The Wall Street Journal
HEART BEAT

# Heart Attack? What Steps Can Prevent a Second One

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November 15, 2011

For heart-attack survivors, eliminating copayments for heart-drug prescriptions can modestly improve the chances of avoiding a second attack, a new study found.

Although making medications free had only a small effect on whether patients filled their prescriptions, Aetna Inc., the big insurer that helped fund the study, found "compelling" improvements in the results. The strategy also did not raise Aetna's costs. The company said Monday that based on the results it will begin offering a benefits plan in 2013 that will enable heart-attack survivors to get certain medicines at no or reduced out-of-pocket costs.

**Reducing the Chances of an Attack**

Doctors weigh factors such as age, gender, blood pressure and cholesterol in determining a patient's risk of having a heart attack in the next 10 years. Medications can reduce this risk.

- Patients with a 20% heart-attack risk might include, for example, a 56-year-old man who smokes and has high cholesterol, or a 72-year-old woman with seven years of diabetes, high cholesterol and mild hypertension.
- Taking a cholesterol-lowering statin can improve the odds for a person with a 20% heart-attack risk to 15%. That means that among 100 patients with the same risk profile, 15 people will have a heart attack in the next 10 years.
- The benefits of taking the statin should be weighed against possible side effects, which can include nausea, muscle stiffness and kidney and liver damage.

***Source: Mayo Clinic***

The study suggests that it takes a lot more than financial incentives to make major headway against a persistent problem that frustrates heart-attack prevention efforts: the failure of many patients at high risk to take their medicines. Indeed, other medical experts have also been devising strategies to get patients to stick to their drug regimens.

The Mayo Clinic encourages its heart patients to take their prescribed medications by giving them a diagram that graphically shows their personal risk of having a heart attack in the next 10 years. In other efforts, a patient and doctor sign a discharge contract after hospitalization for a heart attack, which a University of Michigan study found improves survival rates after one year.

In the past two decades, efforts to make sure doctors prescribe the appropriate medicines when heart-attack patients leave the hospital have resulted in the vast majority of patients going home with prescriptions. Yet data consistently show that no more than half of such patients stay on at least one of the trio of medications proven in rigorous major studies to reduce their risk. The Aetna-funded study, which involved nearly 6,000 patients, found that just 10.5% of patients conscientiously took all three medications in the 13 months following their heart attack.

As many as 20% of patients discharged from the hospital after a heart attack have a second major cardiovascular episode within a year, researchers say. Put another way, there are 325,000 recurrent heart attacks each year in the U.S.

"We have better tools for dealing with heart disease than for any other disease," says Niteesh Choudhry, an internist at Harvard-affiliated Brigham and Women's Hospital in Boston and lead author of the study. "It's very clear patients should be taking those medicines." Dr. Choudhry estimates full compliance with medication regimens could reduce by about half the number of recurrent heart attacks in the U.S.

Dr. Choudhry and his colleagues mounted an unusual study involving 5,855 heart-attack patients to see if medication adherence improved. They also examined whether free prescriptions would reduce the patients' likelihood of suffering a subsequent attack or the need for procedures to reopen obstructed arteries. The study was presented Monday at the annual scientific meeting of the American Heart Association. It was also published online by the New England Journal of Medicine.

The patients, all covered by Aetna, were randomized according to their health plan to either full coverage—no copayment—or regular coverage, in which copayments ranged from $13 to $25 for each of the three different prescriptions. The drugs included a cholesterol-lowering statin. They also included a beta blocker and either an ACE-inhibitor or an angiotensin receptor blocker, all blood-pressure pills. Medical guidelines recommend the medicines for preventing second heart attacks.

The researchers found adherence to at least one of the medicines ranged from 30% to 49%. When there was no copyament, the adherence rate was about 4 to 6 percentage points higher. Eliminating copayments also was associated with an 11% reduction in major events such as a heart attack and it reduced patients' out-of-pocket costs for drug and other medical services such as doctor visits.

The strategy slightly reduced overall costs. Total medical costs during the 13-month follow-up period averaged $69,997 for copay patients and $64,726 for those without copays. The $5,000 difference wasn't statistically significant, but nevertheless showed the program at least didn't add health costs, researchers said.

The study's primary aim was to see whether the strategy of ending copayments reduced the rate of a serious cardiovascular event or bypass surgery or angioplasty to clear obstructed arteries. There was a 7% reduction in the combination of those events, but the improvement wasn't statistically significant.

Nevertheless other benefits observed in the study make a "compelling case" that waiving or reducing copayments can result in "a profoundly better clinical outcome" without increasing health costs, said Lonny Reisman, Aetna's chief medical officer.

Aetna's decision to offer the new benefits package focused on heart-attack patients reflects growing interest in so-called value-based insurance design, which encourages beneficiaries to adopt healthy lifestyles.

"Any program that raises adherence on those drugs 4 to 6% without increasing cost is a home run," said Mark Fendrick, director of the University of Michigan Center for Value-Based Insurance Design, who wasn't involved in the study.

Still, doctors say they need better tools to help patients get the message. "Even when we give drugs for free, patients don't really understand why they're supposed to take them, and they don't," said Raymond Gibbons, a cardiologist at Mayo Clinic, in Rochester, Minn. Even with advanced heart disease, patients often don't feel any symptoms "so they stop taking their pills."

Mayo physicians have developed a way to graphically portray a patient's personal risk for a heart attack using colored "smiley faces" and frowning faces to show patients where they stack up among 100 other patients at similar risk. It is used to encourage compliance with cholesterol drugs. A person's risk for having a heart attack in the next 10 years is calculated based on factors such as age, sex, blood pressure and cholesterol levels. Mayo said it is developing another tool specifically for patients who have had a heart attack.

Dr. Choudhry said the fact that patients with heart disease may take a total of six to 10 drugs is another impediment to adherence, especially if the prescriptions come up for renewal at different times. Synchronizing prescriptions so all refills could be picked on the same day can improve compliance, he said.

CVS Caremark Corp., the big drug-store chain and pharmacy-benefit manager, plans to pilot plan designs next year that use incentives beyond eliminating copayments, said Troyen Brennan, chief medical officer, and a co-author of the new study. The copayment strategy was a "first-generation" approach, he said. Other potential ways of motivating patients to take their medications include allotting them a sum of money upfront, then taking it away if they don't adhere to their drug regimens.