

Statins pay off on a health-policy level, study finds

February 18 2009

Current guidelines for when to prescribe popular cholesterol-lowering drugs called statins would produce cost-effective results and would save thousands of lives every year if they were followed more closely by physicians and patients, according to a new study led by researchers at the University of California, San Francisco.

The authors used a cost-effectiveness model called the Coronary Heart Disease (CHD) Policy Model to assess the incremental cost-effectiveness over a 30-year period of lowering low-density lipoprotein (LDL) cholesterol with statins in persons who have not previously had a heart attack.

Findings are published in the February 17 issue of the *Annals of Internal Medicine*, the official journal of the American College of Physicians. The paper is accompanied by a supporting editorial that cites both the importance of the study and the importance of cost-effectiveness analysis, in general, as a method for comparing strategies to improve health.

The study found that adherence to the 2001 recommendations from the National Heart, Lung and Blood Institute's National Cholesterol Education Program (NCEP) would be a cost-effective way to prevent and manage coronary heart disease in this country.

Full adherence with the guidelines would prevent 20,000 heart attacks and 10,000 CHD deaths every year, according to Mark Pletcher, MD,

MPH, a professor in the UCSF Department of Epidemiology and Biostatistics, who led the study. Although full adherence would require starting millions of Americans on statins, at a cost of \$3.6 billion per year, the health payoff is large enough to justify the cost by current standards, he said.

"We weren't sure that NCEP guidelines, which are relatively aggressive in terms of recommending statins, would be the best approach," Pletcher said. "When we did the math, though, it turns out they are pretty reasonable in terms of health payoff, and are more efficient than some of the alternatives we tested."

The study also demonstrated how important the cost of statins is in the calculations. Pletcher said that when the price of statins falls below about 50 cents per pill, the NCEP guidelines prevent enough heart attacks and save enough in hospital bills to make up the cost of the statin pills.

"As more and more people have access to generic statins at very low prices, statins will start paying for themselves," Pletcher said. "And when per-pill costs are very low, it may actually make sense to prescribe them even more broadly than is recommended in the NCEP guidelines."

Previous studies have shown that statin therapy is generally cost-effective for secondary prevention and for high-risk primary prevention of heart disease in specific scenarios, but have not previously analyzed the full impact or cost-effectiveness of NCEP guidelines, nor compared them to alternatives.

The CHD Policy Model used in this study was developed in the 1980's by Lee Goldman, MD, a co-author on the study. The model uses a wide range of national coronary heart disease data, including results from the 52-year Framingham Heart Study, to model cardiovascular disease events and prevention interventions in the U.S. population. The

researchers sought to estimate the cost-effectiveness of the NCEP guidelines and compare them against alternative strategies, in which statin treatment might be based entirely on age or an assessment of 10-year CHD risk.

The projections were applied to US patients age 35 to 85 years old over the next three decades and results were compared against the prospects of retaining current levels of treatment and the "cost" of early death or chronic care among untreated patients.

"Policymakers in the United States need some basic principles to guide the nation's health care spending, which is excessive by many measures," wrote John B. Wong, MD, from the Tufts University School of Medicine, in the accompanying editorial. "The current fiscal crisis requires much greater attention to health care costs. Perhaps it will be the stimulus for the United States to adopt cost-effectiveness as a guiding principle for allocating resources within health care and between health care and other needs."

Source: University of California - San Francisco

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