

Effect of Experienced Hospitalist Care on Mortality, Cost, and Length of Stay

Auerbach AD, Wachter RM, Katz P, et al. Implementation of a voluntary hospitalist service at a community teaching hospital: improved clinical efficiency and patient outcomes. *Ann Intern Med* 2002;137:859–65.

Study Overview

Objective. To determine whether hospitalist care in a community hospital setting improves patient outcomes and resource use and whether these effects change over time.

Design. Retrospective cohort study.

Setting and participants. 5308 patients admitted to an urban community-based teaching hospital. Patients were cared for either by their community physician or a voluntary hospitalist service, which began operating at the beginning of the 2-year study period.

Main outcome measures. Length of stay, costs, 10-day readmission rates, use of consultative services, in-hospital mortality rate, and mortality rate at 30 and 60 days.

Main results. Patients of hospitalists tended to be younger (65 versus 74 years; $P < 0.001$). Hospitalist patients also were more likely to be of black than of white ethnicity (33.3% versus 17.9%; $P < 0.001$), to have Medicaid insurance (25.1% versus 10.2%; $P < 0.001$), and to receive intensive care (19.9% versus 15.8%; $P < 0.001$) than patients of community physicians. These differences were entered into multivariable models examining length of stay, cost, and mortality. In year 1, there were no differences in length of stay or cost. In year 2, patients of hospitalists had shorter stays (0.61 day shorter; $P = 0.002$) and lower costs (\$822 lower; $P = 0.002$). In-hospital patient mortality was improved for patients under hospitalist care (adjusted relative hazard, 0.71 [95% confidence interval, 0.54–0.93]) and at 30 and 60 days of follow-up.

Conclusion. Care by hospitalist physicians at a community-based teaching hospital improved clinical efficiency by reducing costs and shortening lengths of stay. This effect was significant only in the second year of operation. Hospitalist care also was associated with reduced patient mortality.

Commentary

Patient care by hospitalists (physicians specializing in inpatient medicine) is a new phenomenon. Hospitalists' greater

experience with inpatient care may lead to better patient outcomes, improved clinical efficiency, or both. However, many criticize this care model because of discontinuity, as the patient is handed off from their outpatient provider to the hospitalist and back for every admission. Most of the previous studies of hospitalist care have been conducted in teaching hospitals, where a layer of housestaff makes interpretation of the results difficult. Others have suffered from the lack of concurrent control or short follow-up period. Nevertheless, the published studies are largely supportive of hospitalist care, showing decreased costs and in one case, reduced readmission rates [1–4]. Auerbach and colleagues' study conducted at an urban community teaching hospital adds the provocative finding that hospitalist systems improve significantly in the second year of operation and are associated with a lower mortality rate both during hospitalization and following discharge.

The current study may be the best evidence to date that hospitalist systems work well and may even become the preferred approach to inpatient care. However, it is unlikely that these findings will close the book on the current debate. Potential selection bias and residual confounding weaken the authors' conclusions. Most troubling are the extensive baseline differences between the patients cared for by hospitalists and community physicians. While many of these differences actually implied greater acuity of illness (hospitalists cared for more patients with Medicaid or requiring intensive care), other important differences could be unmeasured and confounding the association between hospitalist care and improved outcomes. Did community physicians or patients choose hospitalist care because they desired the most aggressive treatments? Did patients requiring palliative, end-of-life care remain with their outpatient physician? These potential differences may be partially accounted for by adjusting for case-mix and discharge disposition, but residual confounding is possible. A randomized controlled trial would best account for the many unmeasured predictors, but this design may never be politically or ethically tenable.

Applications for Clinical Practice

In summary, health systems that wish to implement a hospitalist system of care have a consistent and growing body of

evidence to support this action. Weaknesses in this body of evidence also allow community physicians to continue to argue that their inpatient care is not proven to be of lower quality.

—Review by Josh F. Peterson, MD, MPH

References

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