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Heart health

CHD management gaps in general practice

Background

For many years, the Heart Foundation has been involved in the development of evidence based clinical practice guidelines for the management of cardiovascular diseases and conditions, including coronary heart disease (CHD). However, the production of guidelines does not ensure the uptake of evidence based recommendations in practice. This 'management gap' – or difference between guideline recommendations and actual clinical practice – may contribute significantly to the burden of CHD in Australia.

Objective

This review aims to identify gaps of clinical significance in the management of CHD in Australian general practice. These identified gaps will then inform future efforts to improve cardiovascular outcomes in this setting.

Discussion

A literature and key documents search was undertaken to identify Australian data relating to cardiovascular disease, current practice and treatment gaps in the general practice setting. A number of gaps in the management of CHD exist in Australia. Addressing these gaps will improve patient outcomes. While the reasons for the management gaps are complex and multifaceted, the Heart Foundation will use this information to focus its messages and activities in general practice. The key messages developed present opportunities for improved clinical management of CHD in general practice.

■ Coronary heart disease (CHD) represents a major health burden in Australia, affecting an estimated 334 500 Australians[1] and claiming nearly 23 000 Australian lives in 2006.[2] In addition, many more Australians are at risk of CHD, with 90% of adults (about 13.1 million people) in Australia having at least one modifiable risk factor and one in 4 people having three or more.[3] The prevalence of individual risk factors is high, and unfavourable trends have been observed with insufficient physical activity, excess weight and diabetes over the past 20 years.[3]

The Heart Foundation has been involved in the development of evidence based clinical practice guidelines for the management of various cardiovascular diseases and conditions, including CHD,[4] chronic heart failure (CHF),[5] and biomedical risk factors (hypertension[6] and dyslipidaemia[7]). However, the production and dissemination of guidelines does not ensure the uptake of evidence based recommendations in practice.[8] The 'management gap' – or difference between guideline recommendations and actual clinical practice – may contribute significantly to the burden of CHD in Australia.[9] Conversely, identifying management gaps can provide opportunities for improving clinical care and patient outcomes.

The Heart Foundation is currently refocusing its efforts to improve cardiovascular outcomes for the Australian population. Strategies include greater focusing of guideline content and key messages, developing a spectrum of clinical tools to assist health professionals in translating the evidence into practice, and advocating for policy changes and systems solutions to address identified management gaps.

General practice is an ideal setting within which to address identified gaps in the management of CHD. Within the health care sector, general practice is not only the first point of contact but also the 'gatekeeper' controlling access to medicines, further tests, and referral to other providers (eg. specialists, allied health professionals, community supports and tertiary care facilities). Around 85% of the community will see a general practitioner at least once per year,[10] and this figure may be even higher for those with a history of CHD.

Table 1. Lifestyle risk factors[12]

	Community prevalence[3,13]	General practice prevalence[14]	GP interventions[14]
Smoking	20.0–21.3% smoke daily	16–17% smoke daily, 3–4% smoke occasionally, 27–29% are ex-smokers	0.6% of encounters involve smoking cessation advice
Nutrition	70–86% have low vegetable intake 46–48% have low fruit intake	No data	3.4% of encounters involve nutrition or weight counselling
Alcohol	10–14% drink at 'harmful' levels	26–27% drink at 'at risk' levels	0.3% of encounters involve alcohol advice
Physical activity	34–54% are insufficiently active	No data	1.1% of encounters involve physical activity advice
Overweight/ obesity	54–60% are overweight	58.5% are overweight or obese	3.4% of encounters involve nutrition or weight counselling

Absolute risk assessment

Internationally there is growing consensus that the management of cardiovascular disease risk is better served through the identification of high risk individuals based on multifactorial assessment of overall risk, ie. the 'absolute risk' of developing CVD or dying from it during a defined period of time (usually 5 or 10 years), than through identification and treatment of isolated risk factors. For example, two individuals may have the same blood pressure (BP), however, the likelihood of developing CVD within a certain time period (the absolute risk) may be substantially higher for one person than the other due to the synergistic effects of other factors such as cholesterol, gender, age or smoking.

Few data are available regarding the use of absolute risk assessment in Australian general practice. Anecdotal evidence suggests that GPs currently use various methods to discuss cardiovascular risk with their patients, but the use of an absolute risk approach is not widespread.

The Heart Foundation recommends using the Framingham Risk Equation for adults aged 45–74 years who are not known to have cardiovascular disease or to be at high risk of cardiovascular disease. However, note that this equation is likely to underestimate cardiovascular risk in specific population groups such as Aboriginal people and Torres Strait Islanders, those with diabetes, and adults who are overweight or obese. Risk factors included in the Framingham Risk Equation are: BP, age, gender, total cholesterol/ HDL ratio, smoking status and diabetes.

(An Australian absolute risk guideline has been developed by the National Vascular Disease Prevention Alliance (NVDPA), released March 2009).

Methods

Published information on CHD management gaps in Australian general practice was sourced through a PubMed search (initial search included all literature and documents published to December 2006; some data updated August 2008) using the terms: 'coronary heart disease', 'general practice', 'baseline', 'current practice', 'cardiovascular disease', 'secondary prevention', and 'best practice'.

The search was limited to articles relevant to the Australian general practice setting.

Other sources of information included: National Institute for Clinical Studies, National Prescribing Service, Australian General Practice Statistics and Classification Centre – Bettering the Evaluation and Care of Health, National Service Improvement Framework, Centre for General Practice Integration Studies, National Primary Care Collaboratives (NPCC), and Primary Health Care Research and Information Service. These resources were then reviewed to identify apparent CHD management gaps in Australian general practice.

Findings from the review were limited by the lack of objective, systematically collected data; much of the information obtained was derived from surveys, audits and other self reporting methods. The limitations of these study methods, such as bias toward desired behaviours, should be noted.

Results

Theoretically there may be several clinician and patient related factors contributing to any management gap. However, this review concentrated on the clinical management gaps that can adversely affect outcomes for patients with CHD. Overall, three management gaps were identified: lifestyle risk factor modification, treatment to target for hypertension and dyslipidaemia, and underutilisation of practice systems.

Lifestyle risk factor modification

The prevalence of lifestyle risk factors is high, and more general practice consultations could involve advice on decreasing lifestyle related risk (*Table 1*). In addition, these risk factors may be assessed and addressed in isolation, rather than as part of an absolute risk approach. However, there is evidence to suggest that GP intervention is successful, particularly in helping patients to give up smoking, improve their nutrition and increase their physical activity levels.[11]

Treatment to target for hypertension and dyslipidaemia

Hypertension and dyslipidaemia are commonly managed problems in general practice (9.6 and 3.5 encounters per 100 respectively).[14] However, there are few objective national data to indicate how

Table 2. Biomedical risk factors[12]

	Community prevalence[3,13]	General practice prevalence	GP interventions
Hypertension	14–30% have raised BP	Estimates vary from 20–28% of people attending GPs[16–18]	30% diagnosed with hypertension were treated to target[17] 18% with hypertension at baseline were classified as having normal BP at 5 year follow up[19]
Dyslipidaemia	9–51% have raised cholesterol	9–24% diagnosed with lipid disorder[20]	<20% treated to target[17] 12.7% attending GPs were currently using lipid lowering medications[20]
Both/either	No data	15–18% have both hypertension and lipid disorder 36.7% have either hypertension and/or lipid disorder[20]	Of those with hypertension and/or dyslipidaemia: 39.9% took one medication 31.3% took two medications 12.2% were not taking any medication[20]

Note: 'Targets' referred to in these data may vary. Heart Foundation targets for BP and lipids vary across different patient populations. Targets are not criteria for medication use and decision to treat with medications should be informed by an absolute risk assessment for people without existing CHD. For more information refer to Heart Foundation guidelines at www.heartfoundation.org.au

effectively biomedical risk factors are currently managed within the general practice setting.

While prescriptions for BP lowering agents in hypertension increased between 2000 and 2006, the prescription rate for serum lipid reducing agents remained constant.[15] While it is reasonable to assume that some proportion of those with raised BP and/or high blood cholesterol are not identified in general practice, this may be small (eg. within the AusDiab population, 80% of patients with hypertension had had a BP check within the past year[16]). The real problem is that only a small proportion of those identified are treated to target levels (*Table 2, 3*).

Underutilisation of practice systems

The National Primary Care Collaboratives (now under the umbrella of the Australian Primary Care Collaboratives: www.apcc.org.au) demonstrates the potential for improvement when a systematic approach is taken to the management of CHD in general practice. The lessons learned through this initiative can be applied to improve all of the management gaps described in this report. In particular, the introduction, or improved use, of practice registers to identify those with CHD can greatly improve management and clinical indicators for a practice's CHD patient population.

The NPCC initiative shows that the three 'waves' of practices involved to November 2007 improved in all CHD indicators studied over an 18 month period. These indicators included those with CHD on aspirin, those with CHD on a statin, those with a recent history of myocardial infarction on a beta blocker, and BP treated to target of <140/90 mmHg.[21]

The NPCC and other practice improvement initiatives have proven that simple, systematic changes can have a profound and sustained impact on key indicators, leading to improved and streamlined patient care and, hopefully, better outcomes for the many Australians living with CHD.

Table 3. Heart Foundation targets for blood pressure[6] and lipids[7]

Targets for high risk patients with CHD (see guidelines[6,7] for other patient groups)

Blood pressure
<130/80 mmHg
OR
<125/75 mmHg in those with proteinuria >1 g/day
(with or without diabetes)

Lipids
LDL-C <2.0 mmol/L
HDL-C >1.0 mmol/L
Triglycerides <1.5 mmol/L

Discussion

Despite the long term availability of proven therapies for the management of CHD, these are still underutilised in Australian health care settings, including general practice. This 'treatment inertia' – a failure to appropriately initiate or intensify biomedical risk factor management in the absence of symptoms – contributes to unnecessary morbidity and mortality.[22] While all relevant barriers are not understood, the Heart Foundation is taking a 'key message' approach to tackle some of the most pressing issues (*Table 4*).

While the Heart Foundation's work has generally targeted the Australian population as a whole, there is recognition that specific groups, such as Indigenous Australians and those at socioeconomic disadvantage, have worse outcomes, and additional effort is required to remedy this situation.

Chronic heart failure

While this article concentrates on practice based measures to decrease the CHD management gap, chronic heart failure (CHF)

Table 4. Improving CHD management in general practice: three key messages[12]

- **Establish practice systems for CHD**

  Practice registers are critical for case finding and monitoring progress. The Australian Primary Care Collaboratives provides case studies of successful practice registers and approaches. Consider:
  – identifying a staff member as 'champion' of the register
  – using chronic disease management items and utilising practice nurses and community supports for care planning and ongoing care

- **Facilitate lifestyle risk factor modification for all**

  The role of general practice is to raise the issue(s). Remember that any improvement is likely to be beneficial, and consider:
  – acquiring motivational interviewing skills
  – using RACGP learning modules (www.gplearning.com.au) and Lifescripts messages and resources (see www.agpn.com.au/site/index. cfm?display=5270)
  – referring to the Heart Foundation's Health Information Service (1300 36 27 87) and community supports

- **Treat to target for biomedical risk factors**

  See www.heartfoundation.org.au for further information, guidelines and clinical tools. Remember:
  – as a general rule, the lower the better for BP and total and LDL cholesterol levels
  – lifestyle modifications are first line management
  – many patients with hypertension will need combination therapy to reach target
  – statins are recommended for all with CHD, irrespective of lipid levels
  – diabetes and kidney disease are important factors to consider and treat

For patients without existing CVD, use absolute risk to direct treatment and target levels

provides an additional, related clinical area with significant scope for improving patient outcomes.

The three key messages presented in this article in the context of CHD management are also relevant to the management of CHF. Appropriate practice systems can facilitate early diagnosis, lifestyle interventions are a vital component of CHF management, and 'treating to target', in this case, requires the up-titration of angiotensin converting enzyme inhibitor (ACEI) and beta blocker therapy to maximal recommended doses (as tolerated).

Chronic heart disease affects more than 300 000 Australians and its prevalence is likely to continue to rise with the aging Australian population.[5] The Joint Heart Failure Program (an initiative of the Heart Foundation, the National Institute for Clinical Studies and the National Prescribing Service) has identified under or late diagnosis and under utilisation of ACEI and beta blocker therapy as the key management gaps relating to CHF.[23–26]

Conclusion

This review was conducted to identify current management gaps in general practice for people with CHD. Informed by these findings, the Heart Foundation, together with GPs, can better address these gaps in Australian general practice and progress toward improved outcomes for patients with CHD.

Conflict of interest: none declared.

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