

# Role of chronic medical conditions in readmissions

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Researchers cite identification and monitoring of known underlying chronic medical conditions as opportunities to reduce readmission rates and improve patient safety.

Not only are hospital readmissions a costly problem for patients and for the health care system, with studies showing nearly 20 percent of Medicare patients are readmitted to the hospital at an annual cost of \$17 billion, but they also pose a significant opportunity for improved patient care and safety. They also represent a complex, multi-faceted issue that still needs to be better understood. In new findings from Brigham and Women's Hospital (BWH), researchers find that the most frequent reasons for [readmission](#) were often related, either directly or indirectly, to patients' underlying chronic [medical conditions](#) (comorbidities), providing a new opportunity for focus in reducing readmission rates. This research is published online in the *British Medical Journal* on December 16, 2013 and will appear in the January print edition.

"We know that the reason for readmission is often different from the reason that the patient was initially hospitalized. Our research shows that the five most frequent reasons for readmission were often related to patients' existing chronic medical conditions, underscoring the need for post-discharge care to focus attention not just on the primary diagnosis of the previous hospitalization but also on these comorbidities," said Jacques Donzé, MD, MSc, a research associate in the Division of General Internal Medicine at BWH and lead author of the new research.

Researchers evaluated the primary diagnoses and patterns of 30-day readmissions and potentially avoidable readmissions according to seven most common comorbidities in medical patients (chronic heart failure, ischemic heart disease, atrial fibrillation, diabetes mellitus, cancer, chronic obstructive pulmonary disease, and chronic kidney disease). They analyzed data from 10,731 discharges, of which, 2,398 or 22 percent, were followed by a 30-day readmission at three hospitals within the same hospital network. Among the readmissions, 858, or 8 percent, were categorized as potentially avoidable.

Among the potentially avoidable readmissions, the overall three most common reasons for readmission were infection, cancer and heart failure. Heart failure and infection were the two most frequent main readmission diagnosis for the seven chronic medical conditions studied, accounting for 21 to 34 percent of all potentially avoidable readmissions. Interestingly, almost all of the top five diagnoses of potentially avoidable readmissions for each comorbidity were possible direct or indirect complications of that comorbidity. For example, patients discharged with a comorbidity of cancer were most frequently readmitted for care of their cancer or possibly related complications like infection, metabolic disorder, gastro-intestinal disorder, or renal failure. Heart failure was the most frequent main readmission diagnosis for patients with five of the seven chronic medical conditions studied.

Particularly important, researchers note that patients with cancer, [heart failure](#), and chronic kidney disease had a significantly higher risk of potentially avoidable readmission than those without those comorbidities.

"Transitions of care should not only focus on the acute condition responsible for the hospitalization, but also on patients' underlying chronic conditions that may increase the risk of new, acute complications," said Donzé. "Our research suggests that interventions

could include close follow-up and monitoring of patients' comorbidities in the post-discharge period, when we know that [patients](#) are particularly vulnerable."

**More information:** [www.bmj.com/content/347/bmj.f7 ...  
ceDAQvkx&keytype=ref](http://www.bmj.com/content/347/bmj.f7...ceDAQvkx&keytype=ref)

Provided by Brigham and Women's Hospital

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