Rehospitalization in younger patients

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Older adults often are readmitted after hospitalization for heart failure, pneumonia, and acute myocardial infarction, a significant issue that has caused Medicare to target hospitals with high 30-day readmission rates for financial penalties. Older adults are also often admitted for reasons other than the original hospitalization. This vulnerability to readmission has been referred to as "post-hospital syndrome." However, whether younger patients also experience a similar pattern of readmission has not been well studied.

In a large cohort study, Isuru Ranasinghe and colleagues (Yale-New Haven Hospital, New Haven, CT, USA) used California's Healthcare Cost and Utilization Project inpatient dataset, which included 206,141 hospitalizations for heart failure, 107,256 for myocardial infarction, and 199,620 for pneumonia from 2007 to 2009. They found that patients aged 18-64 years had higher readmission rates for heart failure than patients aged ≥65 years (23.4% vs. 22.0%), and lower readmission rates for myocardial infarction (11.2% vs. 17.5%) and pneumonia (14.4% vs. 17.3%). After they adjusted for the confounding factors of sex, race, comorbidities, and payer status, they found that readmission rates between the groups were very similar (for heart failure readmission in younger compared with older adults, hazard ratio [HR] 0.99; 95%CI 0.97-1.02; for pneumonia, HR 0.97; 95%CI 0.94-1.01; and for myocardial infarction, HR 0.92; 95%CI 0.87-0.96). For older and younger patients, the timing of readmission was similar; readmission risks were highest between days 2-5 post-discharge. Similar to older patients, younger patients often were readmitted for reasons other than the original hospitalization: among those with heart failure, 39-44% of

readmissions were not heart-related; for myocardial infarction, 37-45% were not heart-related, and for pneumonia, 61-64% were not pulmonary related.

In addressing this similarity in readmission patterns, the authors note, "patients aged 18+ years, like those aged ≥65 years, may also experience a post-hospital syndrome," a transient period of generalized vulnerability. The authors further note, "...recent policy changes such as the Hospital Readmissions Reduction Program have incentivized interventions to reduce readmissions by enforcing financial penalties on hospitals with high readmission rates. Many of these targeted interventions are aimed at elderly patients. Our finding of a generalized risk of readmission, and broad yet predictable readmission diagnoses and timing, strongly suggests the need for development of more broad-based multi-disciplinary strategies to mitigate this risk." Younger patients were more likely to have comorbidities of drug and alcohol use and psychiatric disorders, although these were not the primary reasons for readmission. The authors conclude, "While readmission is often perceived as a problem among elderly patients, our data suggests that readmission should be considered"—in US policies that have emphasized readmissions of elderly patients only and by researchers and clinicians—"as a broader issue that extends to all hospitalized patients."

More information: Ranasinghe I, Wang Y, Dharmarajan K, Hsieh AF, Bernheim SM, et al. (2014) Readmissions after Hospitalization for Heart Failure, Acute Myocardial Infarction, or Pneumonia among Young and Middle-Aged Adults: A Retrospective Observational Cohort Study. *PLoS Med* 11(9): e1001737. DOI: 10.1371/journal.pmed.1001737

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