The association between hospital volume and processes, outcomes, and costs of care for congestive heart failure

The Association Between Hospital Volume and Processes, Outcomes, and Costs of Care for Congestive Heart Failure

Abstract

Background: Congestive heart failure (CHF) is common and costly, and outcomes remain suboptimal despite pharmacologic and technical advances.

Objective: To examine whether hospitals with more experience in caring for patients with CHF provide better, more efficient care.

Design: Retrospective cohort study.

Setting: 4095 hospitals in the United States.

Patients: Medicare fee-for-service patients with a primary discharge diagnosis of CHF.

Measurements: Hospital Quality Alliance CHF process measures; 30-day, risk-adjusted mortality rates; 30-day, risk-adjusted readmission rates; and costs per discharge. National Medicare claims data from 2006 to 2007 were used to examine the relationship between hospital case volume and quality, outcomes, and costs for patients with CHF.

Results: Hospitals in the low-volume group had lower performance on the process measures (80.2%) than did medium-volume (87.0%) or high-volume (89.1%) hospitals (P < 0.001). In the low-volume group, being admitted to a hospital with a higher case volume was associated with lower mortality, lower readmission, and higher costs. Similar, though smaller, relationships were found between case volume and both mortality and costs in the medium- and high-volume hospital groups.

Limitations: Analysis was limited to Medicare patients 65 years or older. Risk adjustment was performed by using administrative data.

Conclusion: Experience with managing CHF, as measured by an institution’s volume, is associated with higher quality of care and better outcomes for patients but a higher cost. Understanding which practices employed by high-volume institutions account for these advantages can help improve quality of care and clinical outcomes for all patients with CHF.

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