



■ FEATURE

SMILE and HAPPY: Novel Public Programs for Preventive Cardiology

Written by Mary Mosley

After learning from the INTERHEART studies that 90% of cardiovascular disease (CVD) is linked to lifestyle factors, Leonard Hofstra, MD, PhD, Maastricht University Medical Center, Maastricht, The Netherlands, shifted his focus from general cardiology and research to preventative cardiology to look at health from a broader perspective.

One of the main challenges in cardiology is the patient who has atherosclerosis but is asymptomatic with normal coronary flow until a coronary plaque ruptures, causing a myocardial infarction. Subclinical atherosclerosis is present in ~15% to 20% of men between the ages of 30 and 35, with lesions in the left anterior descending artery $\geq 40\%$. Earlier intervention during the decades of asymptomatic development of this disease is needed.

Current trends underscore the need for prevention because of the rapidly increasing prevalence of CVD, even in developing countries. Contributing factors are aging, obesity, and the doubling incidence of diabetes. CVD is the leading cause of death worldwide, with a person dying from it every 2 seconds. In India, CVD mortality accounts for 28% of deaths.

Government has a role in the prevention of CVD. Well-organized government programs can control the spread of disease, such as the control of cholera through programs that improved water conditions. In the same manner, organized programs are needed to promote healthy food, exercise, and smoking cessation.

THE HAPPY AND SMILE PROGRAMS

Organizers of the Heart Attack Prevention Program for You (HAPPY) hold large-scale CV health camps that provide education and promote awareness. A HAPPY program held in Maastricht, The Netherlands, included a health run from the hospital to the city center, lifestyle coaching, tips on healthy eating and other healthy behaviors, as well as an assessment of the participants' Framingham Risk Profile. Similar health camps have been held in India, where the single-day attendance reached 10,000 people.

The Successful Methods for Inactive Lifestyle Education (SMILE) program was created to be a sustainable program that integrates risk profiling into existing health care, in contrast to a one-time event. SMILE participants complete questionnaires about lifestyle and medical history, after which they receive education about their risks and how lifestyle factors affect their future health. Participants can mail their questionnaires to a local institution, which selectively invites high-risk participants to a physician's office.

The SMILE Caribbean program is expected to begin in Curaçao, with the goal that each island will have its own SMILE program. Questionnaires will be completed electronically, with results sent directly to the cardiology center or to a general practitioner. The questionnaires will be reviewed for high-risk patients. Collection of this information will allow for a database to study and help guide health policy in participating countries. This approach can reach more people and is sustainable. The SMILE program allows for news and information to be directly sent to participants.

Information from the SMILE database will help create a risk profile of the region, which, in turn, will help with the development of strategies to meet the specific needs of each country by directing resources to the areas of greatest need. Identifying the needs of the participants to governments and professional medical societies will help shape education and public health campaigns.

Prof. Hofstra concluded by translating a Chinese saying from some 4500 years ago: "Superior doctors prevent the disease, mediocre doctors treat the disease before evident, and inferior doctors treat the full-blown disease." He suggested that cardiologists will become superior doctors by working to prevent disease.

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