

New tool helps doctors predict heart attack patients at risk for repeat hospitalization

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Some heart attack patients end up back in the hospital just weeks after going home. It can happen for a variety of reasons, but doctors haven't had a reliable way to predict which patients will return—until now.

Thanks to a new tool developed by researchers at the Intermountain Medical Center Heart Institute in [Salt Lake City](#), physicians now have a tool to help identify these patients. This will enable physicians to re-evaluate their treatment plans in the hopes of preventing future admissions.

"If you can identify these patients, you have a better chance of saving their lives," said Benjamin Horne, PhD, director of cardiovascular and [genetic epidemiology](#) at the Intermountain Medical Center Heart Institute and lead researcher for the study, which will be presented Nov. 5 at the [American Heart Association Scientific Sessions 2012](#) in Los Angeles.

Preventing hospital [readmission](#) among [heart attack patients](#) is also a key goal outlined in the [Affordable Care Act](#). Improving the personalization of medical care during an initial hospitalization is the most effective approach to preventing repeat visits to the hospital, but until now the medical evidence regarding who will return has been very limited. This new evidence-based tool provides a standard approach to assessing the likelihood that a heart attack patient will end up back in the hospital, allowing medical providers to re-evaluate their care plan.

Dr. Horne and his group at Intermountain Medical Center looked at 51 factors including age, gender, common blood test information, other health problems, a history of depression, [body mass index](#) and more. All this information is then compiled by the new tool—a sophisticated computerized algorithm—that calculates a [risk score](#) for each patient.

This is how the score works:

- Men are assigned a score between zero and 13. For each additional point on the scale, men have a 20 percent greater risk of re-hospitalization. So, for example, a man with a score of 13 would be 3.6 times more likely to return to the hospital than a man with a score of zero.
- Women are assigned a score between zero and 14. For each additional point on the scale, women have a 14 percent greater risk of having to return to the hospital. A woman with a score of 14 would be about 3 times more likely to be back than a woman who scored a zero.

Researchers said the factors that contributed the most information about re-hospitalization included patient age, the number of medications a patient was prescribed, the length of hospital stay when they had their [heart attack](#), a diagnosis of depression, and a diagnosis of atrial fibrillation.

"There's a saying in medicine: You manage what you measure," said Dr. Horne. "Right now no one has a way to accurately measure the information that these risk factors tell us about readmission and mortality risk. Our tool gives physicians a way to measure their patients' risk and possibly manage their care differently."

Provided by Intermountain Medical Center

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