Prevention or treatment in Coronary Heart Disease? 
The use of simulation to evaluate the cost-effectiveness of interventions.

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Abstract
A discrete event simulation of patients with coronary heart disease (CHD) models CHD events from the first diagnosis of angina, myocardial infarction or unstable angina to death. The data have been derived mainly from published sources and databases. Using life years saved as the output, sensitivity analysis of the key parameters show how the model responds to different data assumptions.

The scenarios examined include the following:
- Changes in the availability of angiograms, angioplasties and bypass surgery;
- Changes in the provision and take-up of secondary prevention;
- Improvements in ambulance times;
- Increase in the availability and timeliness of thrombolysis;
- More widespread provision of cardiac rehabilitation.

The presentation will show the implications of applying quality of life indicators to the years of life saved.

A further model, developed at the London School of Hygiene and Tropical Medicine and concerned with the prevention of coronary heart disease, has been linked to the treatment model described above. The implications of prevention strategies, such as lowering blood pressure in high risk patients, on the need for treatment will be explored.

References: