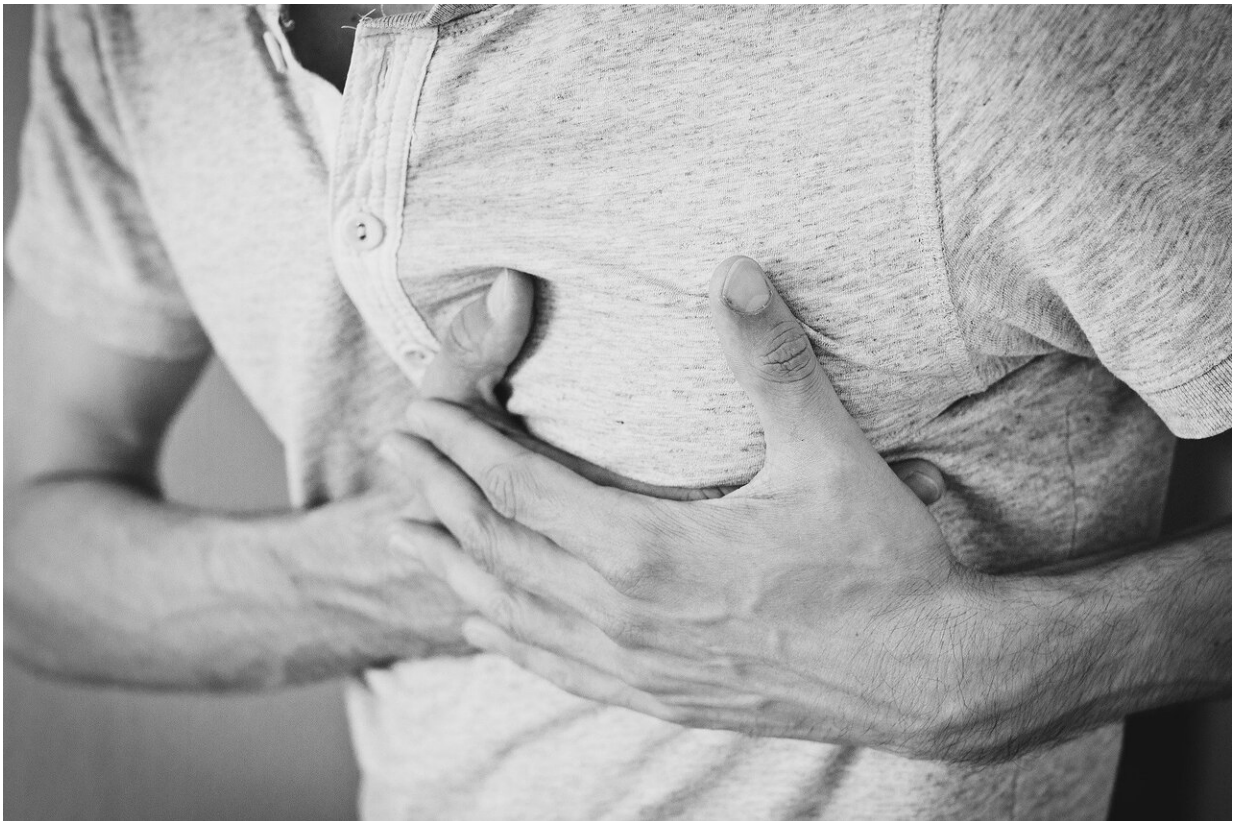


# People with high-deductible health plans less likely to seek ER treatment for chest pain

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People who must spend \$1,000 or more annually in out-of-pocket medical deductibles under their health care insurance plan were less likely to seek care in the ER for chest pain and less likely to be admitted

to the hospital during these visits, compared to people who have health insurance plans with an annual deductible of \$500 or less, according to new research published today in the American Heart Association's flagship journal *Circulation*.

Chest [pain](#) can occur when the heart muscle doesn't get enough oxygen-rich blood. It may feel like pressure or squeezing in the chest. The discomfort also can occur in the shoulders, arms, neck, jaw or back and may also feel like indigestion. Chest pain may be a symptom of an underlying heart problem, usually coronary heart disease (CHD). There are many types of [chest pain](#), and all chest pain should be checked by a [health care](#) professional.

Health insurers and employers who administer their own [health](#) plans are increasingly shifting the cost burden of health care to patients, researchers noted. By 2020, more than half of U.S. employees were enrolled in a high-deductible health plan, according to the national Employer Health Benefits Survey. Previous research has shown that insurance status and financial concerns affect patients' decisions to delay or skip seeking care for many medical conditions.

"Shifting the high cost of health care from insurers and employers to patients has become a trend across the U.S.," said lead study author Shih-Chuan Chou, M.D., M.P.H., S.M., an emergency care physician in the department of emergency medicine at Brigham and Women's Hospital in Boston. "Our study is one of the first to examine the impact of a high-deductible health care plan on people's decisions to go to an ER for chest pain."

Using the claims database from a nationwide U.S. health insurer, researchers identified patients ages 19 to 63, enrolled between 2003 and 2014, whose employers offered only low-deductible health plans (\$500 or less/year) in the first year and then mandated enrollment in a high-

deductible health plan (\$1,000 or more/year) during the second year. The [control group](#) included members who were enrolled in a low-deductible health plan for two straight years.

The study included more than a half-million employees in the high-deductible group and nearly six million employees in the control group. In both groups, the average age was 42; about half of the participants were women, and about two-thirds were non-Hispanic white adults.

Researchers matched people in both groups according to patient-specific demographic and clinical characteristics and employer characteristics (such as the total number of employees) to ensure similarity. They examined whether switching to a high-deductible health plan changed employees' use of the ER for chest pain during the first year (the low-deductible year) compared to the second year (the high-deductible year). They also compared changes in annual patient outcomes from year one to year two between the high-deductible health plan group and the matched control group (those with low-deductible plan for two consecutive years).

Researchers found:

- Switching to a high-deductible health plan was associated with a 4% reduction in ER visits for chest pain.
- Enrollment in a high-deductible health plan was associated with an 11% decrease in ER visits for chest pain leading to hospitalization.
- Among low-income patients, those who had high-deductible health plans were nearly one-third more likely to have a heart attack during a subsequent hospitalization 30 days after their initial ER visit for chest pain.

"People with higher deductibles delay treatment and are sicker when

they show up in the ER for chest pain," Chou said. "When people with low-incomes are switched to high deductible plans, they are disproportionately impacted financially and so is their health."

Each year, up to 7 million people are cared for in an ER for chest pain. "These findings underscore the consequences associated with the affordability of health insurance and health expenses, especially for patients with [chest](#) pain, one of the most common reasons for ER visits," Chou noted.

"Cost is a real factor for patient outcomes," Chou said. "Clinicians need to consider actively including cost in our discussions with patients and in shared decision-making. Insurers and employers need to consider how they will manage high-deductible plans going forward—particularly given the health impact on their employees."

A limitation of the study is the inherent bias created by using an administrative dataset. However, the study design (interrupted time-series framework and matching) helped minimize these limitations.

**More information:** *Circulation* (2021). [DOI: 10.1161/CIRCULATIONAHA.120.052501](#)

Provided by American Heart Association

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