

Cardiovascular disease: the challenge of preventing a major cause of death and disability in the UK

The Joint British Societies Implementation Group met recently to discuss how to prevent cardiovascular disease – coronary heart disease now occupies the number one global leading cause of death. Here Richard Hobbs introduces a supplement based on presentations from the meeting.

Cardiovascular disease (CVD) represents a truly global disorder, with rising prevalence in both developing and developed economies. Coronary heart disease and stroke occupy the number one and two global leading causes of death.¹ Cardiovascular disease accounts for 14.8 million deaths in the world per year. In contrast, cancer was responsible for some 6.2 million deaths in 1997.

Guidelines on cardiovascular disease now emphasise that CVD represents a cluster of disorders, associated with complex interactions between multiple risk factors, especially smoking, hypertension and hyperlipidaemia. Greater emphasis is also placed on the need to identify the various at-risk populations more accurately, and the need to initiate and sustain therapy more consistently in those identified as being at risk. The new English NHS policy recommendations for tackling cardiovascular disease, the National Service Framework (NSF) for Coronary Heart Disease (CHD), are based substantially upon the guidelines developed by the relevant British Societies.

For cardiovascular disease, there is an enormous evidence base to guide the most appropriate interventional strategies to reduce cardiovascular risk in patients with established disease (secondary prevention) and to attenuate risk in those patients at highest risk who do not yet have established disease (primary prevention).

Secondary prevention of CHD

Guidelines highlight that the people



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with most to gain from therapy are those at greatest risk of cardiovascular disease, namely those who have current symptoms of heart disease (such as those who have suffered a heart attack, have angina or have received coronary revascularisation) or those with symptoms of other arterial disease (such as stroke, transient ischaemic attack or peripheral vascular disease).²

A number of interventions are advocated in guidelines with regard to secondary prevention. These include advice about how to stop smoking; informa-

tion on modifiable risk factors and personal advice on how they can be reduced (including physical activity, diet, alcohol consumption, weight and diabetes); advice and treatment to maintain blood pressure below 140/85 mmHg; low-dose aspirin (75 mg daily); use of statins and dietary advice to lower serum cholesterol concentration either to less than 5 mmol/L per litre (LDL cholesterol to below 3 mmol/L) or by 30% (whichever is greater); and particularly meticulous control of blood pressure and glucose in people who also have diabetes. Statins will be necessary in the majority of secondary prevention patients to achieve these targets.³⁻⁵

The implications for practices in terms of secondary prevention are major. Numerous studies illustrate that only a small proportion of those who would benefit from therapy are receiving appropriate advice and treatment.^{6,7} Such under-treatment in secondary prevention is not confined to the United Kingdom: data across Europe, from EUROASPIRE,⁸ and across the United States, from the NHANES surveys,⁹ show similar patterns of under-management of CHD, particularly in those at greatest risk.

Primary prevention of CHD

The interventions to be recommended for individuals at high risk without established CHD are similar to those proposed in secondary prevention. The biggest implication for practice from the primary prevention statements will be how to select those patients who are at increased risk of CHD and, sub-

sequently, how to determine those at most risk who should be offered interventions.

The Joint British Societies recommendations state that patients whose risk of CHD events is greater than 20% over 10 years warrant intervention. However, the NSF for CHD prioritises intervention to those with a 10-year risk score above 30%, on grounds of affordability, since even patients at low risk of CHD will still benefit from statin therapy.¹¹ The method of determining individual risk is dictated as one of the various algorithms that are based upon the Framingham equation,¹¹ such as the European Coronary Risk Chart.¹² The potential workload implications for CHD primary prevention are therefore even more substantial than for secondary, since the numbers of patients involved (all people with both hypertension and diabetes) are much greater than those who have established coronary heart disease.

This series of articles from the Joint Societies meeting is aimed at health professionals with responsibilities to implement or deliver the NSF for CHD. It covers these priorities for cardiovascular disease (CVD) prevention in more detail. In particular, evidence is presented for strategies for CVD prevention and the comprehensive management

of patients with hypertension, diabetes, and patients who have suffered cardiac events.

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