17 Co-morbidity

17.1 Background

The prevalence of co-morbidities, which can affect the treatment a patient receives and also their prognosis, is expected to increase in Australia over the next few years. This increase will be mainly due to the fact that the proportion of the population aged over 65 years is increasing (Australian Institute of Health and Welfare 1998a). Hence the prevalence of chronic diseases, such as arthritis and coronary heart disease, will increase. But the importance of chronic diseases and co-morbidity among children should not be overlooked (Newacheck et al. 1991).

This increase in co-morbidity will have a great impact upon the health sector in Australia, particularly general practice. The GP is usually a person's first point of call when he or she requires medical treatment, and the GP usually treats the whole patient not just a single disease.

There is also the methodological question of co-morbidity not being identified in encounter based data collections. Morbidity not managed at the encounter is not usually recorded. The researcher is able to describe only the problems that are actively managed during the course of a consultation.

Although co-morbidity is of great importance, there have been few studies (Schellevis et al. 1993; van den Akker et al. 1998; Wun et al. 1998) conducted anywhere in the world that have measured the extent of co-morbidity. These SAND questions represent the first attempt in Australia to measure co-morbidity in general practice and to assess the extent to which such co-morbidity is not picked up in cross-sectional encounter based study because it is not managed at the encounter.

17.2 Research questions

1. What is the prevalence of co-morbidity among patients in general practice?
2. How does this prevalence differ by the sex and age of the patient?
3. How does the prevalence differ between different conditions, particularly acute and chronic conditions?

17.3 SAND questions

Box 17.1: Co-morbidity

In the main part of the BEACH form the GP records up to four problems managed at that encounter.

In the SAND section, the GPs were asked to list any (up to four) of the patient's conditions not managed at the encounter.

17.4 Results

Sample size was 3,802 patient encounters from 95 GPs.

The total number of morbid conditions for each patient was calculated by adding the number of problems managed at the encounter with the number of conditions recorded in the SAND section as not managed at the encounter. Only problems and conditions that were labelled with a specific diagnostic/disease label (ICPC-2 codes in the diagnosis/disease component 7) and that were not one of the codes in the exclusion list used by van den Akker et al—(1998) in their study of co-morbidity in general practice were included in the count of morbid conditions.

Around one in five encounters were with patients without disease; that is, these people were attending with symptoms, complaints and process events (e.g. cough, headache, referrals, test results; i.e. ICPC-2 codes in the components 1–6) and did not have a specific disease (according to the van den Akker definition) managed or listed in the unmanaged co-morbidities listed. At a further 42.0% of encounters the patient had only one disease either managed or listed. Over one-third (36.6%) of encounters were with people who had one or more recognised co-morbid conditions (Table 17.1).

About two-thirds (64.0%) of all morbidity listed (n=5,360) had been managed at the encounter.

Table 17.1: Number of recognised conditions[(a)] per patient

Number of recognised conditions	Number	Percentage of encounters (n=3,802)	95% LCI	95% UCI
0	816	21.5	19.4	23.5
1	1,595	42.0	39.5	44.4
2	782	20.6	18.8	22.3
3	357	9.4	8.0	10.8
4+	252	6.6	4.8	8.5

(a) as defined above

Note: Abbreviations: LCI = Lower 95% confidence interval, UCI = Upper 95% confidence interval

At least one co-morbidity was reported for a similar proportion of male and female patients (38% and 36% respectively). The proportion of people with co-morbidities increased with age and the highest proportion was among those aged 75 and over (71%) (Figure 17.1).

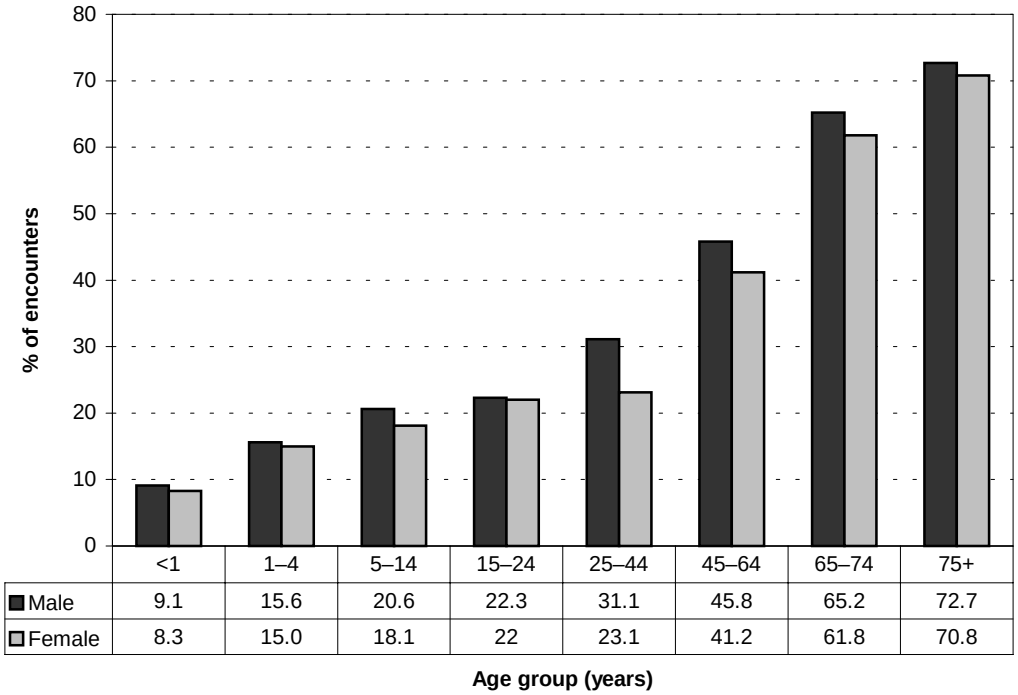

Figure 17.1: Age–sex specific rates of presence of co-morbidity

17.5 Discussion

The prevalence of co-morbidity (or multi-morbidity as van den Akker terms it) was higher in this survey than in the Dutch study carried out in 1994 (van den Akker et al. 1998). The Dutch study found a prevalence of roughly 30% compared with 37% in the current study. One of the possible reasons for this is that the denominator used in the Dutch study was the total population registered with the GPs. The total number of registered patients would include those who come infrequently and who are likely to be in better health than those attending more regularly. In contrast, the encounter-based nature of the BEACH method generates a greater chance of identifying patients who attend general practice more frequently and who are likely to be less healthy.

In the future, the data collected will be analysed separately for acute and chronic diseases, as has been done elsewhere (Wun et al. 1998; Schellevis et al. 1993). Further study is planned into the extent to which other factors (e.g. health card status, place of residence) are associated with increased levels of co-morbidity. It is particularly necessary to think about co-morbidity in the area of health outcome studies including clinical trials which usually excludes individuals who have co-morbidity. However, as demonstrated in the current study it is a common event in the general practice patient population.