

Study links social, community factors with hospital readmissions

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Factors like the level of poverty in a neighborhood, living alone, and age affect a patient's chances of being readmitted to a hospital after discharge, even after possible variations in quality of care in the hospital have been taken into account.

Those are the conclusions of a new study by Henry Ford Health System researchers who found links between readmission rates and social factors such as patients' [marital status](#) and neighborhood poverty, suggesting that readmissions are not just an issue of hospital quality.

The study appears in the May issue of *Health Affairs*.

"The use of readmission rate as a basis for financial penalties to hospitals assumes that readmissions are a result of poor-quality care," says Jianhui Hu, a research associate at the Henry Ford's Center for Health Policy and Health Services Research. "Our team found that there is much more to it than that.

"For example, patients living in a high-poverty neighborhood were 24 percent more likely than others to be readmitted. While the pathway from poverty to readmission risks is complicated and can be all different for different patients, things that happened after they were discharged from the hospital, at home or in the community, may put some patients in higher readmission risks."

The study noted that the proper role of readmission data as a measure of

hospital quality is under active debate in the [health care policy](#) arena. At issue is a provision of the Affordable Care Act (ACA) that established the Hospital Readmissions Reduction Program.

Under that program, the Centers for Medicare and Medicaid Services (CMS) began to reduce payments to hospitals with "excess" 30-day readmissions.

Earlier studies suggested that readmissions are a product of a complex set of factors, only one of which is [hospital quality](#) of care. Many of those studies used data collected from hundreds of hospitals nationwide, where it is often hard to separate effects of variables like poverty from effects of variations in the quality of care provided by hospitals serving low-income patients.

"Few of them identified and controlled for various hospital-specific factors that might be related to readmission, such as staffing, organizational structure, discharge-planning protocols and the hospital's role in an integrated system of care," Hu explains.

So her team set out to examine the issue using data from a single urban institution – Henry Ford Hospital in Detroit – to determine the effects of patients' socioeconomic status under a single, fixed organizational and staffing structure and standard care protocols for patients of all types.

Drawing on the hospital's data bank, they identified all Medicare fee-for-service patients age 65 and older who were discharged from the hospital during 2010.

After excluding patients who died in the hospital, were discharged against medical advice or were hospitalized for certain special treatments, the researchers finalized a study group of 4,646 unique patients.

Using in-house data to determine each patient's age, sex, race, marital status, street address and diagnosis, the researchers mapped patients' addresses to census data to determine their neighborhood socioeconomic factors, including percentage of families with incomes below the [federal poverty level](#), median household income and percentage of the population older than 25 without a [high school diploma](#).

Their mean age was 77, and black patients made up the majority of the study group. On average, patients lived in [neighborhoods](#) where nearly 30 percent of people age 25 and older lacked a high school diploma, 17 percent of households had incomes below [poverty level](#) and the median household income was about \$38,000.

Eighty percent of the 4,646 patients had no 30-day readmissions during the year, and 5 percent had multiple readmissions.

Besides the greater likelihood that patients living in high poverty neighborhoods would be readmitted, they found:

- Married patients were significantly less likely to be readmitted, suggesting they had more social support than unmarried patients.
- Older and male patients were more likely to have at least one readmission compared to young and female patients.
- Patients discharged with congestive heart failure and acute myocardial infarction and those with certain types of diseases, such as end-stage liver disease, acute renal failure, diabetes and malnutrition, were at significantly higher risk of being readmitted than patients without those conditions.

These findings suggest that effects of social factors at the patient and community levels were not confounded with variations in hospital resources. Study results should add to the ongoing debate about possible refinements to the CMS readmissions measure for [hospital](#)

reimbursement, Hu says, and speak to the first of three questions raised by those who challenge the fairness of the CMS readmission penalties:

- Are demographic and socioeconomic factors empirically associated with risk of readmission?
- Do some hospitals treat a disproportionate share of patients who are at higher risk for readmission?
- Should hospitals be responsible for taking actions to address socioeconomic disparities in risk of readmission and if so, is there a limit on what they should or can do?

"Whether hospitals should be held accountable for the effects of poverty, illiteracy, lack of proficiency in English or lack of social support in the [patients](#) and communities they serve has not yet been resolved," Hu says.

"Our findings underscore the importance of reaching consensus on this issue and, if appropriate, changing the risk-adjustment models, related penalties or both."

More information: Paper: content.healthaffairs.org/content/33/5/778.abstract

Provided by Henry Ford Health System

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