

Inpatient Resource Utilization: Effect of Physician Specialty and Experience

Parekh V, Saint S, Furney S, et al. What effect does inpatient physician specialty and experience have on clinical outcomes and resource utilization on a general medical service? *J Gen Intern Med* 2004;19(5 Pt 1):395–401.

Study Overview

Objective. To examine internal medicine specialty and physician experience on inpatient resource use and clinical outcome in an academic general medicine service.

Design. Retrospective cohort study.

Setting and participants. 2599 admissions from July 2001 to June 2002 with complete data from 4 general medical services at the University of Michigan Hospitals in Ann Arbor, MI, were evaluated.

Main outcome measures. Resource utilization was measured using length of stay (LOS) and total hospital costs. Clinical outcomes were measured using hospital mortality and 14-day and 30-day readmission rates.

Main results. When compared with general internists, rheumatologists and endocrinologists had a significantly greater adjusted mean LOS (0.56 days more; $P = 0.002$ and 0.38 days more; $P = 0.03$, respectively). Total hospital costs were lower for general internists when compared with endocrinologists (\$1100 lower; $P = 0.03$), and a trend to lower costs was observed when compared with rheumatologists (\$431 lower; $P = 0.07$). Compared with all other physicians, hospitalists showed a trend toward reduced LOS (0.31 days less; $P = 0.07$). Physicians in the top 2 deciles of general medicine inpatient experience showed significantly reduced LOS compared with all other physicians (0.35 days less; $P = 0.04$). No significant differences were seen in readmission rates of in-hospital mortality among the various groups of physicians.

Conclusion. General internists had lower LOS and costs when compared with endocrinologists and rheumatologists. Hospitalists tended to have reduced LOS as compared with all other physicians. Recent experience in general medicine inpatient service appears to be associated with reduced inpatient resource use.

Commentary

Inpatient medical care delivery has changed substantially with the advent of hospitalists over the last several years [1]. These physicians traditionally spend 25% or more of their time caring for hospitalized patients, and their ranks are projected to increase [1,2]. Previous studies have demonstrated that hospitalists decrease LOS, reduce hospital costs, and possibly reduce short-term mortality [1,3,4]. Parekh and colleagues have reaffirmed that hospitalists use less resources, but they were unable to demonstrate reduced mortality or readmission rates. The most interesting aspect of this study is the additional analyses relating experience to decreased patient LOS.

In their initial analysis, Parekh and colleagues noted that 3 months of inpatient experience during the study year showed a trend toward decreased LOS. When they broadened the definition of total inpatient experience to include any inpatient experience in the study or prior year, a significantly reduced adjusted LOS was observed. Interestingly, the broader definition used was only 5 inpatient service months over 2 years, a lower threshold than used in previous studies. Furthermore, in this analysis, specialty inpatient experience was not associated with reduced LOS, implying that experience with general medicine patients may be an important factor in developing efficient practice patterns. Generalization of these findings to nonacademic hospitals may be limited.

Applications for Clinical Practice

In one academic hospital, inpatient general medicine experience is associated with more efficient use of resources by physicians as evidenced by decreased LOS. It seems benefits may be seen with as few as 5 months of service over 2 years. However, short-term mortality and readmission rates did not show improvement, suggesting other outcome measures may be necessary to better assess quality of care by hospitalists.

—Review by Mark S. Horng, MD

References

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