	Ear	S	Skin	Z	Social
K	Circulatory	T	Metabolic, endocrine, nutritional		

Figure 2.2: The structure of the International Classification of Primary Care—Version 2 (ICPC–2)

In 1995, recognising a need for a coding and classification system for general practice electronic health records, the FMRC (then the Family Medicine Research Unit) developed an extended vocabulary of terms classified according to the ICPC, now called ICPC-2 PLUS.[27] This is an interface terminology, developed by the FMRC from all the terms used by GPs in studies such as the Australian Morbidity and Treatment Survey 1990–91[28], the Morbidity and Therapeutic Index 1992–1998 (a clinical audit tool that was available to GPs), and BEACH 1998–2009, that together have included more than 1.5 million encounter records. These terms are classified according to ICPC-2 to ensure international standards for reporting. Readers interested in seeing how coding works can download the ICPC-2 PLUS Demonstrator at <www.fmrc.org.au/icpc2plus/demonstrator.htm>.

When the free-text data are received from the GPs, trained secondary coders (who are undergraduate students studying health information management or medical science) code

the data in more specific terms using ICPC-2 PLUS. This ensures high coder reliability and automatic classification of the concept, and provides the ability to 'ungroup' such ICPC-2 rubrics as 'other diseases of the circulatory system' and select a specific disease from the terms within it.

Presentation of data classified in ICPC-2

Statistical reporting is almost always at the level of the ICPC-2 classification (for example, acute otitis media/myringitis—ICPC-2 code H71). However, there are some exceptions where data are grouped either above the ICPC-2 level or across the ICPC-2 level. These grouped morbidity, pathology and imaging codes are defined in Appendix 4, and chronic morbidity groups are provided in Appendix 5.

Reporting morbidity with groups of ICPC-2 codes

When recording problems managed, the GP may not always be very specific. For example, in recording the management of hypertension, they may simply record the problem as 'hypertension'. In ICPC-2, 'hypertension, unspecified' is classified as 'uncomplicated hypertension' (code K86). There is another code for 'complicated hypertension' (K87). In some cases the GP may simply have failed to specify that the patient had hypertension with complications. The research team therefore feels that for national data reporting, it is more reliable to group the codes K86 and K87 and label this 'Hypertension*'—the asterisk indicating that multiple ICPC-2 codes (as in this example) or ICPC-2 PLUS codes (see below) are included. Appendix 4 lists codes included in these groups.

Reporting morbidity with groups of ICPC-2 PLUS codes

In other cases a concept can be classified within (but be only part of) multiple ICPC-2 codes. For example, osteoarthritis is classified in ICPC-2 in multiple broader codes according to site, for example, L92—shoulder syndrome (includes bursitis, frozen shoulder, osteoarthritis of shoulder, rotator cuff syndrome). When reporting osteoarthritis in this publication, all the more specific osteoarthritis ICPC-2 PLUS terms are grouped within all the appropriate ICPC-2 codes. This group is labelled 'Osteoarthritis*'—the asterisk again indicating multiple codes, but in this case they are PLUS codes rather than ICPC-2 codes. Appendix 4 lists codes included in these groups.

Reporting chronic morbidity

Chronic conditions are medical conditions characterised by a combination of the following characteristics: duration that has lasted or is expected to last 6 months or more, a pattern of recurrence or deterioration, a poor prognosis, and consequences or sequelae that affect an individual's quality of life.

To identify chronic conditions, a chronic condition list[29] classified according to ICPC-2 was applied to the BEACH data set. In general reporting, both chronic and non-chronic conditions (for example, diabetes and gestational diabetes) may have been grouped together when reporting (for example, diabetes—all*). When reporting chronic morbidity, only problems regarded as chronic have been included in the analysis. Where the group used for the chronic analysis differs from that used in other analyses in this report, they are marked with a double asterisk. Codes included in the chronic groups are provided in Appendix 5.

Reporting pathology and imaging test orders

All the pathology and imaging tests are coded very specifically in ICPC-2 PLUS, but ICPC-2 classifies pathology and imaging tests very broadly (for example, a test of cardiac enzymes is classified in K34—Blood test associated with the cardiovascular system; a CT scan of the lumbar spine is classified as L41—Diagnostic radiology/imaging of the musculoskeletal system). In Australia, the MBS classifies pathology and imaging tests in groups that are relatively well recognised. The team therefore regrouped all pathology and imaging ICPC-2 PLUS codes into MBS standard groups. This allows comparison of data between data sources. These groups are marked with an asterisk, and inclusions are provided in Appendix 4.

Classification of pharmaceuticals

Pharmaceuticals that are prescribed, provided by the GP or advised for over-the-counter purchase are coded and classified according to an in-house classification, the Coding Atlas for Pharmaceutical Substances (CAPS).

This is a hierarchical structure that facilitates analysis of data at a variety of levels, such as medication class, medication group, generic composition and brand name.

Strength and regimen are independent fields that, when combined with the CAPS code, give an opportunity to derive the prescribed daily dose for any prescribed medication or group of medications.

CAPS is mapped to the Anatomical Therapeutic Chemical (ATC)[30] classification, which is the Australian standard for classifying medications at the generic level.

The ATC has a hierarchical structure with five levels. For example:

- Level 1: C—Cardiovascular system
- Level 2: C10—Serum lipid reducing agents
- Level 3: C10A—Cholesterol and triglyceride reducers
- Level 4:C10AA—HMG CoA reductase inhibitors
- Level 5: C10AA01—Simvastatin (the generic drug).

Reporting pharmaceutical data

For pharmaceutical data, there is the choice of reporting in terms of the CAPS coding scheme or the ATC. They each have advantages in different circumstances.

In the CAPS system, a new drug enters at the product and generic level, and is immediately allocated a generic code. Therefore, the CAPS classification uses a bottom–up approach.

In the ATC, a new generic drug type may initially enter the classification at any level (1 to 5), not necessarily always at the generic level. Reclassification to lower ATC levels may occur later. Therefore, the ATC uses a top–down approach.

When analysing medications across time, a generic medication that is initially classified to a higher ATC level will not be identifiable in that data period and may result in under-enumeration of that drug during earlier data collection periods.

In measuring changes in medications over time, the team chose to report at Level 2 of the ATC (which is more stable over time than Level 3), and in CAPS for the generic-level drugs.

2.11 Quality assurance

All morbidity and therapeutic data elements were secondarily coded by staff entering key words or word fragments, and selecting the required term or label from a pick list. This was then automatically coded and classified by the computer. A quality assurance program to ensure reliability of data entry includes ongoing development of computer-aided error checks ('locks') at the data entry stage, and a physical check of samples of data entered versus those on the original recording form. Further logical data checks are conducted through SAS on a regular basis.

2.12 Validity and reliability

A discussion of the reliability and validity of the BEACH program has been published elsewhere.[31] In this section we touch on some aspects of reliability and validity of active data collection from general practice that should be considered by the reader.

In the development of a database such as BEACH, data gathering moves through specific stages: GP sample selection, cluster sampling around each GP, GP data recording, secondary coding and data entry. At each stage the data can be invalidated by the application of inappropriate methods. The methods adopted to ensure maximum reliability of coding and data entry have been described above. The statistical techniques adopted to ensure valid analysis and reporting of recorded data are described in Section 2.6. Previous work has demonstrated the extent to which a random sample of GPs recording information about a cluster of patients represents all GPs and all patients attending GPs.[32] Other studies have reported the degree to which GP-reported patient RFEs and problems managed accurately reflect those recalled by the patient[33] and the reliability of secondary coding of RFEs[34] and problems managed.[28] The validity of ICPC as a tool with which to classify the data has also been investigated in earlier work.[35]

However, the question of the extent to which the GP-recorded data are a reliable and valid reflection of the content of the encounter must also be considered. In many primary care consultations, a clear pathophysiological diagnosis is not reached. Bentsen[36] and Barsky[37] suggest that a firm and clear diagnosis is not apparent in about half of GPs' consultations, and others suggest the proportion may be even greater.[38] Further, studies of general ambulatory medical practice have shown that a large number of patients presenting to a primary care practitioner are without a serious physical disorder.[39,40] As a result, it is often necessary for a practitioner to record a problem in terms of symptoms, signs, patient concerns, or the service that is requested, such as immunisation. For this reason, this report refers to patient 'problems' rather than 'diagnoses'.

A number of studies have demonstrated wide variance in the way a GP perceives the patient's RFE and the manner in which the GP describes the problem under management. In a direct observational study of consultations via a one-way mirror, Bentsen demonstrated differences in the way practitioners labelled problems, and suggested that clinical experience may be an important influence on the identification of problems within the consultation.[36] Two other factors that might affect GPs' descriptions of patient RFEs have been identified: even when individuals select the same stimuli, some label each stimulus separately whereas others cluster them under one label and individuals differ in the number of stimuli they select (selective perception).[41]

The extent to which therapeutic decisions may influence the diagnostic label selected has also been discussed. Howie[42] and Anderson[39] argue that, while it is assumed that the diagnostic process used in general practice is one of symptom→ diagnosis → management, the therapeutic method may well be selected on the basis of the symptom, and the diagnostic label chosen last. They suggest that the selection of the diagnostic label is therefore influenced by the management decision already made.

Anderson has also pointed out that the therapeutic decision may be influenced by fashion, and, in turn, this affects the selection of the problem label. He gives the example of a rise in the occurrence of neurotic depression in parallel with a decrease in the use of menopause as a diagnosis in the United Kingdom, and suggests this may be the result of a change in the preferred treatment from oestrogen therapy to antidepressants.[39] This should be remembered when considering the changes in general practice described in this report.

Alderson contends that to many practitioners 'diagnostic accuracy is only important to the extent that it will assist them in helping the patient'. He further suggests that if major symptoms are readily treatable, some practitioners may feel no need to define the problem in diagnostic terms.[43] Crombie stated that in the second and third national morbidity surveys in the United Kingdom there was 'enormous variability in the rates at which doctors perceive and record illnesses'. He concluded that the probable cause arose from the different ways in which GPs gave priority in their perceptions and recording of certain morbidities while discounting or ignoring others. He was unable to account statistically for this variation by the effect of geography, age, sex or class differences in the practice populations.[44] Differences in the way male and female GPs label problems also appear to be independent of such influences.[45]

These problems are inherent in the nature of general practice. Knottnerus argues that the GP is confronted with a fundamentally different pattern of problems from the specialist, the GP often having to draw up general diagnostic hypotheses related to probability, severity and consequences.[46] Anderson suggests that morbidity statistics from family practice should therefore be seen as 'a reflection of the physician's diagnostic opinions about the problems that patients bring to them rather than an unarguable statement of the problems managed'.[39] In any case, doctors base their actions on problems as they perceive them.

While these findings regarding limitations in the reliability and validity of practitioner-recorded morbidity should be kept in mind, they apply equally to data drawn from medical records, whether paper or electronic, as they do to active data collection methods.[47,48] There is as yet no more reliable method of gaining detailed data about morbidity and its management in general practice. Further, irrespective of the differences between individual GPs in their labelling of the problems, morbidity data collected by GPs in active data collection methods have been shown to provide a reliable overview of the morbidity managed in general practice.[49]

3 The sample

Table 3.1 shows the number of encounters contained in each year of the BEACH program since April 1999, and the size of the total 10-year database for each variable (weighted), upon which all comparisons over time described in this report are based.

Table 3.1: Annual summary of data sets, 1999–00 to 2008–09 (final weighted data)

Variable	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	Total 10 years
General practitioners	1,047	999	983	1,008	1,000	953	1,017	930	953	1,011	9,901
Encounters	104,856	99,307	96,973	100,987	98,877	94,386	101,993	91,805	95,898	96,688	981,770
Reasons for encounter	155,690	149,962	144,654	152,352	144,674	141,215	153,309	138,434	146,696	151,282	1,478,268
Problems managed	153,857	143,528	139,092	146,336	148,521	137,330	149,088	136,333	145,078	149,462	1,448,625
Medications	115,432	107,400	101,350	104,813	103,210	95,816	106,493	93,193	98,439	102,737	1,028,883
Other treatments	48,194	49,072	51,130	53,676	52,315	53,630	47,847	44,035	49,130	49,048	498,077
Referrals	11,760	10,366	7,761	12,265	11,794	10,881	12,235	12,195	12,008	13,251	114,516
Imaging	7,841	8,227	7,642	8,678	8,121	7,840	9,003	8,229	9,143	9,469	84,193
Pathology	27,613	29,225	30,086	33,234	34,831	34,652	39,357	38,963	41,375	44,066	353,402

4 The participating GPs

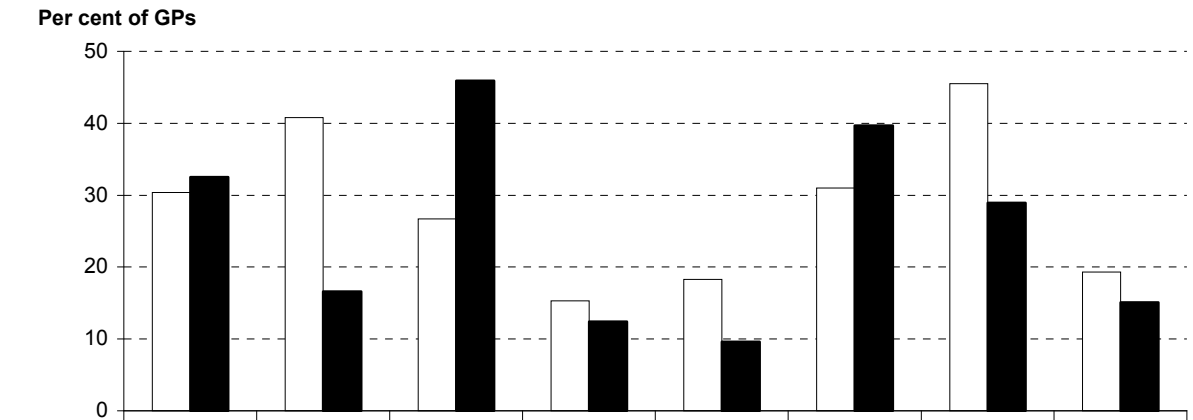
Part of the BEACH method involves the completion of a profile questionnaire by each GP participant (see Appendix 2). This questionnaire covers information about the GP and the major practice at which they are employed. Over the 10 years, the questions have occasionally been altered to improve the quality and clarity of the data collected, or to investigate topics not previously surveyed as they become relevant. Therefore, some characteristics have data over the full 10-year period, and some for shorter periods.

Since 1999–00 some trends have emerged in the characteristics of GP BEACH participants (Table 4.1). The most noticeable changes over the 10 years are listed below and some are presented in Figure 4.1. It should be noted, however, that in regard to the age and sex of GPs who participated in BEACH during 2008–09 (see section 3.2 in *General practice activity in Australia 2008–09*)[1], the proportions reported in the 1998–99 to 2007–08 version of this report are more reliable indicators of changes over time for the GP and practice characteristics discussed below.[50]

- The feminisation of the general practice workforce is reflected in the growing proportion of GP participants who are female. The proportion of female participants increased from 30.4% in 1999–00 to 32.5% in 2008–09. This change reflects that apparent in the sample frame of all recognised GPs claiming more than 375 general practice Medicare items of service in the previous quarter in Australia, as provided each year by DoHA, from Medicare claims data.
- There was a considerable decrease in the proportion of GPs aged 35–44 years (from 32.4% in 1999–00 to 14.0% in 2008–09), and an increase in the proportion aged 55 years and over (from 26.7% in 1999–00 to 45.9% in 2008–09). Again, these changes reflect the differences observed in the sample frame from Medicare data.
- Reflecting the change in age distribution, the proportion of GPs working in general practice for fewer than 2 years decreased, from 0.7% in 1999–00 to 0.1% in 2008–09, and the proportion practising for 20 years and over increased, from 43.5% to 71.9%. There was also a decrease in the proportion working in general practice for 11–19 years, from 31.9% in 1999–00 to 19.3% in 2008–09.
- The proportion of GPs working fewer than six sessions per week increased considerably, and the proportion working 11 or more sessions per week decreased significantly. This was thought to partially reflect the larger proportion of female GPs working part-time in conjunction with motherhood. However, Charles et al. (2004) found that, while female GPs were much more likely than males to work fewer sessions, no significant change had occurred in the proportion of female GPs working part-time between 1999 and 2003. They found the proportion of males working fewer than six sessions per week rose from 6.1% in 1998–99 to 11.4% in 2002–03.[51] Between 1999–00 and 2008–09 there was also a significant increase in the proportion of GPs working 6–10 sessions per week, from 66.0% in 1999–00 to 78.0% in 2008–09. The proportion of GPs working 11 or more sessions per week almost halved, from 18.3% to 9.6% over this period.
- The proportion of participants in solo practice halved between 1999–00 and 2006–07, and the proportion in smaller practices of 2–4 GPs also decreased considerably. There was an associated significant increase in the proportion of GPs working in practices with five or more practitioners, from 35.8% in 1999–00 to 56.1% in 2006–07. From 2007–08, the

question was altered to capture full-time equivalent GPs at the practice, so data are no longer comparable for the question in its original format.

- The results for consultations in a language other than English reflect a change in question design. Between 1998–99 and 2000–01 GPs were asked only one question: 'Do you conduct more than 50% of consultations in a language other than English?' The question was removed for the following 2 years, but was replaced as the issue again became of interest. A new question was designed to collect more specific data. The recent results suggest that about one-quarter of participants provide some consultations in a language other than English, but few are doing so at more than 50% of their consultations. It would appear that, in the survey's original format, those GPs who did consult in another language were keen to let that be known, and the '> 50%' category was the only avenue available to them.
- There was no significant change over the decade in the proportions of Australian trained GPs compared with those who had graduated outside Australia. However, there was a significant change in the geographic distribution of country of graduation for those trained overseas.
- The proportion of GP participants holding Fellowship of the RACGP significantly increased, from 31.0% in 1999–00 to 39.7% in 2008–09.
- There was a significant reduction in the proportion of GPs who provide their own after-hours services, from 45.5% in 2000–01 to 28.9% in 2008–09, and those who provided after-hours services in cooperation with other practices, from 19.3% in 2000–01 to 15.1% in 2008–09.



	Female	<45 years	55+ years	<6 sessions/wk	>10 sessions/wk	FRACGP	Own after-hours(a)	Co-op after-hours(a)
□ 1999–00	30.4	40.8	26.7	15.3	18.3	31.0	45.5	19.3
■ 2008–09	32.5	16.6	45.9	12.4	9.6	39.7	28.9	15.1

(a) Data about after-hours services were only collected from 2000–01 onward. This figure refers to the results from 2000–01.

Note: Wk—week; FRACGP—Fellows of the Royal Australian College of General Practitioners; Own after-hours—the practice provides its own after-hours service for their patients; Co-op after-hours—the practice provides after-hours services in a cooperative arrangement with other practices.

Figure 4.1: Summary of changes in GP characteristics, 1999–00 to 2008–09

Table 4.1: GP characteristics, BEACH, 1999–00 to 2008–09

	Per cent of GPs[a]									
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09
GP characteristic	(*n* = 1,047)	(*n* = 999)	(*n* = 983)	(*n* = 1,008)	(*n* = 1,000)	(*n* = 953)	(*n* = 1,017)	(*n* = 930)	(*n* = 953)	(*n* = 1,011)
Sex (χ^2 = 1.12, *p* = 0.289) (missing *n*)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Male	69.6	68.4	64.2	64.8	67.3	67.9	62.8	65.9	63.2	67.5
Female	30.4	31.6	35.8	35.2	32.7	32.1	37.2	34.1	36.8	32.5
Age (χ^2 = 161.59, *p* < 0.001) (missing *n*)	(4)	(9)	(1)	(0)	(1)	(1)	(18)	(11)	(8)	(4)
< 35 years	8.4	6.7	7.1	7.3	5.8	8.9	4.7	6.7	7.8	2.6
35–44 years	32.4	28.4	26.8	26.6	24.9	25.5	22.3	22.6	22.2	14.0
45–54 years	32.4	34.2	36.5	35.2	36.5	31.8	34.2	35.6	36.4	37.5
55+ years	26.7	29.7	29.5	30.9	32.7	33.6	38.7	35.0	33.5	45.9
Years in general practice (χ^2 = 174.41, *p* < 0.001) (missing *n*)	(8)	(6)	(4)	(6)	(9)	(5)	(13)	(13)	(7)	(6)
< 2 years	0.7	0.5	0.3	0.6	1.3	0.4	0.6	0.5	0.6	0.1
2–5 years	8.0	6.4	7.2	7.5	5.3	10.3	4.9	7.9	9.9	3.4
6–10 years	15.9	13.7	13.4	13.5	10.7	12.6	12.1	11.1	12.9	5.7
11–19 years	31.9	29.9	28.4	28.0	28.1	25.4	24.0	23.4	20.6	19.3
20+ years	43.5	48.8	50.3	50.4	54.6	51.3	58.5	57.0	55.9	71.5
Currently in a general practice vocational training program (χ^2 = 1.44, *p* = 0.229)	2.2	2.5	2.5	2.9	4.4	3.5	2.6	2.9	2.8	1.5
Fellow of RACGP (χ^2 = 16.01, *p* < 0.001)	31.0	31.4	35.1	35.5	33.5	42.3	40.7	46.3	50.2	39.7

(continued)

Table 4.1 (continued): GP characteristics, BEACH, 1999–00 to 2008–09

	Per cent of GPs[a]									
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09
GP characteristic	(*n* = 1,047)	(*n* = 999)	(*n* = 983)	(*n* = 1,008)	(*n* = 1,000)	(*n* = 953)	(*n* = 1,017)	(*n* = 930)	(*n* = 953)	(*n* = 1,011)
Sessions per week (χ^2 = 40.7, p < 0.001) (missing *n*)	(6)	(16)	(15)	(8)	(7)	(8)	(6)	(7)	(9)	(6)
< 6 per week	15.3	15.9	16.0	18.7	17.2	14.4	17.3	17.0	15.4	12.4
6–10 per week	66.0	66.3	67.8	67.9	68.2	71.2	70.7	73.3	73.9	78.0
11+ per week	18.3	16.2	14.8	13.4	13.6	11.4	12.0	9.6	10.9	9.6
Size of practice—Number of GPs (χ^2 = 93.49, p < 0.001) (missing *n*)	(5)	(28)	(4)	(8)	(10)	(6)	(9)	(6)		
Solo	18.1	19.3	15.3	13.7	10.6	12.2	13.1	8.2	NAv	NAv
2–4 GPs	46.1	38.6	39.7	38.4	37.8	36.4	35.2	35.7	NAv	NAv
5+ GPs	35.8	42.1	44.7	47.9	51.6	51.3	51.7	56.1	NAv	NAv
Size of practice—Full-time equivalents (missing *n*)	..	..	..	..	..	..	..	..	(23)	(8)
< 2	NAv	NAv	NAv	NAv	NAv	NAv	NAv	NAv	17.6	19.6
2– < 5 GPs	NAv	NAv	NAv	NAv	NAv	NAv	NAv	NAv	41.2	42.9
5– < 10 GPs	NAv	NAv	NAv	NAv	NAv	NAv	NAv	NAv	31.9	29.4
10+ GPs	NAv	NAv	NAv	NAv	NAv	NAv	NAv	NAv	9.2	8.1
Consultations in languages other than English[b] (missing *n*)	..	..	..	..	(6)	(1)	(10)	(0)	(4)	(3)
< 25%	NAv	NAv	NAv	NAv	17.8	21.7	21.0	18.1	20.4	17.5
25–50%	NAv	NAv	NAv	NAv	2.9	2.4	3.6	2.7	3.0	3.5
> 50%	10.6	13.5	NAv	NAv	2.4	3.4	3.4	2.9	3.6	1.5

(continued)

Table 4.1 (continued): GP characteristics, BEACH, 1999–00 to 2008–09

	Per cent of GPs[a]									
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09
GP characteristic	(*n* = 1,047)	(*n* = 999)	(*n* = 983)	(*n* = 1,008)	(*n* = 1,000)	(*n* = 953)	(*n* = 1,017)	(*n* = 930)	(*n* = 953)	(*n* = 1,011)
Place of graduation[c] (χ^2 = 0.23, *p* = 0.630) (missing *n*)	(2)	(0)	(0)	(0)	(1)	(1)	(6)	(1)	(3)	(2)
Australia	73.3	72.7	76.1	72.6	73.5	69.8	72.0	73.6	73.5	74.3
Overseas	26.7	27.3	23.9	27.4	26.5	30.2	28.0	26.4	26.8	25.7
United Kingdom	8.5	8.2	7.6	9.1	7.2	7.6	8.1	7.3	6.8	10.3
Asia	9.4	4.7	8.6	9.9	9.5	10.9	10.9	10.1	9.8	8.3
Europe	1.9	1.9	1.8	1.6	2.3	3.8	2.1	1.7	2.6	1.9
Africa	2.4	1.5	3.7	4.3	5.4	5.4	4.5	5.1	4.3	3.8
New Zealand	1.5	1.5	0.5	2.2	1.0	1.3	1.9	1.4	1.4	1.2
Other	2.8	9.5	1.6	0.9	1.0	1.3	0.6	0.8	0.5	0.3
Practice location by RRMA (χ^2 = 9.94, *p* = 0.127) (missing *n*)	(0)	(0)	(1)	(0)	(2)	(1)	(1)	(0)	(1)	(0)
Capital	65.2	68.1	69.3	64.7	62.4	64.9	69.1	63.9	67.8	66.8
Other metropolitan	7.4	6.9	8.1	8.5	6.4	6.7	6.8	7.3	7.0	10.0
Large rural	7.6	5.6	5.9	5.1	7.0	5.4	5.7	7.9	6.9	5.5
Small rural	6.2	5.6	4.9	7.7	7.0	6.9	6.0	5.4	4.7	6.1
Other rural	12.2	12.2	10.5	12.0	14.2	13.0	11.1	13.6	11.3	10.3
Remote central	0.4	1.0	0.5	0.6	0.9	1.3	0.5	1.0	0.7	0.4
Other remote, offshore	1.0	0.7	0.8	1.4	2.0	1.8	0.8	1.1	1.5	0.9

(continued)

Table 4.1 (continued): GP characteristics, BEACH, 1999–00 to 2008–09

	Per cent of GPs[a]									
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09
GP characteristic	(*n* = 1,047)	(*n* = 999)	(*n* = 983)	(*n* = 1,008)	(*n* = 1,000)	(*n* = 953)	(*n* = 1,017)	(*n* = 930)	(*n* = 953)	(*n* = 1,011)
Practice location by ASGC (χ^2 = 8.98, *p* = 0.061) (missing *n*)	(0)	(1)	(0)	(0)	(2)	(2)	(0)	(0)	(1)	(0)
Major cities	68.6	70.9	71.4	69.4	65.4	67.6	72.1	66.3	72.2	73.4
Inner regional	20.3	18.9	17.3	19.1	21.8	20.1	18.8	22.7	17.4	18.0
Outer regional	9.7	8.4	10.1	9.3	10.1	10.1	7.8	9.4	8.6	7.2
Remote	1.2	1.4	0.9	1.6	1.6	1.5	0.8	1.3	1.3	0.9
Very remote	0.2	0.3	0.3	0.7	1.0	0.7	0.6	0.3	0.5	0.5
After-hours arrangements[d] (χ^2 = 2.57, *p* = 0.108) (missing *n*)	NAv	(0)	(0)	(10)	(5)	(8)	(14)	(3)	(6)	(6)
Practice does its own	NAv	45.5	41.6	42.8	43.6	35.9	34.6	34.6	33.2	28.9
Cooperative with other practices	NAv	19.3	19.4	16.7	20.0	16.2	15.7	15.5	11.3	15.1
Other than own/cooperative	NAv	39.5	44.0	45.2	59.6	50.1	52.6	52.1	55.6	57.4
Computer use at practice[e] (χ^2 = 95.92, *p* < 0.001)	NAv	87.4	89.7	91.3	95.0	93.7	96.4	96.6	96.7	NAv
Computer use by individual GPs[f]	NAv	NAv	NAv	NAv	NAv	NAv	NAv	NAv	NAv	94.7

(a) Missing data removed.

(b) Data for all three groupings only available from 2003–04 onward.

(c) *p* = 0.630—no significant difference when comparing Australia with all overseas countries of GP origin; *p* < 0.001—significant difference in the distribution of overseas countries of GP origin.

(d) Multiple responses were allowed.

(e) Data refer to computer use at the major practice and may not reflect the use of computers by individual GPs.

(f) Data refer to computer use by individual GPs.

Note: RACGP—Royal Australian College of General Practitioners; NAv—not available; RRMA—Rural, Remote and Metropolitan Areas classification; ASGC—Australian Standard Geographical Classification.

5 The encounters

This chapter includes details about the encounters in general practice from each of the 10 years of the BEACH study from 1999–00 to 2008–09. The direction and type of change from 1999–00 to 2008–09 is indicated for each result in the far right column of the tables: ↑/↓ indicates a statistically significant linear change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

Significant linear changes can be extrapolated to estimate the national increase or decrease in the content of encounters between 1999–00 and 2008–09. An example of an extrapolated change is given for each table. The method used to extrapolate to national change estimates is described in Chapter 2, Section 2.8.

5.1 Content of the encounters

Table 5.1 provides an overview of the changes over time for data collected in BEACH between 1999–00 and 2008–09. As the table shows, many changes have occurred over the 10-year period, representing the changes occurring in Australian general practice over this time.

The number of reasons for encounter given by the patient and recorded by the GP increased significantly over the decade, from 148.5 RFEs per 100 encounters to 156.5 per 100 encounters. Changes in types of RFEs are investigated in Chapter 6.

A significant increase in the rate of problems managed was first detected in 2007–08 and continued to rise in 2008–09 to a rate of 154.6 problems managed per 100 encounters. The rate in 1999–00 was 146.7 per 100 encounters, indicating an additional 24.7 million problems managed in general practice in 2008–09 compared with a decade earlier.

Reflecting the increase in problems managed was an increase in the rate of chronic problems managed, which shows a linear increase between 1999–00 and 2008–09, from 47.2 chronic problems per 100 encounters to 55.1 per 100 encounters. This represents an estimated additional 14.0 million chronic problems managed in general practice nationally in 2008–09 compared with 1999–00.

There was also a significant increase in the rate of new problems managed, from 45.3 per 100 encounters to 57.4 per 100 encounters, representing an increase of 18.5 million new problems managed over the 10-year period.

Although there was no change since 1999–00 in the overall rate of medications recorded, changes in the form of supply of medications occurred. There was a significant decline in the rate of medications prescribed to patients, representing 1.8 million fewer prescriptions written in 2008–09 than in 1999–00. However, the rate of GP-supplied medications increased from 6.9 per 100 encounters to 11.0 per 100, indicating an additional 5.3 million medications supplied by GPs to patients in 2008–09. More detailed analysis of these results can be found in Chapter 9.

Other areas that demonstrated an increase over time included procedures, referrals (overall, and to specialists and allied health professionals), pathology and imaging orders, and orders

for other investigations (Table 5.1). These changes are reported in more detail in their respective chapters.

As a proportion of all Medicare/DVA-claimable encounters recorded in BEACH, long surgery consultations decreased, from 8.7% in 1999–00 to 7.3% in 2008–09 (Table 5.2). This was primarily due to a decrease in long surgery consultations from 2007–08 (9.9%) to 7.3% in 2008–09. Home visits also decreased as a proportion of MBS-claimable encounters, from 1.5% in 1999–00 to 0.9% in 2008–09. This equates to approximately 510,000 fewer home visits in 2008–09 than 10 years earlier.

In the subsample study for length of consultation that included start and finish times for A1 Medicare/DVA-claimable encounters, there was no significant change in mean length of consultation between 2000–01 and 2008–09. There was also no significant change in mean consultation length when all encounters with a GP Medicare item number were considered (Table 5.3).

Table 5.1: Summary of morbidity and management, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[a]
Variable	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Reasons for encounter	148.5 (146.7–150.2)	151.0 (149.2–152.8)	149.2 (147.4–150.9)	150.9 (149.0–152.7)	150.2 (148.4–152.0)	149.6 (147.8–151.5)	150.3 (148.4–152.2)	150.8 (148.9–152.7)	153.0 (151.1–154.8)	156.5 (154.7–158.2)	↑
Problems managed	146.7 (144.9–148.6)	144.5 (142.8–146.3)	143.4 (141.7–145.2)	144.9 (143.0–146.8)	146.3 (144.4–148.2)	145.5 (143.6–147.4)	146.2 (144.2–148.2)	148.5 (146.4–150.6)	151.3 (149.2–153.4)	154.6 (152.6–156.5)	↑
New problems	45.3 (43.6–46.9)	47.4 (45.7–49.0)	55.1 (53.8–56.5)	57.0 (55.6–58.3)	55.9 (54.5–57.3)	55.2 (53.8–56.5)	56.9 (55.5–58.2)	56.5 (55.1–57.9)	57.7 (56.3–59.1)	57.4 (56.0–58.7)	↑
Chronic problems	47.2 (45.5–49.0)	46.9 (45.3–48.4)	48.0 (46.4–49.5)	47.7 (46.1–49.4)	50.4 (48.6–52.1)	50.4 (48.7–52.1)	50.6 (48.8–52.5)	50.6 (48.8–52.5)	52.4 (50.5–54.3)	55.1 (53.4–56.8)	↑
Work-related	3.2 (2.9–3.5)	3.3 (3.1–3.5)	3.0 (2.7–3.2)	NAv	NAv	3.1 (2.8–3.5)	2.8 (2.6–3.1)	2.9 (2.6–3.1)	2.8 (2.6–3.1)	2.8 (2.6–3.0)	—
Medications	110.1 (107.8–112.4)	108.2 (105.7–110.6)	104.5 (102.2–106.9)	103.8 (101.4–106.2)	104.4 (102.1–106.7)	101.5 (99.3–103.8)	104.4 (101.8–107.0)	101.5 (99.2–103.9)	102.7 (100.3–105.0)	106.3 (104.0–108.5)	—
Prescribed	93.8 (91.5–96.2)	92.3 (89.9–94.7)	88.0 (85.6–90.4)	84.3 (81.8–86.9)	86.0 (83.6–88.5)	83.4 (81.2–85.5)	85.8 (83.3–88.4)	83.3 (81.0–85.5)	82.4 (80.3–84.6)	86.4 (84.1–88.6)	↓
GP-supplied	6.9 (6.0–7.7)	6.9 (5.9–7.9)	7.6 (6.6–8.7)	9.3 (8.0–10.6)	8.6 (7.6–9.6)	8.1 (7.3–8.8)	8.8 (8.2–9.5)	8.9 (8.2–9.6)	10.1 (9.5–10.7)	11.0 (10.2–11.8)	↑
Advised OTC	9.4 (8.7–10.1)	9.0 (8.2–9.7)	8.9 (8.2–9.6)	10.2 (9.3–11.1)	9.8 (9.0–10.5)	10.1 (9.2–10.9)	9.8 (9.0–10.5)	9.4 (8.7–10.1)	10.1 (9.3–10.9)	8.9 (8.3–9.4)	—
Other treatments	46.0 (44.1–47.8)	49.4 (47.1–51.7)	51.9 (49.5–54.2)	51.8 (49.3–54.3)	51.4 (48.9–53.8)	54.7 (52.1–57.3)	43.6 (41.5–45.8)	44.7 (42.3–47.0)	51.2 (48.9–53.6)	50.7 (48.5–52.9)	↑
Clinical	33.5 (31.8–35.2)	37.2 (35.1–39.3)	38.1 (36.1–40.1)	37.2 (35.0–39.4)	36.6 (34.5–38.8)	39.2 (37.1–41.4)	29.2 (27.3–31.1)	29.5 (27.6–31.4)	34.5 (32.5–36.5)	34.0 (32.1–35.9)	—
Procedural	12.5 (11.9–13.0)	12.2 (11.6–12.8)	13.8 (13.1–14.5)	14.6 (13.9–15.3)	14.7 (14.0–15.5)	15.5 (14.6–16.4)	14.4 (13.7–15.1)	15.2 (14.4–16.0)	16.7 (15.9–17.5)	16.7 (16.0–17.5)	↑

(continued)

Table 5.1 (continued): Summary of morbidity and management, BEACH, 1999–00 to 2008–09

Variable	Rate per 100 encounters (95% CI)										
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↓[a]
Referrals	11.1 (10.7–11.6)	10.4 (10.0–10.8)	10.5 (10.1–10.9)	11.1 (10.7–11.6)	11.6 (11.1–12.1)	11.5 (11.1–12.0)	12.0 (11.5–12.5)	12.2 (11.7–12.7)	12.5 (12.0–13.0)	13.7 (13.2–14.2)	↑
Specialist	7.3 (7.0–7.6)	7.4 (7.1–7.7)	7.3 (7.0–7.6)	7.7 (7.3–8.0)	7.9 (7.5–8.2)	7.7 (7.4–8.0)	8.2 (7.8–8.5)	8.0 (7.7–8.4)	8.0 (7.6–8.3)	9.0 (8.7–9.3)	↑
Allied health services	3.1 (2.9–3.3)	2.3 (2.2–2.5)	2.3 (2.1–2.4)	2.5 (2.3–2.7)	2.6 (2.4–2.8)	2.7 (2.5–2.9)	2.9 (2.7–3.1)	3.1 (2.9–3.3)	3.4 (3.2–3.7)	3.9 (3.6–4.1)	↑
Hospital	0.7 (0.6–0.8)	0.5 (0.4–0.6)	0.4 (0.4–0.5)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.5 (0.4–0.5)	0.4 (0.3–0.4)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.3 (0.3–0.4)	↓
Emergency department	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.2)	↑
Other referrals/other medical services[b]	0.0Ŧ (0.0–0.0)	0.2 (0.1–0.2)	0.4 (0.3–0.4)	0.3 (0.2–0.3)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.3–0.4)	0.5 (0.5–0.6)	0.5 (0.4–0.6)	0.3 (0.2–0.4)	↑
Pathology[c]	NAv	29.7 (28.4–30.9)	31.0 (29.7–32.4)	32.9 (31.5–34.4)	35.2 (33.7–36.7)	36.7 (35.2–38.2)	38.6 (36.9–40.3)	42.4 (40.7–44.2)	43.2 (41.3–45.0)	45.6 (43.8–47.4)	↑
Imaging[d]	NAv	7.7 (7.3–8.0)	7.9 (7.6–8.2)	8.6 (8.2–9.0)	8.2 (7.8–8.6)	8.3 (8.0–8.6)	8.8 (8.4–9.2)	9.0 (8.6–9.3)	9.5 (9.2–9.9)	9.8 (9.4–10.2)	↑
Other investigations[d]	NAv	0.6 (0.5–0.7)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.0 (1.0–1.1)	1.1 (1.0–1.2)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	↑

(a) The direction and type of change is indicated for each result: ↑/↓ indicates a statistically significant change, and — indicates there was no change.

(b) Other referrals and other medical services have been reported together for comparability. The 'other medical services' group was introduced in 2003–04. Previously these were grouped with 'other referrals'.

(c) In the 2000–01 BEACH year the data collection and data coding system for pathology changed. Changes over time are calculated using the 2000–01 data to ensure comparability.

(d) In the 1999–00 BEACH year 'imaging' and 'other investigations' were grouped and reported together.

Ŧ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: CI—confidence interval; NAv—not available; OTC—over-the-counter.

Table 5.2: Type of encounter, summary of annual results (most frequent events), BEACH, 1999–00 to 2008–09

MBS/DVA consultation category	Percentage distribution of Medicare/DVA-claimable encounters (95% CI)										↑↓[a]
	1999–00 (*n* = 93,698)	2000–01 (*n* = 82,113)	2001–02 (*n* = 84,196)	2002–03 (*n* = 89,068)	2003–04 (*n* = 86,244)	2004–05 (*n* = 81,582)	2005–06 (*n* = 89,011)	2006–07 (*n* = 79,847)	2007–08 (*n* = 83,376)	2008–09 (*n* = 86,069)	
Short surgery consultations	1.4 (1.1–1.8)	1.6 (0.3–2.0)	1.1 (0.9–1.3)	1.2 (1.0–1.4)	1.2 (0.9–1.4)	1.0 (0.8–1.3)	1.0 (0.8–1.1)	1.1 (0.9–1.4)	1.2 (1.0–1.4)	1.5 (1.3–1.8)	—
Standard surgery consultations	84.1 (83.2–84.9)	83.9 (82.9–84.9)	84.1 (83.1–85.0)	82.8 (81.8–83.9)	82.4 (81.2–83.6)	82.3 (81.0–83.5)	83.7 (82.7–84.7)	83.4 (82.4–84.3)	82.1 (80.1–83.3)	79.8 (78.9–80.8)	↓
Long surgery consultations	8.7 (8.0–9.3)	8.8 (8.2–9.5)	8.7 (8.0–9.3)	9.6 (8.9–10.2)	9.7 (9.0–10.4)	10.5 (9.7–11.2)	9.8 (9.1–10.5)	10.0 (9.3–10.6)	9.9 (9.2–10.5)	7.3 (6.8–7.8)	§
Prolonged surgery consultations	0.6 (0.5–0.7)	0.7 (0.5–0.8)	0.7 (0.5–0.8)	0.8 (0.6–0.9)	0.7 (0.6–0.9)	0.8 (0.6–0.9)	0.7 (0.5–0.8)	0.6 (0.5–0.7)	0.7 (0.5–0.8)	0.4 (0.3–0.6)	—
Home visits	1.5 (1.3–1.7)	1.5 (1.2–1.9)	1.6 (1.3–1.9)	1.3 (1.1–1.6)	1.4 (1.0–1.8)	1.0 (0.8–1.2)	1.2 (0.9–1.5)	0.9 (0.7–1.1)	1.0 (0.6–1.4)	0.9 (0.7–1.0)	↓
Hospital	0.5 (0.3–0.7)	0.2 (0.1–0.3)	0.2 (0.1–0.3)	0.4 (0.2–0.6)	0.4 (0.3–0.5)	0.2 (0.1–0.3)	0.2 (0.1–0.3)	0.2 (0.1–0.3)	0.2 (0.1–0.2)	0.2 (0.1–0.3)	↓
Residential aged care facility	1.0 (0.8–1.2)	0.7 (0.5–1.0)	1.0 (0.7–1.3)	1.2 (0.9–1.6)	1.2 (0.9–1.4)	1.2 (0.8–1.6)	1.3 (0.9–1.6)	1.3 (1.0–1.6)	1.2 (0.9–1.5)	1.2 (0.9–1.5)	—
Chronic disease management	N/A	0.0[Ŧ] (0.0–0.0)	0.1 (0.1–0.3)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.3 (0.2–0.4)	0.4 (0.3–0.5)	0.5 (0.4–0.6)	0.9 (0.8–1.0)	↑
Case conference	N/A	0.0[Ŧ] (0.0–0.0)	0.0[Ŧ] (0.0–0.0)	0.0[Ŧ] (0.0–0.0)	0.0[Ŧ] (0.0–0.0)	0.0[Ŧ] (0.0–0.0)	0.0[Ŧ] (0.0–0.0)	0.0[Ŧ] (0.0–0.0)	0.0[Ŧ] (0.0–0.0)	0.0 (0.0–0.0)	—
Health assessment	0.0[Ŧ] (0.0–0.0)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	↑
Incentive payments	N/A	N/A	N/A	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	↑
GP mental health care	NAv	NAv	NAv	0.0 (0.0–0.0)	0.0 (0.0–0.0)	0.0 (0.0–0.0)	0.0 (0.0–0.0)	0.4 (0.3–0.5)	0.8 (0.7–0.9)	1.0 (0.8–1.1)	↑
Other items	2.3 (2.0–2.6)	2.5 (2.0–3.0)	2.5 (1.9–3.0)	2.4 (1.8–3.0)	2.7 (2.0–3.5)	2.6 (1.7–3.4)	1.6 (1.3–1.8)	1.4 (1.1–1.7)	2.0 (1.5–2.4)	1.5 (1.2–1.8)	↓

(a) The direction and type of change is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant change, and — indicates there was no change.

Ŧ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: Includes encounters that were recorded as claimable through the Department of Veterans' Affairs (DVA). CI—confidence interval; MBS—Medicare Benefits Schedule; N/A—not applicable; NAv—not available.

Table 5.3: Consultation length (minutes), BEACH, 2000–01 to 2008–09

	Consultation length (minutes)								
Variable	**2000–01**	**2001–02**	**2002–03**	**2003–04**	**2004–05**	**2005–06**	**2006–07**	**2007–08**	**2008–09**
A1 Medicare/DVA items (A,B,C,D)[a]	**(*n* = 30,961)**	**(*n* = 35,104)**	**(*n* = 34,886)**	**(*n* = 31,844)**	**(*n* = 30,683)**	**(*n* = 32,830)**	**(*n* = 33,756)**	**(*n* = 29,956)**	**(*n* = 33,025)**
Mean	14.8 (14.5–15.1)	14.9 (14.7–15.2)	14.8 (14.5–15.1)	15.0 (14.7–15.3)	15.1 (14.8–15.4)	14.9 (14.6–15.1)	14.9 (14.7–15.2)	14.8 (14.6–15.1)	14.4 (14.2–14.6)
Median	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Mode	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Range	1–106	1–155	1–165	1–120	1–120	1–110	1–155	1–110	1–120
All Medicare/DVA-claimable encounters (GP items)	**(*n* = 31,734)**	**(*n* = 36,142)**	**(*n* = 35,861)**	**(*n* = 32,839)**	**(*n* = 31,510)**	**(*n* = 34,111)**	**(*n* = 35,201)**	**(*n* = 31,722)**	**(*n* = 34,783)**
Mean	14.9 (14.6–15.2)	15.0 (14.8–15.3)	14.9 (14.6–15.2)	15.1 (14.9–15.4)	15.2 (14.9–15.5)	15.0 (14.7–15.2)	15.1 (14.8–15.3)	15.1 (14.8–15.3)	14.6 (14.4–14.9)
Median	13.0	13.0	13.0	14.0	13.0	13.0	13.0	13.0	13.0
Mode	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Range	1–150	1–180	1–165	1–175	1–180	1–110	1–155	1–110	1–120

(a) A1 Medicare items—Group A includes: 3, 4, 13, 19, 20; Group B includes: 23, 24, 25, 33, 35; Group C includes: 36, 37, 38, 40, 43; Group D includes: 44, 47, 48, 50, 51.

Note: DVA—Australian Government Department of Veterans' Affairs. Results for the 1999–00 BEACH year are not presented, as data are not comparable for this year.

6 The patients

This chapter includes data about the patients who participated in the BEACH study, including the patient characteristics and reasons for the encounter (RFEs), from each of the 10 years of the BEACH study from 1999–00 to 2008–09. The direction and type of change from 1999–00 to 2008–09 is indicated for each result in the far right column of the tables: ↑/↓ indicates a statistically significant linear change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant or marginal change, and — indicates that there was no change.

Significant linear changes can be extrapolated to estimate the national increase or decrease in patient characteristics or RFEs between 1999–00 and 2008–09. An example of an extrapolation is given for each table. The method used to extrapolate to national change estimates is described in Chapter 2, Section 2.8.

6.1 Age–sex distribution of patients at encounter

Table 6.1 shows the age–sex distribution of patients at BEACH encounters between 1999–00 and 2008–09. Over this time period the proportion of encounters with patients aged less than 45 years decreased from 51.4% to 41.3%, which equates to approximately 5.8 million fewer encounters nationally. Over the same period, the proportion of encounters with patients aged 45 years and over increased from 48.6% to 58.7%, which equates to an additional 16.6 million encounters. The relationship between patient age, general practice attendance rates and the age distribution of the Australian population is reported in Chapter 4 of *General practice in Australia, health priorities and policies 1998 to 2008*.[52]

6.2 Other patient characteristics

Table 6.1 shows that the proportion of encounters with patients holding a Commonwealth concession card has increased significantly from 38.6% in 1999–00 to 45.7% in 2008–09. The increase equates to about 12.1 million more encounters with Commonwealth concession cardholders in 2008–09 compared with 10 years earlier.

6.3 Patient reasons for encounter

RFEs are those concerns and expectations that patients bring to the GP. International interest in reasons for encounter has been developing over the past three decades. RFEs reflect the patient's demand for care and can provide an indication of service use patterns, which may benefit from intervention on a population level.[53]

Participating GPs were asked to record at least one and up to three patient RFEs in words as close as possible to those used by the patient, before the diagnostic or management process had begun. RFEs can be expressed in terms of one or more symptoms (for example 'itchy eyes', 'chest pain'), in diagnostic terms (for example 'about my diabetes', 'for my hypertension'), a request for a service ('I need more scripts', 'I want a referral'), an expressed fear of disease, or a need for a check-up.

Patient RFEs can have a one-to-one, one-to-many, many-to-one and many-to-many relationship to problems managed. That is, the patient may describe a single RFE that relates to a single problem managed at the encounter, one RFE that relates to multiple problems, multiple symptoms that relate to a single problem managed at the encounter, or multiple RFEs that relate to multiple problems managed at the encounter.

Number of reasons for encounter

Table 6.2 shows there was a decrease in the proportion of patients giving a single RFE, from 62.0% in 1999–00 to 56.6% in 2008–09. To balance this there was an increase in the proportion of encounters at which two RFEs or three RFEs were recorded, from 27.5% in 1999–00 to 30.3% in 2008–09 for two RFEs, and from 10.5% in 1999–00 to 13.1% in 2008–09 for three RFEs. This suggests that there were 6.1 million more encounters nationally where two RFEs were reported and 4 million more where three RFEs were reported in 2008–09 than in 1999–00.

Reasons for encounter by ICPC-2 chapter

Table 6.3 shows that between 1999–00 and 2008–09, there was:

- a significant increase in the overall rate of RFEs, from 148.5 per 100 encounters in 1999–00 to 156.5 per 100 encounters in 2008–09. This increase equates to about 25 million extra RFEs nationally in 2008–09 than in 1999–00
- a 40% increase in the rate of general and unspecified RFEs, equating to an approximate increase of 16.2 million general and unspecified RFEs from 1999–00 to 2008–09 nationally
- a significant decrease in RFEs relating to respiratory problems from 25.3 per 100 encounters in 1999–00 to 22.0 per 100 encounters in 2008–09
- a significant increase across the decade in RFEs relating to male genital systems and endocrine & metabolic systems
- a significant decrease across the decade in RFEs relating to neurological problems, ear problems and pregnancy & family planning.

Distribution of reasons for encounter by ICPC-2 component

Table 6.4 shows that between 1999–00 and 2008–09:

- RFEs expressed in terms of a symptom or complaint (for example, 'tired', 'feeling anxious') were the most frequent. However, the presentation rate of symptoms or complaints decreased significantly since 1999–00 from 73.4 per 100 encounters to 68.8 per 100 encounters in 2008–09
- the rate of patient attendance to request test results nearly doubled, equating to an increase of over 4.7 million encounters with an RFE of this type in 2008–09 compared with 1999–00
- requests for an administrative procedure (such as a medical certificate) also nearly doubled, equating to an increase of approximately 1.4 million requests for an administrative procedure nationally

- patient requests for medications, treatments and therapeutics (such as repeat prescriptions) increased by 27.5%, equating to an increase of approximately 5.0 million such requests in 2008–09 compared with 1999–00
- patient requests for diagnostic and preventative treatments (such as immunisation) also increased from 22.9 per 100 encounters in 1999–00 to 26.9 per 100 encounters in 2008–09.

Most frequent patient reasons for encounter

Table 6.5 shows that between 1999–00 and 2008–09:

- the rate at which patients cited a need for prescription(s) as an RFE increased by nearly one-third, equating to an increase of about 4.4 million encounters with this RFE in 2008–09 compared with 1999–00
- the rate of immunisations/vaccinations, depression and hypertension as RFEs all increased by about one-quarter
- the rate of requests for general blood tests and RFEs relating to diabetes both increased by 50%, equating to an additional 540,000 for both these RFEs
- the rate of request for referrals trebled over the decade, equating to an additional 800,000 of such requests in 2008–09 compared with 1999–00
- the presentation rate of ear pain, throat complaint, headache each decreased by about one-quarter.

Table 6.1: Characteristics of patients at encounters, BEACH, 1999–00 to 2008–09

Patient characteristics	Rate per 100 encounters (95% CI)										
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↓[a]
Sex (missing *n*)[b]	(1,182)	(1,111)	(809)	(911)	(932)	(809)	(788)	(765)	(876)	(867)	
Male	42.7 (42.0–43.5)	42.9 (42.2–43.6)	42.6 (41.9–43.3)	42.2 (41.4–42.9)	42.6 (41.8–43.3)	43.5 (42.7–44.3)	44.0 (43.2–44.7)	43.7 (42.9–44.5)	42.9 (42.1–43.7)	42.4 (41.5–43.3)	—
Female	57.3 (56.5–58.0)	57.1 (56.4–57.8)	57.4 (56.7–58.1)	57.8 (57.0–58.6)	57.4 (56.7–58.2)	56.5 (55.7–57.3)	56.0 (55.3–56.8)	56.3 (55.5–57.1)	57.1 (56.3–57.9)	57.6 (56.7–58.5)	—
Age group (missing *n*)[b]	(804)	(846)	(760)	(895)	(905)	(925)	(769)	(779)	(784)	(704)	
< 1 year	2.4 (2.2–2.5)	2.1 (1.9–2.3)	2.0 (1.9–2.1)	1.9 (1.8–2.1)	1.8 (1.7–1.9)	1.9 (1.8–2.1)	2.1 (1.9–2.2)	1.8 (1.7–2.0)	2.0 (1.8–2.1)	2.0 (1.8–2.1)	↓
1–4 years	5.2 (4.9–5.5)	5.4 (5.1–5.7)	4.9 (4.6–5.2)	5.0 (4.7–5.3)	4.6 (4.3–4.8)	4.3 (4.0–4.7)	4.3 (4.0–4.5)	4.1 (3.9–4.4)	4.3 (4.1–4.6)	4.2 (4.0–4.4)	↓
5–14 years	7.2 (6.9–7.5)	6.8 (6.4–7.2)	6.4 (6.1–6.7)	6.6 (6.3–6.9)	5.9 (5.6–6.3)	5.8 (5.5–6.1)	6.0 (5.7–6.3)	5.6 (5.3–5.9)	5.5 (5.2–5.8)	5.3 (5.1–5.6)	↓
15–24 years	10.4 (9.9–10.8)	10.3 (9.8–10.7)	9.5 (9.1–10.0)	10.1 (9.7–10.4)	9.6 (9.2–10.1)	9.0 (8.6–9.4)	9.4 (9.0–9.8)	9.1 (8.6–9.5)	9.5 (9.0–9.9)	8.4 (8.0–8.9)	↓
25–44 years	26.3 (25.5–27.0)	26.3 (25.6–27.0)	25.8 (25.1–26.5)	25.7 (24.9–26.4)	24.1 (23.4–24.8)	24.4 (23.7–25.1)	23.9 (23.2–24.7)	23.3 (22.6–24.0)	23.4 (22.7–24.1)	21.4 (20.7–22.1)	↓
45–64 years	24.5 (24.0–25.0)	26.1 (25.5–26.7)	26.3 (25.7–26.8)	26.5 (25.9–27.0)	27.2 (26.7–27.7)	28.0 (27.4–28.6)	27.6 (27.0–28.2)	28.2 (27.6–28.7)	28.1 (27.5–28.6)	29.1 (28.5–29.6)	↑
65–74 years	12.0 (11.5–12.5)	11.7 (11.2–12.2)	12.3 (11.8–12.8)	11.6 (11.1–12.0)	12.4 (11.9–12.9)	12.6 (12.1–13.2)	12.2 (11.7–12.6)	12.7 (12.2–13.2)	12.6 (12.1–13.1)	13.4 (12.9–13.9)	↑
75+ years	12.1 (11.4–12.9)	11.3 (10.7–12.0)	12.8 (12.0–13.5)	12.7 (11.9–13.4)	14.4 (13.6–15.2)	13.9 (13.1–14.7)	14.6 (13.7–15.4)	15.2 (14.4–16.0)	14.7 (13.9–15.5)	16.2 (15.4–17.0)	↑

(continued)

Table 6.1 (continued): Characteristics of patients at encounters, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[a]
Patient characteristics	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Other characteristics[c]											
New patient to practice	7.3 (6.7–7.9)	8.0 (7.2–8.7)	8.9 (8.2–9.5)	9.7 (8.9–10.5)	9.1 (8.4–9.8)	8.9 (8.1–9.6)	8.9 (8.2–9.7)	8.4 (7.7–9.2)	8.5 (7.7–9.3)	5.8 (5.4–6.2)	§
Commonwealth concession card	38.6 (37.0–40.2)	36.7 (35.1–38.3)	41.9 (40.4–43.3)	40.4 (38.8–41.9)	42.5 (41.0–44.0)	43.2 (41.8–44.7)	42.1 (40.6–43.7)	41.5 (39.9–43.0)	41.8 (40.3–43.3)	42.3 (41.0–43.6)	↑
Repatriation health card[d]	2.9 (2.6–3.1)	3.1 (2.9–3.4)	3.3 (3.0–3.5)	3.3 (3.0–3.6)	3.5 (3.2–3.8)	3.2 (2.9–3.4)	3.1 (2.8–3.3)	3.1 (2.8–3.3)	2.8 (2.5–3.0)	2.8 (2.6–3.1)	—
Non-English-speaking background	8.0 (6.5–9.5)	8.0 (7.2–8.7)	9.3 (7.6–11.0)	10.6 (9.0–12.2)	9.7 (7.8–11.6)	10.8 (9.0–12.6)	9.8 (8.2–11.4)	7.1 (5.8–8.5)	9.9 (8.2–11.5)	9.4 (7.9–10.9)	—
Aboriginal person and/or Torres Strait Islander	0.7 (0.5–0.9)	0.8 (0.5–1.1)	1.0 (0.8–1.3)	1.0 (0.8–1.3)	1.6 (1.2–2.0)	1.3 (1.0–1.7)	0.9 (0.6–1.1)	0.9 (0.6–1.2)	0.9 (0.7–1.2)	0.8 (0.5–1.0)	—

(a) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

(b) Missing data removed.

(c) Missing data for each of the listed 'other' patient characteristics were counted as a 'no' response.

(d) The 1999–00 results published here include patients who held either a gold or white Repatriation health card; some previously published figures only included patients who held the gold card.

Note: CI—confidence interval.

Table 6.2: Number of patient reasons for encounter, BEACH, 1999–00 to 2008–09

Number of reasons for encounter	Rate per 100 encounters (95% CI)										
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↓ (a)
One RFE	62.0 (60.8–63.1)	60.4 (59.2–61.6)	61.8 (60.6–63.0)	60.7 (59.5–61.9)	61.0 (59.9–62.2)	61.4 (60.2–62.6)	60.9 (59.7–62.2)	60.6 (59.4–61.9)	58.9 (57.7–60.2)	56.6 (55.5–57.8)	↓
Two RFEs	27.5 (26.9–28.2)	28.2 (27.6–28.9)	27.2 (26.5–28.0)	27.8 (27.1–28.4)	27.7 (27.0–28.4)	27.6 (26.9–28.3)	27.8 (27.1–28.5)	27.9 (27.2–28.7)	29.1 (28.5–29.8)	30.3 (29.6–30.9)	↑
Three RFEs	10.5 (9.8–11.1)	11.4 (10.7–12.1)	11.0 (10.3–11.6)	11.6 (10.8–12.3)	11.3 (10.5–12.0)	11.0 (10.3–11.7)	11.2 (10.5–11.9)	11.4 (10.7–12.2)	11.9 (11.2–12.6)	13.1 (12.4–13.8)	↑

(a) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change.

Note: CI—confidence interval; RFE—reason for encounter.

Table 6.3: Rate of patient reasons for encounter by ICPC-2 chapter, BEACH, 1999–00 to 2008–09

ICPC-2 Chapter	Rate per 100 encounters[a] (95% CI)										
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↓ (b)
General & unspecified	29.0 (28.1–29.9)	28.3 (27.5–29.1)	30.9 (29.9–31.8)	34.6 (33.6–35.6)	36.2 (35.2–37.2)	36.5 (35.5–37.6)	36.3 (35.2–37.4)	37.7 (36.7–38.8)	40.1 (39.0–41.2)	40.6 (39.6–41.7)	↑
Respiratory	25.3 (24.3–26.2)	24.6 (23.7–25.4)	23.4 (22.6–24.2)	23.0 (22.0–24.0)	21.4 (20.6–22.2)	20.6 (19.8–21.4)	21.9 (21.1–22.7)	20.7 (19.9–21.6)	20.6 (19.7–21.5)	22.0 (21.2–22.9)	↓
Musculoskeletal	16.6 (16.1–17.1)	17.7 (17.1–18.2)	16.7 (16.1–17.3)	17.7 (17.2–18.3)	16.3 (15.7–16.9)	16.7 (16.0–17.3)	16.4 (15.8–16.9)	16.1 (15.6–16.6)	15.4 (14.9–15.9)	16.1 (15.5–16.6)	—
Skin	15.1 (14.7–15.6)	15.5 (15.0–16.0)	14.4 (13.9–14.9)	14.7 (14.3–15.2)	15.1 (14.5–15.7)	15.6 (15.0–16.2)	15.0 (14.5–15.6)	15.7 (15.1–16.3)	15.4 (14.8–16.1)	15.1 (14.6–15.6)	—
Cardiovascular	11.2 (10.6–11.8)	11.7 (11.1–12.2)	11.4 (10.8–11.9)	10.6 (10.0–11.1)	10.7 (10.1–11.2)	10.5 (10.0–11.0)	10.8 (10.2–11.3)	11.2 (10.7–11.8)	11.2 (10.6–11.8)	11.5 (10.9–12.0)	—
Digestive	10.4 (10.0–10.7)	11.1 (10.7–11.5)	10.6 (10.2–11.0)	10.4 (10.0–10.8)	10.7 (10.3–11.2)	9.9 (9.5–10.3)	9.9 (9.5–10.3)	10.1 (9.7–10.5)	10.3 (10.0–10.7)	9.8 (9.4–10.1)	§

(continued)

Table 6.3 (continued): Rate of patient reasons for encounter by ICPC-2 chapter, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
ICPC-2 Chapter	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Psychological	7.2 (6.8–7.6)	8.1 (7.7–8.6)	7.8 (7.3–8.3)	7.3 (6.9–7.8)	7.3 (6.9–7.7)	7.6 (7.2–8.0)	7.8 (7.3–8.3)	7.5 (7.1–7.8)	7.8 (7.5–8.2)	8.7 (8.2–9.1)	§
Endocrine & metabolic	5.4 (5.1–5.7)	6.2 (5.9–6.5)	6.4 (6.1–6.7)	6.0 (5.7–6.3)	6.2 (5.8–6.5)	6.2 (5.8–6.5)	6.2 (5.8–6.5)	6.4 (6.1–6.8)	6.5 (6.1–6.8)	6.9 (6.5–7.3)	↑
Female genital system	5.3 (4.9–5.7)	5.5 (5.1–5.9)	5.5 (5.1–5.9)	6.1 (5.7–6.6)	5.1 (4.8–5.5)	5.0 (4.6–5.4)	5.1 (4.8–5.5)	5.1 (4.7–5.4)	5.2 (4.8–5.6)	5.3 (4.9–5.6)	—
Neurological	5.6 (5.4–5.8)	5.8 (5.5–6.0)	5.4 (5.2–5.6)	5.7 (5.5–6.0)	5.3 (5.1–5.6)	5.1 (4.9–5.4)	4.9 (4.7–5.2)	4.9 (4.7–5.2)	4.8 (4.6–5.0)	4.8 (4.6–5.0)	↓
Ear	4.2 (4.0–4.4)	4.2 (4.0–4.3)	4.2 (4.0–4.4)	4.0 (3.8–4.1)	3.7 (3.6–3.9)	3.9 (3.7–4.1)	3.9 (3.7–4.1)	3.6 (3.4–3.7)	3.6 (3.4–3.8)	3.7 (3.5–3.9)	↓
Pregnancy & family planning	3.8 (3.5–4.2)	3.5 (3.2–3.8)	3.5 (3.2–3.8)	3.6 (3.3–3.9)	3.7 (3.4–4.0)	3.4 (3.1–3.7)	3.4 (3.1–3.6)	3.3 (3.0–3.6)	3.2 (3.0–3.5)	3.1 (2.8–3.3)	↓
Urology	2.6 (2.5–2.8)	2.4 (2.3–2.6)	2.5 (2.4–2.7)	2.5 (2.3–2.6)	2.5 (2.4–2.7)	2.5 (2.4–2.7)	2.6 (2.5–2.8)	2.6 (2.4–2.7)	2.5 (2.4–2.7)	2.7 (2.5–2.8)	—
Eye	2.8 (2.7–3.0)	2.7 (2.5–2.8)	2.5 (2.4–2.7)	2.7 (2.6–2.9)	2.7 (2.6–2.9)	2.7 (2.6–2.9)	2.8 (2.6–2.9)	2.5 (2.4–2.7)	2.5 (2.4–2.6)	2.6 (2.4–2.7)	—
Blood	2.1 (1.9–2.3)	2.0 (1.8–2.2)	1.1 (0.9–1.2)	1.0 (0.8–1.2)	1.3 (1.1–1.4)	1.2 (1.0–1.5)	1.2 (1.0–1.3)	1.2 (1.1–1.4)	1.4 (1.2–1.5)	1.4 (1.3–1.6)	§
Male genital system	1.0 (0.9–1.1)	1.1 (1.0–1.3)	1.0 (0.9–1.1)	1.0 (0.9–1.2)	1.1 (0.9–1.2)	1.2 (1.1–1.4)	1.3 (1.2–1.4)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.3 (1.2–1.4)	↑
Social problems	1.0 (0.8–1.1)	0.9 (0.7–1.1)	1.0 (0.8–1.1)	1.0 (0.8–1.2)	0.9 (0.8–1.1)	1.0 (0.8–1.1)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	1.1 (1.0–1.2)	1.0 (0.9–1.0)	—
Total RFEs	**148.5 (146.7–150.2)**	**151.0 (149.2–152.8)**	**149.2 (147.4–150.9)**	**150.9 (149.0–152.7)**	**150.2 (148.4–152.0)**	**149.6 (147.8–151.5)**	**150.3 (148.4–152.2)**	**150.8 (148.9–152.7)**	**153.0 (151.1–154.8)**	**156.5 (154.7–158.2)**	↑

(a) Figures do not total 100, as more than one RFE can be recorded for each encounter.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

Note: CI—confidence interval; RFE—reason for encounter.

Table 6.4: Rate of patient reasons for encounter by ICPC-2 component, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
ICPC component	**(*n* = 104,856)**	**(*n* = 99,307)**	**(*n* = 96,973)**	**(*n* = 100,987)**	**(*n* = 98,877)**	**(*n* = 94,386)**	**(*n* = 101,993)**	**(*n* = 91,805)**	**(*n* = 95,898)**	**(*n* = 96,688)**	
Symptoms & complaints	73.4 (71.5–75.3)	76.6 (74.6–78.6)	74.1 (72.3–75.9)	74.0 (72.0–76.1)	71.7 (69.8–73.5)	71.3 (69.4–73.2)	69.7 (67.9–71.5)	67.9 (66.1–69.8)	67.7 (65.8–69.6)	68.8 (67.1–70.5)	↓
Diagnosis, diseases	27.7 (26.2–29.2)	29.0 (27.6–30.5)	27.3 (25.9–28.7)	26.0 (24.6–27.4)	25.1 (23.9–26.4)	24.5 (23.3–25.7)	26.8 (25.4–28.2)	27.9 (26.2–29.5)	27.8 (26.3–29.3)	27.8 (26.4–29.2)	§
Diagnostic & preventive procedures	22.9 (22.0–23.8)	22.3 (21.4–23.2)	22.7 (21.7–23.6)	23.8 (22.8–24.7)	24.0 (23.1–25.0)	23.4 (22.5–24.3)	24.4 (23.4–25.3)	24.8 (23.8–25.7)	25.6 (24.7–26.5)	26.9 (26.0–27.8)	↑
Medications, treatments & therapeutics	12.0 (11.4–12.6)	11.2 (10.6–11.8)	11.9 (11.3–12.4)	13.0 (12.4–13.6)	14.4 (13.7–15.1)	14.5 (13.8–15.3)	14.4 (13.7–15.1)	14.2 (13.5–14.8)	15.1 (14.3–15.8)	15.3 (14.6–15.9)	↑
Results	4.0 (3.7–4.3)	4.2 (3.9–4.6)	4.7 (4.4–5.1)	5.4 (5.0–5.7)	6.0 (5.6–6.4)	6.8 (6.4–7.2)	6.5 (6.1–6.9)	6.9 (6.5–7.3)	7.6 (7.2–8.1)	7.8 (7.4–8.2)	↑
Referral & other RFEs	7.2 (6.7–7.7)	6.5 (6.0–7.0)	7.2 (6.7–7.7)	7.0 (6.6–7.5)	7.2 (6.8–7.6)	7.4 (6.9–7.9)	6.9 (6.5–7.4)	7.3 (6.9–7.8)	6.8 (6.4–7.2)	7.5 (7.0–7.9)	—
Administrative	1.3 (1.1–1.4)	1.1 (0.9–1.3)	1.3 (1.1–1.5)	1.6 (1.4–1.8)	1.8 (1.6–1.9)	1.7 (1.5–1.8)	1.7 (1.5–1.8)	1.9 (1.7–2.0)	2.4 (2.2–2.5)	2.4 (2.2–2.6)	↑
Total RFEs	**148.5 (146.7–150.2)**	**151.0 (149.2–152.8)**	**149.2 (147.4–150.9)**	**150.9 (149.0–152.7)**	**150.2 (148.4–152.0)**	**149.6 (147.8–151.5)**	**150.3 (148.4–152.2)**	**150.8 (148.9–152.7)**	**153.0 (151.1–154.8)**	**156.5 (154.7–158.2)**	↑

(a) Figures do not total 100, as more than one RFE can be recorded for each encounter.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, and § indicates a non-linear significant or marginal change.

Note: CI—confidence interval; RFE—reason for encounter.

Table 6.5: Most frequent patient reasons for encounter, BEACH, 1999–00 to 2008–09

Patient reason for encounter	Rate per 100 encounters[a] (95% CI)										↑↓[b]
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	
Check-up—all*	14.2 (13.5–14.9)	13.2 (12.5–13.9)	13.4 (12.7–14.0)	13.6 (12.9–14.2)	14.1 (13.4–14.8)	13.4 (12.8–14.0)	14.1 (13.4–14.8)	14.6 (13.9–15.2)	14.5 (13.8–15.1)	15.2 (14.5–15.8)	—
Prescription—all*	9.6 (9.1–10.2)	9.2 (8.7–9.8)	9.8 (9.2–10.3)	10.8 (10.2–11.3)	12.1 (11.5–12.7)	12.2 (11.5–12.8)	12.1 (11.4–12.7)	11.8 (11.2–12.4)	12.5 (11.9–13.2)	12.6 (12.0–13.2)	↑
Test results*	4.0 (3.7–4.2)	4.3 (3.9–4.6)	4.7 (4.4–5.0)	5.4 (5.0–5.7)	6.0 (5.7–6.4)	6.8 (6.4–7.2)	6.5 (6.1–6.9)	6.9 (6.5–7.3)	7.6 (7.2–8.1)	7.8 (7.4–8.2)	↑
Cough	7.0 (6.5–7.4)	7.0 (6.5–7.4)	6.5 (6.1–6.9)	6.7 (6.3–7.2)	6.2 (5.8–6.6)	5.9 (5.5–6.2)	6.4 (6.0–6.8)	5.8 (5.4–6.2)	6.2 (5.8–6.7)	6.8 (6.3–7.2)	—
Immunisation/vaccination—all*	4.2 (3.9–4.6)	4.4 (4.0–4.8)	4.6 (4.2–5.0)	4.7 (4.3–5.1)	4.4 (4.0–4.9)	4.3 (3.9–4.8)	4.8 (4.4–5.2)	4.3 (3.9–4.7)	4.8 (4.4–5.1)	5.3 (4.8–5.7)	↑
Throat complaint	4.2 (3.8–4.5)	4.0 (3.7–4.3)	3.8 (3.5–4.0)	3.8 (3.5–4.1)	3.4 (3.1–3.6)	3.5 (3.3–3.8)	3.3 (3.0–3.5)	3.3 (3.1–3.6)	3.3 (3.0–3.6)	3.2 (2.9–3.5)	↓
Back complaint*	3.6 (3.4–3.8)	3.8 (3.5–4.0)	3.8 (3.6–4.1)	3.5 (3.3–3.8)	3.5 (3.2–3.7)	3.4 (3.2–3.6)	3.5 (3.2–3.7)	3.2 (3.0–3.4)	3.2 (3.0–3.4)	3.1 (2.9–3.3)	↓
Rash*	2.7 (2.6–2.9)	2.9 (2.8–3.1)	2.8 (2.6–3.0)	2.8 (2.7–3.0)	2.8 (2.6–2.9)	2.9 (2.7–3.1)	2.6 (2.5–2.8)	2.8 (2.6–3.0)	2.5 (2.3–2.6)	2.6 (2.5–2.8)	—
Upper respiratory infection	2.7 (2.4–3.0)	2.6 (2.3–2.9)	2.3 (2.1–2.6)	2.2 (1.9–2.4)	1.9 (1.7–2.1)	1.8 (1.5–2.0)	2.4 (2.0–2.7)	2.4 (2.1–2.7)	2.2 (2.0–2.5)	2.3 (2.0–2.6)	§
Hypertension*	1.7 (1.4–1.9)	2.2 (1.9–2.4)	2.1 (1.8–2.3)	1.8 (1.6–2.0)	1.9 (1.6–2.1)	1.7 (1.5–1.9)	1.9 (1.6–2.1)	2.1 (1.8–2.5)	2.1 (1.8–2.3)	2.1 (1.9–2.4)	↑
Administrative procedure NOS	1.1 (1.0–1.2)	1.0 (0.9–1.1)	1.2 (1.0–1.3)	1.4 (1.3–1.6)	1.5 (1.4–1.7)	1.4 (1.3–1.5)	1.4 (1.3–1.6)	1.6 (1.5–1.8)	2.0 (1.8–2.1)	2.1 (1.9–2.3)	↑
Depression*	1.7 (1.6–1.8)	2.1 (2.0–2.3)	1.9 (1.8–2.0)	1.9 (1.7–2.0)	1.8 (1.7–1.9)	1.9 (1.7–2.0)	1.9 (1.7–2.0)	1.9 (1.8–2.1)	2.0 (1.9–2.2)	2.1 (1.9–2.2)	↑
Fever	2.2 (1.9–2.5)	2.3 (2.0–2.5)	2.0 (1.8–2.2)	2.2 (1.9–2.5)	1.9 (1.7–2.1)	1.8 (1.6–2.0)	2.2 (1.9–2.5)	1.8 (1.6–2.0)	2.1 (1.8–2.5)	1.9 (1.7–2.1)	—

(continued)

Table 6.5 (continued): Most frequent patient reasons for encounter, BEACH, 1999–00 to 2008–09

Patient reason for encounter	Rate per 100 encounters[a] (95% CI)										↑↓[b]
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	
Abdominal pain*	2.1 (1.9–2.2)	2.3 (2.1–2.4)	2.1 (2.0–2.2)	1.9 (1.8–2.1)	2.0 (1.9–2.2)	1.9 (1.8–2.0)	1.8 (1.7–1.9)	1.8 (1.7–1.9)	1.8 (1.6–1.9)	1.7 (1.6–1.9)	↓
Headache	2.2 (2.0–2.3)	2.2 (2.0–2.3)	2.0 (1.9–2.2)	2.1 (1.9–2.3)	1.8 (1.6–1.9)	1.7 (1.6–1.8)	1.7 (1.6–1.8)	1.6 (1.4–1.7)	1.6 (1.5–1.8)	1.6 (1.4–1.7)	↓
Skin complaint	1.2 (1.1–1.4)	1.5 (1.4–1.6)	1.3 (1.1–1.5)	1.3 (1.2–1.5)	1.4 (1.2–1.5)	1.5 (1.3–1.6)	1.4 (1.3–1.5)	1.4 (1.3–1.5)	1.4 (1.3–1.5)	1.5 (1.4–1.6)	↑
Weakness/tiredness	1.5 (1.4–1.6)	1.7 (1.5–1.8)	1.5 (1.4–1.6)	1.5 (1.3–1.6)	1.5 (1.4–1.6)	1.7 (1.5–1.8)	1.3 (1.2–1.4)	1.4 (1.2–1.5)	1.4 (1.2–1.5)	1.5 (1.4–1.6)	—
Ear pain	1.9 (1.7–2.0)	1.8 (1.7–1.9)	1.7 (1.6–1.9)	1.7 (1.5–1.8)	1.6 (1.4–1.7)	1.6 (1.5–1.7)	1.6 (1.5–1.7)	1.4 (1.3–1.5)	1.4 (1.3–1.5)	1.4 (1.3–1.6)	↓
Shoulder complaint	1.0 (1.0–1.1)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	1.0 (0.9–1.1)	1.3 (1.1–1.4)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	1.0 (0.9–1.1)	1.4 (1.3–1.5)	↑
Knee complaint	1.3 (1.2–1.4)	1.4 (1.3–1.5)	1.4 (1.3–1.5)	1.3 (1.2–1.4)	1.4 (1.3–1.5)	1.4 (1.3–1.5)	1.4 (1.3–1.5)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	—
Diarrhoea	1.3 (1.2–1.4)	1.5 (1.4–1.6)	1.4 (1.3–1.5)	1.6 (1.4–1.7)	1.5 (1.3–1.6)	1.4 (1.3–1.5)	1.3 (1.2–1.4)	1.3 (1.2–1.5)	1.4 (1.3–1.6)	1.3 (1.2–1.4)	—
Diabetes—all*	0.8 (0.7–0.9)	1.0 (0.8–1.1)	1.0 (0.9–1.1)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.3 (1.1–1.4)	1.2 (1.1–1.4)	↑
Blood test NOS	0.8 (0.7–0.9)	0.8 (0.7–1.0)	0.8 (0.7–1.0)	1.0 (0.9–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.3)	1.2 (1.0–1.3)	1.2 (1.1–1.4)	1.2 (1.0–1.3)	1.2 (1.0–1.3)	↑
Vertigo/dizziness	1.2 (1.1–1.3)	1.3 (1.2–1.4)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.1 (1.1–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	—
Anxiety*	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.2 (1.0–1.3)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.1 (1.0–1.3)	—
Swelling*	1.1 (1.0–1.1)	1.1 (0.9–1.1)	1.1 (1.0–1.2)	1.1 (1.0–1.1)	1.2 (1.0–1.3)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	—

(continued)

Table 6.5 (continued): Most frequent patient reasons for encounter, BEACH, 1999–00 to 2008–09

Patient reason for encounter	Rate per 100 encounters[a] (95% CI)										↑↓[b]
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	
Sleep disturbance	1.2 (1.1–1.3)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.2 (1.0–1.3)	1.2 (1.0–1.3)	1.2 (1.1–1.4)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	—
Foot/toe complaint	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	1.2 (1.1–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	—
Leg/thigh complaint	1.0 (0.9–1.0)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.0 (0.9–1.1)	1.0 (1.0–1.1)	0.9 (0.8–1.0)	1.0 (1.0–1.1)	—
Referrals NOS	0.3 (0.3–0.4)	0.4 (0.3–0.4)	0.5 (0.4–0.5)	0.7 (0.6–0.7)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	1.0 (0.9–1.0)	↑
Neck complaint	1.1 (1.0–1.2)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	0.9 (0.9–1.0)	1.0 (0.9–1.2)	0.9 (0.8–1.1)	0.9 (0.8–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	↓
Chest pain NOS	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	1.3 (1.2–1.4)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	1.1 (1.0–1.1)	0.9 (0.8–1.0)	↓
Advice/education	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.6 (0.6–0.7)	0.6 (0.6–0.7)	0.7 (0.7–0.8)	0.8 (0.7–1.0)	0.7 (0.7–0.8)	0.8 (0.8–0.9)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	↑
Trauma/injury NOS	0.7 (0.7–0.8)	0.8 (0.7–0.9)	0.6 (0.6–0.7)	0.8 (0.7–0.9)	0.9 (0.8–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.8–0.9)	—
Vomiting	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.3)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	0.8 (0.7–0.9)	↓
Total RFEs	**148.5 (146.7–150.2)**	**151.0 (149.2–152.8)**	**149.2 (147.4–150.9)**	**150.9 (149.0–152.7)**	**150.2 (148.4–152.0)**	**149.6 (147.8–151.5)**	**150.3 (148.4–152.2)**	**150.8 (148.9–152.7)**	**153.0 (151.1–154.8)**	**156.5 (154.7–158.2)**	↑

(a) Figures do not total 100, as more than one RFE can be recorded for each encounter.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, § indicates a non-linear significant change, and — indicates there was no change.

* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix 4).

Note: CI—confidence interval; NOS—not otherwise specified; RFE—reason for encounter.

7 Problems managed

A 'problem managed' is a formal statement of the provider's understanding of a health problem presented by the patient, family or community, and can be described in terms of a disease, symptom or complaint, social problem, or ill-defined condition managed at the encounter. As GPs were instructed to record each problem at the most specific level possible from the information available, the problem managed may at times be limited to the level of a presenting symptom.

At each patient encounter, up to four problems could be recorded by the GP. A minimum of one problem was compulsory. The status of each problem to the patient—new (first presentation to a medical practitioner) or old (follow-up of previously managed problem)—was also indicated. The concept of a principal diagnosis, which is often used in hospital statistics, is not adopted in studies of general practice where multiple problem management is the norm rather than the exception. Further, the range of problems managed at the encounter often crosses multiple body systems and may include undiagnosed symptoms, psychosocial problems or chronic disease, which makes the designation of a principal diagnosis difficult. Thus the order in which the problems were recorded by the GP is not significant.

This chapter includes data about the problems managed in general practice from each of the last 10 years of the BEACH study from 1999–00 to 2008–09. The direction and type of change from 1999–00 to 2008–09 is indicated for each result in the far right column of the tables: ↑/↓ indicates a statistically significant linear change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

Significant linear changes can be extrapolated to estimate the national increase or decrease in the management rate of a problem between 1999–00 and 2008–09. An example of an extrapolated change is given for each table. The method used to extrapolate to national change estimates is described in Chapter 2, Section 2.8.

There are two ways to describe the relative frequency of problems managed: as a percentage of all problems managed in the study, or as a rate of problems managed per 100 encounters. Where groups of problems are reported (for example cardiovascular problems), it must be remembered that more than one of that type of problem (such as hypertension and heart failure) may have been managed at a single encounter. In considering these results, the reader must be mindful that although a rate per 100 encounters for a single ungrouped problem (for example, asthma, 1.4 per 100 encounters) can be regarded as equivalent to 'asthma is managed at 1.4% of encounters', such a statement cannot be made for grouped concepts (ICPC-2 chapters and those marked with asterisks in the tables).

7.1 Number of problems managed

GPs are asked to record information about the management of up to four problems at each encounter. Table 7.1 shows the number of problems managed at each encounter over time.

There were increases in the number of encounters where two, three and four problems were managed, and a decrease in encounters where only one problem was managed. When extrapolated to all GP encounters in Australia this indicates there were about 4.9 million

more occasions where two problems were managed, 3.1 million more occasions where three problems were managed, and 910,000 more occasions where four problems were managed by GPs in Australia in 2008–09 than in 1999–00.

There was a significant increase in the number of problems managed at encounter, from 146.7 per 100 encounters in 1999–00 to 154.6 in 2008–09 (Table 7.2). This suggests there were an additional 24.7 million problems managed at GP encounters in Australia in 2008–09 than in 1999–00. This was reflected in significant increases in the management rate of new problems (Table 7.5), and the management rate of chronic conditions (Table 7.6).

7.2 Distribution of problems managed by ICPC-2 component

As shown in Table 7.2, there were significant increases in the management rate of problems described and classified as 'diagnoses and diseases', 'diagnostic and preventive procedures', 'results' and 'administrative procedures' between 1999–00 and 2008–09. The increase in the management of diagnoses and diseases represents an extrapolated national increase of 15.8 million encounters for this type of problem, the increase in the rate of diagnostic and preventive procedures represents an additional 3.5 million contacts for this problem and the increase in the management of test results represents an extrapolated increase of 870,000 contacts in Australia in 2008–09 when compared with 1999–00.

There were no significant changes in the management rate of problems described in terms of symptoms and complaints, nor those described and classified as 'medications, treatments and therapeutics' and 'referrals and other reasons for encounters' between 1999–00 and 2008–09.

7.3 Problems managed by ICPC-2 chapter and individual problems managed

Problems managed at general practice encounters by ICPC chapter are described in Table 7.3 for all years from 1999–00 to 2008–09. Problems related to the respiratory system have remained the most common type of problem managed since 1999–00. However, the management rate of respiratory problems has decreased significantly from 24.2 per 100 encounters in 1999–00 to 20.8 per 100 in 2008–09. This represents a national decrease of approximately 1.2 million occasions where a respiratory problem was managed in 2008–09 when compared with 1999–00.

The most common individual problems managed are described in Table 7.4 for all years from 1999–00 to 2008–09. Hypertension has remained the most common individual problem managed in general practice in Australia since 1999–00. Its management rate increased significantly between 1999–00 and 2008–09, from 8.4 to 10.1 per 100 encounters. This represents an estimated national increase of 2.8 million occasions where hypertension was managed in 2008–09 compared with 1999–00.

7.4 Most common new problems

Table 7.5 shows the most frequently managed new problems between 1999–00 and 2008–09. There was a significant increase in the management rate of new problems over the 10 years of the study from 45.3 per 100 encounters in 1999–00 to 57.4 in 2008–09, suggesting approximately 18.5 million more GP contacts with management of new problems than in 1999–00. The majority of this increase occurred between 1999–00 and 2001–02, increasing from 45.3 to 55.1 in 2001–02. The rate remained relatively stable from 2001–02 to 2008–09.

The most common new problems managed in general practice over the decade were upper respiratory tract infection, immunisation/vaccination and acute bronchitis/bronchiolitis. The management of general check-ups as a new problem increased significantly from 0.5 per 100 encounters in 1999–00 to 1.1 per 100 encounters in 2008–09, representing an additional 730,000 occasions where general check-ups were managed in 2008–09 compared with 1999–00 (Table 7.5).

7.5 Most frequently managed chronic problems

Table 7.6 shows the most frequently managed chronic problems between 1999–00 and 2008–09. The management rate of chronic conditions significantly increased from 47.2 per 100 encounters in 1999–00 to 55.1 per 100 in 2008–09, suggesting approximately 14.0 million more GP contacts in Australia in 2008–09 with chronic problems than in 1999–00.

The most common chronic problems managed were non-gestational hypertension, depressive disorder, non-gestational diabetes and lipid disorders. These problems all increased significantly over the decade. For example, lipid disorders increased from 2.6 to 3.7 per 100 encounters, representing an increase in management of 1.5 million lipid problems from 1999–00 to 2008–09 (Table 7.6).

Table 7.1: Number of problems managed at an encounter, BEACH, 1999–00 to 2008–09

Number of problems managed at encounter	Per cent of encounters (95% CI)										
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↓[a]
One problem	65.4 (64.3–66.5)	66.5 (65.4–67.5)	67.7 (66.6–68.8)	66.9 (65.8–68.1)	66.2 (65.0–67.3)	66.5 (65.3–67.7)	66.4 (65.1–67.6)	65.0 (63.7–66.2)	63.0 (61.7–64.3)	60.8 (59.6–61.9)	↓
Two problems	24.7 (24.0–25.3)	24.4 (23.8–25.1)	23.1 (22.4–23.7)	23.4 (22.6–24.1)	23.8 (23.1–24.5)	23.6 (22.9–24.3)	23.4 (22.7–24.1)	24.0 (23.3–24.8)	25.4 (24.7–26.2)	26.7 (26.1–27.4)	↑
Three problems	7.7 (7.3–8.1)	7.3 (6.9–7.7)	7.3 (6.9–7.7)	7.6 (7.2–8.0)	7.7 (7.2–8.1)	7.7 (7.3–8.2)	7.9 (7.4–8.4)	8.5 (8.1–9.0)	8.8 (8.3–9.3)	9.7 (9.2–10.1)	↑
Four problems	2.2 (1.9–2.5)	1.9 (1.5–2.2)	1.9 (1.6–2.2)	2.1 (1.7–2.5)	2.4 (2.0–2.8)	2.2 (1.8–2.5)	2.3 (2.1–2.6)	2.5 (2.2–2.7)	2.7 (2.4–3.0)	2.8 (2.6–3.1)	↑

(a) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change.

Note: CI—confidence interval.

Table 7.2: Distribution of problems managed, by ICPC-2 component, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
ICPC-2 component	**(*n* = 104,856)**	**(*n* = 99,307)**	**(*n* = 96,973)**	**(*n* = 100,987)**	**(*n* = 98,877)**	**(*n* = 94,386)**	**(*n* = 101,993)**	**(*n* = 91,805)**	**(*n* = 95,898)**	**(*n* = 96,688)**	
Diagnosis, diseases	96.1 (94.4–97.8)	95.2 (93.6–96.7)	93.7 (92.1–95.2)	93.1 (91.5–94.8)	94.8 (93.0–96.5)	94.2 (94.2–96.0)	95.5 (93.6–97.3)	96.6 (94.8–98.3)	98.1 (96.2–99.9)	100.9 (99.1–102.6)	↑
Symptoms & complaints	32.0 (31.2–32.8)	31.7 (30.9–32.5)	31.4 (30.6–32.2)	31.4 (30.6–32.2)	30.8 (30.0–31.6)	31.1 (30.2–31.9)	30.4 (29.6–31.2)	31.4 (30.6–32.2)	32.3 (31.5–33.1)	32.1 (31.3–32.9)	—
Diagnostic & preventive procedures	13.1 (12.4–13.7)	12.6 (11.9–13.2)	12.4 (11.8–13.0)	13.5 (12.8–14.2)	13.6 (12.9–14.4)	13.3 (12.5–14.0)	13.7 (13.1–14.4)	13.8 (13.0–14.5)	14.2 (13.5–14.8)	15.0 (14.2–15.7)	↑
Medications, treatments & therapeutics	3.1 (2.9–3.3)	2.9 (2.7–3.1)	3.3 (3.0–3.6)	3.6 (3.3–3.8)	4.0 (3.6–4.3)	3.7 (3.4–3.9)	3.2 (3.0–3.5)	3.2 (2.9–3.5)	2.9 (2.7–3.2)	3.3 (3.0–3.6)	—
Results	0.8 (0.7–0.9)	0.8 (0.7–0.9)	1.1 (0.9–1.2)	1.1 (0.9–1.2)	1.2 (1.1–1.4)	1.4 (1.3–1.5)	1.4 (1.3–1.6)	1.6 (1.4–1.7)	1.8 (1.6–1.9)	1.5 (1.4–1.7)	↑
Referral & other RFE	1.3 (1.2–1.4)	1.1 (1.0–1.2)	1.1 (1.0–1.3)	1.7 (1.5–1.9)	1.3 (1.1–1.4)	1.4 (1.2–1.5)	1.2 (1.1–1.4)	1.3 (1.2–1.5)	1.2 (1.1–1.3)	1.0 (0.9–1.1)	—
Administrative	0.4 (0.4–0.5)	0.4 (0.3–0.4)	0.5 (0.4–0.5)	0.5 (0.5–0.6)	0.6 (0.6–0.7)	0.6 (0.5–0.6)	0.7 (0.6–0.8)	0.8 (0.7–0.8)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	↑
Total problems	**146.7 (144.9–148.6)**	**144.5 (142.8–146.3)**	**143.4 (141.7–145.2)**	**144.9 (143.0–146.8)**	**146.3 (144.4–148.2)**	**145.5 (143.6–147.4)**	**146.2 (144.2–148.2)**	**148.5 (146.4–150.6)**	**151.3 (149.2–153.4)**	**154.6 (152.6–156.5)**	↑

(a) Figures do not total 100, as more than one problem can be recorded for each encounter.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, and — indicates there was no change.

Note: CI—confidence interval; RFE—reason for encounter.

Table 7.3: Distribution of problems managed, by ICPC-2 chapter, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
ICPC-2 Chapter	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Respiratory	24.2 (23.5–24.9)	22.5 (21.9–23.2)	21.4 (20.7–22.0)	20.6 (20.0–21.3)	20.1 (19.5–20.7)	19.2 (18.6–19.9)	20.6 (19.9–21.3)	19.6 (18.9–20.3)	19.4 (18.8–20.1)	20.8 (20.2–21.4)	↓
Cardiovascular	16.3 (15.5–17.0)	16.0 (15.3–16.7)	16.1 (15.5–16.8)	16.0 (15.3–16.7)	16.8 (16.1–17.5)	16.2 (15.5–16.9)	16.6 (16.1–17.7)	17.4 (16.7–18.1)	17.6 (16.8–18.3)	18.6 (17.8–19.3)	↑
Musculoskeletal	16.9 (16.4–17.4)	17.4 (16.9–18.0)	17.5 (17.0–18.0)	17.1 (16.5–17.6)	17.1 (16.6–17.6)	17.7 (17.1–18.3)	17.2 (16.7–17.7)	17.1 (16.6–17.6)	17.3 (16.7–17.8)	17.3 (16.9–17.8)	—
General & unspecified	13.9 (13.4–14.5)	14.2 (13.7–14.7)	14.7 (14.0–15.5)	15.8 (15.2–16.3)	15.0 (14.5–15.5)	15.1 (14.5–15.7)	15.1 (14.5–15.7)	16.2 (15.6–16.8)	17.8 (17.1–18.5)	17.1 (16.4–17.7)	↑
Skin	17.0 (16.6–17.5)	16.7 (16.2–17.3)	16.1 (15.6–16.6)	16.5 (16.0–17.0)	16.9 (16.2–17.6)	17.2 (16.6–17.9)	16.6 (16.1–17.2)	17.5 (16.9–18.2)	17.2 (16.5–17.9)	17.0 (16.5–17.5)	—
Endocrine & metabolic	9.1 (8.7–9.6)	9.8 (9.3–10.2)	10.4 (10.0–10.9)	10.6 (10.2–11.0)	11.3 (10.8–11.8)	11.8 (11.2–12.3)	11.6 (11.0–12.1)	12.1 (11.6–12.6)	12.9 (12.3–13.5)	13.5 (12.9–14.0)	↑
Psychological	10.5 (10.0–11.1)	10.8 (10.2–11.3)	10.6 (10.1–11.2)	10.3 (9.8–10.8)	10.8 (10.3–11.4)	11.4 (10.8–12.0)	11.1 (10.5–11.7)	11.0 (10.5–11.4)	11.5 (10.9–12.0)	12.4 (11.9–12.9)	↑
Digestive	10.1 (9.7–10.3)	9.9 (9.6–10.2)	9.9 (9.6–10.2)	10.1 (9.8–10.4)	10.5 (10.2–10.8)	9.9 (9.6–10.2)	10.1 (9.8–10.4)	10.4 (10.1–10.7)	10.7 (10.4–11.1)	10.5 (10.2–10.8)	—
Female genital system	6.2 (5.8–6.5)	6.1 (5.7–6.4)	6.1 (5.8–6.5)	6.7 (6.2–7.1)	5.9 (5.5–6.3)	5.7 (5.3–6.1)	5.8 (5.4–6.2)	5.7 (5.3–6.1)	5.8 (5.4–6.2)	6.1 (5.7–6.6)	—
Ear	4.5 (4.3–4.7)	4.4 (4.2–4.6)	4.2 (4.0–4.4)	4.0 (3.8–4.2)	4.0 (3.8–4.1)	4.1 (3.9–4.2)	4.0 (3.8–4.1)	3.8 (3.6–3.9)	3.8 (3.6–3.9)	3.9 (3.7–4.1)	↓
Neurological	3.9 (3.7–4.1)	3.8 (3.6–3.9)	3.7 (3.5–3.9)	4.2 (4.0–4.4)	3.9 (3.8–4.1)	3.6 (3.5–3.8)	3.6 (3.4–3.8)	3.8 (3.6–3.9)	3.6 (3.4–3.7)	3.8 (3.6–3.9)	—
Pregnancy & family planning	4.3 (4.0–4.6)	3.9 (3.6–4.2)	4.0 (3.7–4.2)	4.2 (3.9–4.5)	4.2 (3.9–4.5)	3.8 (3.6–4.1)	3.8 (3.6–4.1)	3.9 (3.6–4.2)	3.9 (3.6–4.2)	3.7 (3.4–3.9)	↓
Urology	3.0 (2.9–3.2)	2.7 (2.5–2.8)	2.8 (2.7–3.0)	2.8 (2.7–3.0)	3.0 (2.9–3.2)	3.0 (2.9–3.2)	3.1 (2.9–3.2)	3.2 (3.0–3.3)	3.1 (3.0–3.3)	3.3 (3.2–3.5)	↑

(continued)

Table 7.3 (continued): Distribution of problems managed, by ICPC-2 chapter, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
ICPC-2 Chapter	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Eye	2.7 (2.6–2.9)	2.6 (2.5–2.7)	2.5 (2.4–2.6)	2.6 (2.5–2.7)	2.7 (2.6–2.9)	2.7 (2.5–2.8)	2.8 (2.6–2.9)	2.7 (2.5–2.8)	2.6 (2.4–2.7)	2.7 (2.6–2.8)	—
Male genital system	1.4 (1.3–1.5)	1.5 (1.3–1.6)	1.3 (1.2–1.4)	1.4 (1.3–1.6)	1.6 (1.5–1.7)	1.8 (1.6–1.9)	1.9 (1.7–2.0)	1.9 (1.7–2.0)	1.8 (1.7–1.9)	2.1 (1.9–2.2)	↑
Blood	1.7 (1.6–1.8)	1.7 (1.5–1.8)	1.3 (1.2–1.4)	1.4 (1.3–1.5)	1.7 (1.5–1.8)	1.6 (1.4–1.8)	1.5 (1.4–1.6)	1.7 (1.5–1.8)	1.6 (1.5–1.8)	1.5 (1.3–1.6)	§
Social problems	0.9 (0.8–1.0)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.6 (0.5–0.7)	0.7 (0.6–0.7)	0.7 (0.6–0.8)	0.6 (0.5–0.7)	↓
Total problems	**146.7 (144.9–148.6)**	**144.5 (142.8–146.3)**	**143.4 (141.7–145.2)**	**144.9 (143.0–146.8)**	**146.3 (144.4–148.2)**	**145.5 (143.6–147.4)**	**146.2 (144.2–148.2)**	**148.5 (146.4–150.6)**	**151.3 (149.2–153.4)**	**154.6 (152.6–156.5)**	↑

(a) Figures do not total 100, as more than one problem can be managed at each encounter.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

Note: CI—confidence interval.

Table 7.4: Most frequently managed problems, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Problem managed	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Hypertension*	8.4 (7.9–8.9)	8.6 (8.2–9.1)	9.0 (8.5–9.5)	8.8 (8.4–9.3)	9.2 (8.7–9.7)	8.9 (8.4–9.4)	9.4 (8.9–10.0)	9.6 (9.1–10.0)	9.9 (9.4–10.5)	10.1 (9.6–10.6)	↑
Check-up—all*	6.4 (6.0–6.8)	5.9 (5.5–6.2)	5.8 (5.4–6.1)	6.4 (6.0–6.8)	6.4 (5.9–6.9)	6.3 (5.9–6.7)	6.4 (6.0–6.8)	6.6 (6.2–7.0)	6.3 (6.0–6.7)	6.7 (6.3–7.1)	—
General check-up*	1.8 (1.6–1.9)	1.6 (1.5–1.8)	1.8 (1.6–1.9)	1.9 (1.8–2.1)	1.8 (1.7–2.0)	2.1 (1.9–2.2)	2.1 (1.9–2.2)	2.4 (2.2–2.6)	2.5 (2.3–2.7)	2.5 (2.3–2.7)	↑
Female genital check-up*	1.6 (1.4–1.7)	1.5 (1.3–1.6)	1.6 (1.4–1.7)	1.8 (1.6–2.0)	1.8 (1.6–2.0)	1.8 (1.6–2.0)	1.8 (1.6–2.0)	1.7 (1.5–1.9)	1.8 (1.6–2.0)	2.0 (1.8–2.3)	↑
Cardiac check-up*	1.3 (1.2–1.5)	1.3 (1.2–1.4)	1.1 (1.0–1.3)	1.1 (0.9–1.2)	1.2 (1.0–1.3)	1.0 (0.9–1.1)	1.2 (1.0–1.3)	1.3 (1.1–1.5)	1.2 (1.0–1.4)	1.3 (1.1–1.5)	—
Upper respiratory tract infection	7.2 (6.7–7.7)	6.9 (6.5–7.3)	6.2 (5.8–6.6)	6.4 (6.0–6.8)	5.5 (5.1–5.8)	5.6 (5.2–5.9)	6.2 (5.8–6.6)	5.8 (5.3–6.2)	6.2 (5.7–6.7)	6.1 (5.7–6.6)	↓
Immunisation/ vaccination—all*	4.6 (4.2–5.0)	4.6 (4.2–4.9)	4.7 (4.3–5.1)	4.6 (4.3–5.0)	4.7 (4.3–5.2)	4.6 (4.2–5.1)	5.0 (4.6–5.4)	4.7 (4.3–5.2)	5.2 (4.8–5.6)	5.7 (5.2–6.2)	↑
Depression*	3.4 (3.2–3.6)	3.7 (3.4–3.9)	3.4 (3.2–3.6)	3.5 (3.3–3.7)	3.6 (3.4–3.9)	3.7 (3.5–3.9)	3.6 (3.4–3.8)	3.7 (3.5–3.9)	4.0 (3.8–4.2)	4.3 (4.0–4.5)	↑
Diabetes—all*	2.7 (2.5–2.9)	2.8 (2.6–3.0)	3.1 (2.9–3.3)	2.9 (2.7–3.1)	3.3 (3.1–3.5)	3.2 (3.0–3.4)	3.5 (3.3–3.8)	3.7 (3.5–3.9)	3.9 (3.6–4.1)	4.1 (3.9–4.3)	↑
Lipid disorders*	2.6 (2.4–2.8)	2.9 (2.7–3.1)	2.9 (2.7–3.1)	3.0 (2.8–3.2)	3.1 (2.9–3.4)	3.3 (3.1–3.6)	3.4 (3.1–3.7)	3.5 (3.2–3.7)	3.7 (3.4–4.0)	3.9 (3.7–4.2)	↑
Arthritis—all*	3.6 (3.3–3.8)	3.9 (3.7–4.1)	3.8 (3.5–4.0)	3.7 (3.5–3.9)	4.0 (3.8–4.2)	3.9 (3.7–4.2)	3.8 (3.5–4.0)	3.7 (3.5–3.9)	3.6 (3.4–3.8)	3.8 (3.6–4.0)	—
Osteoarthritis*	2.2 (2.1–2.4)	2.5 (2.3–2.7)	2.6 (2.4–2.8)	2.6 (2.4–2.7)	2.8 (2.6–3.0)	2.8 (2.6–3.0)	2.7 (2.5–2.9)	2.6 (2.4–2.8)	2.6 (2.4–2.8)	2.8 (2.6–2.9)	↑
Back complaint*	2.8 (2.6–2.9)	2.6 (2.4–2.8)	2.6 (2.4–2.8)	2.6 (2.4–2.8)	2.7 (2.5–2.8)	2.8 (2.6–3.0)	2.6 (2.5–2.8)	2.6 (2.5–2.8)	2.7 (2.6–2.9)	2.7 (2.6–2.9)	—

(continued)

Table 7.4 (continued): Most frequently managed problems, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Problem managed	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Acute bronchitis/ bronchiolitis	3.2 (3.0–3.4)	2.7 (2.5–2.9)	2.7 (2.5–2.9)	2.6 (2.4–2.8)	2.4 (2.2–2.6)	2.4 (2.2–2.6)	2.5 (2.3–2.7)	2.2 (2.1–2.4)	2.4 (2.2–2.6)	2.6 (2.4–2.8)	↓
Oesophageal disease	1.6 (1.5–1.8)	1.5 (1.4–1.6)	1.8 (1.7–2.0)	1.9 (1.8–2.1)	2.2 (2.0–2.4)	2.1 (1.9–2.2)	2.4 (2.2–2.5)	2.3 (2.1–2.5)	2.3 (2.2–2.5)	2.5 (2.3–2.7)	↑
Asthma	3.2 (3.0–3.4)	2.8 (2.7–3.0)	2.8 (2.7–3.0)	2.7 (2.6–2.9)	2.6 (2.4–2.7)	2.3 (2.2–2.5)	2.3 (2.1–2.4)	2.3 (2.1–2.4)	2.2 (2.0–2.3)	2.2 (2.1–2.3)	↓
Prescription—all*	1.8 (1.6–2.0)	1.7 (1.5–1.8)	1.9 (1.6–2.1)	2.0 (1.8–2.2)	2.3 (2.0–2.6)	2.1 (1.8–2.3)	2.0 (1.7–2.2)	2.2 (1.9–2.4)	2.0 (1.7–2.2)	2.1 (1.9–2.4)	—
Anxiety*	1.7 (1.6–1.9)	1.7 (1.5–1.8)	1.6 (1.5–1.8)	1.6 (1.4–1.7)	1.7 (1.6–1.9)	1.7 (1.6–1.9)	1.8 (1.6–2.0)	1.7 (1.6–1.9)	1.8 (1.6–1.9)	1.9 (1.8–2.1)	—
Contact dermatitis	1.9 (1.8–2.0)	2.1 (1.9–2.2)	1.9 (1.8–2.0)	1.9 (1.8–2.0)	1.8 (1.6–1.9)	1.9 (1.8–2.0)	1.8 (1.7–1.9)	1.9 (1.8–2.0)	1.8 (1.7–1.9)	1.9 (1.8–2.0)	—
Urinary tract infection*	1.8 (1.7–1.9)	1.5 (1.4–1.6)	1.6 (1.5–1.7)	1.7 (1.6–1.8)	1.7 (1.6–1.8)	1.7 (1.6–1.8)	1.8 (1.6–1.9)	1.6 (1.5–1.8)	1.6 (1.5–1.7)	1.7 (1.6–1.8)	—
Sleep disturbance	1.5 (1.4–1.7)	1.6 (1.4–1.7)	1.6 (1.5–1.8)	1.6 (1.4–1.7)	1.6 (1.5–1.7)	1.7 (1.5–1.9)	1.6 (1.5–1.7)	1.6 (1.4–1.7)	1.6 (1.5–1.7)	1.6 (1.4–1.7)	—
Test results*	0.8 (0.7–0.9)	0.8 (0.7–0.9)	1.1 (0.9–1.2)	1.1 (0.9–1.2)	1.2 (1.1–1.4)	1.4 (1.3–1.5)	1.4 (1.3–1.6)	1.6 (1.4–1.7)	1.8 (1.6–1.9)	1.5 (1.4–1.7)	↑
Sprain/strain*	1.8 (1.7–2.0)	2.0 (1.9–2.2)	1.8 (1.7–1.9)	1.7 (1.5–1.8)	1.6 (1.5–1.7)	1.7 (1.5–1.9)	1.8 (1.6–1.9)	1.5 (1.4–1.7)	1.6 (1.4–1.7)	1.4 (1.3–1.5)	↓
Gastroenteritis*	1.6 (1.4–1.7)	1.6 (1.5–1.8)	1.6 (1.5–1.7)	1.7 (1.6–1.9)	1.7 (1.5–1.8)	1.5 (1.4–1.7)	1.5 (1.4–1.7)	1.7 (1.5–1.8)	1.7 (1.5–1.8)	1.4 (1.3–1.5)	—
Sinusitis acute/chronic	1.6 (1.4–1.7)	1.5 (1.4–1.6)	1.4 (1.3–1.5)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.2 (1.1–1.3)	1.3 (1.2–1.4)	1.4 (1.3–1.5)	1.2 (1.0–1.4)	1.4 (1.2–1.5)	—
Atrial fibrillation/flutter	0.6 (0.5–0.7)	0.6 (0.5–0.6)	0.7 (0.6–0.8)	0.6 (0.6–0.7)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.3 (1.2–1.4)	↑

(continued)

Table 7.4 (continued): Most frequently managed problems, BEACH, 1999–00 to 2008–09

Problem managed	Rate per 100 encounters[a] (95% CI)										↑↓[b]
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	
Pregnancy*	0.7 (0.6–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.8 (0.7–1.0)	0.8 (0.7–0.9)	0.8 (0.7–0.8)	0.9 (0.8–1.0)	1.3 (1.1–1.4)	1.3 (1.2–1.5)	1.3 (1.1–1.4)	↑
Ischaemic heart disease*	1.6 (1.4–1.7)	1.3 (1.2–1.4)	1.3 (1.1–1.4)	1.2 (1.1–1.3)	1.4 (1.2–1.5)	1.2 (1.1–1.3)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.2 (1.0–1.4)	1.3 (1.2–1.4)	↓
Solar keratosis/sunburn	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.0 (0.9–1.2)	1.2 (1.0–1.3)	1.3 (1.1–1.5)	1.3 (1.1–1.6)	1.2 (1.1–1.3)	1.3 (1.2–1.4)	1.4 (1.1–1.6)	1.2 (1.1–1.4)	—
Malignant neoplasm, skin	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.9 (0.7–1.0)	0.8 (0.7–0.9)	1.1 (0.9–1.3)	1.2 (1.0–1.4)	1.0 (0.9–1.1)	1.1 (1.0–1.3)	1.3 (1.2–1.4)	1.2 (1.1–1.4)	↑
Viral disease, other/NOS	1.5 (1.3–1.7)	1.6 (1.4–1.8)	1.5 (1.3–1.7)	1.4 (1.2–1.6)	1.3 (1.2–1.5)	1.2 (1.1–1.4)	1.2 (1.0–1.4)	1.1 (0.9–1.2)	1.3 (1.2–1.4)	1.2 (1.0–1.4)	—
Oral contraception*	1.0 (0.9–1.1)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.4 (1.2–1.5)	1.3 (1.2–1.4)	1.2 (1.1–1.3)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.1 (1.0–1.3)	—
Vitamin/nutritional deficiency	0.3 (0.3–0.4)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.4 (0.3–0.4)	0.5 (0.4–0.6)	0.6 (0.5–0.7)	0.5 (0.4–0.6)	0.6 (0.5–0.7)	0.9 (0.8–1.0)	1.1 (1.0–1.2)	↑
Acute otitis media/ myringitis	1.6 (1.5–1.7)	1.5 (1.4–1.6)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.2 (1.0–1.3)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	↓
Abnormal test results*	0.5 (0.5–0.6)	0.6 (0.5–0.7)	0.7 (0.6–0.8)	0.8 (0.7–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.8)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.0 (1.0–1.1)	↑
Fracture*	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.0 (1.0–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (1.0–1.1)	1.0 (0.9–1.1)	0.9 (0.9–1.0)	—
Osteoporosis	0.5 (0.5–0.6)	0.6 (0.5–0.6)	0.7 (0.6–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	↑
Tonsillitis*	1.3 (1.2–1.4)	1.2 (1.1–1.3)	1.1 (1.0–1.3)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (0.9–1.2)	1.1 (1.0–1.2)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	↓
Menopausal complaint	1.4 (1.2–1.5)	1.4 (1.3–1.5)	1.4 (1.3–1.5)	1.5 (1.3–1.6)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	0.9 (0.8–0.9)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	↓

(continued)

Table 7.4 (continued): Most frequently managed problems, BEACH, 1999–00 to 2008–09

Problem managed	Rate per 100 encounters[a] (95% CI) 1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↓[b]
Allergic rhinitis	1.1 (0.9–1.2)	1.0 (0.9–1.1)	0.8 (0.7–0.9)	0.6 (0.5–0.7)	0.7 (0.6–0.8)	0.7 (0.6–0.9)	0.6 (0.5–0.7)	0.5 (0.5–0.6)	0.6 (0.5–0.7)	0.6 (0.5–0.6)	↓
Pre-postnatal check-up*	1.1 (1.0–1.3)	0.7 (0.6–0.9)	0.7 (0.6–0.9)	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.6 (0.5–0.7)	0.6 (0.5–0.7)	0.4 (0.3–0.5)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	↓
Total problems	**146.7 (144.9–148.6)**	**144.5 (142.8–146.3)**	**143.4 (141.7–145.2)**	**144.9 (143.0–146.8)**	**146.3 (144.4–148.2)**	**145.5 (143.6–147.4)**	**146.2 (144.2–148.2)**	**148.5 (146.4–150.6)**	**151.3 (149.2–153.4)**	**154.6 (152.6–156.5)**	↑

(a) Figures do not total 100, as more than one problem can be managed at each encounter. Also only the most frequent problems are included.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, and — indicates there was no change.

* Includes multiple ICPC–2 or ICPC–2 PLUS codes (see Appendix 4).

Note: CI—confidence interval; NOS—not otherwise specified. This table includes individual problems which were managed at >= 1.0 per 100 encounters in any year, and any other statistically significant differences of interest.

Table 7.5: Most frequently managed new problems, BEACH, 1999–00 to 2008–09

New problem managed	Rate per 100 encounters[a] (95% CI) 1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↓[b]
Upper respiratory tract infection	4.5 (4.1–4.9)	4.4 (4.1–4.8)	4.7 (4.4–5.1)	5.1 (4.7–5.5)	4.2 (3.8–4.5)	4.3 (4.0–4.6)	4.8 (4.4–5.2)	4.4 (4.1–4.8)	4.8 (4.4–5.2)	4.7 (4.4–5.0)	—
Immunisation/ vaccination—all*	1.3 (1.1–1.5)	1.5 (1.3–1.8)	2.7 (2.4–3.0)	2.9 (2.6–3.2)	2.9 (2.6–3.3)	2.7 (2.4–3.1)	2.7 (2.5–3.0)	2.8 (2.5–3.1)	2.8 (2.5–3.0)	2.8 (2.5–3.1)	↑
Acute bronchitis/ bronchiolitis	1.7 (1.6–1.9)	1.6 (1.5–1.7)	1.9 (1.7–2.0)	1.9 (1.7–2.1)	1.8 (1.6–1.9)	1.7 (1.5–1.9)	1.9 (1.7–2.1)	1.6 (1.5–1.7)	1.7 (1.6–1.9)	1.9 (1.8–2.1)	—
General check-up*	0.5 (0.4–0.5)	0.4 (0.3–0.5)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	1.0 (0.9–1.1)	1.0 (0.8–1.1)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.1 (1.0–1.3)	↑
Gastroenteritis*	1.0 (0.9–1.2)	1.1 (1.0–1.2)	1.2 (1.1–1.4)	1.3 (1.2–1.5)	1.3 (1.2–1.5)	1.2 (1.1–1.3)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.3 (1.2–1.5)	1.1 (1.0–1.2)	—

(continued)

Table 7.5 (continued): Most frequently managed new problems, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
New problem managed	**(*n* = 104,856)**	**(*n* = 99,307)**	**(*n* = 96,973)**	**(*n* = 100,987)**	**(*n* = 98,877)**	**(*n* = 94,386)**	**(*n* = 101,993)**	**(*n* = 91,805)**	**(*n* = 95,898)**	**(*n* = 96,688)**	
Urinary tract infection*	0.8 (0.8–0.9)	0.8 (0.7–0.9)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.1 (1.0–1.1)	1.1 (1.0–1.1)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	1.0 (0.9–1.1)	1.0 (1.0–1.1)	↑
Sinusitis acute/chronic	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.7 (0.7–0.8)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	—
Viral disease, other/NOS	1.0 (0.8–1.1)	1.1 (0.9–1.2)	1.0 (0.9–1.2)	1.1 (0.9–1.2)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.9 (0.8–1.1)	0.9 (0.7–1.0)	—
Sprain/strain*	0.9 (0.8–1.0)	1.1 (0.9–1.2)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.0)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–0.9)	—
Acute otitis media/ myringitis	0.9 (0.8–1.0)	0.9 (0.8–1.0)	1.0 (0.9–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.8 (0.8–0.9)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.8 (0.7–0.8)	0.8 (0.7–0.8)	↓
Tonsillitis*	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–0.9)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.8 (0.7–1.0)	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.6 (0.6–0.7)	↓
Abnormal test results	0.1 (0.1–0.2)	0.2 (0.2–0.3)	0.3 (0.3–0.3)	0.3 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.3 (0.3–0.4)	0.4 (0.4–0.5)	0.5 (0.4–0.5)	0.5 (0.4–0.6)	↑
Test results*	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.3–0.5)	0.4 (0.4–0.5)	0.5 (0.4–0.6)	0.5 (0.4–0.5)	↑
Total new problems	**45.3 (43.6–46.9)**	**47.4 (45.7–49.0)**	**55.1 (53.8–56.5)**	**57.0 (55.6–58.3)**	**55.9 (54.5–57.3)**	**55.2 (53.8–56.5)**	**56.9 (55.5–58.2)**	**56.5 (55.1–57.9)**	**57.7 (56.3–59.1)**	**57.4 (56.0–58.7)**	↑

(a) Figures do not total 100, as more than one problem can be managed at each encounter. Also only the most frequent new problems are included.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, and — indicates there was no change.

* Includes multiple ICPC–2 or ICPC–2 PLUS codes (see Appendix 4).

Note: CI—confidence interval; NOS—not otherwise specified. This table includes individual new problems which were managed at >= 1.0 per 100 encounters in any year, and any other statistically significant differences of interest.

Table 7.6: Most frequently managed chronic problems, BEACH, 1999–00 to 2008–09

Chronic problem managed	Rate per 100 encounters[a] (95% CI)										
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↓[b]
Hypertension (non-gestational)**	8.4 (7.9–8.9)	8.6 (8.1–9.1)	9.0 (8.5–9.5)	8.8 (8.3–9.3)	9.2 (8.7–9.7)	9.2 (8.7–9.7)	9.4 (8.9–10.0)	9.5 (9.0–10.0)	9.9 (9.3–10.4)	10.1 (9.6–10.6)	↑
Depressive disorder**	3.4 (3.2–3.6)	3.6 (3.4–3.9)	3.4 (3.2–3.6)	3.5 (3.3–3.7)	3.6 (3.4–3.8)	3.6 (3.4–3.8)	3.6 (3.4–3.8)	3.7 (3.5–3.9)	4.0 (3.7–4.2)	4.2 (4.0–4.4)	↑
Diabetes (non-gestational)**	2.7 (2.5–2.9)	2.8 (2.6–3.0)	3.1 (2.9–3.3)	2.9 (2.7–3.1)	3.3 (3.1–3.5)	3.3 (3.1–3.5)	3.5 (3.3–3.8)	3.7 (3.5–3.9)	3.9 (3.6–4.1)	4.1 (3.8–4.3)	↑
Lipid disorders**	2.6 (2.4–2.8)	2.9 (2.7–3.1)	2.9 (2.7–3.1)	3.0 (2.8–3.2)	3.1 (2.9–3.4)	3.1 (2.9–3.4)	3.4 (3.1–3.7)	3.5 (3.2–3.7)	3.7 (3.4–4.0)	3.9 (3.7–4.2)	↑
Chronic arthritis**	3.6 (3.3–3.8)	3.9 (3.7–4.1)	3.8 (3.5–4.0)	3.7 (3.5–3.9)	4.0 (3.8–4.2)	4.0 (3.8–4.2)	3.8 (3.5–4.0)	3.7 (3.5–3.9)	3.6 (3.4–3.8)	3.8 (3.6–4.0)	—
Oesophageal disease	1.6 (1.5–1.8)	1.5 (1.4–1.6)	1.8 (1.7–1.9)	1.9 (1.8–2.0)	2.2 (2.0–2.3)	2.2 (2.0–2.3)	2.4 (2.2–2.5)	2.3 (2.1–2.5)	2.3 (2.2–2.5)	2.5 (2.3–2.7)	↑
Asthma	3.2 (3.0–3.4)	2.8 (2.7–3.0)	2.8 (2.7–3.0)	2.7 (2.6–2.9)	2.6 (2.4–2.7)	2.6 (2.4–2.7)	2.3 (2.1–2.4)	2.3 (2.1–2.4)	2.2 (2.0–2.3)	2.2 (2.1–2.3)	↓
Atrial fibrillation/flutter	0.6 (0.5–0.7)	0.6 (0.5–0.6)	0.7 (0.6–0.8)	0.6 (0.6–0.7)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.3 (1.2–1.4)	↑
Ischaemic heart disease**	1.6 (1.4–1.7)	1.3 (1.2–1.4)	1.3 (1.1–1.4)	1.2 (1.1–1.3)	1.4 (1.2–1.5)	1.4 (1.2–1.5)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.1 (1.0–1.2)	1.3 (1.2–1.4)	§
Malignant neoplasm of skin	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.9 (0.7–1.0)	0.8 (0.7–0.9)	1.1 (0.9–1.3)	1.1 (0.9–1.3)	1.0 (0.9–1.1)	1.1 (1.0–1.3)	1.2 (1.0–1.4)	1.2 (1.1–1.4)	↑
Back syndrome with radiating pain**	1.0 (0.9–1.1)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–0.9)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	—
Osteoporosis	0.5 (0.5–0.6)	0.6 (0.5–0.6)	0.7 (0.6–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	↑
Chronic obstructive pulmonary disease	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.7–0.8)	0.7 (0.7–0.8)	0.7 (0.6–0.8)	0.8 (0.8–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	—

(continued)

Table 7.6 (continued): Most frequently managed chronic problems, BEACH, 1999–00 to 2008–09

Chronic problem managed	Rate per 100 encounters[a] (95% CI)										
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↕↓[b]
Hypothyroidism/ myxoedema	0.5 (0.4–0.5)	0.4 (0.4–0.5)	0.5 (0.5–0.6)	0.5 (0.5–0.6)	0.5 (0.5–0.6)	0.5 (0.5–0.6)	0.7 (0.6–0.7)	0.6 (0.6–0.7)	0.7 (0.6–0.8)	0.8 (0.7–0.8)	↑
Heart failure	0.9 (0.8–1.0)	0.7 (0.6–0.7)	0.7 (0.6–0.8)	0.7 (0.7–0.8)	0.7 (0.7–0.8)	0.7 (0.7–0.8)	0.6 (0.6–0.7)	0.7 (0.6–0.8)	0.6 (0.6–0.7)	0.7 (0.6–0.8)	↓
Migraine	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.8 (0.8–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.7 (0.6–0.7)	0.7 (0.6–0.7)	0.7 (0.6–0.8)	↓
Obesity (BMI > 30)	0.5 (0.4–0.6)	0.6 (0.6–0.7)	0.8 (0.6–0.9)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.6 (0.5–0.6)	0.8 (0.6–0.9)	0.7 (0.6–0.8)	0.6 (0.5–0.7)	—
Dementia (including senile, Alzheimer's)	0.4 (0.3–0.5)	0.3 (0.2–0.4)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.5 (0.4–0.6)	0.5 (0.4–0.6)	0.5 (0.4–0.6)	0.5 (0.4–0.5)	0.4 (0.3–0.5)	0.6 (0.4–0.7)	—
Shoulder syndrome (excluding arthritis)**	0.5 (0.4–0.5)	0.4 (0.3–0.4)	0.4 (0.4–0.5)	0.4 (0.3–0.5)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.5 (0.4–0.6)	0.5 (0.4–0.5)	0.5 (0.4–0.5)	0.6 (0.5–0.6)	↑
Gout	0.6 (0.5–0.7)	0.5 (0.5–0.6)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.6 (0.5–0.7)	0.5 (0.5–0.6)	—
Schizophrenia	0.4 (0.3–0.4)	0.4 (0.3–0.5)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.5 (0.4–0.5)	0.5 (0.4–0.5)	0.5 (0.4–0.5)	0.4 (0.4–0.5)	0.5 (0.4–0.6)	0.5 (0.4–0.6)	↑
Anxiety disorder**	0.5 (0.4–0.5)	0.5 (0.4–0.5)	0.4 (0.4–0.5)	0.5 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.5 (0.4–0.5)	0.4 (0.3–0.5)	0.5 (0.4–0.5)	—
Chronic acne**	0.5 (0.4–0.5)	0.5 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.3 (0.3–0.4)	↓
Total chronic problems	**47.2 (45.5–49.0)**	**46.9 (45.3–48.4)**	**48.0 (46.4–49.5)**	**47.7 (46.1–49.4)**	**50.4 (48.6–52.1)**	**50.4 (48.7–52.1)**	**50.6 (48.8–52.5)**	**50.6 (48.8–52.5)**	**52.4 (50.5–54.3)**	**55.1 (53.4–56.8)**	↑

(a) Figures do not total 100, as more than one problem can be managed at each encounter. Also only the most frequent chronic problems are included.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

** Indicates that this group differs from that used for analysis in other sections of this chapter, as only chronic conditions have been included in this analysis (see Appendix 5).

Note: CI—confidence interval; BMI—body mass index. This table includes individual chronic problems which were managed at > 0.5 per 100 encounters in any year, and any other statistically significant differences of interest.

8 Overview of management

This chapter includes an overview of management in general practice from each of the 10 years of the BEACH study from 1999–00 to 2008–09. The direction and type of change from 1999–00 to 2008–09 is indicated for each result in the far right column of the tables: ↑/↓ indicates a statistically significant linear change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant or marginal change, and — indicates that there was no change.

Since 1999–00, some trends emerged in management of actions at patient encounters (Table 8.1). Most noticeably, over these 10 years:

- the rate of prescribed medications significantly decreased, from 93.8 per 100 encounters in 1999–00 to 86.4 per 100 encounters in 2008–09
- the rate of GP supplied medications significantly increased, from 6.9 per 100 encounters in 1999–00 to 11.0 per 100 encounters in 2008–09
- the rate of clinical treatments increased significantly from 33.5 per 100 encounters in 1999–00 to 39.2 in 2004–05, decreased to 29.2 in 2005–06 with the introduction of the practice nurse provider numbers, but then increased again to 34.0 per 100 in 2008–09
- there was an increase in the rate of procedural treatments undertaken in general practice, from 12.5 per 100 encounters in 1999–00 to 16.7 per 100 encounters in 2008–09
- the rate of referrals to other health providers significantly increased, from 11.1 to 13.7 per 100 encounters between 1999–00 and 2008–09
- since 2000–01, the rate of pathology tests ordered significantly increased by 53%, from 29.7 orders per 100 encounters to 45.6 per 100 encounters in 2008–09
- there was a significant increase in the rate of imaging tests ordered, from 7.7 per 100 encounters in 2000–01 to 9.8 per 100 in 2008–09, and in the rate of other investigations, from 0.6 per 100 in 2000–01 to 1.0 per 100 encounters in 2008–09.

Similar changes can be observed for each of these areas, in the percentage of encounters where at least one management type was provided (Table 8.2). This reflects a change in the likelihood of each action eventuating at an encounter.

- There was a significant reduction in the likelihood of patients being provided with at least one medication (from 68.5% in 1999–00 to 65.1% in 2008–09), particularly prescribed medications, decreasing from 60.1% to 54.6% over this time. The latter reflects the reduction in the rate of prescribed medications reported above and shown in Table 8.1.
- There was an increase in the likelihood of patients receiving at least one GP-supplied medication, from 5.1% in 1999–00 to 8.5% of encounters in 2008–09.
- The likelihood of patients receiving at least one other (non-pharmacological) treatment increased from 36.2% of encounters in 1999–00 to 39.6% in 2008–09.
- The likelihood of patients receiving at least one procedural treatment at the encounter continually and significantly increased from 11.4% in 1999–00 to 15.0% in 2008–09.
- The likelihood of patients being referred increased significantly (from 10.4% of encounters in 1999–00 to 12.8% in 2008–09), particularly to specialists (from 6.9% in 1999–00 to 8.6% in 2008–09), to allied health practitioners (from 3.0% in 1999–00 to 3.7% in 2008–09), and to emergency departments (from 0.1% in 1999–00 to 0.2% in 2008–09).

- Contributing to the increase in the rates of pathology and imaging tests ordered per 100 encounters shown in Table 8.1, there was an increase in the likelihood of the GP ordering at least one investigation at the encounter, from 18.9% in 1999–00 to 24.6% in 2008–09. In 1999–00 the likelihood of at least one pathology test being ordered was 13.8%, and that of at least one imaging test being ordered was 6.7%. By 2008–09 these proportions had significantly increased to 18.2% and 8.5% of encounters, respectively (Table 8.2).

Table 8.1: Summary of management, BEACH, 1999–00 to 2008–09

Management type	Rate per 100 encounters (95% CI)										↑↓[a]
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	
Medications	110.1 (107.8–112.4)	108.2 (105.7–110.6)	104.5 (102.2–106.9)	103.8 (101.4–106.2)	104.4 (102.1–106.7)	101.5 (99.3–103.8)	104.4 (101.8–107.0)	101.5 (99.2–103.9)	102.7 (100.3–105.0)	106.3 (104.0–108.5)	—
Prescribed	93.8 (91.5–96.2)	92.3 (89.9–94.7)	88.0 (85.6–90.4)	84.3 (81.8–86.9)	86.0 (83.6–88.5)	83.4 (81.2–85.5)	85.8 (83.3–88.4)	83.3 (81.0–85.5)	82.4 (80.3–84.6)	86.4 (84.1–88.6)	↓
GP-supplied	6.9 (5.8–7.9)	6.9 (5.7–8.1)	7.6 (6.3–9.0)	9.3 (7.6–11.0)	8.6 (7.4–9.8)	8.1 (7.3–8.9)	8.8 (8.2–9.5)	8.9 (8.2–9.6)	10.1 (9.5–10.7)	11.0 (10.2–11.8)	↑
Advised OTC	9.4 (8.6–10.2)	9.0 (8.1–9.8)	8.9 (8.1–9.6)	10.2 (9.2–11.1)	9.8 (9.0–10.6)	10.1 (9.1–11.0)	9.8 (9.0–10.5)	9.4 (8.7–10.1)	10.0 (9.3–10.9)	8.9 (8.3–9.4)	—
Other treatments	46.0 (44.1–47.8)	49.4 (47.1–51.7)	51.9 (49.6–54.2)	51.8 (49.3–54.3)	51.4 (48.9–53.8)	54.7 (52.1–57.3)	43.6 (41.5–45.8)	44.7 (42.3–47.0)	51.2 (48.9–53.6)	50.7 (48.5–52.9)	↑
Clinical	33.5 (31.8–35.2)	37.2 (35.1–39.3)	38.1 (36.1–40.1)	37.2 (35.0–39.4)	36.6 (34.5–38.8)	39.2 (37.1–41.4)	29.2 (27.3–31.1)	29.5 (27.6–31.4)	34.5 (32.5–36.5)	34.0 (32.1–35.9)	—
Procedural	12.5 (11.9–13.0)	12.2 (11.6–12.8)	13.8 (13.1–14.5)	14.6 (13.9–15.3)	14.7 (14.0–15.5)	15.5 (14.6–16.4)	14.4 (13.7–15.1)	15.2 (14.4–16.0)	16.7 (15.9–17.5)	16.7 (16.0–17.5)	↑
Referrals	11.1 (10.7–11.6)	10.4 (10.0–10.8)	10.5 (10.1–10.9)	11.1 (10.7–11.6)	11.6 (11.1–12.1)	11.5 (11.1–12.0)	12.0 (11.5–12.5)	12.2 (11.7–12.7)	12.5 (12.0–13.0)	13.7 (13.2–14.2)	↑
Specialist	7.2 (6.9–7.5)	7.4 (7.0–7.7)	7.3 (7.0–7.6)	7.7 (7.3–8.0)	7.9 (7.5–8.2)	7.7 (7.4–8.0)	8.2 (7.8–8.5)	8.0 (7.7–8.4)	8.0 (7.6–8.3)	9.0 (8.7–9.3)	↑
Allied health service	3.1 (2.9–3.3)	2.3 (2.2–2.5)	2.3 (2.1–2.4)	2.5 (2.3–2.7)	2.6 (2.4–2.8)	2.7 (2.5–2.9)	2.9 (2.7–3.1)	3.1 (2.9–3.3)	3.5 (3.2–3.7)	3.9 (3.6–4.1)	↑
Hospital	0.7 (0.6–0.8)	0.5 (0.4–0.6)	0.4 (0.4–0.5)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.5 (0.4–0.5)	0.4 (0.3–0.4)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.3 (0.4–0.4)	↓
Emergency department	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.2)	↑
Other referrals/other medical services[b]	0.0[‡] (0.0–0.0)	0.2 (0.1–0.2)	0.4 (0.3–0.4)	0.3 (0.2–0.3)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.3–0.4)	0.5 (0.5–0.6)	0.5 (0.4–0.6)	0.3 (0.2–0.3)	↑

(continued)

Table 8.1 (continued): Summary of management, BEACH, 1999–00 to 2008–09 (rate per 100 encounters)

	Rate per 100 encounters (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[a]
Management type	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Pathology[c]	NAv	29.7 (28.4–30.9)	31.0 (29.7–32.4)	32.9 (31.5–34.4)	35.2 (33.7–36.7)	36.7 (35.2–38.2)	38.6 (36.9–40.3)	42.4 (40.7–44.2)	43.2 (41.3–45.0)	45.6 (43.8–47.4)	↑
Imaging[c]	NAv	7.7 (7.3–8.0)	7.9 (7.6–8.2)	8.6 (8.2–9.0)	8.2 (7.8–8.6)	8.3 (8.0–8.6)	8.8 (8.4–9.2)	9.0 (8.6–9.3)	9.5 (9.2–9.9)	9.8 (9.4–10.2)	↑
Other investigations[c]	NAv	0.6 (0.5–0.7)	0.9 (0.8–1.0)	1.0 (0.8–1.2)	1.0 (0.9–1.2)	1.1 (0.9–1.3)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	↑

(a) The direction and type of change is indicated for each result: ↑/↓ indicates a statistically significant change, and — indicates there was no change.

(b) Other referrals and other medical services have been grouped for comparability. In 1999–00 'other medical services' and 'other referrals' were grouped and reported together.

(c) In the 2000–01 BEACH year, the data collection and data coding system for pathology, imaging and other investigations changed. Data from 1999–00 are not comparable to those from 2000–01 onward.

Ŧ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: CI—confidence interval; OTC—over-the-counter; NAv—not available.

Table 8.2: Encounters for which at least one management was recorded, BEACH, 1999–00 to 2008–09

	Per cent of encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
At least one…	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Management type	**92.2 (91.7–92.7)**	**91.6 (91.0–92.2)**	**91.8 (91.3–92.3)**	**91.3 (90.6–92.0)**	**91.5 (90.9–92.0)**	**91.9 (91.3–92.5)**	**91.2 (90.6–91.8)**	**90.4 (89.8–91.0)**	**91.9 (91.3–92.4)**	**92.2 (91.7–92.7)**	—
Medication or other treatment	**83.8 (83.1–84.5)**	**83.5 (82.7–84.2)**	**83.2 (82.5–84.0)**	**82.5 (81.6–83.3)**	**82.3 (81.5–83.1)**	**82.4 (81.6–83.2)**	**81.4 (80.6–82.1)**	**79.9 (79.1–80.8)**	**82.2 (81.4–82.9)**	**82.4 (81.7–83.1)**	↓
Medication	**68.5 (67.6–69.3)**	**68.0 (67.1–68.9)**	**66.6 (65.7–67.5)**	**65.8 (64.9–66.8)**	**65.6 (64.7–66.5)**	**64.3 (63.4–65.2)**	**65.2 (64.3–66.2)**	**63.9 (63.0–64.9)**	**64.4 (63.4–65.3)**	**65.1 (64.3–65.9)**	↓
Prescription	60.1 (59.1–61.1)	59.8 (58.7–60.8)	57.4 (56.4–58.5)	54.9 (53.7–56.1)	55.7 (54.6–56.9)	54.8 (53.8–55.8)	55.6 (54.5–56.6)	54.1 (53.2–55.1)	53.6 (52.6–54.5)	54.6 (53.7–55.5)	↓
GP-supplied	5.1 (4.5–5.6)	5.1 (4.5–5.7)	5.8 (5.1–6.5)	6.8 (6.0–7.7)	6.5 (5.8–7.3)	6.2 (5.7–6.7)	6.4 (6.0–6.9)	6.8 (6.3–7.3)	7.9 (7.4–8.4)	8.5 (7.9–9.1)	↑
Advised OTC	8.3 (7.7–8.9)	8.0 (7.3–8.6)	8.0 (7.4–8.6)	9.0 (8.3–9.8)	8.7 (8.0–9.3)	8.7 (8.1–9.4)	8.6 (8.0–9.2)	8.4 (7.8–8.9)	8.9 (8.3–9.6)	8.0 (7.5–8.5)	—
Other treatment	**36.2 (35.0–37.4)**	**37.6 (36.2–39.1)**	**39.5 (38.1–41.0)**	**39.4 (37.8–40.9)**	**39.3 (37.8–40.8)**	**41.2 (39.7–42.8)**	**35.1 (33.7–36.6)**	**35.3 (33.8–36.9)**	**39.9 (38.3–41.4)**	**39.6 (38.3–41.0)**	↑
Clinical treatment	27.0 (25.8–28.2)	29.0 (27.6–30.3)	29.7 (28.4–31.1)	29.2 (27.7–30.6)	28.9 (27.4–30.3)	30.5 (29.1–32.0)	24.0 (22.7–25.4)	23.8 (22.5–25.2)	27.5 (26.1–28.9)	27.3 (26.3–28.6)	—
Procedural treatment	11.4 (11.0–11.9)	11.1 (10.6–11.7)	12.7 (12.0–13.3)	13.2 (12.6–13.8)	13.3 (12.7–13.9)	13.8 (13.1–14.6)	13.2 (12.6–13.8)	13.8 (13.2–14.5)	15.0 (14.3–15.7)	15.0 (14.4–15.6)	↑
Referral	**10.4 (10.0–10.8)**	**9.9 (9.6–10.3)**	**10.0 (9.6–10.4)**	**10.6 (10.2–11.0)**	**11.0 (10.5–11.5)**	**10.9 (10.5–11.3)**	**11.3 (10.9–11.8)**	**11.5 (11.0–11.9)**	**11.8 (11.3–12.2)**	**12.8 (12.3–13.2)**	↑
Specialist	6.9 (6.6–7.2)	7.1 (6.8–7.4)	7.0 (6.7–7.3)	7.4 (7.0–7.7)	7.6 (7.3–8.0)	7.5 (7.2–7.8)	7.9 (7.5–8.2)	7.7 (7.4–8.0)	7.7 (7.4–8.0)	8.6 (8.3–8.9)	↑
Allied health	3.0 (2.8–3.2)	2.3 (2.1–2.4)	2.2 (2.1–2.4)	2.4 (2.2–2.6)	2.5 (2.3–2.7)	2.6 (2.5–2.8)	2.8 (2.6–3.0)	3.0 (2.8–3.1)	3.3 (3.1–3.5)	3.7 (3.5–3.9)	↑
Hospital	0.7 (0.6–0.8)	0.5 (0.4–0.6)	0.4 (0.4–0.5)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.5 (0.4–0.5)	0.4 (0.3–0.4)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.3 (0.3–0.4)	↓

(continued)

Table 8.2 (continued): Encounters for which at least one management was recorded, BEACH, 1999–00 to 2008–09

	Per cent of encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
At least one…	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Emergency department	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.2)	↑
Other referral/other medical service[c]	0.0Ŧ (0.0–0.0)	0.2 (0.1–0.2)	0.4 (0.3–0.4)	0.3 (0.2–0.3)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.3–0.4)	0.5 (0.5–0.6)	0.5 (0.4–0.6)	0.3 (0.2–0.3)	↑
Investigation	**18.9 (18.3–19.5)**	**19.3 (18.7–19.9)**	**19.7 (19.1–20.3)**	**20.8 (20.2–21.5)**	**21.3 (20.7–22.0)**	**21.8 (21.1–22.4)**	**22.6 (21.9–23.3)**	**23.5 (22.8–24.2)**	**23.8 (23.1–24.5)**	**24.6 (23.9–25.9)**	↑
Pathology order[d]	13.8 (13.3–14.3)	13.8 (13.3–14.3)	14.0 (13.5–14.5)	14.7 (14.2–15.3)	15.5 (14.9–16.1)	15.7 (15.2–16.3)	16.4 (15.8–16.9)	17.4 (16.8–18.0)	17.4 (16.7–18.0)	18.2 (17.6–18.8)	↑
Imaging order[d]	6.7 (6.4–7.0)	7.2 (6.9–7.5)	6.9 (6.6–7.2)	7.5 (7.1–7.8)	7.2 (6.9–7.5)	7.3 (7.0–7.6)	7.8 (7.4–8.1)	7.9 (7.6–8.2)	8.3 (8.0–8.6)	8.5 (8.1–8.8)	↑
Other investigation[d]	NAv	0.6 (0.5–0.7)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	↑

(a) Figures will not total 100, as multiple events may occur in one encounter or in the management of one problem at encounter.

(b) The direction and type of change is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, and — indicates there was no change.

(c) Other referrals and other medical services have been grouped for comparability. In 1999–00 'other medical services' and 'other referrals' were grouped and reported together.

(d) While the coding system for pathology and imaging changed in the 2000–01 BEACH year, the presence or absence of a test at the encounter was still recorded. These figures are therefore comparable with data from subsequent years.

Ŧ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: CI—confidence interval; OTC—over-the-counter; NAv—not available.

9 Medications

This chapter includes data about the medications prescribed, advised or supplied by general practitioners from each of the 10 years of the BEACH study from 1999–00 to 2008–09. The direction and type of change from 1999–00 to 2008–09 is indicated for each result in the far right column of the tables: ↑/↓ indicates a statistically significant linear change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

Significant linear changes can be extrapolated to estimate the national increase or decrease in the prescribed, supplied, or advised medication rate between 1999–00 and 2008–09. Some examples of extrapolated changes are given for each table. The method used to extrapolate to national change estimates is described in Chapter 2, Section 2.8.

GPs could record up to four medications for each of four problems—a maximum of 16 medications per encounter. Each medication could be recorded as prescribed (the default), supplied by the GP or recommended for over-the-counter (OTC) purchase.

There was no significant change in total medication rates per 100 encounters between 1999–00 and 2008–09 (Table 9.1a). However, Table 9.1b shows that between the two data periods, total medication rates decreased significantly per 100 problems managed.

9.1 Prescribed medications

The rate of prescribed medications fell from 93.8 per 100 encounters in 1999–00 to 86.4 per 100 in 2008–09. This significant decrease in prescription rate means that 7.4 fewer prescriptions were being written on average for every 100 GP–patient encounters in 2008–09 than 10 years earlier (Table 9.1a). The extrapolated national effect of this change is 1.8 million fewer prescriptions given by GPs in 2008–09 than in 1999–00.

Table 9.2 shows prescribing rates of common drug groups at ATC drug group Level 2 over the 10-year period. There were approximately 2.4 million fewer drugs for obstructive airways disease prescribed in 2008–09 than in 1999–00 and 930,000 fewer sex hormones such as systemic contraceptives and hormone replacement therapy. Conversely, extrapolations showed 2.4 million more prescriptions for lipid reducing agents and over 1 million more prescriptions for acid-related digestive disorder drugs in 2008–09 than in 1999–00.

Table 9.3 shows prescribed medication rates at the individual generic level. Some medications that were prescribed more often in 2008–09 than in 1999–00 were oxycodone, which showed extrapolated estimates of 1.1 million more times prescribed, tramadol (800,000 more) and warfarin sodium (640,000 more).

Number of repeats ordered

The pattern of the number of repeat prescriptions recorded by GPs changed between 1999–00 and 2008–09, although no change occurred in the percentage of prescriptions with three, four or six or more repeats (Table 9.4). There was a significant decrease in the proportion of prescribed medications for which one or two repeats were ordered and a significant increase in the proportion of prescriptions for which five repeats were recorded. In 1999–00, 26.8% of prescriptions were given five repeats whereas, in 2008–09, 34.8% of prescribed medications had five repeats, an increase of 30.0% from the 1999–00 results.

Table 9.1a: Rates of medications prescribed, advised for over-the-counter purchase, supplied, per 100 encounters, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters (95% CI)[a]										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Medications	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Prescribed	93.8 (91.5–96.2)	92.3 (89.9–94.7)	88.0 (85.6–90.4)	84.3 (81.8–86.9)	86.0 (83.6–88.5)	83.4 (81.2–85.5)	85.8 (83.3–88.4)	83.3 (81.0–85.5)	82.4 (80.3–84.6)	86.4 (84.1–88.6)	↓
GP-supplied	6.9 (6.0–7.7)	6.9 (5.9–7.9)	7.6 (6.6–8.7)	9.3 (8.0–10.6)	8.6 (7.6–9.6)	8.1 (7.3–8.8)	8.8 (8.2–9.5)	8.9 (8.2–9.6)	10.1 (9.5–10.7)	11.0 (10.2–11.8)	↑
Advised OTC	9.4 (8.7–10.1)	9.0 (8.2–9.7)	8.9 (8.2–9.6)	10.2 (9.3–11.1)	9.8 (9.0–10.5)	10.1 (9.2–10.9)	9.8 (9.0–10.5)	9.4 (8.7–10.1)	10.1 (9.3–10.9)	8.9 (8.3–9.4)	—
Total medications	**110.1 (107.8–112.4)**	**108.2 (105.7–110.6)**	**104.5 (102.2–106.9)**	**103.8 (101.4–106.2)**	**104.4 (102.1–106.7)**	**101.5 (99.3–103.8)**	**104.4 (101.8–107.0)**	**101.5 (99.2–103.9)**	**102.7 (100.3–105.0)**	**106.3 (104.0–108.5)**	—

(a) Missing data removed.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, and — indicates there was no change.

Note: CI—confidence interval.

Table 9.1b: Rates of medications prescribed, advised for over-the-counter purchase, supplied per 100 problems, BEACH, 1999–00 to 2008–09

	Rate per 100 problems (95% CI)[a]										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Medications	(*n* = 153,857)	(*n* = 143,528)	(*n* = 139,092)	(*n* = 146,336)	(*n* = 148,521)	(*n* = 137,330)	(*n* = 149,088)	(*n* = 136,333)	(*n* = 145,078)	(*n* = 149,462)	
Prescribed	63.9 (62.5–65.4)	63.9 (62.4–65.4)	61.4 (59.8–62.9)	58.2 (56.6–59.8)	58.8 (57.3–60.3)	57.3 (55.9–58.7)	58.7 (57.2–60.3)	56.1 (54.7–57.4)	54.5 (53.2–55.8)	55.9 (54.5–57.2)	↓
GP-supplied	4.7 (4.0–5.4)	4.8 (3.9–5.6)	5.3 (4.4–6.3)	6.4 (5.3–7.5)	5.9 (5.1–6.7)	5.5 (5.0–6.1)	6.0 (5.6–6.5)	6.0 (5.5–6.5)	6.7 (6.3–7.1)	7.1 (6.6–7.6)	↑
Advised OTC	6.4 (5.8–7.0)	6.2 (5.6–6.8)	6.2 (5.7–6.7)	7.0 (6.3–7.7)	6.7 (6.1–7.2)	6.9 (6.3–7.5)	6.7 (6.2–7.2)	6.3 (5.8–6.8)	6.7 6.2–7.2)	5.7 (5.3–6.1)	—
Total medications	**75.0 (73.6–76.4)**	**74.8 (73.3–76.3)**	**72.9 (71.4–74.3)**	**71.6 (70.1–73.1)**	**71.3 (70.0–72.7)**	**69.8 (68.9–71.2)**	**71.4 (69.9–72.9)**	**68.4 (67.0–69.7)**	**67.9 (66.5–69.2)**	**68.7 (67.5–70.0)**	↓

(a) Missing data removed.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, and — indicates there was no change.

Note: CI—confidence interval.

Table 9.2: Distribution of prescribed medications (by ATC Level 2), BEACH, 1999–00 to 2008–09

ATC Level 2	Rate per 100 encounters[a] (95% CI) 1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↓[b]
Antibacterials for systemic use	15.7 (15.2–16.3)	15.4 (14.8–16.0)	13.9 (13.4–14.4)	13.3 (12.8–13.9)	13.6 (13.1–14.2)	14.0 (13.5–14.6)	14.6 (14.0–15.2)	14.0 (13.4–14.5)	13.8 (13.2–14.3)	14.6 (14.1–15.1)	↓
Analgesics	9.6 (9.1–10.2)	8.9 (8.4–9.4)	8.5 (8.1–9.0)	8.5 (8.0–9.1)	8.5 (8.0–9.0)	8.3 (7.8–8.7)	9.0 (8.4–9.5)	8.6 (8.1–9.0)	8.5 (8.0–8.9)	8.5 (8.1–8.9)	↓
Agents acting on the renin-angiotensin system	4.1 (3.8–4.3)	4.6 (4.3–4.8)	5.0 (4.7–5.3)	4.9 (4.6–5.2)	5.5 (5.1–5.8)	5.5 (5.2–5.8)	6.1 (5.7–6.5)	6.5 (6.1–6.9)	6.6 (6.2–7.0)	7.1 (6.7–7.4)	↑
Psycholeptics	5.4 (5.0–5.7)	5.2 (4.9–5.5)	5.1 (4.8–5.5)	4.7 (4.4–5.0)	5.0 (4.7–5.4)	4.9 (4.6–5.2)	5.0 (4.6–5.3)	4.8 (4.5–5.2)	4.7 (4.4–5.0)	5.0 (4.7–5.3)	—
Serum lipid reducing agents	2.2 (2.0–2.4)	2.4 (2.2–2.5)	2.4 (2.3–2.6)	2.4 (2.2–2.6)	2.8 (2.6–3.0)	3.0 (2.8–3.2)	3.3 (3.0–3.6)	3.4 (3.2–3.7)	3.7 (3.5–4.0)	4.1 (3.8–4.3)	↑
Drugs for obstructive airway diseases	6.6 (6.1–7.0)	5.6 (5.2–5.9)	5.1 (4.8–5.5)	4.6 (4.3–4.9)	4.1 (3.9–4.4)	3.8 (3.6–4.1)	3.9 (3.6–4.1)	3.8 (3.5–4.0)	3.6 (3.3–3.8)	3.8 (3.6–4.0)	↓
Psychoanaleptics	3.0 (2.8–3.1)	3.1 (2.9–3.3)	3.0 (2.8–3.2)	3.0 (2.8–3.2)	3.3 (3.1–3.5)	3.1 (3.0–3.3)	3.3 (3.1–3.5)	3.5 (3.3–3.7)	3.5 (3.3–3.6)	3.7 (3.5–3.9)	↑
Anti-inflammatory and antirheumatic products	4.6 (4.4–4.9)	5.8 (5.5–6.0)	5.3 (5.1–5.6)	4.8 (4.6–5.1)	4.8 (4.5–5.0)	4.5 (4.2–4.7)	3.9 (3.7–4.2)	3.6 (3.3–3.7)	3.5 (3.2–3.7)	3.4 (3.2–3.5)	↓
Drugs for acid-related disorders	2.6 (2.4–2.8)	2.4 (2.2–2.5)	2.5 (2.4–2.7)	2.5 (2.4–2.7)	2.9 (2.7–3.0)	2.7 (2.5–2.9)	3.1 (2.9–3.2)	3.0 (2.8–3.2)	3.1 (2.9–3.2)	3.3 (3.1–3.4)	↑
Drugs used in diabetes	1.8 (1.6–2.0)	2.0 (1.8–2.2)	2.2 (2.0–2.4)	1.9 (1.7–2.1)	2.2 (2.0–2.4)	2.1 (1.9–2.2)	2.5 (2.2–2.7)	2.4 (2.2–2.6)	2.5 (2.3–2.7)	2.9 (2.6–3.2)	↑
Sex hormones and modulators of the genital system	3.9 (3.7–4.1)	3.9 (3.7–4.1)	3.8 (3.6–4.0)	3.7 (3.5–3.9)	3.5 (3.3–3.7)	3.1 (2.9–3.3)	3.0 (2.8–3.2)	3.0 (2.7–3.3)	2.9 (2.7–3.0)	2.7 (2.5–2.9)	↓
Corticosteroids, dermatological preparations	2.8 (2.7–3.0)	3.1 (2.8–3.3)	2.8 (2.7–3.0)	2.6 (2.5–2.8)	2.6 (2.4–2.7)	2.8 (2.6–2.9)	2.5 (2.4–2.7)	2.6 (2.4–2.8)	2.6 (2.4–2.7)	2.6 (2.5–2.8)	—

(continued)

Table 9.2 (continued): Distribution of prescribed medications (by ATC Level 2), BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
ATC Level 2	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Calcium channel blockers	2.5 (2.3–2.7)	2.3 (2.1–2.5)	2.2 (2.0–2.4)	2.0 (1.8–2.1)	2.2 (2.0–2.3)	2.0 (1.8–2.1)	2.2 (2.0–2.4)	2.1 (2.0–2.3)	2.1 (1.9–2.3)	2.3 (2.1–2.4)	—
Beta-blocking agents	1.9 (1.7–2.1)	1.7 (1.5–1.8)	1.8 (1.6–1.9)	1.6 (1.5–1.7)	1.8 (1.7–2.0)	1.7 (1.5–1.8)	1.9 (1.8–2.1)	1.8 (1.7–2.0)	1.7 (1.6–1.9)	2.0 (1.8–2.1)	—
Anti-thrombotic agents	0.8 (0.7–0.9)	1.0 (0.9–1.1)	1.1 (1.0–1.3)	1.1 (1.0–1.2)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.3 (1.2–1.4)	1.5 (1.3–1.6)	1.5 (1.4–1.7)	1.8 (1.6–1.9)	↑
Ophthalmologicals	1.7 (1.6–1.8)	1.6 (1.5–1.7)	1.5 (1.4–1.6)	1.6 (1.5–1.7)	1.7 (1.5–1.8)	1.7 (1.6–1.8)	1.9 (1.7–2.0)	1.7 (1.6–1.8)	1.7 (1.5–1.8)	1.7 (1.6–1.8)	—
Vaccines	4.2 (3.8–4.6)	3.8 (3.5–4.2)	3.9 (3.5–4.2)	4.2 (3.8–4.5)	3.3 (3.0–3.6)	2.9 (2.6–3.3)	2.5 (2.2–2.8)	1.7 (1.5–1.9)	1.6 (1.4–1.8)	1.6 (1.4–1.8)	↓
Corticosteroids for systemic use	1.4 (1.3–1.5)	1.2 (1.1–1.3)	1.3 (1.2–1.5)	1.1 (1.0–1.2)	1.3 (1.1–1.4)	1.2 (1.1–1.4)	1.3 (1.2–1.4)	1.3 (1.2–1.5)	1.2 (1.1–1.3)	1.3 (1.2–1.4)	—
Diuretics	2.1 (1.9–2.3)	1.9 (1.7–2.0)	1.7 (1.5–1.9)	1.6 (1.4–1.7)	1.5 (1.4–1.7)	1.4 (1.2–1.5)	1.4 (1.3–1.5)	1.4 (1.3–1.5)	1.3 (1.1–1.4)	1.3 (1.2–1.4)	↓
Cardiac therapy	1.7 (1.5–1.8)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.0 (0.8–1.1)	1.0 (0.9–1.2)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.9 (0.8–1.0)	↓
Thyroid therapy	0.5 (0.4–0.5)	0.5 (0.5–0.6)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.7 (0.6–0.7)	0.7 (0.6–0.7)	0.7 (0.6–0.8)	0.7 (0.7–0.8)	0.7 (0.6–0.8)	0.8 (0.7–0.9)	↑
Nasal preparations	1.6 (1.5–1.7)	1.5 (1.3–1.6)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	↓
Otologicals	0.9 (0.8–1.0)	1.0 (0.9–1.0)	0.9 (0.8–1.0)	0.8 (0.8–0.9)	0.8 (0.8–1.0)	0.9 (0.8–1.0)	0.8 (0.7–0.8)	0.7 (0.6–0.8)	0.8 (0.7–0.8)	0.8 (0.7–0.9)	—
Total prescribed medications	**93.8 (91.5–96.2)**	**92.3 (89.9–94.7)**	**88.0 (85.6–90.4)**	**84.3 (81.8–86.9)**	**86.0 (83.6–88.5)**	**83.4 (81.2–85.5)**	**85.8 (83.3–88.4)**	**83.3 (81.0–85.5)**	**82.4 (80.3–84.6)**	**86.4 (84.1–88.6)**	↓

(a) Column will not add to 100, as multiple prescriptions could be written at each encounter. Also, only the most frequent medications are included.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change and — indicates there was no change.

Note: CI—confidence interval.

Table 9.3: Most frequently prescribed medications (by CAPS generic), BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Generic drug	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Amoxycillin	3.1 (2.9–3.4)	3.2 (3.0–3.5)	2.9 (2.7–3.1)	3.1 (2.8–3.4)	3.3 (3.0–3.5)	3.5 (3.2–3.8)	3.6 (3.3–3.8)	3.3 (3.0–3.6)	3.5 (3.2–3.7)	3.5 (3.3–3.8)	—
Cephalexin	2.1 (1.9–2.2)	2.2 (2.0–2.4)	2.0 (1.9–2.2)	1.9 (1.8–2.0)	2.0 (1.9–2.2)	2.4 (2.2–2.6)	2.5 (2.3–2.7)	2.3 (2.2–2.5)	2.4 (2.3–2.6)	2.5 (2.3–2.6)	↑
Paracetamol	4.1 (3.7–4.4)	3.9 (3.6–4.3)	3.1 (2.8–3.4)	3.1 (2.8–3.5)	2.9 (2.5–3.2)	2.7 (2.4–2.9)	3.0 (2.7–3.3)	2.6 (2.3–2.9)	2.5 (2.2–2.7)	2.3 (2.1–2.5)	↓
Paracetamol–codeine	2.4 (2.2–2.6)	2.2 (2.0–2.4)	2.2 (2.1–2.4)	2.0 (1.8–2.2)	2.1 (1.9–2.3)	2.0 (1.8–2.2)	2.0 (1.8–2.2)	2.0 (1.8–2.1)	1.9 (1.7–2.1)	1.9 (1.8–2.0)	↓
Atorvastatin	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.0 (1.0–1.2)	1.2 (1.1–1.3)	1.4 (1.3–1.5)	1.6 (1.4–1.8)	1.7 1.5–1.8)	1.7 (1.6–1.9)	1.9 (1.7–2.0)	↑
Amoxycillin/potassium clavulanate	1.6 (1.5–1.8)	1.7 (1.5–1.9)	1.6 (1.4–1.7)	1.6 (1.4–1.7)	1.7 (1.5–1.8)	1.7 (1.5–1.8)	1.7 (1.5–1.8)	1.7 (1.5–1.9)	1.7 (1.6–1.9)	1.8 (1.7–2.0)	—
Roxithromycin	1.8 (1.7–2.0)	1.6 (1.4–1.8)	1.4 (1.3–1.5)	1.3 (1.2–1.5)	1.1 (1.0–1.2)	1.1 (1.0–1.3)	1.5 (1.3–1.7)	1.4 (1.2–1.5)	1.2 (1.1–1.4)	1.4 (1.3–1.5)	↓
Metformin	0.7 (0.6–0.8)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.8 (0.8–0.9)	1.0 (0.9–1.1)	1.0 (0.9–1.0)	1.2 (1.0–1.3)	1.1 (1.0–1.3)	1.2 (1.1–1.3)	1.4 (1.3–1.5)	↑
Salbutamol	2.4 (2.2–2.6)	2.1 (1.9–2.2)	2.0 (1.8–2.1)	1.7 (1.6–1.9)	1.5 (1.4–1.6)	1.4 (1.3–1.5)	1.5 (1.4–1.6)	1.4 (1.3–1.5)	1.3 (1.2–1.5)	1.4 (1.3–1.5)	↓
Perindopril	0.7 (0.6–0.8)	0.6 (0.6–0.7)	0.7 (0.7–0.8)	0.7 (0.6–0.8)	0.7 (0.7–0.8)	0.8 (0.7–0.9)	1.0 (0.9–1.1)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.4 (1.2–1.5)	↑
Esomeprazole	N/A	N/A	N/A	0.3 (0.2–0.3)	0.6 (0.5–0.7)	0.7 (0.6–0.8)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.2 (1.1–1.3)	1.3 (1.3–1.4)	↑
Warfarin sodium	0.7 (0.6–0.8)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.1)	0.9 (0.8–1.0)	1.0 (0.9–1.2)	1.1 (0.9–1.2)	1.2 (1.1–1.4)	↑
Oxycodone	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.4 (0.4–0.5)	0.5 (0.5–0.6)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.0 (0.9–1.2)	1.2 (1.1–1.3)	↑

(continued)

Table 9.3 (continued): Most frequently prescribed medications (by CAPS generic), BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Generic drug	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Temazepam	1.4 (1.3–1.6)	1.4 (1.3–1.6)	1.3 (1.2–1.5)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	↓
Diazepam	1.1 (1.0–1.2)	1.0 (0.9–1.2)	1.0 (0.9–1.2)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.1 (1.0–1.2)	1.2 (1.0–1.3)	—
Irbesartan	0.7 (0.6–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	1.1 (1.0–1.2)	1.0 0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	↑
Chloramphenicol eye	0.9 (0.8–1.0)	0.9 (0.8–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.9–1.0)	1.1 (1.0–1.1)	1.0 (0.9–1.1)	0.9 (0.9–1.0)	1.0 (0.9–1.1)	—
Atenolol	1.0 (0.9–1.2)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	0.8 (0.7–0.9)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	—
Meloxicam	N/A	N/A	0.0[Ŧ] (0.0–0.1)	0.3 (0.3–0.4)	0.4 (0.3–0.5)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.7 (0.7–0.8)	0.9 (0.8–1.1)	0.9 (0.8–1.0)	↑
Simvastatin	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	1.0 (1.0–1.1)	1.1 (1.0–1.2)	1.2 (1.0–1.3)	1.1 (1.0–1.2)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	—
Fluticasone/salmeterol	N/A	0.2 (0.2–0.3)	0.6 (0.5–0.7)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	↑
Levonorgestrel/ ethinyloestradiol	1.3 (1.2–1.4)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	0.8 (0.8–0.9)	↓
Cefaclor monohydrate	1.6 (1.3–2.0)	1.6 (1.4–1.8)	1.1 (1.0–1.2)	1.0 (0.9–1.2)	0.8 (0.7–0.9)	0.8 (0.7–1.0)	0.8 (0.6–1.0)	0.8 (0.6–0.9)	0.6 (0.5–0.7)	0.8 (0.7–0.9)	↓
Tramadol	0.1 (0.0–1.1)	0.2 (0.1–0.2)	0.7 (0.6–0.8)	1.0 (0.9–1.1)	0.9 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.0)	0.9 (0.8–1.1)	0.9 (0.8–0.9)	0.8 (0.7–0.9)	↑
Doxycycline hydrochloride	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.7–0.8)	0.8 (0.7–0.9)	0.7 (0.7–0.9)	0.7 (0.7–0.8)	0.8 (0.7–0.9)	—
Ramipril	0.3 (0.3–0.4)	0.4 (0.4–0.5)	0.6 (0.5–0.7)	0.7 (0.6–0.7)	0.7 (0.7–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	↑

(continued)

Table 9.3 (continued): Most frequently prescribed medications (by CAPS generic), BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Generic drug	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Irbesartan/ hydrochlorothiazide	N/A	0.3 (0.2–0.4)	0.6 (0.5–0.6)	0.6 (0.5–0.7)	0.7 (0.7–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.8 (0.7–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.8)	↑
Thyroxine	0.5 (0.4–0.5)	0.5 (0.4–0.6)	0.5 (0.5–0.6)	0.6 (0.5–0.6)	0.6 (0.5–0.7)	0.6 (0.5–0.7)	0.6 (0.6–0.7)	0.7 (0.6–0.8)	0.7 (0.6–0.7)	0.7 (0.7–0.8)	↑
Betamethasone topical	0.9 (0.8–0.9)	1.0 (0.9–1.2)	0.9 (0.8–1.0)	0.7 (0.6–0.8)	0.8 (0.8–0.9)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.7–0.8)	↓
Diclofenac sodium systemic	1.3 (1.1–1.4)	1.2 (1.0–1.3)	0.9 (0.8–1.0)	0.7 (0.6–0.8)	0.8 (0.7–0.9)	1.0 (0.8–1.1)	1.0 (0.9–1.1)	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	↓
Amlodipine	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.7)	0.7 (0.6–0.7)	0.6 (0.6–0.7)	0.7 (0.6–0.8)	0.8 (0.7–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	—
Mometasone	0.6 (0.6–0.7)	0.7 (0.6–0.7)	0.8 (0.7–0.9)	0.6 (0.6–0.7)	0.5 (0.5–0.6)	0.8 (0.7–0.9)	0.7 (0.6–0.7)	0.7 (0.6–0.7)	0.8 (0.7–0.8)	0.7 (0.6–0.7)	—
Aspirin	0.8 (0.8–1.0)	0.8 (0.7–0.9)	0.7 (0.6–0.7)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.7)	0.7 (0.7–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.7)	0.7 (0.6–0.8)	↓
Venlafaxine	0.2 (0.0–0.4)	0.3 (0.1–0.5)	0.3 (0.1–0.5)	0.3 (0.1–0.5)	0.4 (0.2–0.6)	0.4 (0.2–0.6)	0.4 (0.4–0.5)	0.7 (0.6–0.7)	0.6 (0.5–0.6)	0.6 (0.6–0.7)	↑
Gliclazide	0.4 (0.2–0.7)	0.5 (0.2–0.8)	0.9 (0.8–1.1)	0.4 (0.2–0.6)	0.5 (0.3–0.7)	0.4 (0.2–0.6)	0.6 (0.5–0.6)	0.5 (0.4–0.6)	0.5 (0.5–0.6)	0.6 (0.5–0.7)	—
Oxazepam	0.8 (0.6–1.1)	0.7 (0.6–0.9)	0.7 0.5–0.9)	0.6 (0.5–0.8)	0.7 0.5–0.9)	0.6 (0.4–0.8)	0.7 (0.6–0.8)	0.6 (0.5–0.7)	0.6 (0.5–0.6)	0.6 (0.5–0.7)	—
Frusemide	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.6 (0.5–0.7)	0.6 (0.6–0.7)	0.6 (0.6–0.7)	0.6 (0.5–0.7)	0.6 (0.5–0.7)	↓
Sertraline	0.8 (0.7–0.9)	0.8 (0.7–0.8)	0.6 (0.6–0.7)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.7)	0.7 (0.6–0.8)	0.7 (0.6–0.7)	0.6 (0.5–0.7)	0.6 (0.5–0.7)	↓
Candesartan cilexetil	0.1 (0.1–0.1)	0.2 (0.2–0.2)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.4 (0.4–0.5)	0.6 (0.5–0.7)	0.6 (0.5–0.7)	0.6 (0.5–0.7)	↑

(continued)

Table 9.3 (continued): Most frequently prescribed medications (by CAPS generic), BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Generic drug	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Pantoprazole	0.1 (0.0–0.4)	0.1 (0.0–0.4)	0.4 (0.2–0.6)	0.4 (0.2–0.5)	0.4 (0.2–0.6)	0.4 (0.3–0.5)	0.5 (0.4–0.6)	0.5 (0.4–0.6)	0.5 (0.5–0.6)	0.6 (0.5–0.7)	↑
Influenza virus vaccine	1.5 (1.3–1.7)	1.5 (1.3–1.8)	1.5 (1.2–1.7)	1.4 (1.2–1.7)	1.2 (1.0–1.4)	0.9 (0.7–1.1)	1.1 (0.9–1.3)	0.6 (0.5–0.8)	0.4 (0.3–0.5)	0.6 (0.4–0.7)	↓
Rosuvastatin	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0 (0.0–0.1)	0.4 (0.3–0.4)	0.6 (0.5–0.7)	↑
Generic medication frequently prescribed in previous years											
Naproxen systemic	0.8 (0.7–0.9)	0.6 (0.5–0.6)	0.4 (0.4–0.5)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.2–0.4)	0.4 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.2–0.4)	0.3 (0.2–0.3)	↓
Budesonide topical nasal	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.5 (0.4–0.5)	0.3 (0.3–0.4)	0.4 (0.3–0.4)	0.3 (0.2–0.4)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	↓
Ranitidine	1.0 (0.9–1.1)	1.0 (0.9–1.1)	0.6 (0.6–0.7)	0.5 (0.4–0.5)	0.4 (0.3–0.4)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	↓
Enalapril maleate	0.7 (0.6–0.8)	0.5 (0.5–0.6)	0.4 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.2)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	↓
Budesonide inhaled	0.7 (0.7–0.8)	0.6 (0.5–0.6)	0.5 (0.4–0.5)	0.3 (0.3–0.4)	0.3 (0.2–0.3)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	↓
Beclomethasone inhaled	0.6 (0.5–0.7)	0.4 (0.3–0.5)	0.3 (0.3–0.4)	0.2 (0.1–0.2)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.0–0.1)	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	↓
Total prescribed medications	**93.8 (91.5–96.2)**	**92.3 (89.9–94.7)**	**88.0 (85.6–90.4)**	**84.3 (81.8–86.9)**	**86.0 (83.6–88.5)**	**83.4 (81.2–85.5)**	**85.8 (83.3–88.4)**	**83.3 (81.0–85.5)**	**82.4 (80.3–84.6)**	**86.4 (84.1–88.6)**	↓

(a) Column will not add to 100, as multiple prescriptions could be written at each encounter.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change and — indicates there was no change.

Ŧ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: CI—confidence interval; N/A—not applicable (that is, drug was not available at that time).

Table 9.4: Number of repeats for prescribed medications, BEACH, 1999–00 to 2008–09

	Per cent of prescriptions (95% CI)[a]										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Number of repeats	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
No repeats	31.9 (30.2–33.7)	33.0 (31.2–34.8)	38.3 (36.7–39.4)	38.0 (36.4–39.6)	37.8 (36.2–39.3)	38.5 (36.8–40.2)	35.9 (34.4–37.5)	35.2 (33.7–36.7)	34.5 (33.1–35.9)	34.0 (32.8–35.2)	§
One repeat	20.4 (19.5–21.3)	20.3 (19.3–21.4)	17.6 (16.8–18.3)	17.7 (16.8–18.6)	16.6 (15.8–17.3)	17.6 (16.7–18.4)	17.6 (16.8–18.4)	16.4 (15.6–17.1)	16.8 (16.0–17.6)	17.1 (16.1–18.0)	↓
Two repeats	16.3 (15.2–17.4)	15.2 (14.1–16.3)	13.1 (12.3–14.0)	12.0 (11.0–13.0)	11.4 (10.6–12.1)	10.6 (10.0–11.3)	10.1 (9.4–10.9)	10.5 (9.6–11.4)	10.2 (9.3–11.1)	9.7 (9.0–10.3)	↓
Three or four repeats	4.3 (3.7–4.8)	4.4 (4.0–4.8)	4.5 (4.1–4.9)	4.8 (4.4–5.1)	5.0 (4.7–5.4)	4.8 (4.4–5.2)	4.5 (3.8–5.2)	4.8 (4.3–5.3)	4.6 (4.0–5.2)	4.4 (4.0–4.8)	—
Five repeats	26.8 (25.3–28.3)	26.9 (25.6–28.2)	26.4 (25.2–27.7)	27.4 (26.0–28.7)	29.2 (27.9–30.4)	28.3 (27.0–29.6)	31.7 (30.3–33.1)	33.0 (31.7–34.4)	33.8 (32.5–35.1)	34.8 (33.6–36.0)	↑
Six or more repeats	0.3 (0.0–0.6)	0.1 (0.1–0.2)	0.0 (0.0–0.0)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.3)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	—

(a) Missing data removed.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

Note: CI—confidence interval. Results are reported to one decimal place, a result of 0.0 indicates that the prescription accounted for < 0.05%.

9.2 Medications supplied by GPs

Rates of GP-supplied medications per 100 encounters and per 100 problems managed increased significantly in the 10-year period. Rates rose from 6.9 per 100 encounters in 1999–00 to 11.0 in 2008–09 (Table 9.1a). The extrapolated national effect of this change is 5.3 million more medications supplied directly to the patient by GPs in 2008–09 than in 1999–00. Per 100 problems managed, the rates increased from 4.7 to 7.1 between the two data periods (Table 9.1b).

Table 9.5 shows rates of generic medications most frequently supplied by GPs between 1999–00 and 2008–09. The majority of these medications were vaccines and rates for most of them increased significantly over the period. The supply of pneumococcal vaccine rose significantly from 0.1 per 100 encounters in 1999–00 to 0.7 per 100 in 2008–09. The extrapolated national effect of this change is that pneumococcal vaccine was supplied 680,000 more times in 2008–09 than in 1999–00. The peak for papillomavirus vaccine can be seen in 2007–08 with one supplied per 100 encounters. The rate dropped significantly in 2008–09 to 0.6 per 100 encounters on average. For the influenza vaccine, the move away from prescribing towards GP supply was evident in the significant increase in its supply by GPs (Table 9.5) that coincided with the significant decrease in its prescribing rates (Table 9.3). This change follows federal government policy starting in 2001 which made the vaccine available free-of-charge to all Australians aged 65 years and over, to Indigenous people aged 50 years and older and to younger Indigenous persons with health risks. The vaccines can be ordered by the GP directly from the supplier.

9.3 Medications advised for over-the-counter purchase

The overall rate of advised OTC medications showed no significant change over the period (Table 9.1a). Table 9.6 shows the most commonly advised OTC medications at the generic level. The rate of advised sodium chloride for topical nasal use rose significantly from <0.05 per 100 encounters in 1999–00 to 0.2 in 2008–09. The extrapolated national effect of this change is that this medication was advised by GPs 180,000 more times in 2008–09 than in 1999–00. Rates of advised cetirizine also rose significantly.

Table 9.5: Medications most frequently supplied by GPs, BEACH, 1999–00 to 2008–09

Generic medication	Rate per 100 encounters (95% CI)										↑↓ (a)
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	
Influenza virus vaccine	0.7 (0.5–0.9)	0.6 (0.4–0.7)	0.9 (0.7–1.1)	0.7 (0.5–0.9)	1.2 (0.9–1.4)	1.2 (0.9–1.6)	1.6 (1.3–1.8)	2.0 (1.6–2.3)	1.5 (1.2–1.7)	2.3 (2.0–2.7)	↑
Pneumococcal vaccine	0.1 (0.0–0.1)	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.1–0.1)	0.4 (0.3–0.5)	0.9 (0.8–1.0)	0.6 (0.6–0.7)	0.6 (0.5–0.7)	0.7 (0.6–0.8)	↑
Papillomavirus vaccine	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0Ŧ (0.0–0.0)	1.0 (0.9–1.1)	0.6 (0.6–0.7)	§
Vitamin B12 (cobalamin)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.0Ŧ (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.4 (0.3–0.4)	0.4 (0.4–0.5)	↑
Mumps/measles/rubella vaccine	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	↑
Diph/pert/tetanus/Hep B/Polio/Hib vaccine	N/A	N/A	N/A	N/A	N/A	0.0Ŧ (0.0–0.0)	0.1 (0.0–0.1)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.3 (0.3–0.4)	↑
Rotavirus vaccine	N/A	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.1 (0.1–0.2)	0.3 (0.2–0.3)	↑
Haemophilus B vaccine	0.3 (0.3–0.4)	0.2 (0.2–0.3)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	0.3 (0.2–0.4)	0.2 (0.2–0.2)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	↓
ADT–CDT vaccine (diphtheria–tetanus)	0.3 (0.2–0.3)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	—
Polio vaccine oral sabin/injection	0.4 (0.3–0.5)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.3 (0.2–0.4)	0.3 (0.3–0.4)	0.4 (0.4–0.5)	0.5 (0.4–0.5)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.2)	↓
Meningitis vaccine	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.2 (0.1–0.2)	0.3 (0.2–0.3)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	↑
Total GP-supplied medications	**6.9 (6.0–7.7)**	**6.9 (5.9–7.9)**	**7.6 (6.6–8.7)**	**9.3 (8.0–10.6)**	**8.6 (7.6–9.6)**	**8.1 (7.3–8.8)**	**8.8 (8.2–9.5)**	**8.9 (8.2–8.6)**	**10.1 (9.5–10.7)**	**11.0 (10.3–11.8)**	↑

(a) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, § indicates a non-linear significant change, and — indicates there was no change.

Ŧ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: CI—confidence interval. N/A—not applicable (that is, drug was not available at that time).

Table 9.6: Most frequently advised over-the-counter medications, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[a]
Generic medication	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Paracetamol	2.5 (2.2–2.8)	2.4 (2.0–2.7)	2.1 (1.9–2.4)	2.6 (2.3–2.9)	2.5 (2.1–2.8)	2.3 (2.0–2.6)	2.5 (2.2–2.8)	2.4 (2.1–2.7)	2.6 (2.2–2.9)	2.3 (2.0–2.6)	—
Ibuprofen	0.3 (0.2–0.4)	0.5 (0.4–0.6)	0.5 (0.4–0.6)	0.7 (0.5–0.8)	0.6 (0.5–0.7)	0.5 (0.4–0.6)	0.6 (0.5–0.7)	0.5 (0.5–0.6)	0.6 (0.5–0.7)	0.5 (0.4–0.6)	↑
Diclofenac diethyl topical	0.2 (0.2–0.3)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	—
Sodium chloride topical nasal	0.0Ŧ (0.0–0.0)	0.1 (0.0–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	↑
Aspirin	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	—
Sodium/potassium/citric/ glucose rehydration	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	—
Clotrimazole topical	0.2 (0.0–0.4)	0.2 (0.0–0.4)	0.2 (0.0–0.5)	0.2 (0.0–0.4)	0.2 (0.0–0.4)	0.2 (0.0–0.4)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	—
Cetirizine	0.0Ŧ (0.0–0.0)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	↑
Paracetamol–codeine	0.3 (0.2–0.4)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	↓
Loratadine	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	0.1 (0.1–0.2)	↓
Fexofenadine	0.1 (0.0–0.9)	0.1 (0.0–0.5)	0.1 (0.0–0.5)	0.1 (0.0–0.4)	0.1 (0.0–0.5)	0.2 (0.0–0.5)	0.1 (0.1–0.2)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	—
Total advised medications	**9.4 (8.7–10.1)**	**9.0 (8.2–9.7)**	**8.9 (8.2–9.6)**	**10.2 (9.3–11.1)**	**9.8 (9.0–10.5)**	**10.1 (9.2–10.9)**	**9.8 (9.0–10.5)**	**9.4 (8.7–10.1)**	**10.1 (9.3–10.9)**	**8.9 (8.3–9.4)**	—

(a) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, and — indicates there was no change.

Ŧ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: CI—confidence interval.

10 Other treatments

This chapter includes data about the other treatments provided in general practice from each of the 10 years of the BEACH study from 1999–00 to 2008–09. The survey form allowed GPs to record up to two other treatments for each problem managed at the encounter. Other treatments included all clinical and procedural treatments provided. These groups are defined in Appendix 4. Between 2005–06 and 2008–09 the GPs were asked to indicate whether the treatment was provided by a practice nurse (tick box). In this chapter all 'other treatments' are reported, irrespective of whether they were done by the GP or by the practice nurse. That is, the non-pharmacological management provided in general practice patient encounters is described, rather than management provided specifically by the general practitioner. Treatments provided by the practice nurse are reported separately in Chapter 13.

Routine clinical measurements or observations, such as measurements of blood pressure and physical examinations, were not included between 1998–99 and 2004–05. With the inclusion of practice nurse activities in BEACH since 2005–06, clinical observations have been recorded, but only when undertaken by the practice nurse.

The direction and type of change from 1999–00 to 2008–09 is indicated for each result in the far right column of the tables: ↑/↓ indicates a statistically significant linear change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

Significant linear changes can be extrapolated to estimate the national increase or decrease in the other treatments provided between 1999–00 and 2008–09. An example of an extrapolated change is given for each table. The method used to extrapolate to national change estimates is described in Chapter 2, Section 2.8.

10.1 Clinical treatments

Overall, there was no change in the rate of clinical treatments provided at general practice encounters when comparing 1999–00 and 2008–09 data. However, there was a significant increase in the rate of clinical treatments recorded between 1999–00 and 2004–05, followed by a 25% decrease in 2005–06. The rate of clinical treatments then gradually increased to 34.0 per 100 encounters in 2008–09 (Table 10.1).

There were numerous changes when comparing the individual types of clinical treatments given over the 10-year period. Since 1999–00 there was an overall increase in the rate of general advice and education given to patients, from 4.2 per 100 encounters in 1999–00 to 6.1 per 100 in 2008–09. There were also numerous significant changes within this period (Table 10.1). The rate of other administrative/documentation shows a similar pattern, with peaks of 1.8 per 100 encounters occurring in 2003–04 and 2008–09.

A significant linear increase was seen in the rate of sickness certificates provided over the 10-year period, given at a rate of 0.6 per 100 encounters in 1999–00 and increasing to 1.9 per 100 encounters in 2008–09. This represents an estimated 1.5 million more sickness certificates provided nationally in 2008–09 than in 1999–00.

Table 10.2 shows that some changes have occurred in the rates at which clinical treatments were used in the management of specific problems. The rate at which clinical treatments were used in the management of tobacco abuse increased fivefold from 0.1 per 100 tobacco abuse encounters in 1999–00 to 0.5 per 100 in 2008–09. Clinical treatments were provided in the management of asthma less often in 2008–09 than in 1999–00. A significant linear decrease over the 10-year period is shown, equating to 270,000 fewer occasions at which a clinical treatment was given in the management of asthma in 2008–09 than in 1999–00.

10.2 Procedures

Overall, the rate at which procedures were provided by GPs increased significantly over time, from 12.5 per 100 encounters in 1999–00 to 16.7 per 100 encounters in 2008–09. This equates to an estimated additional 6.1 million occasions at which a procedure was performed in 2008–09 compared with 1999–00 (Table 10.3).

This significant rise in the rate of procedures is reflected in the rates of individual types of procedural treatments. For example, there was an increase in pap smears, from 0.8 per 100 encounters in 1999–00 to 1.2 per 100 encounters in 2008–09. This equates to a national estimated 540,000 additional pap smears undertaken by GPs in 2008–09 compared with 1999–00. Other procedural treatments that demonstrate a significant increase over this time included local injections (Table 10.3).

A number of changes were apparent in the most common problems managed with a procedure between 1999–00 and 2008–09 (Table 10.4). In parallel with the aforementioned increase in the rate of pap smears there was an associated increase in the rate of female genital check-ups, from 0.5 per 100 encounters in 1999–00 to 1.1 per 100 in 2008–09. This equated to an additional 730,000 female genital check-ups performed in 2008–09 compared with during 1999–00.

For solar keratosis (the problem most often managed with a procedure) the rate at which a procedure was performed rose marginally, from 0.8 per 100 contacts in 1999–00 to 0.9 per 100 in 2008–09.

Significantly more procedures were performed in the management of hypertension over time, with an additional 120,000 procedures performed nationally for this problem in 2008–09 than in 1999–00 (Table 10.4).

Table 10.1: The most frequent clinical treatments, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[a]
Treatment	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Advice/education*	4.2 (3.7–4.7)	5.8 (5.2–6.4)	6.3 (5.6–7.0)	6.9 (6.1–7.7)	6.8 (6.1–7.6)	7.0 (6.2–7.8)	4.8 (4.1–5.4)	5.7 (5.0–6.5)	7.2 (6.3–8.1)	6.1 (5.4–6.9)	§
Counselling—problem*	3.4 (3.0–3.9)	3.4 (3.0–3.8)	4.7 (4.0–5.3)	5.5 (4.8–6.1)	4.7 (4.1–5.3)	4.2 (3.3–5.0)	4.8 (4.1–5.4)	4.4 (3.7–5.0)	4.3 (3.8–4.9)	3.8 (3.3–4.4)	—
Counselling/advice—nutrition/weight*	4.2 (3.8–4.6)	5.6 (5.0–6.1)	5.5 (5.0–5.9)	5.2 (4.7–5.8)	4.6 (4.2–5.1)	5.3 (4.7–5.9)	3.6 (3.2–4.0)	3.4 (3.0–3.7)	4.2 (3.8–4.6)	4.1 (3.6–4.5)	—
Advice/education—treatment*	6.2 (5.6–6.8)	5.9 (5.3–6.5)	5.1 (4.6–5.6)	4.2 (3.8–4.7)	4.4 (3.8–4.9)	4.6 (4.0–5.1)	3.1 (2.6–3.5)	2.8 (2.5–3.1)	3.5 (3.1–3.8)	3.5 (3.1–4.0)	↓
Counselling—psychological*	2.6 (2.4–2.8)	2.8 (2.6–3.1)	3.2 (2.8–3.5)	2.9 (2.6–3.1)	2.9 (2.6–3.1)	3.2 (2.9–3.5)	3.1 (2.8–3.3)	2.9 (2.6–3.1)	3.2 (2.9–3.4)	3.2 (3.0–3.5)	↑
Advice/education—medication*	2.9 (2.6–3.2)	2.6 (2.3–2.9)	2.8 (2.6–3.1)	2.5 (2.2–2.7)	3.4 (3.1–3.7)	3.4 (2.9–3.8)	1.6 (1.4–1.7)	1.8 (1.6–2.0)	2.0 (1.8–2.2)	2.3 (2.1–2.6)	§
Sickness certificate*	0.6 (0.5–0.7)	1.1 (0.9–1.3)	1.1 (0.9–1.3)	1.3 (1.1–1.5)	1.0 (0.9–1.2)	1.7 (1.3–2.1)	1.6 (1.4–1.9)	1.6 (1.3–1.8)	1.7 (1.4–2.0)	1.9 (1.6–2.2)	↑
Other admin/document*	1.0 (0.9–1.2)	1.5 (1.3–1.6)	1.5 (1.4–1.7)	1.6 (1.4–1.7)	1.8 (1.6–2.0)	1.3 (1.1–1.5)	1.0 (0.9–1.1)	1.2 (1.1–1.4)	1.5 (1.4–1.7)	1.8 (1.7–2.0)	§
Reassurance, support	1.6 (1.4–1.8)	1.5 (1.3–1.8)	1.5 (1.3–1.7)	1.4 (1.2–1.5)	1.5 (1.3–1.7)	1.6 (1.2–1.9)	1.0 (0.8–1.2)	1.1 (0.9–1.3)	1.4 (1.2–1.6)	1.5 (1.3–1.8)	—
Counselling/advice—exercise*	1.6 (1.4–1.8)	2.2 (1.9–2.4)	2.1 (1.8–2.3)	1.6 (1.4–1.8)	1.5 (1.3–1.7)	1.9 (1.4–2.3)	1.1 (0.9–1.2)	1.1 (1.0–1.3)	1.3 (1.1–1.5)	1.4 (1.2–1.6)	—
Counselling/advice—smoking*	0.7 (0.6–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.6 (0.6–0.7)	0.8 (0.6–1.0)	0.5 (0.4–0.6)	0.6 (0.5–0.6)	0.6 (0.5–0.7)	0.8 (0.7–0.8)	—
Counselling/advice—prevention*	0.3 (0.3–0.4)	0.3 (0.2–0.4)	0.3 (0.2–0.4)	0.3 (0.2–0.4)	0.4 (0.3–0.5)	0.4 (0.1–0.8)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.5 (0.4–0.6)	0.4 (0.3–0.5)	—
Counselling/advice—lifestyle*	0.3 (0.2–0.4)	0.3 (0.2–0.4)	0.4 (0.3–0.5)	0.5 (0.3–0.7)	0.3 (0.2–0.4)	0.4 (0.0–1.0)	0.5 (0.3–0.6)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.2 (0.1–0.3)	—

(continued)

Table 10.1 (continued): The most frequent clinical treatments, BEACH, 1999–00 to 2008–09

Treatment	Rate per 100 encounters (95% CI)										↑↓ (a)
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	
Counselling/advice—alcohol*	0.4 (0.3–0.4)	0.4 (0.4–0.5)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.5 (0.2–0.7)	0.3 (0.3–0.3)	0.3 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	—
Family planning*	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.2–0.6)	0.3 (0.2–0.3)	0.3 (0.3–04)	0.4 (0.3–0.4)	0.3 (0.3–0.4)	—
Observe/wait*	0.6 (0.5–0.7)	0.7 (0.4–1.0)	0.3 (0.2–0.4)	0.3 (0.2–0.3)	0.3 (0.2–0.4)	0.4 (0.0–0.7)	0.3 (0.2–0.4)	0.3 (0.2–0.4)	0.3 (0.2–0.4)	0.4 (0.3–0.6)	—
Counselling/advice—health/body*	0.6 (0.4–0.7)	0.4 (0.3–0.5)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.2–0.3)	0.4 (0.1–0.6)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.3 (0.2–0.4)	0.4 (0.3–0.5)	—
Counselling/advice—pregnancy*	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.4)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	—
Counselling/advice—relaxation*	0.3 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.4)	0.2 (0.2–0.3)	0.2 (0.2–0.2)	↓
Counselling/advice—STDs*	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	—
Counselling/advice—drug abuse*	0.4 (0.1–0.6)	0.3 (0.2–0.5)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.3)	0.2 (0.1–0.3)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	↓
Counselling/advice—relationship*	0.4 (0.3–0.4)	0.3 (0.2–0.3)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.2–0.2)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	↓
Total clinical treatments	**33.5 (31.8–35.2)**	**37.2 (35.1–39.3)**	**38.1 (36.1–40.1)**	**37.2 (35.0–39.4)**	**36.6 (34.5–38.8)**	**39.2 (37.1–41.4)**	**29.2 (27.3–31.1)**	**29.5 (27.6–31.4)**	**34.5 (32.5–36.5)**	**34.0 (32.1–35.9)**	§

(a) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix 4).

Note: CI—confidence interval; admin—administration; STD—sexually transmitted disease.

Table 10.2: The most common problems managed with a clinical treatment, BEACH, 1999–00 to 2008–09

	Rate at which a clinical treatment was given, per 100 contacts[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Problem managed	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Depression*	1.6 (1.5–1.8)	1.8 (1.6–2.0)	1.7 (1.6–1.9)	1.7 (1.6–1.9)	1.7 (1.6–1.9)	1.8 (1.7–2.0)	1.7 (1.5–1.8)	1.5 (1.4–1.6)	1.8 (1.6–1.9)	1.8 (1.7–2.0)	—
Upper respiratory tract infection	1.4 (1.2–1.6)	1.7 (1.5–1.9)	2.0 (1.7–2.2)	1.8 (1.6–2.0)	1.6 (1.4–1.8)	1.8 (1.5–2.0)	1.6 (1.3–1.8)	1.5 (1.3–1.6)	1.8 (1.6–2.0)	1.7 (1.5–1.9)	—
Hypertension*	1.1 (0.9–1.2)	1.4 (1.2–1.6)	1.4 (1.2–1.5)	1.5 (1.3–1.7)	1.3 (1.1–1.4)	1.3 (1.2–1.5)	1.0 (0.9–1.2)	0.9 (0.8–1.0)	1.2 (1.1–1.4)	1.1 (1.0–1.2)	—
Lipid disorders*	0.8 (0.7–0.9)	1.0 (0.9–1.2)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	1.0 (0.9–1.1)	0.8 (0.7–0.9)	0.8 (0.7–0.8)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	↑
Diabetes—all*	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.1 (0.9–1.2)	↑
Anxiety*	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.7 (0.7–0.8)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	—
Gastroenteritis*	0.8 (0.7–0.9)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.7 (0.6–0.7)	0.7 (0.6–0.7)	0.8 (0.7–0.9)	0.7 (0.6–0.7)	↓
Test results*	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.4 (0.3–0.4)	0.3 (0.2–0.4)	0.4 (0.3–0.5)	0.5 (0.4–0.6)	0.5 (0.3–0.6)	0.4 (0.3–0.4)	0.6 (0.5–0.7)	0.5 (0.4–0.6)	↑
Back complaint*	0.6 (0.5–0.7)	0.6 (0.5–0.7)	0.6 (0.5–0.7)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.6 (0.5–0.7)	0.5 (0.4–0.6)	0.5 (0.4–0.5)	0.5 (0.5–0.6)	0.6 (0.5–0.6)	—
Sprain/strain*	0.5 (0.5–0.6)	0.6 (0.5–0.7)	0.6 (0.5–0.6)	0.4 (0.4–0.5)	0.5 (0.4–0.5)	0.5 (0.4–0.6)	0.5 (0.4–0.5)	0.4 (0.3–0.4)	0.4 (0.3–0.5)	0.4 (0.3–0.4)	↓
Obesity	0.4 (0.3–0.5)	0.5 (0.4–0.5)	0.5 (0.4–0.6)	0.5 (0.4–0.6)	0.5 (0.4–0.5)	0.5 (0.4–0.6)	0.4 (0.3–0.4)	0.5 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.3–0.4)	—
Acute stress reaction	0.4 (0.3–0.5)	0.4 (0.3–0.4)	0.4 (0.4–0.5)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.5 (0.4–0.5)	0.4 (0.3–0.4)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.5 (0.4–0.5)	—
Osteoarthritis*	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.4 (0.3–0.4)	0.5 (0.4–0.5)	0.3 (0.3–0.4)	0.3 (0.2–0.4)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	—

(continued)

Table 10.2 (continued): The most common problems managed with a clinical treatment, BEACH, 1999–00 to 2008–09

	Rate at which a clinical treatment was given, per 100 contacts[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Problem managed	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
General check-up*	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.3–0.3)	0.3 (0.2–0.4)	0.4 (0.3–0.4)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.3–0.5)	↑
Asthma	0.6 (0.5–0.7)	0.6 (0.5–0.7)	0.7 (0.6–0.8)	0.6 (0.5–0.6)	0.5 (0.5–0.6)	0.5 (0.4–0.6)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	↓
Acute bronchitis/ bronchiolitis	0.4 (0.3–0.5)	0.4 (0.3–0.4)	0.5 (0.4–0.5)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.4 (0.3–0.4)	—
Tobacco abuse	0.1 (0.1–0.2)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.2)	0.2 (0.2–0.2)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.5 (0.4–0.5)	↑
Pregnancy*	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	↑
Urinary tract infection*	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.2)	↓
Menopausal complaint	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.4 (0.3–0.5)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	↓
Total problems with clinical treatments	**30.4 (28.9–31.9)**	**32.8 (31.1–34.5)**	**33.6 (31.9–35.2)**	**32.8 (31.0–34.7)**	**32.4 (30.7–34.2)**	**34.4 (32.6–36.2)**	**26.7 (25.1–28.3)**	**26.8 (25.1–28.4)**	**31.2 (29.5–33.0)**	**30.9 (29.2–32.5)**	—

(a) Rate of provision of clinical treatment for selected problem per 100 total selected problems.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, § indicates a non-linear significant change, and — indicates there was no change.

* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix 4).

Note: CI—confidence interval. This table includes individual problems which had clinical treatments given at a rate of >= 0.5 per 100 selected problems in any year, and any other statistically significant differences of interest.

Table 10.3: The most frequent procedural treatments, BEACH, 1999–00 to 2008–09

Treatment	Rate per 100 encounters (95% CI)										↑↓[(a)]
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	
Excision/removal tissue/ biopsy/destruction/ debridement/cauterisation*	3.0 (2.8–3.2)	2.6 (2.4–2.9)	2.7 (2.5–3.0)	2.9 (2.6–3.1)	3.1 (2.7–3.6)	3.3 (3.0–3.6)	3.0 (2.7–3.2)	3.4 (3.0–3.7)	3.4 (3.1–3.8)	3.2 (2.9–3.5)	—
Local injection/ infiltration*[(b)]	0.2 (0.2–0.3)	0.2 (0.1–0.2)	1.2 (0.9–1.4)	1.5 (1.3–1.7)	1.6 (1.4–1.8)	2.0 (1.7–2.2)	2.0 (1.8–2.2)	1.9 (1.7–2.1)	2.3 (2.1–2.5)	2.3 (2.1–2.4)	↑
Dressing/pressure/ compression/tamponade*	2.2 (2.0–2.3)	1.8 (1.6–1.9)	1.8 (1.7–1.9)	2.0 (1.8–2.1)	1.8 (1.7–2.0)	2.0 (1.8–2.1)	2.1 (1.9–2.3)	2.3 (2.1–2.4)	2.2 (2.1–2.4)	2.3 (2.1–2.4)	—
Physical medicine/ rehabilitation*	1.7 (1.5–1.8)	2.0 (1.8–2.3)	2.2 (1.9–2.4)	2.1 (1.8–2.4)	1.7 (1.5–1.9)	2.0 (1.7–2.3)	1.4 (1.1–1.6)	1.1 (0.9–1.3)	1.3 (1.1–1.5)	1.2 (1.1–1.3)	↓
Incision/drainage/flushing/ aspiration/removal body fluid*	1.1 (1.0–1.2)	1.1 (1.0–1.1)	1.2 (1.0–1.2)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	1.0 (1.0–1.1)	1.3 (1.2–1.4)	1.3 (1.1–1.4)	1.2 (1.1–1.3)	1.3 (1.2–1.4)	↑
Pap smear*	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.1 (0.9–1.2)	1.1 (0.9–1.3)	1.0 (0.8–1.1)	1.0 (0.8–1.1)	0.9 (0.8–1.0)	1.1 (0.9–1.2)	1.2 (1.0–1.3)	↑
Repair/fixation—suture/ cast/prosthetic device (apply/remove)*	1.0 (0.9–1.1)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	0.8 (0.7–0.9)	↓
Other therapeutic procedures/surgery NEC*	1.1 (0.8–1.3)	1.1 (0.9–1.4)	1.4 (1.2–1.7)	1.2 (1.0–1.4)	1.1 (0.9–1.3)	1.2 (0.9–1.5)	0.8 (0.6–0.9)	0.7 (0.6–0.9)	0.8 (0.6–0.9)	0.9 (0.7–1.1)	—
Electrical tracings*	0.4 (0.3–0.5)	0.4 (0.3–0.4)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.4 (0.3–0.5)	0.5 (0.4–0.5)	0.6 (0.5–0.6)	0.5 (0.4–0.5)	—
Physical function test*	0.3 (0.3–0.4)	0.5 (0.3–0.6)	0.4 (0.3–0.5)	0.5 (0.4–0.7)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.6 (0.4–0.7)	0.5 (0.4–0.6)	0.5 (0.4–0.6)	↑
Urine test*	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.3 (0.2–0.4)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.4 (0.4–0.5)	0.3 (0.2–0.3)	↑
Glucose test*	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.1–0.2)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	—

(continued)

Table 10.3 (continued): The most frequent procedural treatments, BEACH, 1999–00 to 2008–09

Treatment	Rate per 100 encounters (95% CI)										↑↓[a]
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	
Other diagnostic procedures*	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.2 (0.1–0.3)	0.2 (0.2–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.3)	0.2 (0.1–0.3)	0.3 (0.2–0.3)	↑
Total procedural treatments	**12.5 (11.9–13.0)**	**12.2 (11.6–12.8)**	**13.8 (13.1–14.5)**	**14.6 (13.9–15.3)**	**14.7 (14.0–15.5)**	**15.5 (14.6–16.4)**	**14.4 (13.7–15.1)**	**15.2 (14.4–16.0)**	**16.7 (15.9–17.5)**	**16.7 (16.0–17.5)**	↑

(a) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, § indicates a non-linear significant change, and — indicates there was no change.

(b) Excludes all local injection/infiltrations performed for immunisations.

* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix 4).

Note: CI—confidence interval; NEC—not elsewhere classified.

Table 10.4: The most common problems managed with a procedural treatment, BEACH, 1999–00 to 2008–09

Problem managed	Rate at which a procedural treatment was given, per 100 contacts[a] (95% CI)										↑↓[b]
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	
Solar keratosis/sunburn	0.8 (0.7–0.8)	0.7 (0.6–0.8)	0.8 (0.6–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.1)	0.9 (0.7–1.1)	0.9 (0.8–1.0)	0.9 (0.8–1.0)	0.9 (0.8–1.1)	0.9 (0.8–1.0)	↑
Female genital check-up*	0.5 (0.4–0.6)	0.5 (0.5–0.6)	0.6 (0.5–0.7)	0.8 (0.7–0.9)	0.8 (0.7–1.0)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.9 (0.8–1.0)	1.1 (0.9–1.2)	↑
Laceration/cut	0.7 (0.6–0.7)	0.5 (0.5–0.6)	0.5 (0.4–0.5)	0.6 (0.5–0.7)	0.5 (0.4–0.6)	0.5 (0.5–0.6)	0.5 (0.5–0.6)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	—
Excessive ear wax	0.5 (0.4–0.6)	0.5 (0.4–0.6)	0.6 (0.5–0.6)	0.5 (0.5–0.6)	0.5 (0.4–0.6)	0.6 (0.5–0.6)	0.7 (0.6–0.8)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.6 (0.6–0.7)	↑
Malignant neoplasm skin	0.4 (0.3–0.5)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.5 (0.4–0.6)	0.6 (0.4–0.7)	0.6 (0.5–0.6)	0.6 (0.5–0.7)	0.5 (0.4–0.6)	0.6 (0.5–0.7)	↑
Warts	0.5 (0.5–0.6)	0.5 (0.4–0.5)	0.5 (0.4–0.6)	0.5 (0.4–0.5)	0.5 (0.4–0.5)	0.5 (0.4–0.5)	0.4 (0.4–0.5)	0.6 (0.5–0.6)	0.5 (0.4–0.6)	0.5 (0.4–0.5)	—

(continued)

Table 10.4 (continued): The most common problems managed with a procedural treatment, BEACH, 1999–00 to 2008–09

	Rate at which a procedural treatment was given, per 100 contacts[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Problem managed	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Chronic ulcer skin (including varicose ulcer)	0.5 (0.4–0.5)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.3 (0.2–0.4)	0.4 (0.4–0.5)	0.4 (0.3–0.5)	0.5 (0.4–0.6)	—
Sprain/strain*	0.5 (0.4–0.6)	0.5 (0.4–0.6)	0.5 (0.5–0.6)	0.5 (0.4–0.6)	0.4 (0.3–0.4)	0.5 (0.4–0.6)	0.4 (0.3–0.4)	0.3 (0.2–0.3)	0.4 (0.3–0.5)	0.3 (0.2–0.3)	↓
General check-up*	0.1 (0.1–0.1)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.3)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.3 (0.2–0.3)	0.4 (0.3–0.5)	0.3 (0.3–0.4)	↑
Back complaint*	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.5 (0.4–0.5)	0.4 (0.3–0.6)	0.4 (0.3–0.5)	0.5 (0.4–0.6)	0.4 (0.4–0.5)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.4)	—
Vitamin/nutritional deficiency	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	↑
Hypertension*	0.1 (0.0–0.1)	0.2 (0.1–0.2)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	↑
Asthma	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.3 (0.3–0.4)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.2)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	↑
Total problems with procedural treatments	**11.8 (11.3–12.3)**	**11.5 (10.9–12.1)**	**13.1 (12.4–13.7)**	**13.6 (13.0–14.2)**	**13.7 (13.1–14.4)**	**14.3 (13.5–15.0)**	**13.6 (12.9–14.2)**	**14.3 (13.6–15.0)**	**15.6 (14.9–16.4)**	**15.6 (15.0–16.3)**	↑

(a) Rate of provision of clinical treatment for selected problem per 100 total selected problems.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, and — indicates there was no change.

* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix 4).

Ŧ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: CI—confidence interval. This table includes individual problems which had procedural treatments done at a rate of >= 0.5 per 100 selected problems in any year, and any other statistically significant differences of interest.

11 Referrals and admissions

A referral is defined as 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 arising at the encounter were included (that is, continuations were not recorded). For each encounter, GPs could record up to two referrals, and each referral was linked by the GP to the problem(s) for which the patient was referred. Referrals included those to specialists, allied health professionals, hospitals for admission, emergency departments or other medical services. Referrals to hospital outpatient clinics and other GPs were classified as referrals to other medical services.

This chapter includes data about the referrals and admissions from each of the 10 years of the BEACH study from 1999–00 to 2008–09. The direction and type of change from 1999–00 to 2008–09 is indicated for each result in the far right column of the tables: ↑/↓ indicates a statistically significant linear change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant change, and — indicates there was no change.

Significant linear changes can be extrapolated to estimate the national increase or decrease in GP referrals and admissions between 1999–00 and 2008–09. An example of an extrapolated change is given for each table. The method used to extrapolate to national change estimates is described in Chapter 2, Section 2.8.

Table 11.1 shows that over time there was an increasing likelihood that the patient would be referred at the encounters (at 12.8% of encounters in 2008–09 compared with 10.4% in 1999–00), suggesting that the patient was referred to at least one other provider at about 3.8 million more GP encounters in 2008–09 than in 1999–00. There was a significant increase in the overall number of referrals per 100 encounters, from 11.1 in 1999–00 to 13.7 in 2008–09, reflecting both the increased likelihood of referral and a slight increase in the likelihood of multiple referrals at the encounter once the decision to refer had been made. The increase was reflected for most medical specialists with the exception of gynaecologists, neurologists and psychiatrists.

There was an overall significant increase in specialist referrals with a notable rise between 2007–08 and 2008–09. In particular, significant increases occurred in referrals to dermatologists, cardiologists and gastroenterologists.

The rate of referral to an allied health service changed significantly over the decade. The referral rate decreased from 3.1 per 100 encounters in 1999–00 to a low of 2.3 per 100 in 2001–02, and then steadily increased to 3.9 per 100 in 2008–09. The rate of referrals to physiotherapists, psychologists, podiatrist or chiropodists, and dietitians or nutritionists all increased between 1999–00 and 2008–09.

In 2008–09 there were significantly fewer referrals/admissions to hospitals compared with 1999–00 but the frequency was very low in all years.

Table 11.1: The most frequent referrals, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Referral	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
At least one referral	10.4 (10.0–10.8)	9.9 (9.6–10.3)	10.0 (9.6–10.4)	10.6 (10.2–11.0)	11.0 (10.5–11.5)	10.9 (10.5–11.3)	11.3 (10.9–11.8)	11.5 (11.0–11.9)	11.8 (11.3–12.2)	12.8 (12.3–13.2)	↑
Medical specialist	7.3 (7.0–7.6)	7.4 (7.1–7.7)	7.3 (7.0–7.6)	7.7 (7.3–8.0)	7.9 (7.5–8.2)	7.7 (7.4–8.0)	8.2 (7.8–8.5)	8.0 (7.7–8.4)	8.0 (7.6–8.3)	9.0 (8.7–9.3)	↑
Surgeon	0.8 (0.7–0.8)	0.7 (0.7–0.8)	0.8 (0.7–0.8)	0.7 (0.7–0.8)	0.8 (0.8–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.8)	0.8 (0.8–0.9)	0.8 (0.8–0.9)	0.9 (0.8–1.0)	↑
Orthopaedic surgeon	0.7 (0.6–0.7)	0.7 (0.6–0.7)	0.7 (0.7–0.8)	0.8 (0.7–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.8 (0.7–0.8)	0.7 (0.6–0.7)	0.8 (0.7–0.9)	↑
Dermatologist	0.6 (0.5–0.6)	0.6 (0.5–0.7)	0.6 (0.5–0.7)	0.6 (0.5–0.6)	0.6 (0.6–0.7)	0.7 (0.6–0.8)	0.7 (0.6–0.8)	0.6 (0.5–0.7)	0.7 (0.6–0.7)	0.7 (0.7–0.8)	↑
Ophthalmologist	0.7 (0.6–0.7)	0.7 (0.6–0.7)	0.8 (0.7–0.8)	0.7 (0.7–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	0.7 (0.6–0.7)	0.8 (0.7–0.8)	↑
Cardiologist	0.4 (0.3–0.4)	0.4 (0.3–0.4)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.5 (0.4–0.6)	0.5 (0.5–0.6)	0.6 (0.5–0.7)	0.6 (0.5–0.7)	0.5 (0.5–0.6)	0.6 (0.5–0.7)	↑
Ear, nose and throat	0.5 (0.4–0.5)	0.5 (0.5–0.6)	0.5 (0.5–0.6)	0.5 (0.5–0.6)	0.5 (0.5–0.6)	0.5 (0.5–0.6)	0.5 (0.4–0.5)	0.5 (0.4–0.6)	0.5 (0.5–0.6)	0.6 (0.5–0.6)	↑
Gastroenterologist	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.4 (0.3–0.5)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.3–0.4)	0.5 (0.5–0.6)	0.4 (0.4–0.5)	0.5 (0.4–0.6)	0.5 (0.5–0.6)	↑
Gynaecologist	0.5 (0.5–0.6)	0.6 (0.5–0.6)	0.5 (0.5–0.6)	0.6 (0.6–0.7)	0.6 (0.5–0.6)	0.5 (0.5–0.6)	0.5 (0.5–0.6)	0.5 (0.5–0.6)	0.4 (0.4–0.5)	0.5 (0.5–0.6)	—
Urologist	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.3–0.3)	0.3 (0.3–0.4)	0.3 (0.2–0.3)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.3 (0.3–0.3)	0.4 (0.3–0.4)	↑
Neurologist	0.2 (0.2–0.2)	0.2 (0.2–0.2)	0.2 (0.2–0.2)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	—
Psychiatrist	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	—

(continued)

Table 11.1 (continued): The most frequent referrals, BEACH, 1999–00 to 2008–09

Referral	Rate per 100 encounters[a] (95% CI)										
	1999–00 (*n* = 104,856)	2000–01 (*n* = 99,307)	2001–02 (*n* = 96,973)	2002–03 (*n* = 100,987)	2003–04 (*n* = 98,877)	2004–05 (*n* = 94,386)	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)	↑↓[b]
Allied health service	3.1 (2.9–3.3)	2.3 (2.2–2.5)	2.3 (2.1–2.4)	2.5 (2.3–2.7)	2.6 (2.4–2.8)	2.7 (2.5–2.9)	2.9 (2.7–3.1)	3.1 (2.9–3.3)	3.5 (3.2–3.7)	3.9 (3.6–4.1)	↑
Physiotherapy	1.0 (0.9–1.1)	1.0 (0.9–1.1)	0.9 (0.8–1.0)	1.1 (0.9–1.2)	1.0 (0.9–1.1)	1.1 (0.9–1.1)	1.1 (1.0–1.3)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	1.2 (1.1–1.3)	↑
Psychologist	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.4 (0.4–0.5)	0.7 (0.6–0.7)	0.8 (0.7–0.9)	↑
Podiatrist/chiropodist	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.3–0.4)	0.3 (0.3–0.4)	0.4 (0.3–0.4)	↑
Dietitian/nutritionist	0.1 (0.1–0.2)	0.1 (0.1–0.1)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	↑
Dentist	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	—
Audiologist/acoustic testing	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.0[‡] (0.0–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.0[‡] (0.0–0.0)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	—
Optometrist	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.1–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	↑
Diabetes education	0.0[‡] (0.0–0.0)	0.0[‡] (0.0–0.0)	0.1 (0.0–0.1)	0.0[‡] (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.1–0.1)	—
Breast clinic	0.0[‡] (0.0–0.1)	0.0[‡] (0.0–0.0)	0.0[‡] (0.0–0.0)	0.0[‡] (0.0–0.1)	0.1 (0.0–0.1)	0.0[‡] (0.0–0.1)	0.0[‡] (0.0–0.1)	0.0[‡] (0.0–0.1)	0.1 (0.1–0.1)	0.1 (0.0–0.1)	↑
Counsellor	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.1–0.1)	0.1 (0.0–0.1)	0.1 (0.1–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	—
Mental health team	0.0[‡] (0.0–0.0)	0.0[‡] (0.0–0.0)	0.0[‡] (0.0–0.0)	0.0[‡] (0.0–0.0)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.0[‡] (0.0–0.1)	0.1 (0.0–0.1)	—
Drug and alcohol	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.0[‡] (0.0–0.0)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	0.0[‡] (0.0–0.1)	0.0[‡] (0.0–0.1)	0.1 (0.0–0.1)	0.1 (0.0–0.1)	—

(continued)

Table 11.1 (continued): The most frequent referrals, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Referral	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Hospital	0.7 (0.6–0.8)	0.5 (0.4–0.6)	0.4 (0.4–0.5)	0.6 (0.5–0.6)	0.6 (0.5–0.6)	0.5 (0.4–0.5)	0.4 (0.3–0.4)	0.4 (0.3–0.5)	0.4 (0.3–0.5)	0.3 (0.3–0.4)	↓
Emergency department	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	0.2 (0.2–0.2)	↑
Other referrals/other medical services[c]	0.0[Ŧ] (0.0–0.0)	0.2 (0.1–0.2)	0.4 (0.3–0.4)	0.3 (0.2–0.3)	0.4 (0.4–0.5)	0.4 (0.4–0.5)	0.4 (0.3–0.4)	0.5 (0.5–0.6)	0.5 (0.4–0.6)	0.3 (0.2–0.4)	↑
Total referrals	**11.1 (10.7–11.6)**	**10.4 (10.0–10.8)**	**10.5 (10.1–10.9)**	**11.1 (10.7–11.6)**	**11.6 (11.1–12.1)**	**11.5 (11.1–12.0)**	**12.0 (11.5–12.5)**	**12.2 (11.7–12.7)**	**12.5 (12.0–13.0)**	**13.7 (13.2–14.2)**	↑

(a) Column will not add to 100, as multiple referrals could be written at each encounter.

(b) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, and — indicates there was no change.

(c) Other referrals and other medical services have been reported together for comparability. The 'other medical services' group was introduced in 2003–04, previously these were grouped with 'other referrals'.

Ŧ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

Note: CI—confidence interval.

12 Investigations

The GPs participating in the study were asked to record (in free text) any pathology, imaging or other tests ordered or undertaken at the encounter, and to nominate the patient problem(s) associated with each test order placed. This allows the linkage of test orders to a single problem or multiple problems. Up to five orders for pathology and two for imaging and other tests could be recorded at each encounter. A single test may have been ordered for the management of multiple problems, and multiple tests may have been used in the management of a single problem.

A pathology test order may be for a single test (for example Pap smear, HbA1c) or for a battery of tests (for example lipids, full blood count). Where a battery of tests was ordered, the battery name was recorded rather than each individual test. GPs also recorded the body site for any imaging ordered (for example X-ray chest, CT head).

This chapter includes data about the investigations ordered or performed in general practice from each of the 10 years from 1999–00 to 2008–09. The direction and type of change is indicated for each result in the far right column of the tables: ↑/↓ indicates a statistically significant linear change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

Significant linear changes can be extrapolated to estimate the national increase or decrease in investigations ordered or performed between 1999–00 and 2008–09 or between 2000–01 for pathology and imaging groups. Examples of extrapolated change are given for each table. The method used to extrapolate to national estimates is described in Chapter 2, Section 2.8.

Comprehensive investigation of GPs' pathology and imaging ordering has been published in a number of reports. Interested readers may wish to consult the reports listed below.

- In 2000, a comprehensive report on pathology ordering by GPs in Australia in 1998, written by the then General Practice Statistics and Classification Unit (GPSCU) using BEACH data, was published on the Internet by the Diagnostics and Technology Branch of the then Department of Health and Aged Care.[54]
- A report on imaging orders by GPs in Australia in 1999–00, written by the then GPSCU using BEACH data, and published by the AIHW and the University of Sydney in 2001.[55]
- A report on changes in pathology ordering by GPs from 1998 to 2001 was also produced by the GPSCU as an AIHW–University of Sydney book in the GP series in 2003.[56]
- A review of GP pathology ordering in the National Health Priority Areas and other selected problems between 2000 and 2008 is reported in Chapter 5 of the AGPSCC publication *General practice in Australia, health priorities and policies 1998 to 2008*.[57]

12.1 Number of encounters where pathology or imaging was ordered

Table 12.1 shows there was a significant increase in the proportion of encounters at which pathology and/or imaging was ordered, from 18.9% in 1999–00 to 24.2% in 2008–09, equating to an increase of almost 8 million encounters at which tests were ordered in 2008–09. The likelihood of ordering at least one pathology test increased from 13.8% of

encounters in 1999–00 to 18.2% in 2008–09, which is almost 6.5 million additional encounters at which pathology was ordered in 2008–09. The proportion of encounters generating imaging orders increased from 6.7% in 1999–00 to 8.5% in 2008–09, resulting in an estimated 2.7 million more encounters nationally at which imaging was ordered in 2008–09.

12.2 Pathology test orders by MBS groups

Table 12.2 shows the changes in the total number of pathology test orders, and in the distribution of these by MBS pathology groups. These can only be compared from 2000–01 onwards because of the change in coding method introduced in 2000–01 (see Chapter 2). The number of tests ordered increased from 29.7 tests (or battery of tests) per 100 encounters in 2000–01 to 45.6 in 2008–09, which extrapolates to approximately 21.3 million more test orders in 2008–09 than in 2000–01 nationally.

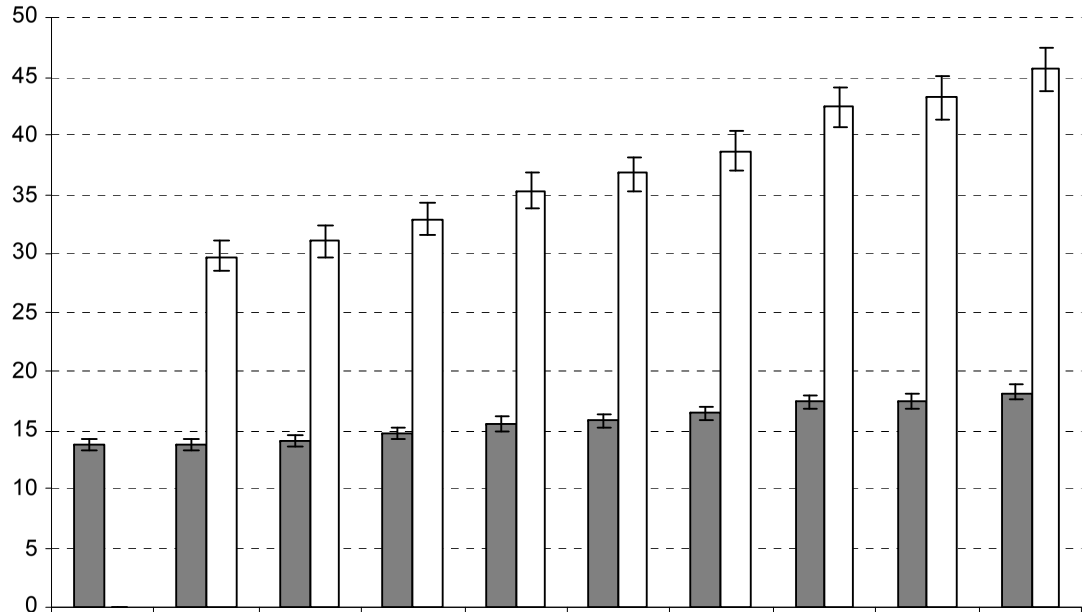
The largest increase was in orders for chemical pathology, which increased from 15.6 per 100 encounters in 2000–01 to 27.0 in 2008–09. This extrapolates to an estimated 14.6 million additional chemistry test orders in 2008–09 than 9 years earlier. Haematology increased at a slower rate, rising from 5.8 tests per 100 encounters in 2000–01 to 8.2 in 2008–09, a national increase of approximately 3.4 million tests. Microbiology test orders increased from 4.6 per 100 encounters in 2000–01 to 5.7 in 2008–09, extrapolating to an increase of about 1.8 million additional test orders in 2008–09. There were far smaller increases in order rates for tissue pathology, immunology and simple tests, and no increases in the other test groups.

As shown in Figure 12.1, both the likelihood of ordering pathology and the total number of tests ordered have significantly increased over the 9 years to 2008–09. However, the growth in the number of tests/batteries ordered has been larger than the growth in likelihood of ordering, because once a decision to order has been made, the number of tests ordered has increased from an average of 2.15 tests/batteries per tested encounter to 2.51.

12.3 Imaging test orders by MBS group

Table 12.3 shows the changes in imaging orders by imaging group from 2000–01 to 2008–09. The first 2 years of imaging data cannot be compared with subsequent years because of coding changes introduced in 2000.

Total test orders increased significantly from 7.7 per 100 encounters in 2000–01 to 9.8 in 2008–09, suggesting a national increase of just under 3.3 million encounters generating an order for imaging. Ultrasound imaging increased from 2.1 tests per 100 encounters in 2000–01 to 3.6 per 100 in 2008–09, a national increase of over 1.9 million encounters with ultrasound orders. Computerised tomography increased from 0.7 per 100 encounters in 2000–01 to 1.3 in 2008–09, equating to 760,000 encounters. Magnetic resonance imaging increased from less than 0.05 per 100 encounters in 2000–01 to 0.1 in 2008–09. Diagnostic radiology and nuclear medicine imaging order rates did not change during this period.



	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09
Per cent of encounters generating pathology test orders	13.8	13.8	14.0	14.7	15.5	15.7	16.4	17.4	17.4	18.2
Pathology test orders per 100 encounters	0.0	29.7	31.0	32.9	35.2	36.7	38.6	42.4	43.2	45.6

Note: Data collection method and coding system changed in 2000–01. Data from 1999–00 are not comparable with data from 2000–01 to 2008–09 in regard to pathology test orders.

Figure 12.1: Encounters where pathology was ordered, and pathology test order rates per 100 encounters, 1999–00 to 2008–09 (95% CI)

Table 12.1: Number of encounters at which pathology or imaging was ordered, BEACH, 1999–00 to 2008–09

	Per cent of encounters (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[a]
Test ordered	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,804)	(*n* = 95,898)	(*n* = 96,688)	
At least one test ordered	18.9 (18.3–19.5)	19.3 (18.7–19.9)	19.2 (18.6–19.8)	20.3 (19.7–21.0)	20.8 (20.1–21.5)	21.2 (20.6–21.8)	22.1 (21.4–22.7)	23.0 (22.3–23.7)	23.4 (22.7–24.1)	24.2 (23.5–24.8)	↑
At least one pathology test ordered	13.8 (13.3–14.3)	13.8 (13.3–14.3)	14.0 (13.5–14.5)	14.7 (14.2–15.3)	15.5 (14.9–16.1)	15.7 (15.2–16.3)	16.4 (15.8–16.9)	17.4 (16.8–18.0)	17.4 (16.7–18.0)	18.2 (17.6–18.8)	↑
At least one imaging test ordered	6.7 (6.4–7.0)	6.8 (6.5–7.1)	6.9 (6.6–7.2)	7.5 (7.1–7.8)	7.2 (6.9–7.5)	7.3 (7.0–7.6)	7.8 (7.4–8.1)	7.9 (7.6–8.2)	8.3 (8.0–8.6)	8.5 (8.1–8.8)	↑

(a) The direction and type of change from 1999–00 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change.

Note: CI—confidence interval.

Table 12.2: Distribution of pathology orders across pathology groups, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	**2000–01**	**2001–02**	**2002–03**	**2003–04**	**2004–05**	**2005–06**	**2006–07**	**2007–08**	**2008–09**	↑↓[b]
Pathology test ordered	**(*n* = 104,856)**	**(*n* = 99,307)**	**(*n* = 96,973)**	**(*n* = 100,987)**	**(*n* = 98,877)**	**(*n* = 94,386)**	**(*n* = 101,993)**	**(*n* = 91,804)**	**(*n* = 95,898)**	**(*n* = 96,688)**	
Chemistry*	NAv	15.6 (14.8–16.5)	16.5 (15.6–17.3)	17.7 (16.8–18.6)	19.1 (18.1–20.1)	20.4 (19.5–21.4)	21.8 (20.6–22.9)	24.5 (23.3–25.7)	24.9 (23.6–26.2)	27.0 (25.8–28.2)	↑
Haematology*	NAv	5.8 (5.5–6.1)	6.2 (5.8–6.5)	6.3 (5.9–6.6)	6.8 (6.4–7.2)	7.0 (6.6–7.3)	7.3 (6.9–7.7)	7.9 (7.5–8.3)	7.9 (7.5–8.3)	8.2 (7.8–8.6)	↑
Microbiology*	NAv	4.6 (4.3–4.9)	4.9 (4.5–5.2)	5.1 (4.8–5.5)	5.3 (4.9–5.7)	5.2 (4.9–5.6)	5.6 (5.2–5.9)	5.9 (5.4–6.3)	5.7 (5.3–6.0)	5.7 (5.3–6.1)	↑
Cytology*	NAv	1.5 (1.3–1.7)	1.6 (1.4–1.7)	1.7 (1.5–1.8)	1.8 (1.5–2.0)	1.6 (1.5–1.8)	1.7 (1.6–1.9)	1.7 (1.5–1.9)	1.9 (1.7–2.1)	2.0 (1.7–2.2)	↑
Other NEC*	NAv	0.8 (0.7–0.9)	0.7 (0.6–0.8)	0.8 (0.6–0.9)	0.8 (0.7–0.9)	0.8 (0.7–1.0)	0.7 (0.6–0.8)	0.8 (0.7–1.0)	1.0 (0.8–1.2)	0.8 (0.7–1.0)	—
Tissue pathology*	NAv	0.5 (0.4–0.5)	0.5 (0.4–0.6)	0.5 (0.4–0.6)	0.7 (0.5–0.8)	0.8 (0.6–0.9)	0.6 (0.5–0.7)	0.7 (0.6–0.8)	0.8 (0.6–0.9)	0.7 (0.6–0.9)	↑
Immunology*	NAv	0.5 (0.4–0.6)	0.5 (0.4–0.5)	0.5 (0.4–0.5)	0.5 (0.4–0.5)	0.5 (0.4–0.6)	0.6 (0.5–0.7)	0.6 (0.5–0.7)	0.7 (0.6–0.7)	0.8 (0.7–0.9)	↑
Infertility/pregnancy*	NAv	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.3 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.2–0.3)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	—
Simple test; other*	NAv	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.1–0.2)	0.2 (0.2–0.3)	↑
Total pathology tests	NAv	**29.7 (28.4–30.9)**	**31.0 (29.7–32.4)**	**32.9 (31.5–34.4)**	**35.2 (33.7–36.7)**	**36.7 (35.2–38.2)**	**38.6 (36.9–40.3)**	**42.4 (40.7–44.2)**	**43.2 (41.3–45.0)**	**45.6 (43.8–47.4)**	↑

(a) Data collection method and coding system changed in the 1999–00 BEACH year. Data from 1999–00 is not comparable with subsequent years in regard to pathology groups.

(b) The direction and type of change from 2000–01 to 2008–09 is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginal change, and — indicates there was no change.

* Includes multiple ICPC-2 and ICPC-2 PLUS codes (see Appendix 4).

Note: CI—confidence interval; NAv—not available; NEC—not elsewhere classified.

Table 12.3: Most frequent imaging tests ordered, BEACH, 1999–00 to 2008–09

	Rate per 100 encounters[a] (95% CI)										
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[b]
Imaging test ordered	(*n* = 104,856)	(*n* = 99,307)	(*n* = 96,973)	(*n* = 100,987)	(*n* = 98,877)	(*n* = 94,386)	(*n* = 101,993)	(*n* = 91,805)	(*n* = 95,898)	(*n* = 96,688)	
Diagnostic radiology*	NAv	4.7 (4.5–5.0)	4.5 (4.3–4.7)	5.0 (4.8–5.3)	4.6 (4.3–4.8)	4.5 (4.3–4.7)	4.8 (4.5–5.0)	4.6 (4.4–4.8)	4.8 (4.6–5.0)	4.7 (4.5–5.0)	—
Ultrasound*	NAv	2.1 (2.0–2.3)	2.5 (2.3–2.6)	2.6 (2.5–2.8)	2.7 (2.5–2.8)	2.7 (2.5–2.8)	2.9 (2.7–3.1)	3.2 (3.0–3.3)	3.4 (3.2–3.5)	3.6 (3.4–3.8)	↑
Computerised tomography*	NAv	0.7 (0.6–0.7)	0.8 (0.7–0.8)	0.8 (0.7–0.9)	0.8 (0.7–0.9)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.1 (1.0–1.2)	1.2 (1.1–1.3)	1.3 (1.2–1.4)	↑
Nuclear medicine imaging*	NAv	0.1 (0.1–0.1)	0.1 (0.1–0.2)	0.1 (0.1–0.2)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	—
Magnetic resonance imaging*	NAv	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.0)	0.0Ŧ (0.0–0.1)	0.0Ŧ (0.0–0.0)	0.1 (0.0–0.1)	0.0Ŧ (0.0–0.1)	0.1 (0.1–0.1)	0.1 (0.1–0.1)	↑
Total imaging tests	NAv	**7.7 (7.3–8.0)**	**7.9 (7.6–8.2)**	**8.6 (8.2–9.0)**	**8.2 (7.8–8.6)**	**8.3 (8.0–8.6)**	**8.8 (8.4–9.2)**	**9.0 (8.6–9.3)**	**9.5 (9.2–9.9)**	**9.8 (9.4–10.2)**	↑

(a) Data collection method and coding system changed in the 1999–00 BEACH year. Data from 1999–00 is not comparable with subsequent years in regard to imaging groups.

(b) The direction and type of change from 2000–01 to 2008–09 for imaging is indicated for each result: ↑/↓ indicates a statistically significant change and — indicates there was no change.

Ŧ Rates are reported to one decimal place. This indicates that the rate is < 0.05 per 100 encounters.

* Includes multiple ICPC-2 and ICPC-2 PLUS codes (see Appendix 4).

Note: CI—confidence interval; NAv—not available.

13 Practice nurse activity

This section investigates changes in the activities of practice nurses in association with the GP–patient encounters for the years 2005–06 to 2008–09.

In November 2004, four Medicare item numbers were introduced into the MBS that allowed GPs to claim for specified tasks undertaken by a practice nurse under the direction of the GP. The recording form for the 2005–06 BEACH year was amended to capture this information.

- GPs were allowed to record multiple (up to three) Medicare item numbers where appropriate, rather than be limited to one item number.
- In the 'other treatments' section, for each problem managed, GPs were asked to tick the 'practice nurse' box if the treatment recorded was provided by the practice nurse rather than by the GP. If the box was not ticked it was assumed the GP gave the treatment.

The survey form allowed GPs to record up to two other treatments for each problem managed at the encounter. Other treatments include all clinical and procedural treatments provided at the encounters. These groups are defined in Appendix 4.

Between November 2004 and March 2008 three new practice nurse items were added to the MBS. In November 2008 item 00711 was added, covering health checks done by practice nurses or Aboriginal health workers. This item was therefore only available to BEACH participants for the period November 2008—March 2009 inclusive.

The eight practice nurse Medicare items available during the 2008–09 BEACH data period are listed with a short description in Table 13.1.[58]

This section investigates changes in:

- the distribution of the Medicare items claimed for practice nurses
- treatments provided by practice nurses in association with the GP-recorded encounter
- problems for which the practice nurse provided the treatment in direct association with the GP-recorded encounters.

In Chapter 10, all treatments (other than medications) recorded by the GPs were reported, irrespective of whether they were provided by the GP or by a practice nurse. As in previous years, injections recorded in the provision of immunisations and vaccinations were not included, as these are already counted as pharmacological management. In contrast, this section, being a description of practice nurse activity, reports only the activities indicated as being conducted by a practice nurse and includes the injections for immunisation/vaccination that were not counted in Chapter 10. GPs are also instructed not to record their taking of routine clinical measurements, such as blood pressure. However, where the practice nurse undertook these activities at the consultation, and it was recorded as a practice nurse activity, they have been included in the analysis in this chapter.

When viewing these results, it must be remembered that these practice nurse data will not include activities undertaken by the practice nurse during the GP's BEACH recording period that were outside (not associated with) the recorded encounter. Such activities could include Medicare-claimable activities (for example, immunisations/vaccinations) provided under instruction from the GP but not at the time of the encounter, or provision of other services not currently claimable from Medicare (for example, dietary advice to an individual or in a group situation).

13.1 Overview of practice nurse activity

Encounters involving a practice nurse as a proportion of all recorded encounters increased significantly from 4.2% in 2005–06 to 6.4% in 2008–09, an increase of about 50%. The number of problems for which the practice nurse was involved in the care provided at the encounter also increased significantly between 2005–06 (2.8%) and 2008–09 (4.2%). However, of those encounters at which the practice nurse activity was specified, the proportion said to be claimable from Medicare, remained constant over the 4 years, at 36–39% (Table 13.1).

Extrapolation of these results to national Medicare claims for GP consultations in these years suggests that in 2008–09, practice nurses were actively involved in provision of care at about 7.2 million encounters, about 2.5 million more than in 2005–06.[59]

Table 13.1: Summary of practice nurse involvement at encounter, and claims made, BEACH, 2005–06 to 2008–09

	2005–06	2006–07	2007–08	2008–09
Variable	**Number**	**Number**	**Number**	**Number**
Total encounters	101,993	91,805	95,898	96,688
Encounters involving practice nurse	4,295	4,769	5,791	6,183
Encounters at which practice nurse activity described	4,013	4,710	5,712	6,052
Encounters with practice nurse item number but activity not described	282	59	79	131
Encounters at which one or more practice nurse item numbers were recorded as claimable	1,683	1,823	2,060	2,416
Total problems managed	149,088	136,333	145,078	149,462
Problems managed with practice nurse involvement	4,111	4,922	5,909	6,281
Proportions	**Per cent (95% CI)**	**Per cent (95% CI)**	**Per cent (95% CI)**	**Per cent (95% CI)**
Encounters involving the practice nurse as a proportion of total encounters	4.2 (3.7–4.7)	5.2 (4.6–5.8)	6.0 (5.5–6.6)	6.4 (5.8–7.0)
Practice nurse claimable encounters as a proportion of total encounters	1.7	2.0	2.1	2.5
Proportion of practice nurse involved encounters for which one or more practice nurse item numbers were recorded	39.2 (34.7–43.6)	38.2 (34.0–42.4)	35.6 (32.4–38.8)	39.1 (35.9–42.3)
Problems involving the practice nurse as a proportion of total problems	2.8 (2.4–3.1)	3.6 (3.2–4.1)	4.1 (3.7–4.5)	4.2 (3.8–4.6)

Note: CI—confidence interval; some of these results may differ from those previously published. These data have been re-analysed for all years to include those encounters at which an item number was recorded but no practice nurse activity was described, in the count of total practice nurse activity.

13.2 Distribution of practice nurse item numbers claimed at encounters

The number of practice nurse item numbers claimed per 100 GP–patient encounters significantly increased from 1.7 items per 100 encounters in 2005–06 to 2.5 per 100 in 2008–09. Extrapolation of these results suggests that the BEACH sample represented about 1.7 million claimed practice nurse items in 2005–06 and about 2.8 million in 2008–09. Medicare data show there were 3.21 million such claims in 2005–06 and 5.44 million in 2008–09.[59] The

2005–06 BEACH sample represented about 53% of the practice nurse activity claimed from Medicare during that period and 59.0% in 2008–09. The balance of the Medicare claims for practice nurse items would be for services provided by the nurse independent of the GP–patient encounter.

There was no significant change in the distribution of practice nurse item numbers claimed for work associated with the BEACH encounters: about two-thirds accounted for by immunisation and about one-third by wound treatment, in each of the four data years. The combined uptake of all cervical smear item numbers did increase, from 0.5% in 2005–06 to 1.1% of these claims in 2008–09 (Table 13.2).

Table 13.2: Distribution of practice nurse item numbers recorded at encounter, BEACH, 2005–06 to 2008–09

Medicare item number	Short descriptor	Per cent of total (95% CI)			
		2005–06	2006–07	2007–08	2008–09
		(*n* = 1,696)	(*n* = 1,835)	(*n* = 2,073)	(*n* = 2,438)
10993	Immunisation	69.5 (63.8–75.3)	66.8 (61.5–72.2)	64.1 (59.6–68.6)	63.5 (59.0–68.1)
10994[a]	Cervical smear and preventive checks	N/A	0.2 (0.0–0.5)	0.2 (0.0–0.4)	0.7 (0.1–1.2)
10995[a]	Cervical smear and preventive checks—women 20–69 years, no smear in past 4 years	N/A	0.1 (0.0–0.2)	0.1 (0.0–0.2)	0.4 (0.0–0.9)
10996	Wound treatment (other than normal aftercare)	30.0 (24.3–35.7)	32.6 (27.2–40.0)	34.4 (30.0–38.8)	33.3 (29.1–37.5)
10997[b]	Service provided to a person with a chronic disease by a practice nurse or registered Aboriginal Health Worker	N/A	N/A	0.7 (0.2–1.2)	1.9 (0.9–2.9)
10998[c]	Cervical smear	0	0.1 (0.0–0.3)	0.3 (0.2–0.5)	0.1 (0.0–0.2)
10999[c]	Cervical smear—women 20–69 years, no smear in past 4 years	0.5 (0.0–0.9)	0.2 (0.0–0.4)	0.3 (0.0–0.8)	0.0
00711[d]	Health check by a practice nurse or registered Aboriginal Health Worker	N/A	N/A	N/A	0.1 (0.0–0.2)
Total practice nurse item numbers—rate per 100 total encounters		1.7 (1.4–2.0)	2.0 (1.7–2.3)	2.2 (1.9–2.4)	2.5 (2.2–2.9)

(a) Item number introduced in November 2006.

(b) Item number introduced in November 2007.

(c) Item numbers introduced in November 2004, but broadened in 2006, so they are not limited to services in rural areas.

(d) Item number introduced in November 2008.

Note: N/A—Not applicable.

13.3 Treatments provided by practice nurses

The number of procedures (including tests undertaken) undertaken by practice nurses at GP–patient encounters rose significantly by 55%, from 4.0 per 100 encounters in 2005–06 to 6.4 per 100 in 2008–09. The practice nurses also took on an increasing proportion of the procedural work recorded at the encounters, from 22.7% to 30.4%. However, their provision of clinical treatments (such as advice and health education) at the GP–patient encounters remained infrequent (Table 13.3).

Table 13.3: Summary of treatments provided by practice nurse, BEACH, 2005–06 to 2008–09

Treatment	Per cent of each activity that was performed/ assisted by the practice nurse (95% CI)				Rate per 100 encounters (95% CI)			
	2005–06	2006–07	2007–08	2008–09	2005–06 (*n* = 101,993)	2006–07 (*n* = 91,805)	2007–08 (*n* = 95,898)	2008–09 (*n* = 96,688)
Procedural treatments[(a)]	22.7 (20.2–25.2)	28.1 (25.5–30.8)	29.7 (27.5–32.0)	30.4 (28.0–32.9)	4.0 (3.5–4.5)	5.2 (4.6–5.8)	6.1 (5.5–6.7)	6.4 (5.8–7.1)
Clinical treatments	0.7 (0.5–0.9)	1.5 (0.9–2.2)	1.3 (1.0–1.6)	1.4 (1.1–1.6)	0.2 (0.1–0.3)	0.5 (0.3–0.6)	0.5 (0.4–0.6)	0.5 (0.4–0.6)
All other treatments	**9.0 (7.9–10.1)**	**11.8 (10.4–13.2)**	**11.9 (10.8–13.0)**	**12.5 (11.3–13.7)**	**4.2 (3.7–4.8)**	**5.7 (4.9–6.4)**	**6.5 (5.9–7.2)**	**6.9 (6.2–7.6)**

(a) Procedural treatments here include all injections for immunisations/vaccinations. These are not included in the summary of the content of encounter in Table 5.1, summary of management in Table 8.1 or in the analyses of other treatments in Chapter 10, because the immunisation/vaccination is already counted as a prescription or GP-supplied medication.

Individual treatments

On average, for every 100 encounters in which the practice nurse activity was described by the GP, the nurses undertook about 107–110 activities across all years.

In terms of procedural treatments, increases were apparent in two specific areas, INR blood tests and check-ups. In 2005–06, these two actions could not be coded by the data entry staff as specific procedures. For 2006–07 such codes were introduced as possible practice nurse activities in response to the data recorded by the GPs in 2005–06. Between 2006–07 and 2008–09, practice nurse INR tests increased from 1.8 per 100 encounters in which they were involved to 6.4 per 100, almost a three-fold increase. The extrapolated result suggests that nationally, practice nurses did about 450,000 INR tests at GP–patient encounters in 2008–09, about 350,000 more than in 2006–07. Over the same period practice nurse check-ups increased from 4.0 per 100 practice nurse encounters to 6.3 per 100 suggesting that nationally they did about 250,000 more check-ups in relation to GP–patient encounters in 2008–09 than they did 3 years earlier.

In the area of clinical treatments only one clear change emerged. Administrative procedures (excluding provision of sickness certificates) done by practice nurses at GP–patient encounters increased from 0.7 to 2.3 per 100 practice nurse encounters, a 3-fold increase (Table 13.4).

13.4 Problems managed with practice nurse involvement

The problems managed most often with the assistance of a practice nurse in association with the consultation were immunisation/vaccination, followed by laceration/cut, chronic skin ulcer, diabetes, and general check-up. There was little change in the rate of nurse involvement in most problems managed. The exception was their work associated with atrial fibrillation/flutter. Nurses were involved in the management of this problem at almost three times the rate in 2008–09 than in 2005–06. This increase in activity is clearly related to the increase in the number of INR tests (noted above) over the same period, as these tests are used for patients taking warfarin, usually those with atrial fibrillation (Table 13.5).

Table 13.4: Most frequent treatments provided by practice nurses, BEACH, 2005–06 to 2008–09

Treatment	Rate per 100 encounters where PN activity described[a] (95% CI) 2005–06 (*n* = 4,013)	2006–07 (*n* = 4,710)	2007–08 (*n* = 5,712)	2008–09 (*n* = 6,052)
Procedural treatments (including tests)	**102.2 (100.1–104.3)**	**101.3 (99.2–103.5)**	**102.3 (100.7–104.0)**	**102.5 (100.5–104.8)**
Local injection/infiltration*	41.0 (36.6–45.4)	37.3 (33.0–41.6)	37.7 (34.7–40.7)	38.2 (34.9–41.6)
Dressing/pressure/compression/tamponade*	23.7 (21.3–26.2)	22.4 (19.8–24.9)	20.7 (18.7–22.8)	21.2 (19.2–23.3)
Incision/drainage/flushing/aspiration/removal body fluid*	8.1 (6.2–10.0)	8.8 (6.7–11.0)	6.8 (5.6–7.9)	7.4 (6.0–8.8)
INR test	NAv	1.8 (1.0–2.6)	4.9 (3.6–6.2)	6.4 (4.9–7.9)
Check-up—practice nurse*	NAv	4.0 (2.3–5.6)	6.1 (4.8–7.4)	6.3 (4.0–8.6)
Electrical tracings*	5.4 (4.1–6.7)	4.5 (3.7–5.2)	5.2 (4.3–6.1)	4.4 (3.6–5.2)
Excision/removal tissue/biopsy/destruction/ debride/cauterise*	7.4 (5.6–9.2)	5.7 (4.2–7.2)	4.9 (3.8–5.9)	4.3 (3.4–5.2)
Repair/fixation-suture/cast/prosthetic device (apply/remove)*	6.4 (5.0–7.8)	6.0 (5.0–7.0)	5.0 (4.2–5.7)	4.3 (3.6–5.0)
Physical function tests*	3.9 (2.6–5.3)	4.3 (2.8–5.7)	3.5 (2.3–4.7)	2.7 (2.0–3.4)
Urine test*	1.4 (0.8–2.0)	1.4 (0.8–2.0)	2.1 (1.3–3.0)	1.7 (1.0–2.4)
Other procedures/minor surgery NEC*	0.9 (0.5–1.3)	1.0 (0.7–1.4)	1.5 (1.0–2.0)	1.4 (0.8–2.0)
Glucose test	0.7 (0.3–1.1)	1.0 (0.4–1.5)	1.0 (0.7–1.3)	1.0 (0.6–1.3)
Pap smear	0.3 (0.0–0.6)	0.6 (0.2–0.9)	0.5 (0.3–0.8)	0.7 (0.1–1.3)
Pregnancy test*	0.3 (0.1–0.6)	0.3 (0.1–0.5)	0.5 (0.3–0.8)	0.5 (0.3–0.7)
Clinical treatments	**5.2 (3.7–6.7)**	**8.9 (5.6–12.1)**	**7.7 (6.2–9.2)**	**7.4 (6.0–8.8)**
Other administrative procedure*	0.7 (0.4–1.0)	1.1 (0.7–1.6)	2.0 (1.4–2.6)	2.3 (1.6–3.0)
Advice/education—treatment *	0.2 (0.1–0.4)	0.9 (0.5–1.3)	0.6 (0.4–0.8)	0.9 (0.5–1.3)
Advice/education*	0.9 (0.4–1.3)	1.5 (0.6–2.4)	1.4 (0.8–2.1)	0.8 (0.5–1.1)
Counselling/advice—nutrition/weight*	0.6 (0.2–0.9)	1.2 (0.2–2.1	0.5 (0.1–0.9)	0.7 (0.4–1.1)
Counselling—problem*	0.9 (0.2–1.5)	0.8 (0.3–1.3)	0.6 (0.3–0.8)	0.5 (0.2–0.7)
All practice nurse activities at the encounter	**107.4 (105.0–108.9)**	**110.2 (107.7–112.8)**	**110.0 (108.4–111.6)**	**109.9 (108.1–111.6)**

(a) Figures do not total 100, as more than one treatment can be performed by a practice nurse at each encounter, and only those individual treatments accounting for >= 0.5% of total treatments by practice nurse are included.

* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix 4).

Note: PN—practice nurse; CI—confidence interval; INR—International Normalised Ratio blood test; NEC—not elsewhere classified; NAv—data not available.

Table 13.5: The most common problems managed with the involvement of practice nurse, BEACH, 2005–06 to 2008–09

	Rate per 100 contacts with PN activity described (95% CI)			
	2005–06	2006–07	2007–08	2008–09
Problem managed	**(*n* = 4,013)**	**(*n* = 4,710)**	**(*n* = 5,712)**	**(*n* = 6,052)**
Immunisation/vaccination—all*	30.9 (26.9–34.9)	30.8 (26.5–35.0)	29.5 (26.7–32.2)	29.5 (26.2–32.7)
Laceration/cut	6.4 (5.0–7.8)	6.2 (5.2–7.2)	6.0 (5.0–7.0)	6.4 (5.5–7.3)
Chronic ulcer skin (including varicose ulcer)	6.8 (5.6–8.0)	6.0 (4.9–7.1)	4.7 (3.7–5.6)	5.9 (4.9–6.9)
General check-up*	2.5 (1.7–3.3)	3.1 (2.2–3.9)	4.3 (3.1–5.4)	3.7 (2.9–4.4)
Atrial fibrillation/flutter	1.2 (0.6–1.7)	1.4 (0.8–2.0)	2.8 (2.0–3.6)	3.4 (2.6–4.3)
Diabetes—all*	1.7 (1.0–2.4)	2.5 (1.8–3.1)	3.0 (2.4–3.7)	3.1 (2.4–3.7)
Malignant neoplasm skin	3.2 (2.3–4.2)	2.9 (2.1–3.8)	2.6 (1.8–3.3)	2.6 (1.9–3.3)
Excessive ear wax	2.2 (1.6–2.9)	3.0 (2.4–3.6)	2.8 (2.2–3.4)	2.5 (2.0–3.0)
Skin infection, post-traumatic	1.8 (1.3–2.3)	1.7 (1.2–2.2)	1.6 (1.0–2.1)	1.9 (1.5–2.3)
Hypertension*	1.1 (0.6–1.5)	1.6 (1.0–2.2)	1.8 (1.2–2.3)	1.8 (1.2–2.4)
Vitamin/nutritional deficiency	0.9 (0.5–1.3)	0.5 (0.3–0.8)	1.0 (0.6–1.4)	1.6 (1.2–2.1)
Blood test blood/lymph	0.2 (0.1–0.4)	0.6 (0.1–1.1)	0.7 (0.4–1.0)	1.1 (0.5–1.7)
Asthma	1.5 (1.0–2.0)	2.3 (1.6–3.0)	1.2 (0.9–1.6)	1.1 (0.7–1.5)
Boil/carbuncle	0.6 (0.4–0.9)	0.8 (0.5–1.1)	0.9 (0.5–1.2)	1.1 (0.7–1.4)
Abrasion/scratch/blister	1.2 (0.7–1.6)	0.7 (0.4–1.0)	1.2 (0.6–1.7)	0.8 (0.5–1.0)
Repair/fixate-suture/cast/prosthetic device (apply/remove)	1.2 (0.7–1.8)	1.2 (0.7–1.6)	1.1 (0.8–1.5)	0.8 (0.5–1.1)
Burns/scalds	0.9 (0.5–1.3)	1.2 (0.8–1.7)	1.1 (0.8–1.4)	0.9 (0.6–1.2)
Skin complaint	1.2 (0.7–1.7)	1.2 (0.8–1.7)	1.0 (0.7–1.3)	0.9 (0.6–1.2)
Contraception, other than oral	1.1 (0.6–1.5)	0.5 (0.3–0.8)	0.9 (0.6–1.2)	0.8 (0.5–1.0)
Fracture	1.1 (0.7–1.5)	1.0 (0.6–1.5)	0.8 (0.5–1.0)	0.5 (0.3–0.7)
Injury skin NEC	1.0 (0.6–1.4)	0.6 (0.3–0.9)	0.4 (0.2–0.6)	0.4 (0.2–0.6)
Total problems	**102.4 (101.7–103.2)**	**104.5 (103.3–105.8)**	**103.4 (102.7–104.2)**	**103.8 (103.1–104.5)**

* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix 4).

Note: CI—confidence interval; NEC—not elsewhere classified.

14 Patient risk factors

General practice is a useful intervention point for health promotion because about 88% of Australians visit a GP at least once each year.[8] GPs, through ongoing professional education, have substantial knowledge of population health, screening programs and other interventions. They are also in an ideal position to advise patients about the benefits of health screening, and to counsel patients about their lifestyle choices on an individual basis.

Since April 1998, a section on the bottom of each encounter form has been used to investigate aspects of patient health or health care delivery not covered by general practice encounter-based information. These additional substudies are referred to as Supplementary Analysis of Nominated Data (SAND). The SAND methods are described in Chapter 2.

The patient risk factors measured include self-reported height and weight (for calculation of BMI), alcohol consumption and smoking status. Patient risk factors are investigated for a subsample of 40 of the 100 patient encounters recorded by each GP. An example of the encounter form with the patient risk factor SAND questions is included in Appendix 1. The methods used for investigating patient risk factors are described in Section 2.4.

Abstracts of results and the research tools used in all SAND substudies from April 1998 to March 2009 have been published. Those from:

- April 1998–99 were published in *Measures of health and health care delivery in general practice in Australia*[11]
- April 1999 to July 2006 were published in *Patient-based substudies from BEACH: abstracts and research tools 1999–2006*[12]
- August 2006 to March 2007 were published in *General practice activity in Australia 2006–07*[13]
- April 2007 to January 2008 were published in *General practice activity in Australia 2007–08*[10]
- February 2008 to January 2009 are included in Chapter 15 of the companion report *General practice activity in Australia 2008–09*.[1]

This chapter includes data about the risk behaviours of general practice patients from each of the 10 years of the BEACH study from 1999–00 to 2008–09. The direction and type of change from 1999–00 to 2008–09 is indicated for each result in the far right column of the tables: ↑/↓ indicates a statistically significant linear change, ↑/↓ indicates a marginally significant linear change, § indicates a non-linear significant or marginal change, and — indicates there was no change.

The results of the patient risk factors, BMI and smoking status are presented in tables 14.1 to 14.3 for each year from 1999–00 to 2008–09. Results for alcohol consumption are presented for each year from 2001–02 to 2008–09, as data from 1999–00 and 2000–01 are not comparable.

Patient BMI and alcohol consumption data collected in the BEACH study have been investigated in further detail and published. Interested readers can consult these publications for further information:

- prevalence of the three WHO defined levels of obesity was published in Chapter 7 of the AGPSCC publication *General practice in Australia, health priorities and policies 1998 to 2008*.[60]
- overweight and obesity in children attending general practice was publishes in Cretikos et al. (2008).[61]
- the relationship between morbidity managed and alcohol consumption is reported in Proude et al. (2006).[62]

14.1 Body mass index

Adults

Overall the rates of overweight and obesity in adults attending general practice has increased significantly from approximately 50% in 1999–00 (52.5%; 95% CI: 51.7–53.4) to 60% in 2008–09 (61.5%; 95% CI: 61.6–62.3) (results not tabulated).

Taken individually, there was a significant increase in the prevalence of overweight and obesity in adults attending general practice, from 33.1% and 19.4%, respectively, in 1999–00 to 36.1% and 25.4% in 2008–09 (Table 14.1). The significant increases in overweight and obesity are apparent in both male and female patients. The increase is largely due to an increase in prevalence of obesity, the rates of overweight only increasing by a much smaller amount (tables 14.2 and 14.3).

Children

In contrast, the rates of overweight and obesity in children aged 2–17 years have remained static from 1999–00 to 2008–09, with about 11% of children being obese and about 17% overweight (Table 14.1).

14.2 Smoking

There was a significant decrease in the rates of current daily and occasional smoking in adults aged 18 years and over, from 18.9% and 5.2%, respectively, in 1999–00 to 15.3% and 2.6% in 2008–09 (Table 14.1). This decrease was apparent in both male and female patients (tables 14.2 and 14.3).

14.3 Alcohol consumption

The rates of at-risk levels of alcohol consumption among adults at general practice encounters have remained static at around 26% of adult patients from 2001–02 to 2008–09 (Table 14.1).

Table 14.1: Comparative results for all patient risk factors, BEACH, 1999–00 to 2008–09

Risk factor	Per cent (95% CI) 1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	↑↓[a]
Adults (aged 18 years and over)											
BMI class[b] (*n*)	**(33,069)**	**(31,957)**	**(31,789)**	**(32,367)**	**(31,890)**	**(30,476)**	**(33,101)**	**(32,334)**	**(31,062)**	**(33,526)**	
Obese	19.4 (18.8–20.0)	20.2 (19.5–20.8)	21.5 (20.8–22.2)	20.9 (20.2–21.5)	22.1 (21.4–22.7)	22.4 (21.7–23.2)	22.2 (21.5–22.9)	23.5 (22.7–24.2)	23.9 (23.1–24.6)	25.4 (24.7–26.1)	↑
Overweight	33.1 (32.5–33.8)	34.1 (33.4–34.7)	33.5 (32.9–34.1)	33.8 (33.2–34.5)	34.5 (33.8–35.1)	34.6 (33.9–35.2)	34.6 (33.9–35.2)	35.0 (34.3–35.6)	35.4 (34.7–36.0)	36.1 (35.5–36.7)	↑
Normal	44.3 (43.5–45.1)	42.8 (42.0–43.7)	42.1 (41.3–42.9)	42.4 (41.6–43.3)	40.7 (39.9–41.6)	40.3 (39.5–41.2)	40.5 (39.7–41.4)	39.0 (38.1–39.8)	38.3 (37.4–39.2)	36.1 (35.3–36.8)	↓
Underweight	3.2 (3.0–3.5)	2.9 (2.7–3.1)	3.0 (2.8–3.2)	2.9 (2.7–3.1)	2.8 (2.6–3.0)	2.7 (2.5–2.9)	2.8 (2.5–3.0)	2.6 (2.4–2.8)	2.5 (2.3–2.7)	2.5 (2.3–2.7)	↓
Smoking status (*n*)	**(32,483)**	**(32,124)**	**(31,966)**	**(32,651)**	**(32,718)**	**(31,295)**	**(33,558)**	**(31,176)**	**(31,652)**	**(34,194)**	
Daily	18.9 (18.1–19.6)	19.3 (18.5–20.1)	18.4 (17.7–19.2)	17.2 (16.5–17.9)	17.6 (16.8–18.3)	18.0 (17.2–18.7)	17.1 (16.3–17.8)	16.1 (15.4–16.9)	16.5 (15.8–17.3)	15.3 (14.6–15.9)	↓
Occasional	5.2 (4.9–5.6)	4.4 (4.0–4.7)	4.1 (3.8–4.4)	4.1 (3.8–4.4)	4.3 (4.0–4.7)	3.7 (3.4–4.0)	3.6 (3.4–3.9)	3.2 (2.9–3.4)	2.9 (2.7–3.2)	2.6 (2.4–2.9)	↓
Previous	27.1 (26.3–27.8)	27.3 (26.5–28.1)	27.8 (27.0–28.6)	27.2 (26.5–28.0)	28.0 (27.3–28.8)	28.0 (27.2–28.8)	27.1 (26.3–27.8)	28.8 (28.0–29.6)	27.9 (27.1–28.6)	28.8 (28.1–29.6)	—
Never	48.8 (47.9–49.7)	49.1 (48.1–50.1)	49.7 (48.7–50.7)	51.4 (50.4–52.4)	50.1 (49.1–51.0)	50.3 (49.4–51.3)	52.3 (51.3–53.2)	51.9 (50.9–52.9)	52.7 (51.7–53.6)	53.3 (52.4–54.2)	↑
Alcohol consumption[c] (*n*)	..	..	**(31,559)**	**(32,140)**	**(31,721)**	**(30,414)**	**(32,753)**	**(30,347)**	**(30,796)**	**(33,347)**	
At-risk alcohol level	NAv	NAv	26.0 (25.1–26.8)	26.2 (25.3–27.1)	26.7 (25.8–27.6)	26.4 (25.5–27.3)	25.9 (25.0–26.8)	27.0 (26.1–28.0)	26.2 (25.3–27.1)	25.2 (24.3–26.0)	—
Responsible drinker	NAv	NAv	44.1 (43.3–45.0)	44.2 (43.4–45.1)	44.9 (44.1–45.8)	44.9 (44.0–45.7)	44.8 (44.0–45.7)	44.6 (43.7–45.5)	44.6 (43.7–45.5)	45.2 (44.3–46.1)	—
Non-drinker	NAv	NAv	29.9 (28.9–30.9)	29.5 (28.5–30.6)	28.4 (27.3–29.4)	28.7 (27.7–29.8)	29.3 (28.2–30.4)	28.3 (27.3–29.4)	29.3 (28.2–30.3)	29.6 (28.6–30.7)	—

(continued)

Table 14.1 (continued): Comparative results for all patient risk factors, BEACH, 1999–00 to 2008–09

Risk factor	Per cent (95% CI)										↑↓[a]
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	
Children (aged 2–17 years)[d] (*n*)	**(4,053)**	**(3,610)**	**(3,518)**	**(3,380)**	**(3,189)**	**(3,018)**	**(3,338)**	**(3,087)**	**(3,046)**	**(2,970)**	
Obese	10.4 (9.3–11.5)	11.4 (10.1–12.6)	10.9 (9.7–12.1)	11.9 (10.5–13.2)	11.8 (10.5–13.2)	10.8 (9.5–12.2)	10.9 (9.7–12.1)	10.6 (9.3–11.9)	11.2 (10.0–12.5)	10.5 (9.3–11.7)	—
Overweight	17.4 (16.3–18.6)	17.8 (16.5–19.2)	17.9 (16.5–19.3)	18.3 (16.9–19.6)	19.2 (17.7–20.7)	17.7 (16.3–19.1)	17.9 (16.5–19.2)	18.6 (17.2–20.0)	17.1 (15.7–18.5)	16.7 (15.3–18.2)	—

(a) The direction and type of change is indicated for each result: ↑/↓ indicates a statistically significant change, and — indicates there was no change.

(b) Adult patients aged 18+ with a recorded height outside the ABS height range based on age and sex were excluded.

(c) From 2001–02 onwards, the wording of the responses to the first and third alcohol questions was amended to exactly reflect the AUDIT instrument from which they are derived. Therefore data from 2000–01 are not directly comparable with data from 2001–02 onwards.

(d) Children with height outside the ABS height range based on age and sex were excluded. Child BMI has been re-calculated for 1999–00 to 2005–06 and will differ from data previously published to incorporate this exclusion and to apply a more precise method for calculating child BMI.

Note: CI—confidence interval; BMI—body mass index; NAv—not available.

Table 14.2: Comparative results for adult male patient risk factors, BEACH, 1999–00 to 2008–09

Risk factor	Per cent (95% CI)										↑↓[a]
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	
BMI class[b] (*n*)	**(13,062)**	**(12,800)**	**(12,512)**	**(12,450)**	**(12,434)**	**(12,288)**	**(12,882)**	**(12,715)**	**(12,126)**	**(13,595)**	
Obese	18.1 (17.3–19.0)	19.2 (18.4–20.1)	20.0 (19.1–20.9)	19.9 (19.1–20.8)	20.7 (19.8–21.5)	21.3 (20.4–22.3)	21.6 (20.7–22.5)	22.4 (21.6–23.3)	23.1 (22.1–24.1)	25.0 (24.1–26.0)	↑
Overweight	40.9 (39.9–41.8)	41.0 (39.9–41.8)	41.0 (40.0–42.0)	41.5 (40.5–42.4)	42.3 (41.3–43.2)	42.0 (41.0–43.0)	42.6 (41.6–43.6)	42.3 (41.4–43.3)	43.0 (42.0–44.0)	43.6 (42.7–44.6)	↑
Normal	39.4 (38.3–40.4)	38.2 (37.0–39.3)	37.4 (36.3–38.6)	37.2 (36.2–38.3)	35.6 (34.5–36.7)	35.3 (34.2–36.5)	34.3 (33.3–35.4)	34.0 (32.9–35.1)	32.7 (31.6–33.8)	30.3 (29.3–31.4)	↓
Underweight	1.6 (1.4–1.9)	1.6 (1.4–1.9)	1.5 (1.3–1.8)	1.4 (1.1–1.6)	1.5 (1.3–1.7)	1.4 (1.1–1.6)	1.5 (1.3–1.7)	1.2 (1.0–1.4)	1.2 (1.0–1.4)	1.0 (0.8–1.2)	—
Smoking status (*n*)	**(12,230)**	**(12,869)**	**(12,547)**	**(12,521)**	**(12,692)**	**(12,613)**	**(13,016)**	**(12,257)**	**(12,335)**	**(13,841)**	
Daily	23.4 (22.3–24.5)	22.6 (21.5–23.7)	21.6 (20.5–22.6)	20.4 (19.4–21.4)	21.0 (20.0–22.0)	21.2 (20.2–22.3)	20.7 (19.7–21.8)	19.4 (18.3–20.5)	19.8 (18.8–20.8)	18.1 (17.2–19.0)	↓
Occasional	5.4 (4.9–5.9)	4.4 (4.0–4.9)	4.6 (4.1–5.1)	4.5 (4.0–5.0)	4.5 (4.0–4.9)	4.3 (3.9–4.7)	4.1 (3.7–4.6)	3.8 (3.4–4.2)	3.3 (2.9–3.7)	3.0 (2.6–3.4)	↓
Previous	36.3 (35.1–37.4)	36.5 (35.2–37.8)	36.6 (35.4–37.9)	36.4 (35.2–37.6)	37.3 (36.2–38.5)	36.5 (35.3–37.6)	35.7 (34.5–36.9)	37.1 (35.8–38.4)	36.5 (35.3–37.7)	37.9 (36.8–39.1)	—
Never	35.0 (33.9–36.1)	36.5 (35.3–37.7)	37.2 (36.0–38.4)	38.7 (37.5–40.0)	37.2 (36.0–38.4)	38.0 (36.8–39.2)	39.5 (38.2–40.7)	39.7 (38.5–41.0)	40.4 (39.2–41.6)	41.0 (39.8–42.2)	↑
Alcohol consumption[c] (*n*)	..	..	**(12,464)**	**(12,391)**	**(12,334)**	**(12,294)**	**(12,792)**	**(12,005)**	**(12,071)**	**(13,583)**	
At-risk alcohol level	NAv	NAv	32.0 (30.8–33.2)	32.8 (31.6–34.1)	33.1 (31.9–34.3)	32.6 (31.3–33.8)	31.6 (30.3–32.8)	32.5 (31.2–33.8)	31.7 (30.5–32.9)	30.1 (28.9–31.2)	—
Responsible drinker	NAv	NAv	46.8 (45.7–48.0)	46.6 (45.5–47.8)	47.3 (46.1–48.5)	47.7 (46.4–48.9)	47.9 (46.7–49.1)	48.0 (46.7–49.2)	47.6 (46.4–48.8)	48.9 (47.8–50.1)	—
Non-drinker	NAv	NAv	21.2 (20.1–22.2)	20.5 (19.5–21.5)	19.6 (18.5–20.7)	19.8 (18.7–20.9)	20.5 (19.4–21.6)	19.5 (18.5–20.6)	20.7 (19.6–21.8)	21.0 (20.0–22.0)	—

(a) The direction and type of change is indicated for each result: ↑/↓ indicates a statistically significant change, and — indicates there was no change.

(b) Adult patients aged 18+ with a recorded height outside the ABS height range based on age and sex were excluded.

(c) From 2001–02 onwards, the wording of the responses to the first and third alcohol questions was amended to exactly reflect the AUDIT instrument from which they are derived. Therefore data from 2000–01 are not directly comparable with data from 2001–02 onwards. *Note:* CI—confidence interval; BMI—body mass index; NAv—not available.

Table 14.3: Comparative results for adult female patient risk factors, BEACH, 1999–00 to 2008–09

Risk factor	Per cent (95% CI)										↑↓[a]
	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	
BMI class[b] (*n*)	**(19,655)**	**(18,820)**	**(19,039)**	**(19,670)**	**(19,214)**	**(17,976)**	**(19,976)**	**(19,410)**	**(18,703)**	**(19,671)**	
Obese	20.2 (19.5–21.0)	20.8 (20.0–21.6)	22.4 (21.6–23.2)	21.5 (20.7–22.3)	23.0 (22.1–23.8)	23.2 (22.4–24.1)	22.6 (21.7–23.4)	24.2 (23.3–25.1)	24.3 (23.5–25.2)	25.6 (24.8–26.4)	↑
Overweight	27.9 (27.2–28.7)	29.4 (28.6–30.1)	28.5 (27.8–29.3)	29.0 (28.2–29.8)	29.4 (28.6–30.1)	29.3 (28.6–30.1)	29.3 (28.6–30.0)	30.1 (29.4–30.9)	30.4 (29.7–31.2)	30.9 (30.2–31.6)	↑
Normal	47.6 (46.6–48.5)	46.0 (45.0–47.0)	45.2 (44.2–46.1)	45.7 (44.7–46.8)	44.1 (43.1–45.1)	43.8 (42.7–44.8)	44.6 (43.6–45.6)	42.2 (41.2–43.2)	41.9 (40.9–43.0)	40.0 (39.1–41.0)	↓
Underweight	4.3 (4.0–4.6)	3.8 (3.5–4.1)	3.9 (3.6–4.2)	3.8 (3.5–4.2)	3.6 (3.3–3.9)	3.6 (3.3–4.0)	3.5 (3.2–3.8)	3.5 (3.2–3.8)	3.3 (3.0–3.6)	3.4 (3.2–3.7)	↓
Smoking status (*n*)	**(19,930)**	**(18,920)**	**(19,182)**	**(19,875)**	**(19,780)**	**(18,468)**	**(20,288)**	**(18,718)**	**(19,081)**	**(20,079)**	
Daily	16.2 (15.4–16.9)	17.1 (16.3–17.9)	16.4 (15.6–17.2)	15.2 (14.4–15.9)	15.4 (14.6–16.1)	15.7 (15.0–16.5)	14.7 (14.0–15.4)	14.0 (13.3–14.8)	14.4 (13.7–15.2)	13.3 (12.6–14.0)	↓
Occasional	5.1 (4.7–5.4)	4.3 (4.0–4.7)	3.8 (3.4–4.1)	3.9 (3.5–4.3)	4.2 (3.9–4.6)	3.3 (3.0–3.7)	3.3 (3.0–3.6)	2.7 (2.5–3.0)	2.6 (2.4–2.9)	2.4 (2.2–2.7)	↓
Previous	21.4 (20.7–22.2)	20.9 (20.0–21.7)	22.0 (21.2–22.9)	21.5 (20.7–22.3)	22.0 (21.2–22.8)	22.2 (21.3–23.0)	21.5 (20.7–22.3)	23.3 (22.5–24.2)	22.3 (21.4–23.1)	22.5 (21.7–23.3)	—
Never	57.4 (56.3–58.4)	57.7 (56.6–58.8)	57.8 (56.7–58.9)	59.4 (58.3–60.5)	58.4 (57.3–59.5)	58.8 (57.7–59.9)	60.5 (59.5–61.6)	59.9 (58.8–61.0)	60.7 (59.6–61.7)	61.7 (60.7–62.7)	↑
Alcohol consumption[c] (*n*)	..	..	**(19,095)**	**(19,749)**	**(19,387)**	**(18,120)**	**(19,961)**	**(18,342)**	**(18,715)**	**(19,764)**	
At-risk alcohol level	NAv	NAv	22.0 (21.1–22.9)	22.1 (21.2–23.0)	22.6 (21.7–23.6)	22.2 (21.3–23.2)	22.2 (21.3–23.2)	23.5 (22.5–24.5)	22.6 (21.6–23.6)	21.8 (20.8–22.7)	—
Responsible drinker	NAv	NAv	42.4 (41.3–43.4)	42.7 (41.7–43.8)	43.5 (42.4–44.5)	43.0 (41.9–44.0)	42.8 (41.8–43.9)	42.4 (41.3–43.5)	42.6 (41.6–43.7)	42.6 (41.6–43.7)	—
Non-drinker	NAv	NAv	35.6 (34.4–36.9)	35.2 (33.9–36.5)	33.9 (32.7–35.2)	34.8 (33.4–36.2)	35.0 (33.6–36.3)	34.1 (32.8–35.4)	34.8 (33.5–36.1)	35.6 (34.3–36.9)	—

(a) The direction and type of change is indicated for each result: ↑/↓ indicates a statistically significant change, ↑/↓ indicates a marginally significant change, and — indicates there was no change.

(b) Adult patients aged 18+ with a recorded height outside the ABS height range based on age and sex were excluded.

(c) From 2001–02 onwards, the wording of the responses to the first and third alcohol questions was amended to exactly reflect the AUDIT instrument from which they are derived. Therefore data from 2000–01 are not directly comparable with data from 2001–02 onwards. *Note:* CI—confidence interval; BMI—body mass index; NAv—not available.

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Glossary

A1 Medicare items: Medicare item numbers 1, 2, 3, 4, 13, 19, 20, 23, 24, 25, 33, 35, 36, 37, 38, 40, 43, 44, 47, 48, 50, 51, 601, 602.

Aboriginal: The patient identifies himself or herself as an Aboriginal person.

Activity level: The number of general practice A1 Medicare items claimed during the previous 3 months by a participating GP.

Allied and other health professionals: Those who provide clinical and other specialised services in the management of patients, including physiotherapists, occupational therapists, dietitians, dentists and pharmacists.

Chapters (ICPC-2): The main divisions within ICPC-2. There are 17 chapters primarily representing the body systems.

Chronic problem: see *Diagnosis/problem, Chronic problem.*

Commonwealth concession card: An entitlement card provided by the Australian Government that entitles the holder to reduced cost medicines under the Pharmaceutical Benefits Scheme and a limited number of other concessions from state and local government authorities.

Complaint: A symptom or disorder expressed by the patient when seeking care.

Component (ICPC-2): In ICPC-2 there are seven components which act as a second axis across all chapters.

Consultation: See *Encounter.*

Diagnosis/problem: 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 that requires ongoing care, including follow-up for a problem or an initial presentation of a problem previously assessed by another provider.
- *Chronic problem:* A medical condition characterised by a combination of the following characteristics: duration that has lasted or is expected to last 6 months or more, a pattern of recurrence or deterioration, a poor prognosis, and consequences or sequelae that impact on an individual's quality of life. (*Source:* O'Halloran J, Miller GC, Britt H 2004. Defining chronic conditions for primary care with ICPC-2. Fam Pract 21(4):381–6).
- *Work-related problem:* Irrespective of the source of payment for the encounter, it is likely in the GP's view that the 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.

Encounter (enc): Any professional interchange between a patient and a GP.

- *Indirect:* Encounter where there is no face-to-face meeting between the patient and the GP but a service is provided (for example prescription, referral).

- *Direct:* Encounter where there is a face-to-face meeting of the patient and the GP.

  Direct encounters can be further divided into:

  - Medicare-claimable
    - *Surgery consultations:* Encounters identified by any one of MBS item numbers 3, 23, 36, 44, 52, 53, 54, 57, 5000, 5020, 5040, 5060, 5200, 5203, 5207, 5208.
    - *Home visits:* Encounters identified by any one of MBS item numbers 4, 24, 37, 47, 58, 59, 60, 65, 5003, 5023, 5043, 5063, 5220, 5223, 5227, 5228.
    - *Hospital encounters:* Encounters identified by any one of MBS item numbers 19, 33, 40, 50, 87, 89, 90, 91.
    - *Residential aged care facility:* Encounters identified by any one of MBS item numbers 20, 35, 43, 51, 92, 93, 95, 96, 5010, 5028, 5049, 5067, 5260, 5263, 5265, 5267.
    - *Health assessments:* Encounters identified by any one of MBS item numbers 700, 702, 704, 706, 708, 710, 712.
    - *Chronic disease management items:* Encounters identified by any one of MBS item numbers 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731.
    - *Case conferences:* Encounters identified by any one of MBS item numbers 734, 736, 738, 740, 742, 744, 746, 749, 757, 759, 762, 765, 768, 771, 773, 775, 778, 779.
    - *Incentive payments:* Encounters identified by any one of MBS item numbers 2497, 2501, 2503, 2504, 2506, 2507, 2509, 2517, 2518, 2521, 2522, 2525, 2526, 2546, 2547, 2552, 2553, 2558, 2559, 2574, 2575, 2577, 2578, 2598, 2600, 2603, 2606, 2610, 2613, 2616, 2620, 2622, 2624, 2631, 2633, 2635, 2664, 2666, 2668, 2673, 2675, 2677, 2704, 2705, 2707, 2708.
    - *Other MBS encounters:* Encounters identified by an MBS item number that does not identify place of encounter (see *A1 Medicare items*).
  - *Workers compensation:* Encounters paid by workers compensation insurance.
  - *Other paid:* Encounters paid from another source (for example state).

General practitioner (GP): 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 Consultation Service Items: Includes GP services provided under the MBS Professional services category including MBS items classed as A1, A2, A5, A6, A7, A14, A17, A18, A19, A20, A22 and selected items provided by GPs classified in A11, A15 and A27.

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

Medication rates: The rate of use of all medications, including medications that were prescribed, supplied by the GP and advised for over-the-counter purchase.

Medication status:

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

Morbidity: Any departure, subjective or objective, from a state of physiological wellbeing. In this sense, sickness, illness and morbid conditions are synonymous.

Patient status: The status of the patient to the practice.

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

Practice nurse involvement: Encounters at which a practice nurse MBS item number and/or a treatment (either clinical or procedural) was recorded as done by the practice nurse.

Prescribed rates: The rate of use of prescribed medications (that is, does not include medications that were GP-supplied or advised for over-the-counter purchase).

Problem managed: See *Diagnosis/problem.*

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

Reasons for encounter (RFEs): The subjective reasons given by the patient for seeing or contacting the general practitioner. These 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 Royal Australian College of General Practitioners (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. (*Source:* Commonwealth Department of Health and Aged Care 2001. Medicare benefits schedule book. Canberra: DHAC).

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 specialists and allied health professionals, and for hospital and residential aged care facility admissions arising at a recorded encounter are included. Continuation referrals are not included. Multiple referrals can be recorded at any one encounter.

Repatriation health card: An entitlement card provided by the Department of Veterans' Affairs that entitles the holder to access a range of Repatriation health care benefits, including access to prescription and other medications under the Pharmaceutical Benefits Scheme.

Rubric: The title of an individual code in ICPC-2.

Significant: This term is used to refer to a statistically significant results. Statistical significance is measured at the 95% confidence level in this report.

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

Work-related problem: See *Diagnosis/problem.*

Appendices

Appendix 1: Example of a 2008–09 recording form

BEACH (Bettering the Evaluation And Care of Health) - Morbidity and Treatment Survey - National DOC ID

Encounter Number

Date of encounter	Date of Birth	Sex	Patient Postcode
___/___/___	___/___/_ _ _ _	M ☐ F ☐	

	Yes / No
New Patient	☐ ☐
Health Care/Benefits Card	☐ ☐
Veterans Affairs Card	☐ ☐
NESB	☐ ☐
Aboriginal	☐ ☐
Torres Strait Islander	☐ ☐

PATIENT SEEN BY GP ☐
PATIENT NOT SEEN BY GP ☐

Medicare Item Nos: (if applicable)
1. ____
2. ____
3. ____

Workers comp paid ☐
State Govt/Other paid ☐
No charge ☐

START Time ___ : ___ AM / PM (please circle)

Patient Reasons for Encounter
1.
2.
3.

Diagnosis/ Problem ① : **Problem Status** New ☐ Old ☐ Work related ☐

Drug Name AND Form for this problem	Strength of product	Dose	Frequency	No. of Rpts	OTC	GP Supply	Drug status New	Drug status Cont.
1.								
2.								
3.								
4.								

Procedures, other treatments, counselling this consult for this problem
1. Prac Nurse? ☐ 2. Prac Nurse? ☐

Diagnosis/ Problem ② : **Problem Status** New ☐ Old ☐ Work related ☐

Drug Name AND Form for this problem	Strength of product	Dose	Frequency	No. of Rpts	OTC	GP Supply	Drug status New	Drug status Cont.
1.								
2.								
3.								
4.								

Procedures, other treatments, counselling this consult for this problem
1. Prac Nurse? ☐ 2. Prac Nurse? ☐

Diagnosis/ Problem ③ : **Problem Status** New ☐ Old ☐ Work related ☐

Drug Name AND Form for this problem	Strength of product	Dose	Frequency	No. of Rpts	OTC	GP Supply	Drug status New	Drug status Cont.
1.								
2.								
3.								
4.								

Procedures, other treatments, counselling this consult for this problem
1. Prac Nurse? ☐ 2. Prac Nurse? ☐

Diagnosis/ Problem ④ : **Problem Status** New ☐ Old ☐ Work related ☐

Drug Name AND Form for this problem	Strength of product	Dose	Frequency	No. of Rpts	OTC	GP Supply	Drug status New	Drug status Cont.
1.								
2.								
3.								
4.								

Procedures, other treatments, counselling this consult for this problem
1. Prac Nurse? ☐ 2. Prac Nurse? ☐

NEW REFERRALS, ADMISSIONS Problem(s)
1. ____ 1 2 3 4
2. ____ 1 2 3 4

IMAGING/Other tests Body site Problem(s)
1. ____ - ____ 1 2 3 4
2. ____ - ____ 1 2 3 4
3. ____ - ____ 1 2 3 4

PATHOLOGY Problem(s)
1. ____ 1 2 3 4
2. ____ 1 2 3 4
3. ____ 1 2 3 4

PATHOLOGY (cont) Problem(s)
4. ____ 1 2 3 4
5. ____ 1 2 3 4

Patient reported
Height: ____ cm
Weight: ____ kg

To the patient if 18+:
Which best describes your smoking status?
Smoke daily ☐
Smoke occasionally ☐
Previous smoker ☐
Never smoked ☐

To the patient if 18+:
How often do you have a drink containing alcohol?
Never ☐
Monthly or less ☐
Once a week/fortnight ☐
2-3 times a week ☐
4+ 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 ☐
Less than monthly ☐
Monthly ☐
Weekly ☐
Daily or almost daily ☐

FINISH Time ___ : ___ AM / PM (please circle)

BA11

Appendix 2: GP characteristics questionnaire, 2008–09

The University of Sydney
at Westmead Hospital

Australian General Practice Statistics and Classification Centre

a collaborating unit of the
Australian Institute of Health and Welfare

Doctor Identification Number

Please fill in boxes or circle answers

1. Sex ..... **Male / Female** *(please circle)*

2. Age .....

3. How many years have you spent in general practice? .....

4. How many GPs (full time equivalents) work at this practice (including yourself)? .....

5. Postcode of major practice address.....

6. In which GP Division is this practice?

_____

7. Year of graduation .....

8. Country of graduation *(primary medical degree)*:

☐ Australia ☐ Other: *(specify)* _____

9. Do you conduct any of your consultations in a language other than English?

☐ No ☐ Yes 25 – 50%
☐ Yes <25% ☐ Yes >50%

10. Are you a GP registrar (i.e. in training)?...**Yes / No**

11. Do you hold FRACGP?.....**Yes / No**

12. Do you hold FACRRM? .....**Yes / No**

13. Is your major practice accredited?.....**Yes / No**

14. To what extent do YOU use computers at work -
(Circle all that apply)

Not at all.....1
Prescribing.....2
Internet.....3
Email.....4

Medical records
complete (paperless) .. 8
partial/hybrid..... 9
paper only.....10

Pathology
electronic ordering (online) ..5
print/produce orders only.....6
electronic results receipt.....7

What clinical software is used? *(please specify)*
_____

15. Number of general practice sessions you usually work per week?
(1 session = ~4 hrs e.g. a morning session) .....

16. Direct patient care hours worked per week?
(Include hours of direct patient care, instructions, counselling etc and other services such as referrals, prescriptions, phone calls etc.) .....

17. Is there a practice nurse at your major practice address?.....**Yes / No**
If yes, how many full time equivalents?.....

18. Are any of the following services located / available on the premises? *(Circle all that apply)*:
(includes services in the same building or within 50 metres, available on a daily or regular basis)

Physiotherapist.....1
Psychologist.....2
Pathology lab/collection centre.....3
Imaging.....4
Specialist.....5
Other *(specify)* _____ 6
None.....7

19. Over the past four weeks have you provided any patient care ....*(Circle all that apply)*:

As a locum.....1
In a deputising service.....2
In a residential aged care facility.....3
As a salaried/sessional hospital medical officer ...4
None of the above.....5

20. What are the normal after-hours arrangements for your practice? *(Circle all that apply)*:

Practice does its own.....1
Co-operative with other practices.....2
Deputising service.....3
Referral to other service (e.g. A&E).....4
Other.....5
None.....6

21. Do you bulk bill ALL patients? ..... **Yes / No**

If No, which groups are bulk billed? *(Tick one box per row)*

	All	Some	None
Pensioner/Healthcare Card holders...	☐	☐	☐
Children <16 years.....	☐	☐	☐
Other patients.....	☐	☐	☐

22. Is your major practice site a teaching practice?
(Circle all that apply):

for undergraduates.....1
for junior doctors.....2
for GP registrars.....3
No.....4

23. Did any of your BEACH consultations take place in an Aboriginal Community Controlled Health Service (ACCHS)?

No.....1
Yes - all.....2
Yes - some (which dates) _____ 3

Thank you for participating in the BEACH PROGRAM.

AGPSCC, Westmead Hospital, WESTMEAD, 2145.
Ph: 02 98458151 fax: 02 98458155 email: janc@med.usyd.edu.au Web http://www.fmrc.org.au

Appendix 3: Dissemination of results from the BEACH program

A full list of BEACH publications is also available from the Family Medicine Research Centre website: <www.fmrc.org.au/publications/>.

BOOKS—GENERAL PRACTICE SERIES (BEACH) ISSN 1442-3022

Britt H & Miller GC (eds) 2009. General practice in Australia, health priorities and policies 1998–2008. General practice series no. 24. Cat. no. GEP 24. Canberra: Australian Institute of Health and Welfare.

Britt H, Miller GC, Charles J, Henderson J, Bayram C, Harrison C et al. 2008. General practice activity in Australia 1998–99 to 2007–08: 10 year data tables. General Practice Series No. 23. Cat. no. GEP 23. Canberra: Australian Institute of Health and Welfare.

Britt H, Miller GC, Charles J, Henderson J, Bayram C, Harrison C et al. 2008. General practice activity in Australia 2007–08. General Practice Series No. 22. Cat. no. GEP 22. Canberra: Australian Institute of Health and Welfare.

Britt H, Miller GC, Charles J, Bayram C, Pan Y, Henderson J, Valenti L, O'Halloran J, Harrison C, Fahridin S 2008. General practice activity in Australia 2006–07. Cat. no. GEP 21. Canberra: AIHW.

Britt H, Miller GC, Henderson J, Bayram C 2007. Patient–based substudies from BEACH: abstracts and research tools 1999–2006. Cat. no. GEP 20. Canberra: AIHW.

Britt H, Miller GC, Charles J, Pan Y, Valenti L, Henderson J, Bayram C, O'Halloran J, Knox S 2007. General practice activity in Australia 2005–06. Cat. no. GEP 19. Canberra: AIHW.

Britt H, Miller GC, Knox S, Charles J, Pan Y, Henderson J, Bayram C, Valenti L, Ng A, O'Halloran J 2005. General practice activity in Australia 2004–05. Cat. no. GEP 18. Canberra: AIHW.

Knox S, Britt H, Pan Y, Miller GC, Bayram C, Valenti L, Charles J, Henderson J, Ng A, O'Halloran J 2005. Locality matters: the influence of geography on general practice activity in Australia 1998–2004. Cat. no. GEP 17. Canberra: AIHW.

Britt H, Miller GC, Knox S, Charles J, Valenti L, Pan Y, Henderson J, Bayram C, O'Halloran J, Ng A 2004. General practice activity in Australia 2003–04. Cat. no. GEP 16. Canberra: AIHW.

Britt H, Miller GC, Knox S, Charles J, Valenti L, Bayram C, O'Halloran J, Henderson J, Pan Y, Harrison C 2004. General practice activity in the states and territories of Australia 1998–2003. Cat. no. GEP 15. Canberra: AIHW.

Britt H, Miller GC, Knox S, Charles J, Valenti L, Henderson J, Pan Y, Bayram C, Harrison C 2003. General practice activity in Australia 2002–03. Cat. no. GEP 14. Canberra: AIHW.

Britt H, Knox S, Miller GC 2003. Changes in pathology ordering by GPs in Australia 1998–2001. Cat. no. GEP 13. Canberra: AIHW.

O'Halloran J, Britt H, Valenti L, Harrison C, Pan Y, Knox S 2003. Older patients attending general practice in Australia 2000–02. Cat. no. GEP 12. Canberra: AIHW.

Bayram C, Britt H, Kelly Z, Valenti L 2003. Male consultations in general practice in Australia 1999–00. Cat. no. GEP 11. Canberra: AIHW.

Britt H, Miller GC, Knox S, Charles J, Valenti L, Henderson J, Pan Y, Sutton C, Harrison C 2002. General practice activity in Australia 2001–02. Cat. no. GEP 10. Canberra: AIHW.

Henderson J, Pan Y, Britt H, Charles J, Miller GC, Knox S 2002. Cardiovascular problems and risk behaviours among patients at general practitioner encounters in Australia 1998–00. Cat. no. GEP 9. Canberra: AIHW.

Britt H, Miller GC, Knox S, Charles J, Valenti L, Henderson J, Kelly Z, Pan Y 2001. General practice activity in Australia 2000–01. Cat. no. GEP 8. Canberra: AIHW.

Britt H, Miller GC, Valenti L 2001. 'It's different in the bush': a comparison of general practice activity in metropolitan and rural areas of Australia 1998–2000. Cat. no. GEP 6. Canberra: AIHW.

Britt H, Miller GC, Knox S 2001. Imaging orders by general practitioners in Australia 1999–00. Cat. no. GEP 7. Canberra: AIHW.

Britt H, Miller GC, Charles J, Knox S, Sayer GP, Valenti L, Henderson J, Kelly Z 2000. General practice activity in Australia 1999–2000. Cat. no. GEP 5. Canberra: AIHW.

Sayer GP, Britt H, Horn F, Bhasale A, McGeechan K, Charles J, Miller GC, Hull B, Scahill S 2000. Measures of health and health care delivery in general practice in Australia. Cat. no. GEP 3. Canberra: AIHW.

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Britt H, Sayer GP, Miller GC, Charles J, Scahill S, Horn F, Bhasale A 1999. BEACH Bettering the Evaluation and Care of Health: a study of general practice activity, six-month interim report. Cat. no. GEP 1. Canberra: AIHW.

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Bullot M, Dixon T, Henderson J, Tomes G 2008. Review and evaluation of Australian information about primary health care: a focus on general practice. Cat. no. HWI 103. Canberra: Australian Institute of Health and Welfare.

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Appendix 4: Code groups from ICPC-2 and ICPC-2 PLUS

Table A4.1: Code groups from ICPC-2 and ICPC-2 PLUS

Group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Reasons for encounter and problems managed			
Abdominal pain	D01		Pain/cramps; abdominal general
	D06		Pain; abdominal localised; other
Abnormal test results	A91		Abnormal result investigations NOS
	B84		Unexplained abnormal white cells
	U98		Abnormal urine test NOS
	X86		Abnormal cervix smear
Anaemia		B78002	Anaemia; sickle cell
		B78003	Anaemia; hereditary haemolytic
		B79001	Anaemia; congenital
		B79004	Anaemia; hereditary
	B80		Iron deficiency anaemia
	B81		Anaemia; vitamin B12/folate deficiency
	B82		Anaemia; other/unspecified
Anxiety	P01		Feeling anxious/nervous/tense
	P74		Anxiety disorder/anxiety state
Arthritis—all	L88		Rheumatoid/seropositive arthritis
	L89		Osteoarthrosis of hip
	L90		Osteoarthrosis of knee
	L91		Osteoarthrosis, other
		L70009	Arthritis; pyogenic
		L70010	Arthritis; viral
		L70021	Arthritis; septic
		L81003	Arthritis; traumatic
		L81015	Haemarthrosis
		L83010	Arthritis; spine cervical
		L83011	Osteoarthritis; spine; cervical
		L84003	Arthritis; spine
		L84004	Osteoarthritis; spine
		L84009	Osteoarthritis; spine; thoracic
		L84010	Osteoarthritis; spine; lumbar
		L84011	Osteoarthritis; lumbosacral
		L84012	Osteoarthritis; sacroiliac
		L84023	Arthritis; spine; thoracic

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Reasons for encounter and problems managed (continued)			
Arthritis—all (continued)		L84024	Arthritis; spine; lumbar
		L84025	Arthritis; lumbosacral
		L84026	Arthritis; sacroiliac
		L89004	Arthritis; hip
		L92006	Arthritis; shoulder
		L92007	Osteoarthritis; shoulder
		L92011	Humeroscapular periarthritis
		S91002	Arthritis; psoriatic
		T99063	Arthritis; crystal (excluding gout)
Back complaint	L02		Back symptom/complaint
	L03		Low back symptom/complaint
	L86		Back syndrome with radiating pain
Cardiac check-up			See Check-up—ICPC chapter, Cardiovascular
Check-up—all	–30		Medical examination/health evaluation, complete
	–31		Medical examination/health evaluation, partial
	X37		Pap smear
Check-up—ICPC chapter	A30; A31		General
	B30; B31		Blood
	D30; D31		Digestive
	F30; F31		Eye
	H30; H31		Ear
	K30; K31		Cardiovascular
	L30; L31		Musculoskeletal
	N30; N31		Neurological
	P30; P31		Psychological
	R30; R31		Respiratory
	S30; S31		Skin
	T30; T31		Endocrine
	U30; U31		Urology
	W30; W31		Prenatal/postnatal
	X30; X31; X37		Female genital
	Y30; Y31		Male genital
	Z30; Z31		Social
Depression	P03		Feeling depressed
	P76		Depressive disorder
Diabetes—non-gestational	T89		Diabetes; insulin-dependent
	T90		Diabetes; non-insulin-dependent

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Reasons for encounter and problems managed (continued)			
Diabetes—all	T89		Diabetes; insulin-dependent
	T90		Diabetes; non-insulin-dependent
	W85		Gestational diabetes
Female genital check-up			See Check-up—ICPC chapter, Female genital
Fracture	L72		Fracture; radius/ulna
	L73		Fracture; tibia/fibula
	L74		Fracture; hand/foot bone
	L75		Fracture; femur
	L76		Fracture; other
		L84019	Fracture; compression; spine
		L99017	Fracture; non-union
		L99018	Fracture; pathological
		L99019	Fracture; malunion
		L99095	Fracture; stress
		N54005	Decompression; fracture; skull
		N80012	Fracture; skull (base)
		N80013	Fracture; skull
		N80014	Injury; head; fracture
Gastroenteritis	D70		Gastrointestinal infection
	D73		Gastroenteritis, presumed infectious
General check-up			See Check-up—ICPC chapter, General
Hypertension/high BP (RFEs)	K85		Elevated blood pressure (without hypertension)
	K86		Hypertension; uncomplicated
	K87		Hypertension; complicated
		W81002	Hypertension; pre-eclamptic
		W81003	Hypertension in pregnancy
Hypertension (problems)	K86		Hypertension; uncomplicated
	K87		Hypertension; complicated
		W81002	Hypertension; pre-eclamptic
		W81003	Hypertension in pregnancy
Immunisation/vaccination—all	A44		Preventive immunisation/medication; general/unspecified
	D44		Preventive immunisation/medication; digestive
	N44		Preventive immunisation/medication; neurological
	R44		Preventive immunisation/medication; respiratory
Ischaemic heart disease	K74		Ischaemic heart disease with angina
	K76		Ischaemic heart disease without angina

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Reasons for encounter and problems managed (continued)			
Menstrual problems	X02		Pain; menstrual
	X03		Pain; intermenstrual
	X05		Menstruation; absent/scanty
	X06		Menstruation; excessive
	X07		Menstruation; irregular/frequent
	X08		Intermenstrual bleeding
	X09		Premenstrual symptom/complaint
	X10		Postponement of menstruation
Oral contraception	W10		Contraception; postcoital
	W11		Contraception; oral
	W50		Medication; reproductive system
Osteoarthritis		L83011	Osteoarthritis; spine; cervical
		L84004	Osteoarthritis; spine
		L84009	Osteoarthritis; spine; thoracic
		L84010	Osteoarthritis; spine; lumbar
Osteoarthritis		L84011	Osteoarthritis; lumbosacral
		L84012	Osteoarthritis; sacroiliac
		L89001	Osteoarthritis; hip
		L90001	Osteoarthritis; knee
		L91001	Osteoarthritis; degenerative
		L91003	Osteoarthritis
		L91008	Heberdens nodes
		L91015	Osteoarthritis; wrist
		L92007	Osteoarthritis; shoulder
Pregnancy	W01		Question of pregnancy
	W78		Pregnancy
	W79		Unwanted pregnancy
Pre/postnatal check-up			See Check-up—ICPC chapter, Prenatal/postnatal
Prescription—all	–50		Medication prescription/request/renewal/injection
Rash	S06		Rash; localised
	S07		Rash generalised
Rheumatoid arthritis	L88		Rheumatoid/seropositive arthritis

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Reasons for encounter and problems managed (continued)			
Sprain/strain		L19014	Strain; muscle(s)
	L77		Sprain/strain; ankle
	L78		Sprain/strain; knee
	L79		Sprain/strain; joint NOS
		L83023	Sprain; neck
		L83024	Strain; neck
Sprain/strain (continued)		L84020	Sprain; back
		L84021	Strain; back
Swelling (skin)	S04		Lump/swelling; localised
	S05		Lump/swelling; generalised
Test results	–60		Results tests/procedures
	–61		Results examination/test/record/letter other provider
Tonsillitis	R76		Tonsillitis; acute
	R90		Hypertrophy; tonsils/adenoids
Urinary tract infection	U70		Pyelonephritis/pyelitis
	U71		Cystitis/urinary infection other
Clinical treatments			
Advice/education		A45002	Advice/education
		B45002	Advice/education; blood
		D45002	Advice/education; digestive
		F45002	Advice/education; eye
		H45002	Advice/education; ear
		K45002	Advice/education; cardiovascular
		L45002	Advice/education; musculoskeletal
		N45002	Advice/education; neurological
		P45001	Advice/education; psychological
		R45002	Advice/education; respiratory
		S45002	Advice/education; skin
		T45002	Advice/education; endocrine/metabolic
		U45002	Advice/education; urology
		W45004	Advice/education; reproductive
		X45002	Advice/education; genital; female
		Y45002	Advice/education; genital; male
		Z45002	Advice/education; social

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Clinical treatments (continued)			
Advice/education—medication		A45015	Advice/education; medication
		A45032	Advice/education; Dosette box
		A45033	Advice/education; Webster pack
		A48003	Review; medication
		A48005	Increased; drug dosage
		A48006	Decreased; drug dosage
		A48007	Change (in); drug dosage
		A48008	Stop medication
		A48009	Recommend medication (not new)
		A48010	Change (in); medication
Advice/education—medication (continued)		A48011	Medication; request; refusal
		A48012	Review; immunisation
		A40010	Medication; given
Advice/education—treatment		A45016	Advice/education; treatment
		A45019	Advice; time off work
		A45020	Advice; rest/fluids
		A45021	Advice; naturopathic treatment
		A45030	Advice/education; first aid
		A48004	Review; treatment
		L45004	Advice/education; RICE
		R45004	Advice/education; asthma
		T45004	Advice/education; diabetes
		T45009	Advice; home glucose monitoring
Counselling/advice—alcohol		P45005	Advice/education; alcohol
		P58009	Counselling; alcohol
Counselling/advice—drug abuse		P45006	Advice/education; illicit drugs
		P58010	Counselling; drug abuse
		P58020	Rehabilitation; drug
		P58021	Rehabilitation; alcohol
Counselling/advice—exercise		A45004	Advice/education; exercise
		A48005	Counselling; exercise
Counselling/advice—health/body		A45005	Advice/education; health
		A45009	Health promotion
		A45010	Information; health
		A45011	Health promotion; injury
		A45018	Advice/education; body

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Clinical treatments (continued)			
Counselling/advice—health/body (continued)		A45026	Advice/education; hygiene
		A48006	Counselling; health
		A98001	Health maintenance
Counselling/advice—lifestyle		P45008	Advice/education; lifestyle
		P58012	Counselling; lifestyle
Counselling/advice—nutrition/weight		A45006	Advice/education; diet
		T45005	Advice/education; nutritional
		T45007	Advice/education; weight management
		T58002	Counselling; weight management
Counselling/advice—pregnancy		W45009	Advice/education; pregnancy
		W58004	Counselling; prenatal
		W58006	Counselling; pregnancy
Counselling/advice—prevention		A45025	Advice/education; immunisation
		A48007	Counselling; prevention
		X45004	Advice/education; breast self-exam
		X45007	Advice/education; Pap smear
		X45008	Advice/education; mammography
		Z45005	Advice/education; environment
Counselling/advice—relationship		Z45006	Advice/education; parenting
		Z45007	Advice/education; mothering
		Z45008	Advice/education; fathering
		Z58001	Counselling; conjugal (partner)
		Z58003	Counselling; marriage/relationship
		Z58006	Counselling; parenting
		Z58007	Counselling; mothering
		Z58008	Counselling; fathering
		Z58009	Counselling; family
		Z58011	Counselling; conflict resolution
Counselling/advice—relaxation		P45007	Advice/education; relaxation
		P58011	Counselling; relaxation
		P58017	Counselling; stress management
Counselling/advice—smoking		P45004	Advice/education; smoking
		P58008	Counselling; smoking
Counselling/advice—STDs		A45012	Advice/education; STD
		A48008	Counselling; STDs
		X58004	Counselling; STDs; female
		Y58004	Counselling; STDs; male

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Clinical treatments (continued)			
Counselling—problem		A48002	Counselling; problem
		A48003	Counselling; individual
		B58001	Counselling; problem; blood
		D58001	Counselling; problem; digestive
		F58001	Counselling; problem; eye
		H58001	Counselling; problem; ear
		K58001	Counselling; problem; cardiovascular
		L58001	Counselling; problem; musculoskeletal
		N58001	Counselling; problem; neurological
Counselling—problem (continued)		R58001	Counselling; problem; respiratory
		S58001	Counselling; problem; skin
		T58001	Counselling; problem; endocrine/metabolic
		U58001	Counselling; problem; urology
		W58003	Counselling; problem; reproductive
		X58001	Counselling; problem; genital; female
		X58003	Counselling; sexual; physical; female
		Y58001	Counselling; problem; genital; male
		Y58003	Counselling; sexual; physical; male
		Z58002	Counselling; problem; social
Counselling—psychological		P45013	Anger management
		P58001	Counselling; psychiatric
		P58002	Psychotherapy
		P58004	Counselling; psychological
		P58005	Counselling; sexual; psychological
		P58006	Counselling; individual; psychological
		P58007	Counselling; bereavement
		P58013	Counselling; anger
		P58014	Counselling; self-esteem
		P58015	Counselling; assertiveness
		P58018	Therapy; group
		P58019	Cognitive behavioural therapy
		P58022	Counselling; body image

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2/ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Clinical treatments (continued)		
Family planning	A98002	Counselling; genetic female
	A98003	Counselling; genetic male
	W14002	Family planning; female
	W45006	Advice/education; preconceptual
	W45007	Advice/education; contraception; female
	W45008	Advice/education; family planning; female
	W58001	Counselling; abortion
	W58005	Counselling; terminate pregnancy
	W58007	Counselling; preconceptual
	W58012	Counselling; sterilisation; female
	W58013	Counselling; family planning; female
	Y14001	Family planning; male
	Y45006	Advice/education; family planning; male
	Y45007	Advice/education; contraception; female
	Y58005	Counselling; sterilisation; male
	Y58006	Counselling; family planning; male
Observe/wait	A45001	Observe/wait
	B45001	Observe/wait; blood
	D45001	Observe/wait; digestive
	F45001	Observe/wait; eye
	H45001	Observe/wait; ear
	K45001	Observe/wait; cardiovascular
	L45001	Observe/wait; musculoskeletal
	N45001	Observe/wait; neurological
	P45002	Observe/wait; psychological
	R45001	Observe/wait; respiratory
	S45001	Observe/wait; skin
	T45001	Observe/wait; endocrine/metabolic
	U45001	Observe/wait; urology
	W45003	Observe/wait; reproductive
	X45001	Observe/wait; genital; female
	Y45001	Observe/wait; genital; male
	Z45001	Observe/wait; social
Other admin/document	–62 (excluding A62008 and A62014)	
Reassurance, support	A48010	Reassurance/support
Sickness certificate	A62008	Admin; certificate; sickness
	A62014	Admin; certificate; workers' compensation

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2/ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Procedures		
Incision/drainage/flushing/aspiration/ removal body fluid	–51	
Excision/removal tissue/biopsy/ destruction/debridement/cauterisation	–52	
Repair/fixation–suture/cast/prosthetic device (apply/remove)	–54	
Local injection/infiltration	–55	
	A40007	Injection; allergy
	A40008	Injection; desensitisation
	B50001	Injection; iron
	B50007	Injection; blood
	B50008	Injection; immunoglobulins
	D50006	Injection; digestive
	F50006	Injection; eye
	H50006	Injection; ear
	K50006	Injection; cardiovascular
	L50007	Injection; musculoskeletal
Local injection/infiltration (continued)	N50005	Injection; neurological
	P50006	Injection; psychological
	R50005	Injection; respiratory
	S50006	Injection; skin
	T50006	Injection; endocrine/metabolic
	T50007	Injection; vitamin; B12
	T50008	Injection; hormone
	T50009	Injection; vitamin
	U50006	Injection; urological
	X50006	Injection; genital; F
	Y50005	Injection; genital; M
Dressing/pressure/compression/tamponade	–56	
Physical medicine/rehabilitation	–57	
Other procedures/minor surgery NEC	–59	
	A40009	Chemotherapy
	A40011	Refill; Dosette box
	A40012	Refill; Webster pack
Check-up—practice nurse	A30031	School screening
	–31 (excluding A31015)	Medical examination/health evaluation, partial

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2/ICPC-2 PLUS code	ICPC-2/ICPC-2 PLUS label
Procedures (continued)		
Diagnostic endoscopy	–40	
Electrical tracings	–42	
Glucose test	T34005	Test; glucose
INR test	B34025	Test; INR
Other diagnostic procedures	–43	
	A31015	Assessment; ADL
Other preventive procedures/high-risk medication	–49	
	A31027	Assessment; physical fitness
	X31001	Exam; breast
	X31005	Check-up; breast
	Y31003	Check-up; prostate
Pap smear	X37001	Pap smear
	X37003	Test; cytology; genital; female
	X37004	Vault smear
	X37005	Pap smear; thin prep
Physical function test	–39	
Urine test	A35001	Test; urine
	A35002	Urinalysis
	B35001	Test; urine; blood
	D35001	Test; urine; digestive
	P35001	Test; urine; psychological
	T35001	Test; urine; endocrine/metabolic
	U35002	Test; urine; urology
	W35001	Test; urine; reproductive
	X35001	Test; urine; genital; female
	Y35001	Test; urine; genital; male
Referrals		
Allied health services	–66	Referral to other provider/nurse/therapist/ social worker
	–68 (excluding A68011; Z68003;Z68004; Z68007 and Z68008)	Other referrals NEC
	Z67002	Referral; respite care
Specialist	–67 (excluding A67010; A67011; A67022; A67015; P67005 and Z67002)	Referral to physician/specialist/clinic/hospital
	A68009	Referral; oncologist
Emergency department	A67011	Referral; accident and emergency

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Referrals (continued)		
Hospital	A67010	Referral; hospital
	A67015	Referral; hospice
	A67022	Admission; hospital
	P67005	Referral; hospital; psychiatrist
Other referrals	A68011	Referral
	Z68003	Referral; financial/legal services
	Z68004	Referral; police
	Z68007	Referral; women's shelter
	Z68008	Referral; Centrelink
Pathology test orders (MBS groups)		
Chemistry		
Amylase	D34004	Test; amylase
B12	B34015	Test; B12
	D34009	Test; Schillings
C reactive protein	A34005	Test; C reactive protein
Calcium/phosphate	A34006	Test; calcium
	A34013	Test; phosphate
	A34024	Test; calcium phosphate
Cardiac enzymes	D34005	Test; aspartate aminotransferase
	K34003	Test; cardiac enzymes
	K34004	Test; creatine kinase
Chemistry; other	A33023	Test; alpha fetoprotein
	A33026	Test; cancer antigen 125
	A33027	Test; cancer antigen 15.3
	A33028	Test; cancer antigen 19.9
	A33029	Test; carcinoembryonic antigen
	A33041	Test; cancer antigen
	A34015	Test; protein
	A34018	Vitamin assay
	A34019	Test; lead
	A34020	Test; blood gas analysis
	A34022	Test; mineral
	A34023	Test; zinc
	A34025	Test; DHEAS
	A34030	Test; biochemistry
	A34031	Test; blood alcohol
	A34032	Test; prolactin
	A34033	Test; testosterone

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Chemistry (continued)		
Chemistry; other (continued)	A34037	Test; Glutathione S-transferase
	A34038	Test; magnesium
	A34040	Test; renin
	A35004	Test; urine sodium
	A35007	Test; urine; albumin
	A35008	Test; albumin creatine ratio
	B34023	Test; transferrin
	D34002	Test; alanine aminotransferase
	D35002	Test; 5-HIAA
	K34001	Test; blood; digitalis
	K34006	Test; amino acids
	K34007	Test; troponin
	N34001	Test; blood; phenylhydantoin
	P34003	Test; methadone
	T34018	Test; androgens
	T34019	Test; insulin
	T34021	Test; C peptide
	T34029	Test; aldosterone
	T34030	Test; parathyroid hormone
	T34035	Test; lipase
	T35002	Test; catecholamines
	W34008	Test; PAPPA
	W38002	Amniocentesis
	Y34010	Test; HCG; M
Drug screen	A34002	Drug assay
	A34026	Blood drug screen
	A34027	Blood screen
	A35003	Drug screen
	A35005	Urine drug screen
	K34005	Test; digoxin
	N34003	Test; phenytoin
	N34004	Test; valproate
	N34005	Test; carbamazepine
	P34002	Test; lithium

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Chemistry (continued)		
EUC	A34007	Test; chloride
	A34008	Test; electrolytes
	A34010	Test; EUC
	A34014	Test; potassium
	A34017	Test; sodium
	A34029	Test; U&E
	A34034	Test; E&C
	U34002	Test; creatinine
	U34003	Test; urea
	U34037	Glomerular filtration rate
	U38006	Test; renal function
HbA1c	T34010	Test; HbA1c
	T34017	Test; fructosamine
	T34022	Test; HBA1
Ferritin	B34016	Test; ferritin
	B34019	Test; iron studies
Folic acid	B34017	Test; folic acid
	B34024	Test; folate
Glucose/tolerance	T34005	Test; glucose
	T34009	Test; glucose tolerance
	T34023	Test; glucose (fasting/random)
	T34025	Test; glucose; fasting
	T34026	Test; glucose; random
Hormone assay	A34003	Hormone assay
	D33015	Test; anti gliadin antibody
	T34007	Test; cortisol
	T34034	Test; ACTH
	W34005	Test; HCG
	W34006	Test; B HCG level (titre/quant)
	X34002	Test; LH
	X34003	Test; progesterone
	X34004	Test; oestradiol
	X34005	Test; FSH
	X34006	Test; SHBG; female
	X34007	Test; free androgen index; female
	Y34004	Test; SHBG; male
	Y34005	Test; free androgen index; male

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Chemistry (continued)		
Lactose intolerance	D38002	Test; lactose intolerance
Lipids	T34001	Check-up; cholesterol
	T34004	Test; lipids profile
	T34006	Test; cholesterol
	T34011	Test; cholesterol HDL
	T34013	Test; cholesterol LDL
	T34016	Test; triglycerides
	T34020	Test; free fatty acids
	T34024	Test; cholesterol/triglycerides
Liver function	A34004	Test; albumin
	D34003	Test; alkaline phosphatase
	D34006	Test; bilirubin
	D34007	Test; gGT
	D34008	Test; liver function
	T34012	Test; LDH
Multi-biochemical analysis	A34012	Test; multi-biochemical analysis
	A34021	Test; E & LFT
Prostate specific antigen	Y34002	Test; acid phosphatase
	Y34003	Test; prostate specific antigen
Thyroid function	T34015	Test; thyroid function
	T34027	Test; thyroxine
	T34028	Test; TSH
	T34037	Test; thyroid peroxidase
Urate/uric acid	U34004	Test; urate/uric acid
Cytopathology		
Cytology	A37002	Test; cytology
	B37003	Test; cytology; blood
	D37002	Test; cytology; digestive
	F37002	Test; cytology; eye
	H37002	Test; cytology; ear
	K37002	Test; cytology; cardiovascular
	L37002	Test; cytology; musculoskeletal
	N37002	Test; cytology; neurological
	R37002	Test; cytology; respiratory
	R37003	Test; sputum cytology

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Cytology (continued)	S37002	Test; cytology; skin
	T37002	Test; cytology; endocrine/metabolic
	U37002	Test; cytology; urology
	W37002	Test; cytology; reproduction
	Y37002	Test; cytology; genital; male
Pap smear	X37001	Pap smear
	X37003	Test; cytology; genital; female
	X37004	Vault smear
	X37005	Pap smear; thin prep
Haematology		
Blood grouping & typing	B33001	Test; Coombs
	B33002	Test; blood grouping & typing
	B33009	Test; blood group
	B33013	Test; blood; cross match
Blood; other	A33042	Test; lymphocyte type & count
	A34035	Test; blood film
	A34036	Test; blood thick film
	B33003	RH; antibody titre
	B34005	Test; blood; platelets
	B34007	Test; blood; sickle cell
	B34021	Test; reticulocyte count
	B34031	Test; haemoglobin epg
	B34032	Test; packed cell volume
	B34033	Test; blood; blood
	B37001	Exam; bone marrow
Coagulation	B34003	Test; coagulation time
	B34006	Test; part thromboplastin time
	B34009	Test; prothrombin time
	B34014	Test; APTT
	B34022	Test; thrombin time
	B34025	Test; INR
	B34026	Test; fibrinogen
	B34028	Test; bleeding time
	B34029	Test; coagulation screen
	K34008	Test; D-Dimer
ESR	A34009	Test; ESR
Full blood count	A34011	Test; full blood count
Haemoglobin	B34018	Test; haemoglobin

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Tissue pathology (Histopathology)		
Histology; skin	S37001	Test; histopathology; skin
Histology; other	A37001	Test; histopathology
	B37002	Test; histopathology; blood
	D37001	Test; histopathology; digestive
	F37001	Test; histopathology; eye
	H37001	Test; histopathology; ear
	K37001	Test; histopathology; cardiovascular
	L37001	Test; histopathology; musculoskeletal
	N37001	Test; histopathology; neurological
	R37001	Test; histopathology; respiratory
	T37001	Test; histopathology; endocrine/metabolic
	U37001	Test; histopathology; urology
	W37001	Test; histopathology; reproductive
	X37002	Test; histopathology; genital; female
	Y37001	Test; histopathology; genital; male
Immunology		
Anti-nuclear antibodies	L33004	Test; anti-nuclear antibodies
Immunology; other	A32001	Test; sensitivity
	A33005	Test; immunology
	A33011	Test; HLA
	A33024	Test; bone marrow surface mark
	A33025	Test; serum electrophoresis
	A33051	Test; immune status
	A33052	Test; skin patch
	A38004	Test; DNA
	B33005	Test; immunology; blood
	B33007	Test; immunoglobulins
	B33011	Test; IgE
	B34027	Test; FBC for surface markers
	B34030	Test; intrinsic factor
	D32001	Test; sensitivity; digestive
	D33004	Test; immunology; digestive
	D33014	Test; endomysial antibody
	D33028	Test; mitochondrial antibodies
	D33031	Test; anti-tissue transglutaminase
	D34010	Test; transglutamase
	F33002	Test; immunology; eye

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Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Immunology; other (continued)	H33002	Test; immunology; ear
	K33002	Test; immunology; cardiovascular
	K33003	Test; ANCA
	L33003	Test; immunology; musculoskeletal
	L34001	Test; lupus erythematosus; cell prep
	N33002	Test; immunology; neurological
	R32004	Test; sensitivity; respiratory
	R33004	Test; immunology; respiratory
	S32001	Test; sensitivity; skin
	S33002	Test; immunology; skin
	T33002	Test; immunology; endocrine/metabolic
	U33003	Test; immunology; urology
	W33007	Test; immunology; reproductive
	X33002	Test; immunology; genital; female
	Y33002	Test; immunology; genital; male
RAST	A34016	Test; RAST
Rheumatoid factor	L33001	Test; rheumatoid factor
Infertility/pregnancy	W33002	Test; pregnancy
	W34002	Test; blood; pregnancy
	W34003	Test; antenatal
	W34007	Test; pregnancy screen
	Y38002	Test; sperm count
	Y38003	Test; semen examination
Microbiology		
Antibody	A33003	Test; antibody
Cervical swab	X33004	Test; cervical swab M,C&S
Chlamydia	A33006	Test; chlamydia
	A33034	Test; chlamydia direct immunofl
	X33006	Test; viral culture; genital; female
Ear swab and C&S	H33003	Test; ear swab M,C&S
Faeces M,C&S	D33002	Stool(s); culture
	D33008	Test; faeces M,C&S
	D36001	Test; faeces; cyst/ova/parasite
Fungal ID/sensitivity	A33008	Test; fungal ID/sensitivity
	A33030	Test; skin scraping fungal M,C&S

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Microbiology (continued)		
Hepatitis serology	D33005	Test; hepatitis A serology
	D33006	Test; hepatitis B serology
	D33007	Test; hepatitis C serology
	D33013	Test; hepatitis serology
	D33018	Test; hepatitis A antibody
	D33019	Test; hepatitis B antibody
	D33020	Test; hepatitis D antibody
	D33021	Test; hepatitis E antibody
	D33022	Test; hepatitis A antigen
	D33023	Test; hepatitis C antigen
	D33024	Test; hepatitis D antigen
	D33025	Test; hepatitis E antigen
	D33026	Test; hepatitis antibody
	D33027	Test; hepatitis antigen
HIV	A33021	Test; cytomegalovirus serology
	B33006	Test; HIV
	B33008	Test; AIDS screen
	B33012	Test; HIV viral load
H pylori	D33009	Test; H Pylori
Microbiology; other	A33004	Test; microbiology
	A33007	Test; culture and sensitivity
	A33012	Test; mycoplasma serology
	A33013	Test; parvovirus serology
	A33015	Test; Barmah forest virus
	A33016	Test; Antistreptolysin O Titre
	A33017	Test; herpes simplex culture
	A33019	Test; herpes simplex serology
	A33020	Test; toxoplasmosis serology
	A33033	Test; swab M,C&S
	A33035	Test; serology
	A33036	Antibodies screen
	A33038	Test; rapid plasma regain
	A33039	Test; viral swab M,C&S
	A33040	Test; viral serology
	A33043	Test; HPV
	A33044	Test; Brucella

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Microbiology; other (continued)	A33045	Test; fungal M,C&S
	A33046	Test; measles virus antibodies
	A33047	Test; Rickettsial serology
	A33053	Test; Bartonella
	A33054	Test; MC&S
	A34028	Test; blood culture
	A34039	Test; Q fever
	B33004	Test; microbiology; blood
	B33010	Test; serum immunoglobulins
	D33003	Test; microbiology; digestive
	D33010	Test; hepatitis D serology
	D33011	Test; hepatitis E serology
	D33012	Test; rotavirus
	D33016	Test; hepatitis C antibody
	D33017	Test; hepatitis B antigen
	F33001	Test; microbiology; eye
	F33003	Test; eye swab M,C&S
	H33001	Test; microbiology; ear
	K33001	Test; microbiology; cardiovascular
	L33002	Test; microbiology; musculoskeletal
	N33001	Test; microbiology; neurological
	R32005	Test; quantiferon
	R33001	Culture; tuberculosis
	R33002	Culture; throat
	R33003	Test; microbiology; respiratory
	R33009	Test; influenza serology
	R33010	Test; Legionnaires antibodies
	R33011	Test; RSV
	S33001	Test; microbiology; skin
	S33005	Test; varicella zoster serology
	S33006	Test; varicella zoster culture
	S33007	Test; nail M,C&S
	T33001	Test; microbiology; endocrine/metabolic
	U33002	Test; microbiology; urology
	W34004	Test; antenatal serology
	W33006	Test; microbiology; reproductive

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Microbiology; other (continued)	X33001	Test; microbiology; genital; female
	X33003	Culture; gonococcal; female
	Y33001	Test; microbiology; genital; male
	Y33003	Culture; gonococcal; male
	Y33004	Test; viral culture; genital; male
	Y33005	Test; urethral/penile swab
Monospot	A33002	Test; monospot
	A33014	Test; Paul Bunnell
	A33031	Test; Epstein Barr virus serology
	A33032	Test; Epstein Barr virus
Nose swab C&S	R33008	Test; nose swab M,C&S
Pertussis	R33007	Test; pertussis
Ross River fever	A33009	Test; Ross River Fever
Rubella	A33001	Test; rubella
Skin swab C&S	S33003	Test; skin swab M,C&S
Sputum C&S	R33005	Test; sputum M,C&S
Throat swab C&S	R33006	Test; throat swab M,C&S
Urine M,C&S	U33001	Test; culture; urine
	U33004	Test; urine M,C&S
Vaginal swab and M,C&S	X33005	Test; vaginal swab M,C&S
Venereal disease	A33010	Test; venereal disease
	A33022	Test; syphilis serology
	A33057	STI screen
Simple basic tests	B35001	Test; urine; blood
	D36003	Test; occult blood
	R32001	Test; Mantoux
	R32002	Test; tuberculin
	W33001	Test; urine; pregnancy
	W35003	Test; urine; HCG
Other NEC		
Blood test	A34001	Test; blood
Urine test	A35001	Test; urine
Urinalysis	A35002	Urinalysis
Faeces test	A36001	Test; faeces

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Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Other pathology test NEC	A35006	Test; urine; FWT
	A38001	Test; other lab
	A38002	Pathology
	A38003	Test; genetic
	A38005	Test; disease screen
	B38001	Test; other lab; blood
	D34001	Test; blood; digestive
	D35001	Test; urine; digestive
	D36002	Test; faeces; digestive
	D38001	Test; other lab; digestive
	F34001	Test; blood; eye
	F38001	Test; other lab; eye
	H34001	Test; blood; ear
	H38001	Test; other lab; ear
	K34002	Test; blood; cardiovascular
	K38001	Test; other lab; cardiovascular
	L34003	Test; blood; musculoskeletal
	L38001	Test; other lab; musculoskeletal
	N34002	Test; blood; neurological
	N38001	Test; other lab; neurological
	P34001	Test; blood; psychological
	P35001	Test; urine; psychological
	P38001	Test; other lab; psychological
	R34001	Test; blood; respiratory
	R38001	Test; other lab; respiratory
	S34001	Test; blood; skin
	S38001	Test; other lab; skin
	T34002	Test; blood; endocrine/metabolic
	T35001	Test; urine; endocrine/metabolic
	T38001	Test; other lab; endocrine/metabolic
	U34001	Test; blood; urology
	U35002	Test; urine; urology
	U38001	Test; other lab; urology
	W34001	Test; blood; reproductive
	W35001	Test; urine; reproductive
	W38001	Test; other lab; reproductive
	X34001	Test; blood; genital; female
	X35001	Test; urine; genital; female

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Pathology test orders (continued)		
Other pathology test NEC (continued)	X38001	Test; other lab; genital; female
	Y34001	Test; blood; genital; male
	Y35001	Test; urine; genital; male
	Y38001	Test; other lab; genital; male
	Z38001	Test; other lab; social
Imaging test orders (MBS groups)		
Diagnostic radiology	A41001	Radiology; diagnostic
	A41002	X-ray; chest
	A41006	X-ray; abdomen
	A41007	Imaging other
	A41010	Radiology
	A41014	Test; imaging; contrast/special
	B41001	Radiology; diagnostic; blood
	D41001	GI series
	D41003	Radiology; diagnostic; digestive
	D41006	X-ray; oesophagus
	D41007	X-ray; biliary ducts
	D41008	X-ray; digestive tract
	D41009	X-ray; mouth
	D41012	X-ray; dental
	D41015	Barium enema
	D41016	Barium meal
	D41017	Barium swallow
	D41020	X-ray; gallbladder
	F41001	Radiology; diagnostic; eye
	F41002	X-ray; eye
	H41001	Radiology; diagnostic; ear
	H41002	X-ray; ear
	K41002	Radiology; diagnostic; cardiovascular
	K41003	Cardiogram
	K41005	Angiography; coronary
	K41006	Angiography; femoral
	K41007	Angiography; cerebral
	K41011	Angiogram
	K41012	Angiogram; coronary
	K41013	Angiogram; cerebral
	K41014	Angiogram; femoral

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Imaging test orders (MBS groups) (continued)		
Diagnostic radiology (continued)	L41001	Arthrogram
	L41003	X-ray; bone(s)
	L41004	Plain x-ray; bone(s)
	L41005	Radiology; diagnostic; musculoskeletal
	L41013	X-ray; elbow
	L41014	X-ray; hand
	L41015	X-ray; wrist
	L41016	X-ray; knee
	L41017	X-ray; hip
	L41018	X-ray; neck
	L41019	X-ray; pelvis
	L41020	X-ray; shoulder
	L41021	X-ray; lumbosacral
	L41022	X-ray; cervical
	L41023	X-ray; thoracic
	L41024	X-ray; spinal
	L41025	X-ray; joint(s)
	L41026	X-ray; foot/feet
	L41027	X-ray; ankle
	L41028	X-ray; leg
	L41029	X-ray; ribs
	L41030	X-ray; face
	L41032	X-ray; arm
	L41033	X-ray; spine; lumbar
	L41034	X-ray; spine; sacrum
	L41035	X-ray; spine; coccyx
	L41036	X-ray; finger(s)/thumb
	L41037	X-ray; toe(s)
	L41038	X-ray; heel
	L41039	X-ray; tibia/fibula
	L41040	X-ray; femur
	L41041	X-ray; radius/ulna
	L41042	X-ray; clavicle
	L41043	X-ray; humerus
	L41044	X-ray; jaw
	L41045	X-ray; temporomandibular joint
	L41060	X-ray; spine; cervicothoracic

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Imaging test orders (MBS groups) (continued)		
Diagnostic radiology (continued)	L41061	X-ray; spine; sacrococcygeal
	L41062	X-ray; spine; thoracolumbar
	L41063	X-ray; back
	L41064	X-ray; back lower
	L41065	X-ray; forearm
	L41066	X-ray; leg lower
	L41067	X-ray; metacarpal
	L41068	X-ray; metatarsal
	L43003	Test; densitometry
	N41001	Radiology; diagnostic neurological
	N41004	X-ray; skull
	P41001	Radiology; diagnostic; psychological
	R41001	Radiology; diagnostic; respiratory
	R41002	X-ray; sinus
	R41003	X-ray; nose
	S41001	Radiology; diagnostic; skin
	T41001	Radiology; diagnostic; endocrine/metabolic
	T41003	X-ray; endocrine/metabolic
	U41001	Pyelogram; intravenous
	U41002	Pyelogram; retrograde
	U41005	Radiology; diagnostic; urology
	U41007	X-ray; urinary tract
	U41008	X-ray; kidney/ureter/bladder
	W41002	Radiology; diagnostic; reproductive
	W41003	X-ray; uterus
	X41001	Mammography; female
	X41002	Mammography; request; female
	X41003	Thermography; breast
	X41005	Radiology; diagnostic; genital; female
	X41007	X-ray; breast; female
	Y41001	Radiology; diagnostic; genital; male
Ultrasound	A41012	Ultrasound
	A41015	Ultrasound; abdomen
	A41017	Ultrasound; chest
	A41021	Ultrasound; inguinal
	A41022	Ultrasound; abdomen; upper
	A41023	Ultrasound; abdomen; lower

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Treatment group	ICPC-2 PLUS code	ICPC-2 PLUS label
Imaging test orders (MBS groups) (continued)		
Ultrasound (continued)	B41002	Ultrasound; spleen
	D41013	Ultrasound; gallbladder
	D41014	Ultrasound; liver
	K41001	Echocardiography
	K41016	Ultrasound; cardiac
	K43003	Test; Doppler
	K43004	Test; Doppler carotid
	K43005	Scan; duplex
	L41046	Ultrasound; neck
	L41047	Ultrasound; pelvis
	L41048	Ultrasound; shoulder
	L41049	Ultrasound; spine
	L41050	Ultrasound; knee
	L41051	Ultrasound; elbow
	L41070	Ultrasound; wrist
	L41071	Ultrasound; ankle
	L41072	Ultrasound; groin
	L41073	Ultrasound; back
	L41074	Ultrasound; back lower
	L41075	Ultrasound; hand/finger(s)
	L41076	Ultrasound; foot/toe(s)
	L41078	Ultrasound; arm
	L41079	Ultrasound; leg
	N41005	Ultrasound; brain
	N41007	Ultrasound; head
	T41004	Ultrasound; thyroid
	U41009	Ultrasound; renal tract
	U41010	Ultrasound; kidney
	W41004	Ultrasound; obstetric
	W41005	Ultrasound; nuchal translucency
	X41009	Ultrasound; breast; female
	X41011	Ultrasound; uterus (not pregnant)
	Y41005	Ultrasound; prostate
	Y41006	Ultrasound; scrotum
	Y41008	Ultrasound; breast; male

(continued)

Table A4.1 (continued): Code groups from ICPC-2 and ICPC-2 PLUS

Group	ICPC-2 PLUS code	ICPC-2 PLUS label
Imaging test orders (continued)		
Computerised tomography	A41013	CT scan
	A41016	CT scan; abdomen
	A41018	CT scan; chest
	A41019	CT scan; abdomen; upper
	A41020	CT scan; abdomen; lower
	D41018	CT scan; liver
	K41017	CT scan; cardiac
	L41052	CT scan; neck
	L41053	CT scan; pelvis
	L41054	CT scan; spine
	L41055	CT scan; spine; cervical
	L41056	CT scan; spine; thoracic
	L41057	CT scan; spine; lumbar
	L41058	CT scan; spine; lumbosacral
	L41059	CT scan; spine; sacrum
	L41069	CT scan; spine; thoracolumbar
	L41077	CT scan; spine; cervicothoracic
	L41080	CT scan; leg
	N41006	CT scan; brain
	N41008	CT scan; head
	R41004	CT scan; sinus
	X41010	CT scan; breast; female
	Y41007	CT scan; breast; male
Nuclear medicine	A41009	Nuclear medicine
	A41011	Isotope scan
	K41015	Scan; thallium heart
	L41002	Scan; bone(s)
	R41005	Scan; VQ (lung)
Magnetic resonance imaging	A41008	MRI

Notes

1. NOS—not otherwise specified; STD—sexually-transmitted disease; NEC—not elsewhere classified; MBS—Medicare Benefits Schedule; EUC—electrolytes, urea and creatinine; LDL—low-density lipoprotein; HDL—high-density lipoprotein; ESR—erythrocyte sedimentation rate; M,C&S—microscopy, culture and sensitivity; HIV—human immunodeficiency virus.

2. '–code'—signifies that the concept includes all of the specified code across all chapters of ICPC-2 (excluding the Z social chapter). Codes listed in this appendix are only those currently active within ICPC-2 PLUS.

Appendix 5: Chronic code groups from ICPC-2 and ICPC-2 PLUS

Table A5.1: Chronic code groups from ICPC-2 and ICPC-2 PLUS

Group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC/ICPC-2 PLUS label
Chronic problems managed			
Anxiety disorder	P74		Anxiety disorder
Autism		P99005	Autism
		P99006	Autism; child
Back syndrome with radiating pain	L86		Back syndrome with radiating pain
Back syndrome without radiating pain (excluding arthritis and sprains/strains)		L84001	Spondylosis
		L84017	Spondylosis; lumbar
		L84018	Degeneration; facet joint
		L84019	Fracture; compression; spine
		L84022	Spondylolisthesis
		L84027	Degeneration; spine
Chronic acne		S96002	Acne; vulgaris
		S96003	Acne; conglobulate (cystic)
		S96007	Acne
Chronic arthritis	L88		Rheumatoid/seropositive arthritis
	L89		Osteoarthrosis of hip
	L90		Osteoarthrosis of knee
	L91		Osteoarthrosis, other
		L83010	Arthritis; spine; cervical
		L83011	Osteoarthritis; spine; cervical
		L84003	Arthritis; spine
		L84004	Osteoarthritis; spine
		L84009	Osteoarthritis; spine; thoracic
		L84010	Osteoarthritis; spine; lumbar
		L84011	Osteoarthritis; lumbosacral
		L84012	Osteoarthritis; sacroiliac
		L84023	Arthritis; spine; thoracic
		L84024	Arthritis; spine; lumbar
		L84025	Arthritis; lumbosacral
		L84026	Arthritis; sacroiliac
		L89004	Arthritis; hip
		L92006	Arthritis; shoulder

(continued)

Table A5.1 (continued): Chronic code groups from ICPC-2 and ICPC-2 PLUS

Group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC/ICPC-2 PLUS label
Chronic problems managed (continued)			
Chronic arthritis (continued)		L92007	Osteoarthritis; shoulder
		L92011	Humeroscapular periarthritis
		S91002	Arthritis; psoriatic
Chronic fatigue syndrome		A04028	Post viral syndrome
		A04029	Chronic fatigue syndrome
		A04030	Post viral fatigue syndrome
		A04031	Myalgic encephalomyelitis
Chronic rheumatic heart disease		K71002	Disease; rheumatic; heart
		K71005	Stenosis; mitral; rheumatic
		K71008	Stenosis; aortic; rheumatic
		K71010	Carditis; rheumatic; chronic
		K71012	Myocarditis; rheumatic; chronic
		K71013	Pericarditis; rheumatic; chronic
		K71015	Stenosis; arterial; rheumatic
Chronic viral hepatitis		D72003	Hepatitis B
		D72008	Hepatitis C
		D72009	Hepatitis D
		D72011	Hepatitis E
Congenital anomaly, musculoskeletal		L82001	Achondroplastic dwarf
		L82003	Clubfoot
		L82007	Lordosis; congenital
		L82012	Scoliosis; congenital
		L82013	Ehlers Danlos syndrome
		L82014	Talipes
		L82015	Curvature of spine; congenital
		L82018	Osteogenesis imperfecta
		L82019	Kyphosis; congenital
		L82021	Kyphoscoliosis; congenital
		L82024	Dislocation;hip; congenital
		L82025	Deformity;foot; congenital
		L82027	Plagiocephaly
		L82028	Cleidocranial dyostosis
		L82029	Hemimelia
Depressive disorder	P76		Depressive disorder
Diabetes (non-gestational)	T89		Diabetes, insulin dependent
	T90		Diabetes, non-insulin dependent

(continued)

Table A5.1 (continued): Chronic code groups from ICPC-2 and ICPC-2 PLUS

Group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC/ICPC-2 PLUS label
Chronic problems managed (continued)			
Hereditary haemolytic anaemia	B78		Hereditary haemolytic anaemia
Hypertension (non-gestational)	K86		Hypertension, uncomplicated
	K87		Hypertension, complicated
Hypertrophy tonsils/adenoids	R90		Hypertrophy tonsils/adenoids
Ischaemic heart disease	K74		Ischaemic heart disease with angina
	K76		Ischaemic heart disease without angina
Lipid disorders	T93		Lipid disorders
		T99075	Lipodystrophy
Metabolic syndrome		T99084	Metabolic syndrome
		T99085	Syndrome X
Neck syndrome (excluding arthritis and sprains/strains)		L83001	Cervical spine syndrome
		L83002	Slipped; disc; cervical
		L83003	Disc syndrome; cervical
		L83004	Cervicobrachial syndrome
		L83005	Cervicocranial syndrome
		L83006	Disc degeneration; cervical
		L83007	Irritation; nerve root; cervical
		L83008	Spondylosis; cervical
		L83009	Torticollis
		L83012	Nerve root compression; cervical
		L83016	Spondylosis; myelopath; cervical
		L83017	Irritation; cervical
		L83018	Disc prolapse; cervical
		L83021	Neuritis; cervical
		L83022	Lesion; spinal disc; cervical
		L83025	Injury; whiplash; old
		L83027	Ruptured disc; cervical
		L83028	Nucleus pulp hernia; cervical
		L83029	Stenosis; spinal; cervical
Psoriasis (excluding arthritis)		S91003	Arthropathy; psoriatic
		S91004	Guttate psoriasis
		S91001	Psoriasis
		S91005	Psoriatic finger/toe nail(s)

(continued)

Table A5.1 (continued): Chronic code groups from ICPC-2 and ICPC-2 PLUS

Group	ICPC-2 rubric	ICPC-2 PLUS code	ICPC/ICPC-2 PLUS label
Chronic problems managed (continued)			
Shoulder syndrome (excluding arthritis)		L92001	Bursitis; shoulder
		L92008	Capsulitis; adhesive
		L92009	Capsulitis; shoulder
		L92015	Epicondylitis; shoulder
		L92002	Fibrositis; shoulder
		L92010	Frozen shoulder
		L92017	Painful arc syndrome
		L92012	Rheumatism; shoulder
		L92003	Rotator cuff syndrome
		L92004	Shoulder syndrome
		L92005	Synovitis; shoulder
		L92013	Tendonitis; shoulder
		L92016	Tendonitis; supraspinatus
		L92014	Tenosynovitis; shoulder

Note: The code groups listed in Appendix 5 are those which differ from other code groups used in the report (see Appendix 4), limiting analysis to only chronic conditions (see Glossary).

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