

14 Discussion

The care of older patients comprises a large proportion of the total workload for GPs in Australia. Encounters with patients aged 65 years or more account for one-quarter (25.0%) of general practice encounters reported in BEACH. This proportion reflects both their use of GP services and the number of problems requiring management by this population. BEACH is based on the assumption that 100 consecutive patient encounters are representative of a GP's workload.⁹⁰ Within these 100 encounters, the vast majority of GPs saw patients aged 65 years or more (Chapter 3), indicating that the care of older patients is an integral part of everyday practice for almost all GPs.

Encounters with the older patient population in general practice have a number of features which distinguish them considerably from the overall BEACH sample. Compared with all encounters recorded in 2001–02,⁹⁶ patients aged 65 years or more reported more RFEs, and had more problems managed. They also had more medications prescribed (particularly cardiovascular medications) and were given more referrals than the overall BEACH sample.

There were also a number of differences in the characteristics of encounters with older patients. Compared with the total BEACH sample,⁹⁶ patients aged 65 years and over were less likely to have direct consultations with the GP (where the patient is physically seen by the GP), and were less likely to be new to the practice. In contrast, they were more likely to have long consultations and home visits.

This comparison between the current study and the BEACH survey clearly demonstrates that the characteristics of general practice encounters with older patients differ from encounters with younger patients. These differences can be found in almost all aspects of general practice: the characteristics of the encounters, the conditions presented for management and the methods of managing these health conditions. Prior research has indicated that GPs have also acknowledged differences in the management of older patients compared with younger patients, and these differences relate to administrative burdens, communication, the need for time commitments and the complexity of the patient's medical problems.³¹

The overall BEACH sample that has been compared with the current study does include older patient encounters. A direct comparison of general practice encounters between younger and older patients may therefore reveal differences more accurately in the general practice management of these population groups.

Dividing the total 65+ population into groups

In the past, studies have been criticised for treating older people as a homogenous group.¹²² In the current study, comparisons have been made between encounters with patients aged between 65 and 74 years, and those aged 75 years and over. Differences have been identified between these age groups, providing evidence for the hypothesis that there are age-related differences in the conditions experienced by the younger and older groups. Significant differences between the two age groups regarding their management in general practice were found in almost all aspects examined. In particular, it is notable that patients aged 75 years and over received no specific form of treatment significantly more often than patients aged between 65 and 74 years (Chapter 4). There were no significant differences related to age in the overall rate of medications prescribed, advised or supplied to the

patient. However, those aged 75 years or more received referrals to specialists, orders for pathology, and imaging and other treatments (in particular clinical treatments) at lower rates than those aged between 65 and 74 (Chapter 4). These lower treatment rates at encounters with older patients may reflect a number of factors. Older patients have many chronic problems (Chapter 12), and those aged 75 years or more are less likely than those aged 65–74 to present to the GP with new problems (Chapter 4). Therefore, while continuing GP management of chronic problems may be required, the focus may surround maintenance and management of the patient's health, rather than investigation and initiation of new forms of treatment (as may be the case in the 65–74 age group, who present significantly more new problems for management).

It was stated in the method that small sample sizes precluded analysing data on smaller age groups, particularly those aged 80 or 85 years or more. It has been projected that the proportion of people aged 80 years or more will increase rapidly, in line with overall population ageing.¹ As the BEACH dataset gets larger, it will be interesting to analyse data from these older age groups, using baseline data from the current study. Analysing data based on the age groups 65–74 and 75+ in this study has also to examine age-related differences in morbidity and management related to the EPC health assessments, which are restricted to those aged 75 years or more.

Risk factors

Alcohol intake

This study has shown that a considerable majority of older patients encountered by GPs either do not drink alcohol, or consume it in a responsible manner. However, it is still alarming that almost one in five (19.4%) of those aged 65–74, and one in seven (13.4%) of those aged 75 years or more, reported consuming alcohol at at-risk levels (Chapter 10). These figures are considerably higher than those reported in other national studies. The 2001 National Health Survey reported that 8.0% of those aged 65–74 and 4.6% of those aged 75 years or more reported high-risk drinking⁴⁵ while the National Drug Strategy Household Survey reported that only 6.0% of older people were high risk drinkers.⁴⁴ The higher rates found in BEACH might be explained by differing measures used to calculate levels of alcohol risk between the surveys. Alternatively, it has been shown previously that older people have high levels of trust and respect for their GP.²⁶⁻²⁸ Older people may therefore be likely to report their alcohol consumption more accurately to their GP, with whom many have had a lengthy relationship characterised by honesty and trust, than to an unknown interviewer.

It has been suggested that due to changes in body structure attributed to ageing, such as increases in the proportion of fat stored in the body, tolerance to alcohol may be reduced in the elderly.¹⁰⁴ Discrepancies between BEACH data and data from the National Health Survey and National Drug and Alcohol Household Survey suggest that the proportion of older people at risk may be higher than previously thought because their current alcohol consumption has previously been underestimated. These factors should be considered by GPs when caring for older people, to ensure that alcohol-related disorders and injuries are appropriately identified and treated.

Smoking status

This study has shown that the majority of older people reported they had never smoked or had previously smoked (Chapter 10). However, 7.5% of those aged 65 years or more

reported smoking daily, and the rate was higher in those patients in the 65–74 year age group (9.5%). These figures parallel the findings from the 2001 National Health Survey, which found that 10.9% of those aged 65–74, and 5.9% of those aged 75 years or more reported current smoking.⁴⁵ Therefore, it may be surmised that BEACH data collected on smoking provides a representative sample of smoking in the overall population for this age group.

Significantly more people in the 65–74 age group are daily smokers compared with those aged 75+ (see Figure 10.3). This may indicate that the younger group (65–74 years) are at a greater risk of developing health conditions relating to smoking. Currently there are very few differences in rates of management of conditions relating to smoking (such as chronic obstructive pulmonary disease, asthma and acute bronchitis) between the two age groups (Chapter 6). It is possible that those in the younger group may already be experiencing the effects of their smoking habits, and it can be hypothesised that the relative rates of conditions associated with smoking will increase over time as those currently in the 65–74 age group get older.

Smoking cessation, even at older ages, has been shown to extend life expectancy⁴⁹ and improve health.^{46,50,51} Previous Australian research has demonstrated that older people were significantly less likely than younger people to believe that smoking was harmful to health, while some believed that there was a ‘safe’ number of cigarettes that could be smoked without causing harm.¹⁰⁷ While the proportion of smokers in this survey is relatively small, the results show that counselling for smoking does continue to occur at encounters with older patients (0.4 per 100 encounters, Chapter 8), but at half the rate that occurs in the overall BEACH sample (0.8 per 100 encounters).⁹⁶ GPs have been identified as an appropriate source of information regarding smoking cessation among older people, due to the high numbers in this age group who attend GPs.¹⁰⁷

Body mass index

In the substudy of BMI two aspects of concern emerged. Over half the respondents aged 65 years or more had a BMI in either the overweight or obese range. In particular, the proportion of patients aged between 65 and 74 years who were overweight or obese was 63.9%. This proportion was significantly lower for patients aged 75 years or more (48.9%) (Chapter 10). The National Health Survey reported that 58.8% of people aged 65–74 years, and 45.6% of people aged 75 years and over were either overweight or obese.⁴⁵ Obesity is associated with a variety of chronic conditions that are prevalent in the older age groups, such as cardiovascular disease, diabetes and osteoarthritis.⁴⁰

Another concerning result from this substudy was the high proportion (10.4%) of patients, particularly women, aged 75 years or more who were underweight (Chapter 10). This is more than double the rate reported in the National Health Survey, which found that 4.1% of those aged 75 years or more were underweight.⁴⁵ Both studies use self-reported height and weight to calculate BMI. Higher rates of underweight in BEACH may be explained by the cut-off points for weight ranges, which differ between the two studies. Underweight in general practice (and therefore in BEACH) is defined as a BMI of less than 20. In contrast, the National Health Survey defines underweight as BMI of less than 18.5. Recently published studies have identified this area as a cause of concern, with mortality rates reported as higher in older people who were underweight compared with those who were overweight.^{52,53} It can be concluded that while obesity is a significant problem in older people, particularly in those aged between 65 and 74 years, underweight in the elderly may also be a risk factor requiring consideration by GPs.

GPs are being encouraged to take an active role in promoting healthy ageing strategies in their older patients.¹⁵ They are thought to be in an ideal position to promote these strategies, particularly because of the high rates of attendance of older people and the fact that GPs are well respected by older people.^{15,21} Clinical treatments, particularly advice and education about weight, nutrition and exercise were provided at high rates, with advice regarding nutrition and weight given at a rate of 5.1 per 100 encounters in patients aged 65 years or more (Chapter 8). These data suggest that GPs do focus on preventive activities in the older patient population.

The harm associated with overweight and obesity has been well documented.^{40,108} However, evidence suggests that underweight is also a significant risk factor for mortality in older people.^{52,53} Therefore, it has been suggested that weight loss in older people should be 'sustained and gradual'.⁵³

While the overall rates of preventive treatments are quite high in patients aged 65 years or more, Table 8.1 shows that clinical treatments overall, and in particular advice and education about weight and nutrition, are offered significantly more often to patients aged between 65 and 74 years, than to those aged 75 years or more. These differences in management rates are important to note. The recording in BEACH of these clinical treatments does show that GPs actively work with patients in the primary or secondary prevention of chronic conditions. The lower rates of clinical treatments in the older age group may reflect the significantly lower numbers of those aged 75 years or more who drink at at-risk levels, are current smokers and are either overweight or obese (Chapter 10).

Changes over time

The comparison of BEACH with an earlier dataset (Australian Morbidity and Treatment Survey-AMTS) allowed the investigation of trends over time. When the AMTS was conducted in 1990–91, the proportion of the Australian population aged 65 years or more was 11.3%. This figure increased steadily over the following decade, to 12.4% in 2001.⁴ There have also been changes to government spending on older people. While the average annual growth of funding for medical services for older people was 7.5% between 1988–89 and 1998–89, and the growth of pharmaceutical services 8.6%, as a proportion of the gross domestic product, government spending on those aged 65 years or more did not change over the period 1989–90 to 1998–99.³

This study shows there have been many significant changes in the problems managed at encounters with older patients in general practice between 1990–91 and 2000–02. In particular, the management rates of ischaemic heart disease and heart failure have significantly declined. In contrast, the rates of management for cardiac check-up, atrial fibrillation and lipid disorders have increased significantly. However, the management rate of hypertension, the most frequently managed problem in both studies at more than one in five encounters, has not changed over the last decade (Chapter 11).

These figures suggest that preventive activities and forms of treatment have improved (as shown in the significant rise in non-pharmacological treatments over this period), and these have been most effective in reducing the effects of ischaemic heart disease and heart failure. It is notable that mortality rates due to cardiovascular conditions have also declined, most rapidly since 1970.⁸ While a previous study found there had been a decline in the relative rate of management of cardiovascular problems between 1990–91 and 2000–02, that study also found that those aged 65 years or more had the highest rates of management for these conditions in both periods.¹²³

Hypertension is seen as a risk factor for more serious cardiovascular diseases.¹⁰³ Therefore, the fact that there has not been a decline in its management rate may indicate that serious cardiovascular conditions will continue to be an issue. Also, this suggests that the role of the GP in the prevention of serious chronic conditions will persist into the future.

It is interesting to note the significant rise in immunisation from 1990–91 to 2000–02. These would be accounted for largely by the influenza vaccine. In the year 2000, Australia had the sixth highest rate of influenza immunisation out of 50 countries tested, at 183 vaccinations per 1000 people.¹²⁴ The rate of influenza vaccination has more than doubled since 1990–91, which can be attributed largely to the introduction of various public health programs. Influenza immunisation in Australia was relatively rare until 1989, rising in 1990 as a result of influenza outbreaks in other countries. This led to the introduction of various programs promoting influenza vaccination, beginning in 1992.¹²⁵ The Immunise Australia program, launched in 1999, allows Australians aged 65 years or more to receive free influenza vaccinations.¹²⁶

Chronic conditions

It has previously been shown that chronic conditions are positively correlated with older ages.^{45,55,57-59} The prevalence substudy (Chapter 12) has shown that at least one chronic condition was present in 93.2% of general practice patients aged 65 years or more. This figure is higher than that reported by Hoffman et al. in 1996 (where 88% of older people reported a chronic condition),⁵⁵ and that of Wolff et al. in 2002 (82% of older people covered by Medicare in the United States had chronic conditions).⁵⁸ It is recognised that those with chronic conditions utilise health services at high rates,⁵⁵ and that a considerable proportion of older people report attending GPs each year.⁵⁷ These factors may explain the higher prevalence of chronic conditions in this study.

Prevalence data collected in BEACH is valid only within general practice, and cannot be extrapolated to the general population. As previously discussed, estimates of disease prevalence in the general population are collected through the National Health Survey. The most recent survey, conducted in 2001, found that the most prevalent conditions were related to vision disorders.⁴⁵ However, some minor vision disorders such as short-sightedness and long-sightedness have not been included in the chronic conditions analysed in BEACH because they would not normally require ongoing management by GPs.

Conditions being regularly managed in general practice may lead to higher estimates of prevalence than those reported in the community. Due to the high numbers of general practice consultations in Australia with older patients, and a focus on the prevention of risk factors,¹⁰³ it is likely that most older Australians would not have health conditions that are undiagnosed. In addition, the National Health Survey relies on self-reported data, and therefore may underestimate the prevalence of certain conditions. These factors may explain the higher prevalence estimates in BEACH.

Prior research has suggested that more problems overall are managed at encounters where chronic conditions are managed compared with those in which acute conditions are managed.⁵⁹ Similarly, the current study has shown that management of multiple problems increases the likelihood of the management of chronic conditions (Chapter 12). At least one chronic condition was managed at 60.8% of encounters with older patients, while two or more chronic conditions were managed at almost one-third of encounters where chronic conditions were managed. Likewise, Hoffman et al. (1996) stated that 66% of consultations with physicians in the United States were for the management of chronic conditions.⁵⁵

These figures imply that the management of chronic conditions comprises a large proportion of the time spent in GP consultations with older patients.

While the majority of patients had only one chronic problem managed at encounter, co-morbidity, or the occurrence of two or more conditions at the same time, has been shown in previous studies to increase with age.^{55,58,61} Wun et al. (1998) found that highly prevalent conditions were more likely to have co-morbidities.¹²⁷ This finding was supported by the current study. Hypertension, the most prevalent condition among older patients in this study, was also present in the seven highest co-morbid relationships (Chapter 12). The conditions most likely to coexist were hypertension and lipid disorder (10.8%), followed by hypertension and osteoarthritis (10.6%).

In this study it is interesting to compare the most frequently managed chronic conditions and the most prevalent chronic conditions (Chapter 12) with the most frequently managed conditions overall in BEACH (Chapter 6). Hypertension was the most frequently managed problem (and therefore the most frequently managed chronic problem) in BEACH. It was managed at almost one in five encounters with patients aged 65 years or more, with no significant difference in its management rate at encounters with the 65-74 and 75+ age groups (Table 6.2). Hypertension is also the most prevalent condition in patients aged 65 years or more, having been diagnosed for 45.6% of these patients (Chapter 12). In the 2001 National Health Survey, hypertension was found to be present in 38.3% of patients aged 65 years or more, and this estimate would include (in the denominator) patients who rarely visit a GP (calculations based on population estimates from data provided by the GP Branch of the Department of Health and Ageing).⁴⁵

Osteoarthritis was the second most frequently managed problem in older patients in general practice, at 6.2 per 100 encounters (Section 6.2). The impact of osteoarthritis is seen mainly as a disabling condition, and is thought to be the leading cause of disability in older women.⁶⁶ Osteoarthritis is also the second most prevalent condition in general practice patients aged 65 years and over, with 20.9% of patients experiencing this condition. The risk factor of obesity is related to osteoarthritis, and therefore this has been identified as a factor that should be minimised in the prevention and management of osteoarthritis.¹²⁸ As stated earlier, the prevalence of overweight and obesity were found to be high in this population. This suggests that greater attention to this risk factor may assist in the prevention and ongoing management of osteoarthritis.

Chapter 12 also compared the prevalence and management of the most frequent chronic conditions. It was shown that conditions requiring ongoing treatment, such as hypertension, heart failure, arthritis and lipid disorder, were some of the most likely to be managed at encounters where they were present in the patient.

Compression or expansion of morbidity

The compression of morbidity theory cannot be directly assessed using BEACH data. As discussed in the introduction, this theory states that life expectancy has a defined limit beyond which it cannot extend, and the onset of chronic disease can be delayed by minimising the impact of risk factors.⁶⁴ Other studies have suggested that compression of morbidity occurs only when chronic conditions are eliminated.^{65,66} The current study has demonstrated that chronic conditions constitute a large proportion of the problems managed in older patients. It has also shown that there is an increase in the number of problems managed at encounters with older patients than at those with the overall population.

With an increased focus on health promotion, as demonstrated by the relatively high levels of advice and education surrounding issues such as weight and nutrition, it is possible that future cohorts of older patients may not experience chronic conditions to as large an extent as has been described in this study. It will be interesting to monitor the health of older patients in general practice over time to test this theory.

Disability in the older population

While the BEACH study does not measure disability as such, it is possible to use the data to hypothesise about the impact of disability on the older population in general practice. The 1998 Disability, Ageing and Carers survey found that 54% of the population aged 65 years or more had a disability. While a greater proportion of those with a disability required assistance with one or more activities, the need for assistance increased with age, irrespective of disability.¹⁷

The Australian Burden of Disease and Injury study found that dementia, hearing loss, stroke, vision disorders, osteoarthritis and ischaemic heart disease were the leading causes of years lost due to disability.⁴⁷ While a number of these disabling conditions, such as hearing loss and vision disorders, are not frequently managed in general practice, osteoarthritis was the second most commonly managed problem in patients aged 65 years or more, and ischaemic heart disease was also commonly managed

Chapter 12 shows that osteoarthritis, ischaemic heart disease and dementia combined accounted for over 10% of the total chronic problems managed. There are a number of other results in this study that may indicate the presence of disability in the older patient population in general practice. Patients aged 75 years or more were significantly less likely to have direct consultations with the GP, and were more than three times as likely to have home visits, than those aged between 65 and 74 years. This may point to increasing disability with age, and indicate that, while the majority of encounters do occur in the doctor's surgery, GPs show flexibility in caring for their older patients, in particular those aged 75 years and over, who are less likely to attend surgery consultations.

Therefore, while there is no measure of disability specifically collected in BEACH, this study has provided a number of indications that disability is relatively prevalent in older people. The presence of disability may affect the ways in which a GP conducts their practice, by providing services such as home visits and consultations at residential aged care facilities.

Enhanced Primary Care (EPC)

Chapter 13 has demonstrated that BEACH provides a roughly representative sample of encounters claimed as EPC items. The EPC items were introduced in November 1999.¹¹⁰ Therefore, the data reported in this study starts from five months after the introduction of the EPC items and reflected the increase in EPC items (demonstrated in HIC data) from the first to the second year of recording.

There were some differences between claims for EPC items made through HIC and data recorded in BEACH. In particular, health assessments formed a greater proportion of the EPC items recorded in BEACH compared with HIC claims (57.1% compared with 48.8%), while a greater proportion of HIC claims were made for care plans than were recorded in BEACH (48.4% compared with 40.6%). This may indicate a tendency for GPs to record health assessments in BEACH rather than care plans, perhaps due to the nature of the BEACH survey. In BEACH, GPs are asked to record 100 consecutive patient-based

encounters. Some GPs may feel that care plans and case conferences are more administrative than clinically based, particularly since the patient does not have to be present while a care plan is written.¹¹¹ Conversely, health assessments must be performed with the patient present, either in the surgery or in the patient's home. Thus, GPs may be more likely to record this type of EPC item in BEACH.

Only 8.0% of GPs who participated in BEACH recorded at least one EPC item (Chapter 13). When they did, over half recorded only one EPC item, but one GP recorded 35 items. Previous studies have also reported GPs with a large number of such items claimed,¹²⁹ with a national study finding less than 10% of GPs claiming for almost half of the EPC items claimed through the HIC.¹²⁰ There are a number of reasons this could have occurred in BEACH. The BEACH recording period could coincide with a GP sending reminders to his patients aged 75 years or more about their annual health assessment. The use of an age-sex register has been shown to be helpful in coordinating health assessments for GPs and has been associated with increased use of EPC items.¹²⁹ Alternatively, the BEACH recording period may have occurred at a time when a GP has scheduled several care plans or case conferences together for logistical reasons. Recently the Federal Government has tightened the requirements surrounding EPC items, placing more emphasis on the complexity issue in the 'chronic and complex' criteria.¹¹¹ This has been accompanied by reports in the Australian general practice media that EPC items have been misused by GPs.¹³⁰ It must be emphasised that high numbers of recording of EPC items by an individual GP in BEACH is not an indication of misuse.

The age and sex distribution of patients at encounters claimed under an EPC item show that women accounted for a larger proportion of the health assessment items recorded, reflecting the higher actual numbers of women aged 65 years and over. However, there were no differences in the sex-specific rates. This indicates that GPs are recognising that older people of both sexes require comprehensive health assessments. The highest rate of health assessment (in terms of age-specific rates) was found in patients aged between 85 and 89 years. It is also notable that there were three assessments conducted for patients who were aged less than 75 years (Chapter 13). However, all of these patients were aged at least 74 years. Thus, it can be assumed that GPs felt that comprehensive health assessments were required for these patients, and conducted them despite the patient falling just short of the age barrier.

As noted earlier in this report, care plans and case conferences are not restricted by patient age, but are recommended for patients aged 65 years or more.¹¹⁰ Therefore, it is interesting that only half of the care plans recorded in BEACH were for patients aged 65 years or more. While it has been shown in this report that chronic conditions are managed at approximately 60% of general practice encounters in this age group, the number of care plans performed for patients aged less than 65 years indicates that serious chronic conditions also frequently occur in younger patients. This supports the government decision not to restrict the use of care plans and case conferences to particular age groups. Clearly there are many younger patients seen by the GP who are likely to benefit from this initiative.

It was hoped that the morbidities recorded in EPC encounters in BEACH would provide some insight into the types of issues being dealt with by the GP at these encounters. However, GPs tended not to record the actual problems managed at these encounters, particularly for health assessments. Almost half of the problems recorded at these encounters related to an administrative service, such as 'health evaluation', rather than a diagnosis (Chapter 13). This may be for a variety of reasons. Health assessments are

designed to provide a holistic assessment of the health of the patient, by measuring the patient's 'health and physical, psychological and social function'.¹¹¹ Therefore, some GPs may feel that it is inappropriate to record specific diagnoses, particularly when they may not be making diagnostic decisions, or specifically managing the patient's long-term conditions. However, where diagnoses were recorded under an EPC item, hypertension was the most common individual diagnosis recorded. This may merely reflect the high prevalence of hypertension in the older population, or may be due to the fact that the MBS requires that the patient's blood pressure be taken during health assessments.¹¹¹ It is notable also that influenza vaccinations and urinary tract infections were recorded as specific problems (each recorded seven times), also reflecting the specifications of health assessments through the MBS.

It can be surmised that GPs, when recording health assessments in BEACH, use one of three approaches. They may choose to record the administrative action of performing a health assessment only, they may record both the administrative action and individual problems managed at those encounters, or may record only the problems they managed during the health assessment. While there is clearly no right or wrong way to record these encounters in BEACH, this poses questions for researchers aiming to describe the morbidity dealt with in patients for whom a health assessment is undertaken.

When recording care plans the GPs were considerably more specific about the actual problems managed (Chapter 13). In the MBS there is no indication given as to whether care plans should encompass the overall health of the patient, or focus on a single condition. Diagnostic frequencies shown in Table 13.7 indicate that for care plans GPs are more likely to focus on specific health conditions in the patient, as can be evidenced by the lower proportion of administrative codes.

In particular, it would appear that diabetes is a problem commonly leading to the formation of a multidisciplinary care plan (Table 13.7). The introduction of the annual cycle of care for patients with diabetes mellitus in 2001 may influence the number of care plans performed for diabetes in the future. The annual cycle, payable through the PIP, specifies aspects of care for patients with diabetes that must be completed over the course of one year. However, the EPC care planning item specifies multidisciplinary involvement, while the annual cycle is conducted solely by the GP. In addition, for GPs to claim the annual cycle they must be enrolled in the PIP.¹¹¹ While approximately three-quarters of GPs are enrolled in the PIP,¹³¹ general practices not participating in this program cannot claim for these items. With the advent of new PIP incentives and possible changes to the structure of the EPC program,¹³⁰ it will be interesting in the future to monitor trends in the recording of EPC items versus the uptake of new items such as that being introduced for the management of diabetes.

Relatively few case conferences were recorded by GPs (Chapter 13). In August 2002 it was reported that there was to be an evaluation of case conferencing items to determine reasons for the low uptake.¹³² GPs have reported that case conferences have shortcomings, including the requirement that all members of the multidisciplinary team must meet, either in person or by teleconference, at the same time.¹¹¹ Studies have demonstrated that the coordination of multiple health providers is very difficult.^{71,73} Further, while the definitions for care plans and case conferences are very similar, care plans have two distinct advantages to the GP: the multidisciplinary team does not have to meet together at the same time¹¹¹; and care plans are included as part of the PIP, providing further incentives for general practices enrolled in the program to conduct care plans rather than case conferences.¹¹⁶

The size of the sample available for analysing EPC management data was small, and we are unable to draw definite conclusions from the data on management techniques used during health assessments and care plans. It is noteworthy that most types of management were recorded at higher rates during care plan encounters than at health assessment encounters. This may reflect the way GPs complete the BEACH encounter form. As demonstrated in Chapter 13, almost half of all problem labels recorded for health assessments were administrative. It may follow that GPs who did not record specific problems also did not record specific management techniques. In contrast, other GPs may have recorded all the management actions made during care plans.

Medications were given at lower rates per 100 encounters at both health assessments and care plans than for the total BEACH encounters with patients aged 75 years or more. It is notable that at both types of encounters, new medications were given at relatively high rates. This may reflect the purpose of these types of encounters. Rather than managing problems, as in normal encounters, health assessments and care plans review and evaluate the patient's health and care by medical practitioners. A medication review is specifically listed as an area of assessment in 75+ health assessments,¹¹¹ so the prescription or provision of new medications may reflect the review process, indicating the presence of problems that require new medication, or changing the medications the patient is currently taking, possibly due to potential contraindications.

A multidisciplinary approach to chronic disease care has been advocated by many.^{60,133} Data from the BEACH study show that multidisciplinary care plans, through the EPC package, have outcomes that result in further actions for patient care, in the forms of new referrals, and investigations. While the BEACH dataset of EPC items is small, these data provide some insight into the outcomes of EPC items, and provide a baseline measure with which to compare the impact of the EPC package on care for those with chronic and complex conditions in the future.

Injuries

Earlier research has suggested that injuries in older people are a serious health concern, with over 1,000 people aged 65 years and over dying as the result of a fall each year.³⁹ A previous study stated that 29% of people aged 65 years or more reported falling in the 12 months before the study, with a greater proportion of those aged 75 years or more having fallen than those aged between 65 and 74 years.³³ In the current study injuries were managed at a rate of 5.0 per 100 encounters (Chapter 6). While musculoskeletal injuries, such as fractures, made up the majority of these problems, injuries to the skin or soft tissue (for example bruises, cuts and burns) also accounted for a large proportion of those injuries. It is possible that the number of injuries occurring in this age group is underestimated using BEACH data. Serious injuries, such as fractures, may be treated in emergency departments more regularly than by GPs, particularly in the elderly who may not be able to remain at home or in a nursing home, while injured. This hypothesis is supported by the low imaging order rates recorded by GPs for older patients, with orders for knee and hip x-rays both occurring at a rate of only 0.4 per 100 encounters. In addition, imaging rates were almost identical for patients in both the younger (65–74) and older (75+) age groups. Further evidence supporting this can be found in Section 8.2, which shows that dressings were provided significantly more often to patients aged 75 years and over than those aged 65–74, suggesting that GPs are more likely to manage less serious falls, though some would be dressings for other problems, such as leg ulcers.

It has been suggested in the literature that those aged 75 years and over are particularly at risk of falls.¹⁰⁰ The current study has largely supported this hypothesis, in particular relating to skin injuries, with these injuries being managed significantly more often for patients aged 75 years and over than for those aged between 65 and 74 (Section 6.3). As the literature has shown that previous falls may be an indicator of future falls,¹⁰¹ GPs may be able to identify minor falls as a risk factor for potential future serious injuries. It has also been shown that certain conditions commonly managed in general practice, such as arthritis, are associated with increased risk of falling in older people.⁴⁰ Therefore, GPs may be able to identify patients at risk of falling, and promote falls prevention strategies to them, for example physical activity and the reduction of hazards in the home, both of which have been shown to help prevent future falls.^{41,42}

Consultation length for older patients in general practice

In this study, consultations for patients aged 65 years and over were significantly longer than for those aged less than 65 years (Chapter 4), at an average of 15.4 minutes compared with 14.9 minutes. The BEACH study is the first to measure consultation length in minutes in Australian general practice (based on recorded start and finish times). Overseas research has provided mixed results about this subject: some studies suggest that consultations are longer for older patients³⁷ and others conclude that there are no differences in consultation length based on age³⁸ or that consultations with older people are shorter.³⁶ The structure of the health care system may have a significant impact on consultation length: the presence or absence of patient registers, the use of set appointments and the payment system for care may all affect the length of time GPs spend with their patients.³⁸

The only study in Australia to report consultation length in general practice for older patients was based on Medicare claims data, which do not accurately report the length of the consultation. The categories in Medicare are based on broad time bands and on the complexity of the consultation. This study reported that older patients had longer consultations, but this was on the basis that GPs were more likely to claim 'long' or 'prolonged' consultations for their older patients, rather than an accurate study of the actual duration of the consultation.⁹⁹

There are some limitations with the BEACH method of recording consultation length. GPs were asked to record the start and finish times of the consultation in minutes. For some GPs, consultation length was calculated to be either 10, 15 or 20 minutes, which may indicate appointment details rather than the exact length of the consultation. Also, it is not known the extent to which the consultation length included the amount of time taken to complete the BEACH encounter form, which averages approximately two minutes.¹³⁴ However, these differences do not confound the comparison of consultation length by age group, as these limitations would be standard for patients in all age groups.

It has also been shown in Chapter 12 that chronic conditions are managed at a rate of 140.0 per 100 encounters in patients aged 65 years and over. It is possible that the high management rate of chronic conditions in this age group contributes to longer consultation length for these patients. However, further analysis would need to be undertaken into the relationship between chronic disease management and consultation length to test this hypothesis.

Advantages of BEACH data

The BEACH survey provides an overall snapshot of general practice activity. In doing so, it includes various aspects of general practice that other sources of data may not discuss. In particular, Chapter 4 of this report describes the proportion of the older population who attended general practice at least once in 2000–01. Data included in this section was obtained through Medicare data held by the HIC. This section suggested that the male attendance rate to GPs declined considerably once males were aged 75 years or more. As mentioned in Chapter 4, Medicare data do not include encounters paid by the DVA; however, these encounters are included in the BEACH survey.

Due to the fact that one in five encounters with patients aged 75 years or more was paid by the DVA, this indicates that Medicare data obtained through the HIC underestimates, by approximately 20%, the true proportion of males aged 75 years and over who attended general practice at least once during this period. Therefore, BEACH provides a more accurate representation of the distribution of general practice encounters with the older population than when considering HIC data alone.

Another advantage of BEACH is that Medicare data are only able to report the proportion of people who attended GPs, and the average numbers of types of visits for specific groups of patients. It is not able to describe the morbidity managed at general practice encounters. In addition, pharmaceutical data reported through the Pharmaceutical Benefits Scheme reports only on the prescriptions paid by the government through this scheme. As well as including all prescribed medications (irrespective of payment source), BEACH provides data on medications advised for over-the-counter purchase as well as those supplied directly to the patient by the GP. BEACH can also relate the medications and other treatments given to patients with the conditions for which these treatments were given.

Finally, BEACH is the only data source providing information on clinical treatments given to patients at encounters with GPs.

Limitations of the BEACH study

While BEACH provides a comprehensive view of encounters in Australian general practice, there are a number of methodological issues that need to be considered. As discussed in Chapter 2, a national random sample of encounters with all GPs is impractical in the Australian general practice setting, both in terms of logistics and cost-effectiveness. Therefore, the most efficient means of describing general practice activity is through a random sample of GPs recording a cluster of encounters. While cluster sampling causes a loss of statistical efficiency, techniques have been employed that take into account the impact of clustering. It has been shown that a random sample of 1,000 GPs recording encounter data on 100 patients provides the most efficient balance between statistical power, cost-effectiveness and validity⁹⁰.

Data used in this study were collected between April 2000 and March 2002. Over these two years, GP participation rates in the study were 27.6% and 30.0% respectively.^{75,96} Since the first year of BEACH (1998) the response rate has declined. There are a number of possible reasons for this decline. GPs who participate in BEACH receive Clinical Audit points for quality assurance from the RACGP. It has been hypothesised that phases of the quality assurance cycle may influence the response rate for BEACH. In addition, GPs aged less than 35 years are underrepresented in BEACH, probably due to the fact that general practice registrars are not required to undertake quality assurance activities until the triennium after training has been completed.^{75,96} Therefore, quality assurance incentives

provided to GPs for participation may not be of interest to this group. While in the annual BEACH reports,^{75-77,96} this is dealt with statistically through post-stratification weighting, when two years of BEACH data are combined (as in the current study), such post-stratification weighting is not possible.

Other limitations to the BEACH data may occur due to the structure of the encounter form. GPs are limited to recording four problems managed in BEACH. This study has demonstrated that older patients had more problems managed than the total BEACH population, and it may be possible that more problems were managed at the encounter than were stated in this study.

It must also be recognised that only medications prescribed, supplied or advised for purchase over the counter at the encounter were recorded. Therefore, BEACH data do not provide an overall description of the number of medications older patients are taking. In addition, only new referrals are recorded at encounter, not all the referrals to other health professionals a patient may have. That is, continuations of referrals are not included.

While it has been stated in the current study that BEACH provides a more accurate representation of encounters due to the inclusion of non-Medicare-paid encounters, the BEACH survey only allows the recording of one Medicare item number. This would lead to underrepresentation of Medicare items, when GPs claimed more than one item for a single encounter.

BEACH only records data based on 100 encounters per GP, and therefore does not provide a longitudinal comprehensive view of patient care. It is entirely possible that BEACH does not cover all aspects of the health of general practice patients as, in most encounters, only those problems managed at the encounter are recorded. However, it must be remembered that the objective of BEACH is to provide an overview of general practice activity rather than a measure of population health.

Older people (those aged 65 years and over) are frequent attenders of general practice (Chapter 4) and almost all (96.7%) had been seen previously by the GP they were attending (Chapter 5). Therefore, the issue of continuity of care is very important in this age group. It would therefore be useful to have a longitudinal study based on older people's care in general practice, to examine the many aspects of care and the longitudinal relationship between patient and doctor.