



## Coronary Heart Disease: Pandemic in a True Sense

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### ABSTRACT

Cardiovascular diseases are caused because of abnormalities in the heart and blood vessels. Recent trends reveal that the incidence of coronary heart disease (CHD) has gradually decreased in many developed countries, but the situation remains quite challenging in developing nations that account for more than 60% of the global burden. Multiple socio-demographic, personal, physician related and healthcare delivery system related factors have been identified which act in variable combinations to either influence the incidence of CHD or affect the short/long-term outcome of the disease. Of all CHD cases who succumb within 28 days of onset of symptoms, almost 67% fail to reach even a hospital. This clearly signifies the importance of primary prevention and early recognition of the warning signs in averting cause-specific mortality. The main priority is to develop cost-effective equitable health care innovations in CHD prevention and to monitor the trend of CHD so that evidence-based interventions can be formulated. To conclude, inculcating health-promoting behaviors in school children and the general population by means of community-based health screening and education interventions could avert many more deaths attributed to CHDs.

Cardiovascular diseases are caused because of abnormalities in the heart and blood vessels, and mainly include coronary heart disease, stroke, hypertension, peripheral vascular disease, rheumatic heart disease, and heart failure.<sup>1</sup> Recent trends reveal that the incidence of coronary heart disease (CHD) has gradually decreased in many developed countries, but the situation remains quite challenging in developing nations that account for more than 60% of global burden.<sup>2</sup> CHDs have contributed significantly towards loss of disability-adjusted life years and are the leading cause of mortality worldwide resulting in 3.8 million deaths in men & 3.4 million in women annually.<sup>2</sup>

Multiple socio-demographic, personal, physician related and healthcare delivery system related factors such as globalization;<sup>1,2</sup> urbanization;<sup>2,3</sup> increased life expectancy;<sup>1</sup> age-gender-ethnicity;<sup>1</sup> poor educational status;<sup>4</sup> adoption of harmful lifestyles;<sup>1,3</sup> socioeconomic status;<sup>5</sup> stressful working conditions and job characteristics;<sup>3</sup> migration;<sup>1</sup> poor awareness among general population about risk factors;<sup>3,6</sup> poor treatment compliance;<sup>3</sup> depression;<sup>7</sup> lack of social/family support and biopsychosocial parameters;<sup>7,8</sup> tobacco use;<sup>8</sup> obesity with high waist-hip ratio;<sup>8,9</sup> post-menopause;<sup>3</sup> deranged lipid profile with high cholesterol level;<sup>8,9</sup> presence of chronic diseases like hypertension/diabetes/metabolic syndrome;<sup>3,5,10</sup> dietary habits and food fads;<sup>3</sup> low consumption of fruits and vegetables;<sup>3,10</sup> physician related-poor awareness about early warning

signs/low index of suspicion/poor awareness about risk assessment in asymptomatic patients;<sup>10</sup> and accessibility and availability of medical/surgical treatment options or healthcare professionals;<sup>1,3</sup> have been identified which act in variable combinations to either influence the incidence of CHD or affect the short/long-term outcome of the disease.

Of all CHD cases who succumb within 28 days of onset of symptoms, almost 67% fail to reach even a hospital. This clearly signifies the importance of primary prevention and early recognition of the warning signs in averting cause-specific mortality.<sup>2</sup> The main priority is to develop cost-effective equitable health care innovations in CHD prevention and to monitor the trend of CHD so that evidence-based interventions can be formulated.<sup>1,3</sup> Considering the magnitude of CHD, a comprehensive and integrated approach is required to minimize the risks in high-risk as well as in general population.<sup>3,11</sup> Implementation of other measures such as improvement in the socio-economic/literacy status;<sup>4,5</sup> creation of an enabling environment for increasing awareness of community members about risk factors;<sup>3,6,9</sup> strategic implementation of primordial and primary prevention strategies targeted towards school children encouraging them to adopt healthy lifestyles;<sup>1,8,9,11</sup> secondary prevention and targeted interventions towards high-risk group patients;<sup>11</sup> training sessions for private practitioners;<sup>10</sup> facilitation of early detection of clinical cases and cost-effective secondary prevention measures to

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prevent long-term complications;<sup>9,10</sup> legislative measures to stop tobacco production/sale/advertising;<sup>9</sup> promotion of research work to establish guidelines pertaining to dietary modifications/weight loss in different age-groups and for surveillance of CHD trends/associated risk factors;<sup>3,8</sup> and universal adoption of WHO cardiovascular risk prediction charts;<sup>11</sup> can be strategically planned according to the particular setting and prevailing cultural perceptions.

To conclude, inculcating health-promoting behaviors in school children and general population by means of community-based health screening and education interventions could avert many more deaths attributed to CHDs.

**Ethical issues:** This study was confirmed by the ethics committee of University.

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