10 Conclusion

This study has presented an overview of the GPs who participated in the BEACH program between April 1998 and March 2000, and of the subset of these GPs who managed cardiovascular problems as part of their general practice activity during that period. The cardiovascular problems managed by these GPs and the patients for whom they were managed have also been described, as have the types of management undertaken for these cardiovascular problems. Changes in types of cardiovascular problems, the management of these problems, the GPs who manage them and the patients for whom they are managed have also been presented for the decade since 1990–91. The prevalence of cardiovascular problems and the risk behaviours of people with recognised cardiovascular problems have also been examined in subsamples of the patients at general practice encounters involved in this study.

The prevalence of cardiovascular problems in the general practice population is such that 99.6% of this GP sample (2,022 of 2,031 GPs) managed at least one cardiovascular problem per 100 patient encounters. On average, the GPs managed 16.6 cardiovascular problems per 100 encounters. An examination of the characteristics of GPs who had higher cardiovascular encounter rates was undertaken to determine whether there were particular GP groups who might become the focus of cost-effective interventions to promote patient behavioural change. In the analysis of variance, the factors that were significantly associated with management of cardiovascular problems were identified. These were GP age, sex, activity level, years in practice, place of graduation, proportion of consultations in languages other than English, and Fellowship of the RACGP. Multivariate analysis used multiple linear regression to identify the best independent predictors of high cardiovascular encounter rate. Being male, aged 35 years or more, working full time, having graduated in Australia, conducting more than half their consultations in a language other than English, and working in smaller or rural practices were significant predictors of high cardiovascular encounter rates. The most cost-effective interventions in terms of education about cardiovascular problem management or patient education could therefore be specifically aimed at these types of GPs, although the amount of variation explained was small, probably reflecting the wide variety of other influences on encounter patterns not investigated in this study.

Although the patients at cardiovascular encounters in all age groups were more likely to be female, a greater proportion of encounters with males involved the management of at least one cardiovascular problem. The patients at cardiovascular encounters were significantly older, more likely to hold a Veterans' Affairs or Commonwealth Government healthcare card and less likely to be a new patient to the practice than those at non-cardiovascular encounters. As atherosclerosis is generally considered to be a disease associated with the ageing process (promoted over time by risk behaviours in many individuals), it is not surprising that the majority of patients presenting with cardiovascular problems are clustered in the age groups of 45 years and over. Almost 60% of the patients at cardiovascular encounters were aged 65 years or over, which, being the retirement/pension age for many Australians, would also explain the high number of healthcare card holders in this group. Patient age may also provide some explanation for those at cardiovascular encounters being less likely to be new patients to the practice. A relationship of trust between patient and GP is created over a period of time and older persons may be more likely to seek ongoing care from the practice in which they have developed confidence. As age advances, it may be less practical for the less mobile to

change practices, which may further explain their continuing to seek care from the same practice. The results suggest considerable continuity of care being provided to these patients in general practice.

There were significantly more patient reasons for encounter recorded and two-and-a-half times the number of problems managed at cardiovascular encounters than at non-cardiovascular encounters. The problems managed at cardiovascular encounters were also significantly less likely to be designated as new problems to the patient. This higher proportion of continuing problems reflects the chronic nature of many cardiovascular conditions, and many of the co-morbidities that tend to affect the older population.

Just over half the cardiovascular problems managed were labelled as hypertension of various types. This is not surprising given that hypertension can be diagnosed and managed as a problem individually or can occur as a symptom of other diseases. Ischaemic heart disease, cardiovascular check-up, other vascular disease, heart failure and arrhythmia were other common problems listed. Over 70% of the cardiovascular problems were managed with at least one type of treatment, the vast majority of which were prescribed medications. Antihypertensives accounted for nearly half of these, which is to be expected given the frequency of hypertension discussed above. GPs also provided non-pharmacological treatments to over 16% of patients with cardiovascular problems, mostly advice or counselling. It is reasonable to assume that this counselling involved discussions about the patients' lifestyles and suggestions to change risk behaviours where these existed. In 5.6% of cases, patients were referred to another healthcare provider, the greater proportion of these being a specialist. Pathology orders constituted the majority of investigations.

Comparing data from the Australian Morbidity and Treatment Survey 1990–91 (AMTS)[235] provided an interesting view of how things have changed over the decade. The characteristics of the GP population itself have changed. There are now fewer solo GPs, reflecting the general trend towards group practice which has escalated in general practice through the late 1990s. The percentage of GPs who conduct more than 50% of their consultations in a language other than English has significantly changed since 1991 [247]. This increase possibly reflects influences of both the multicultural patient population and the number of bilingual doctors who have either immigrated or are the second generation of immigrant families who have graduated and are now practising in Australia. Although there may be significantly more encounters conducted in languages other than English, the more recent BEACH data showed that patients from a non-English-speaking background were no more likely to either have a cardiovascular problem or be managed for cardiovascular problems more often.

The age distribution of patients at encounters changed to some degree over the decade, and the age-specific rates for cardiovascular encounters showed a decrease in all adult age groups. Between the two studies there were no significant changes in overall rates of management of cardiovascular problems, with hypertension still ranking number one for both. However, cardiovascular problems formed a significantly higher proportion of all problems managed in the AMTS than in BEACH. Also apparent was a reduction in the frequency of management of more severe cardiovascular problems such as ischaemic heart disease and heart failure in the later study. The greatest changes occurred in the methods of management for cardiovascular problems. The occurrence of cardiovascular check-up, the number of problems with at least one medication prescribed, and the number of problems with at least one non-pharmacological treatment were significantly higher in BEACH, as were clinical treatments such as counselling and advice. This emphasis on preventive treatment was mirrored in the medications, with significant

increases in both prescribing frequency and type between the two studies. Medications new to the market were responsible for a shift away from several medication types used frequently in the earlier study. The quadrupling of prescriptions for hypolipidaemics over the decade also reflects the changes in management for this cardiovascular risk factor. Evidence provided in these two studies suggests that GP management trends have helped improve the incidence of serious cardiovascular disease over the past decade.

For the first time we have prevalence data provided in the subsample of patients at BEACH encounters. These data show that 24.5% of the 12,247 patients encountered in the subsample currently had at least one cardiovascular problem (either managed or not managed at the recorded encounter). The prevalence of most of these conditions was associated with age and, as previously described, with healthcare card status and being previously seen at the practice. Hypertension was the most prevalent individual cardiovascular problem. These data have provided a point from which estimates can be extrapolated for prevalence of hypertension, ischaemic heart disease, heart failure, arrhythmias and so on in the population of Australian general practice encounters. Added to data from other sources such as the AIHW and the ABS, these and further measures currently being gathered in BEACH subsamples can be used in the future to assess progress in reducing cardiovascular problems and risk behaviours. As previously mentioned, the chance of being 'selected' in the subsample study is directly related to the patient's number of GP attendances over the year. This selection bias will have resulted in overestimates of rates for cardiovascular problems in this study. It probably will also have underestimated the prevalence of risk behaviours such as smoking and alcohol consumption in the younger, less frequent general practice encounter attendees. However, the age-specific rates for both these groups should be reliable. Future substudies of this type which include questions on the number of GP visits per year, in conjunction with HIC data on average age–sex–specific rates of GP attendance, will allow some of the methodological issues referred to in Section 8 of this report to be solved.

The SAND sub-tudies have also allowed the investigation of the extent to which people with known cardiovascular problems continue to partake in risk behaviours such as smoking, excessive alcohol consumption or remaining overweight. Almost one-quarter of males and over 20% of females aged 18–44 years being managed for a cardiovascular problem continue to smoke. Again, in this age group, almost 40% of these males and 23% of these females continue to drink alcohol at at-risk levels. Almost two-thirds of patients with a cardiovascular problem currently under GP management remain overweight, approximately one-quarter of those overweight being classified as obese. Over 17% of younger patients with a cardiovascular problem being managed had both risk factors of overweight and at-risk alcohol consumption. Although these proportions decrease with patient age, these are the 'formative' years for cardiovascular problems, and clearly more effort should be made by patients to avoid these behaviours, particularly when cardiovascular problems have been already identified as they have for this subsample.

In future years it will be possible to analyse all three risk behaviours simultaneously as the BEACH encounter form now allows recording of BMI, smoking behaviour and alcohol consumption level for the same patient. In the meantime, GPs should be encouraged to identify at-risk patients and offer appropriate counselling. Because the majority of Australians consult a GP at least once in any given year, GPs are uniquely placed to promote lifestyle changes and long-term disease prevention [248]. GPs are considered by the public to be a reliable, credible source of information [248] and can effectively provide preventive care that reaches the majority of the population. Some population groups in particular may benefit from interventions delivered by their GP. This study has shown that conducting more than half of their consultations in a language

other than English is a significant predictor of high cardiovascular encounter rate among GPs. GPs from a similar language or cultural background are potentially very effective in providing needs assessment and delivering educational material aimed at reducing risk behaviours[249].

However, building a trusting rapport with a patient may help the GP who understands the culture and speaks the same language to deliver a message in a format understandable to the patient, but this does not guarantee that the message will be delivered or that the physician's advice will be followed. The recent literature describes many incidences of successful interventions where GPs have provided educational tools such as nutritional knowledge questionnaires[250], step-counters and self-monitoring forms[251] for patients at risk of heart disease, with resulting improvements in weight, blood pressure[252] and physical activity levels of patients[253]. The GP–patient consultation provides an excellent opportunity for delivery of interventions, but despite the successes noted above there remain some significant barriers to achieving cardiovascular health improvement or risk reduction via this method.

Ideally, all GPs would advise all patients to adopt healthy lifestyles and so prevent the development of risk factors or decrease the severity of problems already established. In the real world, there are issues with GP confidence, attitude and time limitations that interfere with this delivery, evidence of which also exists in recent literature. Doctors' low self-efficacy has also been cited as a significant barrier to the delivery of effective advice[252]. Girgis at al. (2001) found that substantial proportions of the GP population (as well as surgeons and specialty physicians) reported a lack of competence in, and a high level of support for formal training in, prevention and other interactional skills. Quality of interactional skills can have a substantial effect on outcomes such as patient recall of advice on medication and behaviour modification[254]. The attitude of GPs to perception of risk and delivery of counselling is also less than ideal. Evidence by Heywood at al. (1996) suggests that GPs may counsel only the patients they identify as having a risk factor, and that they are regularly less than accurate in recognising these risk factors in their patients[255]. Lewi at al. (2002) found in a study of smoking advice in general practice that almost 50% of GPs reported asking patients about their smoking history only when it was relevant to their current medical complaint[256]. Heywood at al. (1996) reported that counselling for risk behaviour was associated with longer consultations and older GPs. This study has also found an association between longer consultation, older GPs and cardiovascular encounter rate.

Barriers to physician counselling for risk behaviour also include time constraints and lack of reimbursement[257]. Lengthening consultations to incorporate preventive care and health education without remuneration is probably not considered economically viable in the rapidly 'corporatising' health system. Another real barrier for GPs in delivering effective lifestyle counselling is perceived patient disinterest. GPs often feel that they are wasting their time trying to convince some patients to change their habits. Apart from the 'just give me the script, doc' patients who prefer pharmacological treatment, there are others who lack motivation, family or social support, or who feel too pressured by family or work commitments to fit a 'change of lifestyle' into their busy lives[248]. The evidence presented in this study supports this perception, given the numbers of patient with a cardiovascular condition already under management who continue with one or more risk behaviours.