

# 14 Discussion

Approximately 80% of the population attend a general practitioner in any one year<sup>63</sup>. Medicare and Australian Bureau of Statistics (ABS) data have demonstrated that different proportions of the male and female populations attend GPs and that they do so at different rates (Section 5.2). Comparisons of morbidity and its management at GP encounters showed a very different pattern for male and female patients.

## The male population

Male patients accounted for a lower proportion (42.7%) of total GP encounters in this study. This reflects the Medicare and ABS data which show that fewer Australian males attend GPs (at least once in the year), and those that do attend do so less frequently than females (as shown in Section 5.2). This is in line with the findings of previous studies that indicate males attend health services<sup>16</sup> and GPs in particular<sup>18,64</sup> less often than females.

Age-sex comparisons of the characteristics of people attending GPs, based on Medicare and ABS data, (Section 5.2) demonstrated that males attended GPs at a rate of 5.1 encounters per annum (p.a.) compared with a rate of 6.2 p.a. for females. Data on Medicare services (45% of which are GP-related) confirm this trend, with males in 1997–98 using on average 8.7 services per person p.a. compared with 12.4 p.a. for females<sup>16</sup>. The GP-population patterns identified from the ABS and Medicare data demonstrate that under the age of 15, male patients attend GPs more often than females. However, from the age of 15, males have lower attendance rates than females, which corresponds with earlier GP-Medicare data<sup>17</sup>. However, Medicare data do not accurately represent all the GP encounters. BEACH data have shown that between 6% and 8% of GP encounters were not claimable from Medicare. These include encounters that were funded by the Commonwealth Department of Veterans' Affairs, workers compensation, the States or by some other means; and encounters that did not involve a charge or were indirect (i.e. patient not seen).

## Reason for encounters and problems managed

The data show that although males and females reported similar numbers of RFEs, GPs managed fewer problems at encounters with males. This did not support a previous finding that males were less likely to bring up further health issues at GP encounters<sup>20</sup>. Female patients had an equivalent rate of RFEs and problems managed whereas males had a lower rate of problems managed than RFEs reported. This may be due to multiple RFEs being treated in the management of one problem (e.g. multiple symptoms of one disease) or it may suggest that GPs are not managing all presented RFEs at male encounters. It may be that males and females differ in the way they report their health<sup>64-66</sup> resulting in GPs interpreting and managing male and female problems in different ways.

Encounters with male patients were more likely to have RFEs of a physical nature. This supports the theory that males usually attend GPs with physical, tangible conditions<sup>7,20-22</sup>. The higher rates of procedural treatments (e.g. excisions or removal of tissue) performed at encounters with male patients and the pattern of the most frequently managed problems also demonstrate the tendency of male patients to have physical conditions treated. However, psychological conditions were managed at encounters with males at a higher rate than these conditions were reported as the RFE. This suggests that some GPs recognise the tendency of male patients to under-report psychological symptoms<sup>22</sup>. Despite this, GPs

treated (with medications and counselling) psychological conditions (especially depression) in females much more often than in males.

On each encounter recording form there was space for the management of up to four problems to be recorded. Encounters with males were more likely to have only one problem managed and less likely to have three problems managed. Male encounters were more likely to be standard consultations and less likely to be long consultations. These results suggest that at GP encounters males had shorter consultations than females. It is possible that the Medicare item number distribution reflects the fact that there were fewer problems managed at encounters with males. However, it is also possible that additional problems were not managed because the consultation was shorter. Less time spent at GP encounters has been associated with less provision of preventive care<sup>67</sup> and this has implications for the level of preventive care being provided to male patients.

Multiple logistic regression analyses demonstrate differences in problems managed between the sexes after the effect of other independent predictors were controlled. The social and demographic significant independent predictors were found to be patient age; GP age; GP sex; practice location; whether the patient was a concession cardholder; and status to practice (whether a new or existing patient). Other social variables including socioeconomic status (as defined by the SEIFA index), non-English-speaking background, Indigenous status and whether the patient lived in a rural or urban area were not found to be related to the patient's sex at the encounter. Previous studies had identified socioeconomic status<sup>25,26,68,69</sup>, Indigenous status<sup>70</sup> and rural or urban area of residence<sup>71</sup> to be significant factors on the health of men, although these were not reflected as significant factors in the care of males in the current study.

In Australia, psychological problems are equally prevalent in males and females, occurring most commonly (27%) between the ages of 18 and 24 years<sup>72</sup>. Earlier studies found that females describe more psychological symptoms and have more psychological problems managed than males<sup>22,64,73</sup>. In contrast, the BEACH data showed no differences in the rates of psychological RFEs and management of psychological problems (both before and after adjustment) for male and female patients. This may reflect the equal prevalence of psychological problems in both sexes in the community<sup>72</sup>. However, GPs are providing psychological counselling and psychological prescriptions significantly more often at encounters with females than they are with males. This suggests that while there may be increased awareness of psychological conditions among males, females were more likely to have these treated by the GP, particularly with psychological medications and counselling.

The types of mental illnesses differ between the sexes, with males more likely to have substance use disorders and less likely to have anxiety and affective disorders<sup>72,74</sup>. The high rates of alcohol and tobacco consumption demonstrated in the SAND male sample may be indicative of these substance use disorders. The high rates of alcohol and tobacco consumption and the fact that drug abuse was one of the ten most frequently managed problems in males aged between 15 and 34 years indicate a high rate of substance use disorders in young male patients. This problem of substance use is further compounded by Hanninen and Aro's finding that young males cope with depressive symptoms with substance use<sup>75</sup>. While it has been shown that these substance use disorders are highest in the 18-24 male age group<sup>76</sup>, the current study indicates that the rates remain relatively high until men reach 45 years of age.

The top three types of RFEs at encounters with both males and females were general and unspecified issues, respiratory conditions and musculoskeletal conditions. This reflected the findings of the 1995 National Health Survey which also found that, for both males and females, the most common reasons for seeing a doctor were respiratory conditions, check-

ups and musculoskeletal conditions, with no difference in rates between the sexes<sup>3</sup>. In this study, however, male patients reported significantly higher rates of respiratory and musculoskeletal conditions than females. This suggests that while the prevalence of respiratory and musculoskeletal conditions in the community does not differ between the sexes, males present more frequently to GPs with these conditions.

The ABS found that 10 of the 18 disease categories defined as 'serious' were more prevalent in males<sup>3</sup>. These serious disease categories were not directly comparable with BEACH data. However, using the ABS definition of serious diseases (i.e. conditions with a high probability of serious complications or recurring disability, or those that may require surgical intervention)<sup>3</sup>, the most frequently managed problems from the BEACH data could be classified as either serious or minor. The results indicate that the most frequently diagnosed problems classifiable as serious (i.e. back complaints, diabetes mellitus and lipid disorders) occurred significantly more often at encounters with male patients than at those with female patients. This suggests that the conditions GPs managed for male patients in the BEACH study are more 'serious', supporting the findings of the National Health Survey.

Cardiovascular disease, in this study, was the fourth most commonly managed problem group for both male and female patients. This rate of management did not reflect its status as the highest cause of death in people of both sexes<sup>2</sup>. The rate of management of cardiovascular problems was significantly higher at encounters for male patients than at those with females, which may relate to males having higher morbidity and consequently higher cardiovascular mortality<sup>2</sup>. Alternatively, this higher rate of management could suggest that males are most likely to visit a GP when they are between the ages of 45 and 74 years when cardiovascular conditions are prevalent.

## Management

There was no overall difference in the rate of prescriptions written for male and female patients in the current study. This did not reflect previous ABS findings, which found that women took more medications overall than men<sup>76</sup>. However the ABS's overall medication group included vitamins and self-prescribed medications (e.g. paracetamol) in addition to medications prescribed by health professionals (including GPs). This suggests that the higher medication rates for women reported by the ABS may reflect higher rates of self-medication by women rather than higher GP prescribing rates. An earlier study by Sayer and Britt conducted in 1990-91, using similar methodology to BEACH, reported GP prescribed medications by group using both univariate and multivariate analyses<sup>77</sup>. Similar significant findings were found when the current study was compared with this earlier work by Sayer and Britt<sup>77</sup>. In BEACH, differences in prescribing rates for male and female patients were apparent within specific medication groups and subgroups, but these reflected differences in the types of problems managed, with male patients having higher prescription rates than female patients for cardiovascular, respiratory, and musculoskeletal conditions.

Pathology tests were ordered at a significantly lower rate at encounters with male patients, than at those with female patients. This difference is explained to a certain extent by sex-specific biological conditions to which females are more susceptible (e.g. urinary tract infections resulting in urine tests, and Pap smears to check for cervical cancer). The higher rates of thyroid function tests are related to GPs' investigations of female patients with thyroid problems and weakness/tiredness<sup>78</sup>.

## Age-related morbidity

The age-specific analysis of morbidity managed at male encounters demonstrated some interesting patterns. The morbidity of young men (15–34 years) was dominated by acute, physical conditions. This is not surprising, as young adults tend to view health in terms of physical wellbeing<sup>79</sup>. However, alarmingly, drug abuse was one of the ten most frequently managed problems in this age group. The definition of drug abuse (in ICPC-2) and illicit drug use (used in other reports) are similar: use of those drugs that are illegal to possess or drugs that are not illegal to possess but whose inappropriate use is illicit<sup>2,51</sup>. In the BEACH study, drug abuse was managed most commonly in patients aged between 25 and 34 years. This is also the age group in which the associated burden of disease is greatest<sup>68</sup>. The 2001 National Drug Strategy Household Survey (NDSHS) found that males in every age group were more likely than females to be recent drug users (40% compared with 34%) and this peaked in the 20–29 year age group<sup>80</sup>. The BEACH study found that from 45 years onward the management of drug abuse in males was relatively low. This drop off in older ages was also seen in the NDSHS<sup>80</sup>. This may be because people aged over 45 years were not as exposed to drugs in the community as younger age groups are. Alternatively, the high rate of drug abuse being managed at GP encounters with young males may reflect trusting relationships with their GPs. This has been determined to be an important factor in young adults between 14 and 17 years of age seeking health care from GPs<sup>79</sup>. Heroin addiction was the most commonly managed type of drug abuse in these young male patients in BEACH, whereas the 2001 NDSHS found that marijuana was the most commonly used illicit drug. This suggests that drug abuse was commonly managed at GP encounters because GP monitoring is needed for patients to attend methadone and other prescription drug programs. Further, it is less likely that marijuana use comes to the attention of the GP.

In 1995 the AIHW reported the ten most frequently self-reported conditions of males aged between 25 and 34 years<sup>81</sup>. The three most common conditions were sight disorders (accounting for 25% of the sample), followed by hay fever and headaches. In contrast, the problems managed most often by GPs for male patients in this age group in the BEACH study were upper respiratory tract infections, sprains and strains and depression. This suggests that the more prevalent problems identified by the AIHW are not the most likely to result in a visit to the GP. However, both the AIHW list of most prevalent conditions and the BEACH list of most common problems managed were primarily of a physical nature.

Problems managed at male age-related encounters, with the exception of general check-ups and immunisations in some age groups and cardiac check-ups in the 65–74 year old age group, were not of a preventive type. The provision of immunisation increased with age in male patients and general check-ups were provided commonly in the 25–44 and 75+ age groups. The high rates of general check-ups in male patients aged between 25 and 44 years may be partially work-related.

Males aged between 45 and 74 years were more likely have encounters with GPs than were females. This is possibly an indicator of males realising their health needs or disease symptoms later in life and presenting to the GP. In contrast, women are constantly encouraged to attend GPs for preventive care (e.g. pap smears) and they develop a relationship with GPs from an earlier age through reproductive care and the care of their children. Chapter 11 showed that the most commonly managed problems in males in the older age groups were of a chronic nature. This suggests that either the disease was more serious when males did decide to attend, or that these diseases are diagnosed later in males.

Males aged over 70 years in the community are likely to face redefinitions of their social roles and deterioration of health as they age and become more aware of their mortality as a

result of the death of their peers<sup>1</sup>. This has the potential to result in social isolation and depression<sup>1</sup>. The morbidity managed at encounters with men aged 65+ years has been shown to be mostly of a chronic nature, reflecting deterioration in health. Previous studies have shown depression to be under-diagnosed and under-treated in elderly males<sup>82,83</sup>. In the BEACH study, male patients aged 65 years and over had depression managed at one of the lowest levels of all age groups despite the high level of social change and health deterioration occurring in this population.

Patients aged 75 years and over represent 11.2% of male encounters in the BEACH study. Within this group of male GP attenders, Jacomb<sup>84</sup> found that males (aged 70 years and over) who attended GPs at lower rates had better health, than high attenders and non-attenders who suffered more pain and who had less social support. In higher attenders this difference may be due to more serious morbidity being treated resulting in more GP contact. In Chapter 5 it was demonstrated that 25% of males aged 75 years and over did not attend a GP in the previous 12 months. This suggests that 25% of males aged 75+ years may have health problems equivalent to those of high users of general practice.

### **Work-related problems**

Encounters with male patients were significantly more likely to have been claimable through workers compensation and to include the management of work-related problems (irrespective of payment source) than encounters with female patients (Chapter 4). The ABS also found that men were more likely than women to suffer from work-related injury. The high number of work-related problems managed, the large number of encounters claimable through workers compensation and the low levels of health care card holders among male patients suggest that they were more likely to be employed than female patients. Males also spend more time in the workforce and are more likely to do hazardous jobs, hence they are exposed to a greater work-related risk<sup>2,3,85</sup>. Studies based on GP opinion suggest that a primary reason for males attending GPs is the need to continue working<sup>20</sup>. In the BEACH sample, one in ten males aged between 25 and 44 years had a problem managed which was judged by the GP to be work-related. The most common work-related problems were prominent in the problems managed in these age groups. The results also suggest that in addition to the conditions directly related to the workplace, the most frequent problems managed include acute infections which may prevent men going to work.

### **Risk factors**

The SAND section at the bottom of each encounter form collects health-related information on risk factors from a subsample of male and female patients aged 18 years and over. These subsamples provide patient-reported data on height and weight (to calculate BMI), patient wellbeing, smoking status and alcohol consumption.

The male patients within the BMI substudy were less likely than females to be obese; however, when the overweight and obese categories were combined, 59% of male patients and 48% of female patients were overweight or obese. Previous studies identified the same trend for males to be more obese or overweight than females (67% compared with 52%)<sup>2</sup>. Males aged 65–74 years were most likely to be overweight and males aged 45–64 years were most likely to be obese. This is in contrast to the Australian diabetes, obesity and lifestyle study (AusDiab) which found that males aged between 55 and 74 years were most likely to be obese or overweight (74%) (as reported in *Australia's Health 2002*<sup>2</sup>). At encounters with both male and female patients there was potential for GPs to provide education about diet and exercise more often than they did. Both were provided at a rate of less than 4.3 per 100 encounters (Chapter 8).

Young male patients (18–24 years) were most likely to be of a normal weight, which reflects the high quality of health experienced by most young adults. Yet even in this age group 25% were overweight and this may be partially due to the fact that males between the ages of 18 and 24 years are most likely not to consume any fruit or vegetables<sup>3</sup>.

Male patients whose BMI was calculated were significantly less likely to be underweight than females (5% compared with 11%). The results of the 1999–00 AusDiab study show the same trend, but are dramatically lower than the results of this study, with less than 1% of men and less than 2% of women considered underweight (using a cut-off of BMI < 18.5, rather than < 20, used in this study)<sup>2</sup>. The fact that women are more likely to be underweight than men may be due to pressures to conform to a certain body image. However, it is worth noting that males are also affected by pressures to have a certain body image<sup>86</sup>, although conforming to this image is unlikely to result in an abnormal BMI.

The 1995 National Health Survey showed, through questions relating to eight dimensions of health, that men had a less critical view of their health than women did<sup>3</sup>. This was not directly comparable to the BEACH study which asked a single question aimed to assess the overall self-perceived wellbeing of patients at GP encounters. The current study found only one significant difference between the sexes. Males were less likely than females to rate their health as 'very good,' although this difference was small. The other categories of wellbeing showed a slight trend (although not significant) toward males rating their health more negatively than females.

Tobacco use was the leading cause of drug-related death and hospital separations in Australia in 1998<sup>87,88</sup>. The current study found that 23% of adult male patients and 16% of adult females were daily smokers. The trend for more males to smoke than females supported previous data on sex-specific smoking habits, although the difference between the sexes in previous studies was smaller. The 2001 NDSHS found that 21.1% of males and 18.0% of females smoked (aged over 14 years)<sup>80</sup>. Hill et al. found that 27.1% of males and 23.2% of females aged 18+ were current smokers of tobacco<sup>89</sup>. The larger difference between male and female rates of smoking in BEACH may indicate that male smokers are more likely to attend GPs than female smokers. The male age-specific rates of smoking indicate that there is still a high uptake of smoking in young males. These results are in line with those for smoking uptake rates in other samples<sup>90</sup>. Of the males whose smoking habits were surveyed, those aged between 18 and 24 years had the highest percentage of daily smokers (36.7%). This trend for younger males to have high levels of daily smoking is supported by the 2001 NDSHS which reported that 28.5% of males aged 20–29 years smoked daily<sup>80</sup>.

Alcohol was the second leading cause of drug-related death and hospitalisation in Australia<sup>88</sup>. The current study found that 30% of male patients (compared with 20% of female patients) were 'at-risk' drinkers. Results from the 2001 NDSHS showed the same trend, however the difference was much smaller, with 10.2% of males and 9.4% of females drinking at levels which put their health at risk in the long term. In addition 39.3% of males and 29.6% of females were found to drink (in the previous 12 months) at levels which put their health at risk in the short term. The NDSHS was not directly comparable with the BEACH data because of differences in the age groupings and alcohol guidelines used.

The prevalence of at-risk alcohol consumption in males aged 18–24 years (39.8% of the sampled population) was much higher than the alcohol consumption levels for all other male age groups in the alcohol subsample. Wechsler et al. found the same pattern of high-risk alcohol consumption in young men in a study of 17 to 25 year old college men, of whom 23% were frequent binge drinkers<sup>91</sup>, although different alcohol guidelines and age groupings were used. Although it has been shown that alcohol has a preventive effect for selected morbidities and mortalities, this has been shown to benefit people over the age of 65 years<sup>87</sup>.

Andreasson et al.<sup>92</sup> found that any alcohol consumption in men until the age of 45 years had a negative net effect on health. This highlights the fact that in young males high levels of 'at-risk' alcohol consumption have serious implications for their future health.

The BEACH study prompts GPs to ask their patients about risk factors in a structured manner. Aertgeerts et al.<sup>93</sup> showed that GPs identify only a third of patients with alcohol abuse or dependence in normal practice, which suggests that a large number of patients with serious drinking conditions are going undetected. This may be due to GPs not routinely asking patients structured questions about their alcohol consumption, as it has been found that patients are likely to be truthful about their drinking habits when questioned by GPs<sup>94</sup>.

## Overview

Differences observed across age groups in the types of problems managed and health risk behaviours provide some clues as to the ages of greatest health concern in male patients. In this study patients aged between 15 and 54 years can be identified as those of greatest concern due to low GP utilisation, high smoking rates (measured in patients aged 18+ years) and at-risk alcohol consumption (patients aged 18+ years). From around 45 years onward, although GP utilisation increases, the problems managed are mostly chronic in nature and rates of obesity/overweight peak. This suggests that the low use of GP services and health risk behaviours are resulting in negative health outcomes later in life. A longitudinal study needs to be conducted to accurately determine the relationship between these factors and other variables (such as diet, exercise level, stress and socioeconomic disadvantage) on the health of males.

In the GP-encounter population, the proportion of encounters with young people is smaller than the proportion of young people in the population, due to lower attendance rates in young males generally. This would suggest that the BEACH data under-represent the health habits of young males compared with those in the total population. This is alarming when this age group has the highest levels of at-risk alcohol consumption, daily smoking and management of drug abuse. However, health risk behaviour has become entrenched as a symbol of masculinity in Australia<sup>12</sup>. Young men are especially susceptible to this as they struggle to find an acceptable identity as a man throughout adolescence into early adulthood<sup>12</sup>.

This secondary analysis of BEACH data has provided information about the encounters of male patients in the general practice setting. In particular it provides information on the management of conditions in male patients in Australia where there were previously little data. It may appear that the data reported in this study have focused on the negative aspects of men's health. This reflects the fact that encounters with GPs are usually based on problems (e.g. diseases and illnesses) that require GP management and that health risk behaviours are more prevalent in males. There are many current positive initiatives being implemented for men's health in the community. This report may support these initiatives by increasing awareness of areas of concern for men's health. It may also assist in the future planning of targeted health education and interventions in the male population.

## 14.1 Methodological issues

A full list of methodological issues and limits relating to the BEACH project are detailed elsewhere<sup>49,50</sup>. The main limitations applicable to this study are described below.

In a comparative study of this type it is important to consider the possible influence of the chosen methods on the results. To be included in the primary analysis of sex-specific GP

encounter patterns, the patient's sex had to be recorded by the GP at the encounter. Encounters with no sex recorded were excluded. For the additional analyses of male morbidity by age groups and work-related problems managed the GP was required to complete the date of birth or determine if the problem being managed was caused by the patient's work environment.

The under-representation of participating GPs under 35 years of age compared with the non-participating sample population (see Section 3.3) was validly dealt with by post-stratification weighting. This lower response rate is likely to be associated with the fact that GPs currently in the training program (or at completion of training until the beginning of the new triennium, up to 3 years) are not required to undertake quality assurance (QA) activities. This meant that the 25 QA points offered to participants of the BEACH project were of little interest to this group.

The amount of data that can be recorded at each encounter is limited by the design of the recording form. This may result in GPs not recording some health issues and their management at patient encounters if more than four problems are managed. However, this limitation applies to both sexes and so should not have an impact on comparisons within this study. The GP's ability to complete the encounter form (correctly) also limits the accuracy of the data. However this occurs randomly across GP-patient clusters.

The clustered sampling design used in BEACH is based on each GP and the cluster of encounters they manage. Each cluster has its own characteristics and this means that the resulting encounters are not a random GP-patient selection. While it would be more statistically valid to have five or six encounters recorded by every GP across Australia, this is not a cost-effective alternative<sup>49</sup>. The sample of 1,000 GPs recording 100,000 encounters annually has been shown to be a cost-effective, valid and statistically powerful balance<sup>95</sup>.

GP-Medicare data only include those GP services that have been billed to Medicare as A1 items of service. This means they do not include non-A1 Medicare items of service and Medicare items paid for by the Department of Veterans' Affairs. The GP-population attendance patterns in Chapter 5 (Section 5.2) are affected by these limitations of GP-Medicare data to be representative of GP services. This indicates that Medicare data are under-representative of GP activity collected by BEACH. However, the BEACH study may be under-representative of GP-Medicare encounters, because only one Medicare item number can be recorded at each encounter. At encounters that attract more than one Medicare item number GPs were instructed to include only the more general item. BEACH data also include some encounters that were not Medicare funded (e.g. those provided free of charge, paid for by other means such as State health departments or private insurance companies, or funded by workers compensation).

The BEACH study included only those GPs who were registered, working in private practice or on a fee-for-service basis. No salaried practitioners were included.

The data provided by the BEACH study are only a cross-sectional sample of activity at male GP encounters. An accurate description of long term management of male patients over time cannot be shown using BEACH data.

The morbidity patterns identified from the BEACH study include only the problems managed at the encounter, which means that any co-morbidities not managed at the GP consultation would not be counted. Prescribed, supplied and advised-over-the-counter medications were recorded at each encounter. If a medication was not prescribed, provided or recommended for a problem, this did not mean that the patient was not on medication for this problem. Similarly, the absence of a referral or procedure may indicate that this had been done at a previous encounter or would be done at a future encounter.