

What makes patients more likely to land back in the hospital? Social factors play key role

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No patient who just got out of the hospital wants to end up there again soon. Whoever's paying their hospital bills doesn't want that either.

That's why the Medicare system has started penalizing hospitals with the highest readmission rates for certain conditions. But a new study suggests that unlike hospital gowns, such penalties should not be one-size-fits-all.

In fact, the study shows, certain social, economic, disability and personal-care factors can make a major difference in the readmission risk of people who were recently hospitalized for [heart failure](#), pneumonia or a [heart attack](#). And the factors that make the most difference vary greatly from condition to condition, and are largely not something a hospital can change through treatment.

For instance, pneumonia patients who already had trouble with multiple tasks like getting dressed or cooking food, or who needed paid help at home, before their [hospital stay](#) were the most likely of all [pneumonia patients](#) to be readmitted in the first 30 days after a hospitalization, the study shows.

But for patients with heart failure, that kind of functional difficulty didn't matter as much as money, family and race. Those who had a higher wealth level or [adult children](#) had a much lower chance of readmission—while simply being African American increased the risk of another hospital stay. And for heart attack survivors, the most

important factors boosting their chance of readmission were whether they had been in a nursing home before their hospital stay, and whether their hospital cared for a high percentage of minority patients.

The results, published in the *Journal of General Internal Medicine*, come from a team from the University of Michigan Medical School and Institute for Healthcare Policy and Innovation, and the VA Ann Arbor Healthcare System. They used data from the Health and Retirement Study, based at the U-M Institute for Social Research, and from Medicare, and looked at 10 measures of disability and what are called "social determinants of health".

A model to inform change

The resulting model of readmission risk they developed could be used to predict a patient's chances of readmission, and prompt hospitals to offer extra support such as transportation and home visits. At the same time, it could give the agency that runs Medicare a new tool for determining which hospitals truly have high readmission rates given the patients they treat.

Currently, Medicare adjusts its penalties based only on how sick a hospital's patients are; the more severely ill, the lower the penalty. The research team started with the existing Medicare adjustments and then added the patient's social determinants of health to assess their incremental value. But the new study looks at factors that the hospital can't control, such as patients' race, education, income, social and family support, difficulty taking care of themselves, and what environment they return to after a hospital stay.

Such factors have emerged in other research as crucial to a patient's overall chance of a good outcome. But they've never been studied for how their impact upon readmission risk may vary among people with the

same reason for their initial hospitalization.

"The relationship between [socioeconomic status](#), functional status and use of health care is not a simple or straightforward as people might think," says Jennifer Meddings, M.D., M.Sc., first author of the new paper and an assistant professor of [internal medicine](#) at U-M. "The impact is different depending on condition. We hope these findings will inform future adjustments in the models for readmission."

Penalize or reward?

Meddings notes that the Centers for Medicare and Medicaid Services, which runs Medicare and pays for the care of tens of millions of seniors and seriously disabled people, has opened the door for socioeconomic status to be considered in its programs. The National Academy of Sciences has convened a committee to evaluate evidence on the topic, and present it to CMS.

"In many ways, hospitals these days are being held accountable for the failures of the social safety net, as policies have been developed and implemented to evaluate the performance of hospitals and tie payment to that," says Meddings. "As these programs are refined, understanding the impact of social determinants of health will be crucial."

Accounting for the social determinants of health that could be helping or hurting a hospital's specific patient population could go two ways, she notes. Factoring these issues in to reduce or increase penalties is one way. But another would be to provide additional payment for the services that hospitals don't typically get paid for, such as hiring social workers to connect patients with social services and resources that can help them avoid another hospital stay. Patients who are "dual eligible" - old or disabled enough for Medicare, and poor enough for Medicaid - present a special challenge. The new study looked at Medicaid status but

the sample size wasn't large enough to determine if it played a role in readmission risk.

Meddings sees hope for using [social determinants](#) of health and disability level in health care payment, based on the fact that many of these measures are now captured in electronic medical records when a person arrives at a hospital or when they're being prepared to leave. CMS has traditionally used Medicare claims data - how much the hospital billed the system - but mining EHR data could prove fruitful if it can be done in a standard way, Meddings says.

But, she notes, just knowing that a patient has a spouse or adult children doesn't show how helpful those family members will be to the patient.

Meddings and her colleagues have started studying this same issue in Medicare patients who have had a joint replacement, since CMS has begun penalizing hospitals for high readmissions after a hip or knee replacement operation.

More information: *Journal of General Internal Medicine*, [DOI: 10.1007/s11606-016-3869-x](#)

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