

**A general practice view of  
cardiovascular disease and  
diabetes in Australia**

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# **A general practice view of cardiovascular disease and diabetes in Australia**

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Australian Institute of Health and Welfare  
and  
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## Summary

This report provides a snapshot of general practice care of cardiovascular conditions, diabetes and some related risk behaviours, and is based on the Bettering the Evaluation and Care of Health (BEACH) program, a study of general practice activity in Australia, for the period April 1998–March 1999.

General practitioners in the BEACH study managed in one year a total of 15,442 cardiovascular problems (11% of all problems), 2,485 diabetes problems (almost 2% of all problems) and 11,329 other cardiovascular risk factor problems (8% of all problems) including hypertension, lipid disorder, overweight and obesity and smoking.

The data in this report represent a baseline against which future patterns in general practice can be compared and, together with other information, will help to interpret trends in cardiovascular disease incidence.

### Ischaemic heart disease

GPs managed ischaemic heart disease on 1,488 occasions (1.5 per 100 encounters), amounting to 1.1% of all problems, and 114 (7.7%) of these were new problems (0.1 per 100 encounters). This equates to about 1.6 million encounters for ischaemic heart disease per year and around 119,000 new cases of ischaemic heart disease diagnosed in general practice each year. Patients were predominantly males and most were aged 65 years and above. Co-existing conditions included hypertension, lipid disorder and diabetes. The rates of these conditions in these patients were much greater than the average, pointing to an association between each of them and ischaemic heart disease. To treat this condition GPs relied mainly on medications, which were given at a high rate compared with the average for the study sample, indicating that some of these patients take a combination of medications to control their disease.

### Heart failure

Heart failure was managed on 846 occasions (at a rate of 0.9 per 100 encounters), representing 0.6% of all problems managed. Of these, 67 (7.9%) were newly diagnosed cases of heart failure (0.1 per 100 encounters). This equates to about 899,000 encounters for heart failure per year and around 71,000 new cases of heart failure diagnosed in general practice each year. Patients managed for heart failure reflected the total population attending general practice, being 55% female, and the majority were aged 75 years and over. These patients had many comorbidities, hypertension and diabetes being the most common. The rate of diabetes in patients managed for heart failure was far higher than the average, indicating a clear association between both conditions. Medications, pathology tests and imaging were all used more frequently than the average to manage heart failure.

### Atrial fibrillation or atrial flutter

There were 554 encounters during which GPs cared for atrial fibrillation or flutter, at a rate of 0.6 per 100 encounters, making up 0.4% of all problems. Among these, there were 34 (6.1%) new problems (0.03 per 100 encounters). This equates to about 589,000 encounters for atrial fibrillation or flutter per year and around 36,000 new cases of atrial fibrillation or flutter diagnosed in general practice each year. Patients managed for this condition were predominantly male and most were 75 years and older. The most common co-existing problems managed were hypertension, heart failure and diabetes. The rates of hypertension

and diabetes were well above average in these patients. Medications and pathology tests were ordered relatively frequently at these encounters compared with the average.

### **Palpitations**

GPs managed palpitations on 139 occasions (rate 0.1 per 100 encounters), representing 0.1% of all problems seen. Of these, 57 (0.4%) were new palpitation problems (0.06 per 100 encounters). This equates to about 148,000 encounters for palpitations per year and around 60,000 new cases of palpitations diagnosed in general practice each year. Most of the patients were female and the highest proportion of patients overall was aged 45–64 years. These patients had a high comorbidity profile, the most frequent other problems managed being hypertension, depression and menopausal complaints. GPs made little use of medications to manage palpitations, preferring to use other treatments, pathology and referrals to specialists and for further tests.

### **Stroke**

GPs managed stroke on 170 occasions, at a rate of 0.2 per 100 encounters, amounting to 0.1% of all problems seen, and 29 (17.0%) of these were new problems (0.03 per 100 encounters). This equates to about 181,000 encounters for stroke per year and around 31,000 new cases of stroke diagnosed in general practice each year. Patients were predominantly male and the largest proportion of patients overall was 75 years and over. The most common comorbidities were hypertension and dementia. Also among the top ten conditions managed with stroke were diabetes, depression, atrial fibrillation or flutter and heart failure. GPs used medications, other forms of treatment, pathology and imaging relatively uncommonly to manage stroke. However, they frequently referred stroke patients to other health professionals and services.

### **Transient ischaemic attack (TIA)**

TIA was managed on 156 occasions, at a rate of 0.2 per 100 encounters, representing 0.1% of all problems. There were 55 new TIA problems (0.1 per 100 encounters), accounting for 35.2% of all TIAs. This equates to about 166,000 encounters for TIA per year and around 58,000 new cases of TIA diagnosed in general practice each year. Patients were more likely to be male and those aged 75 years and over made up the largest proportion. Frequent conditions co-managed with TIA were hypertension, lipid disorder and diabetes. Medication and other forms of treatment were used less frequently than the average but pathology and imaging were ordered at a high rate for TIA.

### **Type 1 diabetes**

GPs managed type 1 diabetes on only 209 occasions (at a rate of 0.2 per 100 encounters), representing 0.1% of all problems, which suggests that a significant proportion of people with type 1 diabetes is cared for by specialists rather than in general practice. This equates to about 222,000 encounters for type 1 diabetes in general practice each year. There were only 4 (1.9%) new cases seen (0.004 per 100 encounters) in the study sample. Male and female patients were in equal proportion and the largest group of them was aged 45–64 years. The most frequent other problems that GPs treated at type 1 diabetes encounters were hypertension, depression and ischaemic heart disease. Urinary disease and heart failure were also among the top ten co-existing conditions. All of these comorbidities were managed with diabetes much more frequently than average, indicating an association between the conditions. Medications (mainly insulins), other forms of treatment and referrals were all used at rates similar to the average but pathology tests were ordered relatively often in the management of type 1 diabetes.

## **Type 2 diabetes**

Type 2 diabetes problems were managed at 2,264 encounters (at a rate of 2.3 per 100 encounters), accounting for 1.6% of all problems recorded. Of these, 129 (5.7%) were new problems (0.1 per 100 encounters). This equates to about 2.4 million encounters for type 2 diabetes per year and around 137,000 new cases of type 2 diabetes diagnosed in general practice each year. Slightly more males than females were managed for type 2 diabetes and the highest proportion of patients was aged 45–64 years. These patients had a high level of comorbidities including hypertension, lipid disorders, ischaemic heart disease and heart failure. All of these comorbidities were much more frequent in patients managed for type 2 diabetes than in the total study sample, showing an association between these conditions and diabetes. GPs used medications and referrals to manage type 2 diabetes at rates similar to the average but other forms of treatment and pathology tests were more frequent.

## **Gestational diabetes**

The number of encounters for gestational diabetes (n=12) in the study sample was extremely low, indicating that this is a rare event medically and that patients with this condition are usually not managed in general practice, being referred to specialists instead. It is impossible to obtain a reliable picture of the care of these patients based on such few observations.

## **Hypertension**

Hypertension was the most common problem in general practice, managed on 7,994 occasions (at a rate of 8.2 per 100 encounters), accounting for 5.7% of all problems managed. Of these, 409 (5.1%) were new diagnoses of hypertension (0.4 per 100 encounters). This equates to about 8.5 million encounters for hypertension per year and around 435,000 new cases of hypertension diagnosed in general practice each year. Most of the patients managed for hypertension were female and the majority of patients were aged over 44 years. The most common comorbidities managed with hypertension were lipid disorders and diabetes. Both of these were above average rates, indicating an association between these conditions and hypertension. The patients managed at these encounters had a higher comorbidity level than average. Medications were used frequently to treat hypertension, highlighting the fact that patients are often given a combination of medications to better manage this condition. GPs hardly ever referred hypertension patients to other health professionals or services, suggesting that hypertension is mostly handled in general practice.

## **Hypertension in pregnancy**

The number of encounters for hypertension in pregnancy in the study sample was extremely low (n=7), indicating that patients with this condition are usually not managed in general practice, being referred to specialists instead. It is impossible to obtain a reliable picture of the care of these patients based on such few observations.

## **Lipid disorders**

Lipid disorders were managed on 2,392 occasions (at a rate of 2.5 per 100 encounters) and represented 1.7% of all problems handled by GPs. New problems constituted 13.1% (0.3 per 100 encounters) of all lipid disorder problems. This equates to about 2.5 million encounters for lipid disorders per year and around 333,000 new cases of lipid disorders diagnosed in general practice each year. Males and females were managed for lipid disorders in equal proportions and the largest proportion of patients was aged 45–64. Hypertension was a very frequent co-existing problem with lipid disorders. Diabetes was also relatively common in these patients. Both these comorbidities were well above the average rate. Medications were

used at a below average rate to treat lipid disorders but other forms of treatment and pathology tests were very common. GPs only occasionally referred patients managed for lipid disorders to other health professionals and services, including dietitians and nutritionists.

### **Cardiovascular check-up**

GPs conducted cardiovascular check-ups on 1,204 occasions (rate 1.2 per 100 encounters), amounting to 0.8% of all problems managed, and 101 (8.4%) of the total were new cases (rate 0.1 per 100 encounters). This equates to about 1.3 million encounters for cardiovascular check-ups per year. Most patients undergoing a cardiovascular check-up were in the 45 years and over age range and were women. Medications, other forms of treatment, pathology tests and referrals were used after a cardiovascular check-up at rates considerably below average. A relatively large proportion of patients being examined for the first time was aged 25–44 years. This indicates significant awareness among both patients and GPs of the importance of prevention and monitoring of cardiovascular disease from a younger age.

### **Overweight and obesity**

Overweight and obesity problems were managed at 668 encounters (at a rate of 0.7 per 100 encounters), accounting for 0.5% of all problems seen. Compared with the prevalence of overweight and obesity among general practice patients in the study (51%), the rate of management of this problem is very low. New problems represented 107 (16.0%) of all overweight and obesity problems (0.1 per 100 encounters). This equates to about 710,000 encounters for overweight and obesity problems per year and around 114,000 new cases of overweight and obesity diagnosed in general practice each year. Although the prevalence of overweight and obesity in general practice patients is higher in males, females made up the vast majority of patients treated for this problem. Patients were largely in the 25–44 and 45–64 year ranges. The most frequent comorbidities managed were hypertension, lipid disorders, depression and diabetes. The rates of hypertension and diabetes in these patients were double the average for the total data set, indicating a strong association between the conditions. Advice on nutrition, weight and exercise was the main form of treatment provided. Overall, referrals to other health professionals, including dietitians and nutritionists, were much lower than might have been expected in these cases.

### **Smoking**

GPs managed smoking on 275 occasions (0.3 per 100 encounters), which represents 0.2% of all problems. The rate of management of smoking appears quite low, given that almost one in five GP encounters with adults are with daily smokers. New problems accounted for 71 (25.8%) of all smoking problems (0.1 per 100 encounters). This equates to about 292,000 encounters at which smoking is managed per year and around 75,000 new cases of smoking problems treated in general practice each year. Slightly more males than females were managed for smoking problems and most patients were aged 25–44. The data suggest that in about half these encounters the management of smoking was instigated by the patient and in the other half it was opportunistic care initiated by the GP. The most frequent conditions managed with smoking problems included upper respiratory tract infections, hypertension and depression. To treat this problem, GPs mainly gave patients advice on smoking. Generally GPs themselves treated patients for smoking as the referral rate was very low.

### **Peripheral vascular disease**

Peripheral vascular disease was managed at 215 encounters, at a rate of 0.2 per 100 encounters, amounting to 0.1% of all problems managed. Forty-five (20.9%) of these were

new problems (0.05 per 100 encounters). This equates to about 228,000 encounters for peripheral vascular disease per year and around 48,000 new cases of peripheral vascular disease diagnosed in general practice each year. Patients treated for this condition were more likely to be male and most patients were aged 65 years and over. These patients had a high comorbidity level. The problems that GPs managed most frequently with peripheral vascular disease were hypertension, diabetes, lipid disorders and ischaemic heart disease. The rates of all these comorbidities were much higher than average, indicating an association between the conditions and peripheral vascular disease. Medications, other forms of treatment and pathology tests were all used at below average rates to manage this condition. However, imaging and referrals to specialists and other health services occurred relatively often.