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Health Plan Reports Major Drop in Heart Attacks

Electronic health records contribute to 24 percent reduction in past decade, says Kaiser Permanente

By Ed Edelson
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WEDNESDAY, June 9 (HealthDay News) -- In the war against heart disease, here's some good news from the front lines: A large study reports a 24 percent decline in heart attacks and a significant reduction in deaths since 1999 in one northern California population.

The most impressive finding in the study of more than 46,000 hospitalizations between 1999 and 2008 is a striking reduction in the most serious form of heart attacks, known as STEMI, said Dr. Alan S. Go, a leader of the study reported in the June 10 issue of the *New England Journal of Medicine*.

"The relative incidence of STEMI went down by 62 percent in the past decade," said Go, director of the Comprehensive Clinical Research Unit at Kaiser Permanente, one of the nation's largest not-for-profit health-care providers.

STEMI (segment elevation myocardial infarction) is an acronym derived from the electrocardiogram pattern of the most severe heart attacks, the ones mostly likely to cause permanent disability or death. Myocardial infarction is the formal medical term for a heart attack.

Because of the decrease in heart attack deaths, heart disease is no longer the leading cause of death among the northern California residents enrolled in the Permanente Medical Group, said Dr. Robert Pearl, executive director of the group. Nationwide, heart disease has been the leading cause of American deaths for decades.

In the group, it is now second to cancer, Pearl noted.

The report offers an example of what a highly organized, technologically advanced health-care plan can accomplish, he said.

"If every American got the same level of care, we would avoid 200,000 heart attacks and stroke deaths in this country every year," Pearl said.

"The numbers in the report are definitely credible and are consistent with the trends we are seeing elsewhere," said Dr. Michael Lauer, director of the division of cardiovascular sciences at the U.S. National Heart, Lung, and Blood Institute.

A number of registries have looked at heart disease outcomes for decades, "and we have seen since the 1990s a consistent and persistent fall in deaths from heart disease," Lauer said. "We see the same pattern in just about every group," and the Kaiser Permanente report presents "highly robust data" about the reduction in heart attacks and the deaths they cause, he said.

What's most impressive is that the study links increased use of heart medications such as beta blockers, ACE inhibitors and cholesterol-lowering statins to the trends, Lauer said. "Preventive strategies actually work," he said.

Between 2000 and 2008, the incidence of heart attacks in the Kaiser Permanente plan dropped from 287

cases per 100,000 person-years to 208 cases per 100,000 person-years, the report said. The incidence of STEMI heart attacks decreased from 133 to 50 per 100,000 person-years over the same period. And the 30-day death rate, adjusted for age and sex, dropped from 10.5 percent in 1999 to 7.8 percent in 2008.

Go attributes the lowered heart attack toll to better preventive measures aimed at known risk factors. While the Kaiser Permanente group shows the same negative trends of decreased physical activity and increased obesity as the United States at large, "we did find in the later years improved control of certain risk factors, such as high blood pressure and cholesterol," he said. "There has also been a decline in smoking."

Although he acknowledged better in-hospital treatment of heart attacks, he said "we basically think the big driver of what we found is the reduction of the most severe STEMI heart attacks."

For that, he credits state-of-the-art prevention strategies. The health plan maintains electronic medical records of all enrollees, which are available at all times to all physicians in the program, he noted.

"The technology is used at every point of contact," Pearl said. "If you go to an ophthalmologist to have your eyes checked, he can see that you haven't had your blood lipids checked, and can have that done on the spot. If you go to an emergency room with chest pains, it can call up an older EKG [electrocardiogram] to see how it compares with the current one. If you have heart failure, we can check to see if there are any major changes in weight, and so on."

The Kaiser Permanente results probably are achievable elsewhere in the United States, based on population characteristics, Go said. "Our population is very representative of racial diversity," he said. "It is arguably more diverse than what you see in the rest of the country."

More information

To learn about heart attack risk factors and calculate your own 10-year risk, visit the [American Heart Association](#).

SOURCES: Alan S. Go, M.D., director, Comprehensive Clinical Research Unit, Robert Pearl, M.D., executive director, Kaiser Permanente Health Group, Oakland, Calif.; Michael Lauer, M.D., director, division of cardiovascular sciences, U.S. National Heart, Lung, and Blood Institute; June 10, 2010, *New England Journal of Medicine*

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