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## A New Home Awaits the Hospitalist

In this issue of the *Journal of Hospital Medicine*, Simon et al.<sup>1</sup> provide the first report of pediatric hospitalist comanagement of patients undergoing spinal fusion surgery. In this retrospective cohort study, 14 of 115 patients were comanaged by a pediatric hospitalist. The primary outcomes of the study were length of stay and variability in length of stay. Prior to the initiation of hospitalist comanagement service, all patients were managed preoperatively by a spine surgery nurse and aided by medical subspecialists and other allied health professionals (nutritionists, respiratory therapists, physical therapists, social workers). After the intervention, patients with the most complex medical disease were assigned to comanagement by a pediatric hospitalist. When compared to a historical control of patients with similar medical complexity but not comanaged by hospitalists, the length of stay was reduced by 2.4 days (8.6 vs. 6.2 days). The variability in mean length of stay was also reduced.

This study follows on the heels of 3 important studies addressing the utility of hospitalists in the comanagement of surgical patients. The HOT (Hospitalist Orthopedic Team) trial was a randomized controlled trial assessing the effect of hospitalists on the management of patients undergoing elective hip and knee arthroplasty.<sup>2</sup> There was no effect on length of stay or patient outcomes, though the comanagement model did decrease minor postoperative medical complications and improve physician and nurse satisfaction. Macpherson et al. conducted a retrospective trial where an internist joined a cardiothoracic surgery service at a tertiary-care center.<sup>3</sup> They found a decrease in overall mortality and resource utilization such as labs testing and consultations. There was significant reduction in the length of stay and number of x-rays performed. The third study, by Jaffer et al.,<sup>4</sup> showed that an outpatient, preoperative evaluation clinic staffed by hospitalists at a large tertiary-care center provides a practical model for managing preoperative patients and may be associated with a low rate of postoperative pulmonary complications.

The study by Simon et al. in this issue of the journal has limitations. It is a retrospective cohort trial, and like all such study designs, the validity of the results is subject to confounding. Severity of patient medical disease, intraoperative complications, and advances in surgical technique are examples. While the authors did everything possible to minimize the effect of confounding, it remains a limitation of the study. The study also enrolled only 14 patients in the comanagement group, and this limited any stratification or subgroup analysis to offset known confounders. Patients assigned to the hospitalist comanagement service were by design more medically complex than other spinal fusion patients, and generalizing the results of this trial to all spinal fusion patients may not be possible.

From the study's limitations, however, comes great insight into the role of the hospitalist in surgical comanagement. It is clear from the aforementioned studies that there is a role for the hospitalist in comanagement of surgical patients. While the evidence is conflicting, there are scenarios in which comanagement improves efficiency and quality of care. Yet it is also possible that hospitalist comanagement is not ideal for all surgical patients. The HOT trial did not show benefits in length-of-stay reduction or patient mortality because the patients were homogenous in their complexity and pre- and postoperative care was protocol driven. Length of stay was limited by accessibility of rehabilitation facilities after discharge and not the efficiency of medical care in the hospital. The study in this issue of the *Journal of Hospital Medicine* selectively included patients with the highest complexity of medical disease, and there was a reduction in length of stay. Both trials suggest that the greatest potential benefit for augmenting efficiency and outcomes with hospitalist comanagement may be predicated on the complexity of the patients involved and the surgical system through which they will receive care.

The next step in assessing hospitalist comanagement should not be a hunt-and-peck exercise to stumble on the surgical procedures that show benefit from comanagement. Rather, the prudent next step is to follow the lead of Simon et al. and others<sup>3,4</sup> in trying to identify those surgical patients who represent the greatest medical complexity or have the most variability in their preoperative and postoperative medical care. These are the patients for whom the hospitalist can effect the greatest benefit and the services for which the hospitalist can best augment efficiency. High-risk procedures, patients with multiple comorbidities or elevated preoperative risks, and surgical procedures without defined pre- and postoperative protocols would appear to be the ideal candidates for hospitalist comanagement.

As the discussion of hospital comanagement progresses, it is important to recognize comanagement as a paradigm shift. Surgical comanagement is not merely medical consultation. To be successful, the role of the hospitalist in comanaging surgical patients must be clearly defined as advancing postoperative care as much as it is in assessing preoperative risk. As a comanager, a hospitalist must actively manage preexisting and newly developed medical issues rather than just make recommendations for the surgical team.

The hospitalist must also be more than a dis-

charge coordinator postoperatively; investing in hospitalists merely for discharge planning is a poor use of resources both from a financial and an opportunity-cost perspective. The paradigm of comanagement is not foreign, however, and hospitalists are likely to prosper by learning from the experience of our nephrology and hepatology colleagues, who have successfully found collaborative roles in improving patient care on renal and liver transplant services. The success of these services is due to the precisely defined roles for the internist and the surgeon and because the complexity of the patient being managed warrants continuity of expert consultation.

There is great potential for the hospitalist in surgical comanagement. In less than a decade, the focus of hospital-based medical care has shifted from staffing a shift to improving the quality of the system through which patients traverse the hospital. The lessons hospitalists have learned in quality improvement and in augmenting systems of care are perfectly suited for application to surgical services. Hospitalist comanagement is right not only because it may offer improvement in a surgical patient's medical care, but also for the augmentation of quality improvement in surgical services that have yet to reap the benefits that have defined the excellence of hospitalist medicine. The next step is to embark on the road of prudent prospective research: identifying the patients, and the procedures, that have the greatest opportunity for improvement by hospitalist comanagement. And at the end of that road will be a new home for the hospitalist, assuming the role of the quality-advocate for all aspects of hospital care: pediatric, medical, and surgical patients.

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## REFERENCES

1. Simon TD, Eilert R, Dickinson LM, Kempe A, Benefield E. Pediatric co-management of spine fusion surgery patients. *J Hosp Med.* 2007;2:23-30.
2. Huddleston JM, Long KH, Naessens JM, et al.; Hospitalist-Orthopedic Team Trial Investigators. Medical and surgical comanagement after elective hip and knee arthroplasty: a randomized, controlled trial. *Ann Intern Med.* 2004;141(1):28-38.
3. Macpherson DS, Parenti C, Nee J, Petzel RA, Ward H. An internist joins the surgery service: does comanagement make a difference? *J Gen Intern Med.* 1994;9:440-444.
4. Jaffer, AK, Brotman, DJ, Sridharan, ST, et al. Postoperative pulmonary complications: experience with an outpatient pre-operative assessment program. *J Clin Outcomes Manag.* 2005;12:505-510.