

# Just Because You Can, Doesn't Mean That You Should: A Call for the Rational Application of Hospitalist Comanagement

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Medical comanagement has become a mainstay of hospital medicine. Several studies, however, suggest that medical consultation and comanagement may not be as effective as originally anticipated. The expansion of comanagement services has helped fuel massive demand for hospitalists and with it a critical and potentially destabilizing hospitalist manpower shortage. Comanagement may also drive unanticipated consequences such as facilitating surgeon and specialist disengagement and hospitalist career dissatisfaction and burnout. Comanagement services should be developed carefully and methodically, paying close attention to consequences, intended and unintended. *Journal of Hospital Medicine* 2008;3:398–402. © 2008 Society of Hospital Medicine.

**A**t a hospital at which I work, every patient who presents to the emergency department with a suspected stroke or transient ischemic attack is evaluated by the stroke team. Per protocol, the team rapidly assesses each patient, orders diagnostic and therapeutic interventions . . . and then refers each and every patient to the hospitalist service for admission and “medical comanagement”. At no point is any consideration given to whether the patients actually have medical comorbidities, or if a hospitalist will have anything meaningful to add to the care. The firmly set expectation is that hospitalists admit all stroke patients for the purposes of “comanagement”, while the neurologists “consult”.

Comanagement has become a mainstay of hospital medicine.<sup>1</sup> It is predicated upon the assumption that surgical and specialty patients benefit when their medical comorbidities are managed by hospitalists. It differs conceptually from traditional medical consultation in that hospitalists collaboratively manage patients with surgeons or specialists, sharing responsibility and authority. In practice, however, comanagement varies widely, ranging from a model of care indistinguishable from traditional medical consultation to one where hospitalists admit and assume primary responsibility for surgical and specialty patients. This variability makes it difficult to study and make generalizations about the role and impact of hospitalist comanagement. Nonetheless, recent evidence suggests that hospitalist consultation and comanagement may not be as effective as originally anticipated.

In a 2008 observational cohort study of patients undergoing surgery at an academic medical center, Auerbach et al demonstrated that medical consultation (provided by hospitalists) did

not improve glycemic control or increase the likelihood of perioperative beta-blockade and venous thromboembolism prophylaxis.<sup>2</sup> Patients who received consultation had longer adjusted lengths of stay (12.98% longer; 95% confidence interval, 1.61%-25.61%) and higher adjusted costs (24.36% higher; 95% confidence interval, 13.54%-36.34%). Notwithstanding the limited generalizability of this study to community hospitals, it has raised concerns that hospitalist consultation does not automatically improve quality of care or cost effectiveness.<sup>3</sup>

Several other recent trials have also helped to define where hospitalist comanagement may work well and where it may not. In 2004, Huddleston et al published the Hospitalist Orthopedic Team (HOT) trial, the first randomized prospective trial comparing hospitalist-surgical comanagement to standard care.<sup>4</sup> A total of 526 patients undergoing elective hip or knee replacement surgery at the Mayo Clinic were randomized to either standard orthopedic care with consultation as needed, or immediate hospitalist comanagement. The outcomes were disappointing. Hospitalist comanagement reduced minor complications (such as incidence of urinary tract infections, fever, and hyponatremia) but had no effect on moderate or major complications. The HOT intervention modestly reduced adjusted length of stay (LOS), defined as the point at which patients were deemed stable for discharge, by 0.5 days, but had no impact on actual LOS or cost per case. Not surprisingly, orthopedic surgeons and nurses preferred the HOT model of care over the standard model. One year later, Phy et al analyzed outcomes for patients admitted with hip fracture at the same institution.<sup>5</sup> This retrospective cohort study compared patients who were admitted to either a standard orthopedic service or to a hospitalist team. In contrast to the HOT trial, hospitalist comanagement of hip fracture patients decreased time to surgery and lowered LOS by 2.2 days without compromising patient outcomes.

How did two trials that occurred roughly simultaneously at the same hospital, involving the same hospitalists and orthopedic surgeons generate such different outcomes? A likely answer is patient selection. Patients who undergo elective joint replacement are usually relatively healthy. They are almost always ambulatory and their comorbidities, when present, are generally reasonably compensated. As a rule, they fare well post-

operatively, as evidenced by the 1.3% major complication rate demonstrated in the HOT trial.<sup>3</sup> In contrast, hip fracture patients are older, have greater comorbidity and are at remarkably high risk for developing perioperative delirium.<sup>3,4,6</sup> By definition, their urgent/emergent hip surgery stratifies them to a higher operative risk category than patients who undergo elective joint replacement.<sup>7</sup> Half of hip fracture patients do not return to pre-morbid levels of function, and the 1-year mortality rate has been estimated to be as high as 25%.<sup>6,8</sup> Given these differences, it is not surprising that hip fracture patients are more likely than elective joint replacement patients to respond favorably to hospitalist comanagement.

In 2007, Simon et al published a retrospective study of 739 pediatric spinal fusion patients at Childrens' Hospital in Denver.<sup>9</sup> Beginning in 2004, hospitalists comanaged selected, high-risk surgical patients (14 of 115 spinal fusion patients, or 12%). Over the course of the study, the mean LOS for low-risk patients decreased by 21% but the mean LOS for the high-risk, hospitalist-comanaged patients decreased by 28%; a 33% relative reduction favoring hospitalist-managed patients. By targeting selected high-risk patients, pediatric hospitalists were able to improve upon LOS reductions that occurred systemically across the entire spinal fusion program. Also in 2007, Southern et al compared outcomes for 2,913 patients admitted by full-time teaching hospitalists vs 6,124 patients admitted by nonhospitalists at Montefiore Medical Center, Bronx, New York.<sup>10</sup> Mean LOS for patients admitted to the hospitalist service was 5.01 days vs 5.87 days for the nonhospitalists. Subgroup analysis demonstrated the greatest LOS differentials for patients requiring close clinical monitoring (heart failure, stroke, asthma, or pneumonia) or complex discharge planning.

Although these studies, performed at large academic medical centers, may have limited generalizability, they support the common-sense notion that hospitalists most benefit patients who are sick, frail, and medically or socially complex. As a corollary, hospitalists probably offer relatively little benefit to surgical and specialty patients who are young or have compensated medical comorbidities and/or straightforward disposition plans. The enormous variability across healthcare institutions makes it difficult if not impossible to define a patient acuity or complexity cutoff below which hospitalist comanagement is unlikely to be beneficial. Nonetheless, some degree of common

sense can be applied. As a case in point, a hospitalist probably adds little value to the care of a basically healthy patient with a hemodynamically stable upper gastrointestinal bleed. Despite this, in many institutions, hospitalists admit or manage all gastroenterology patients, irrespective of their diagnosis, acuity, or complexity.<sup>11</sup>

One can even hypothesize that hospitalist comanagement may potentially inject risk into patient care. Admitting that patient with a stable upper gastrointestinal bleed to a hospitalist service may delay the gastroenterologist's involvement and initiation of the necessary endoscopy. Having assumed that the hospitalist is running the show, the gastroenterologist may pay insufficient attention to the patient. The hospitalist and gastroenterologist may give conflicting orders and reports that confuse patients, families, and hospital staff, ultimately increasing the likelihood of medical errors.

Ultimately, the risks inherent in adding complexity into patient care must be balanced against the potential benefits. For patients who are sick, frail, or complicated, the risk-benefit ratio probably tilts in favor of comanagement. However, for generally healthy patients, it is conceivable that adding complexity negates (or worse yet, exceeds) the putative benefits of comanagement.

Given the potential limitations of hospitalist comanagement, why are hospitalists admitting or managing broad and unselected populations of surgical and specialty patients? Hospital leaders have suggested that hospitalist comanagement may protect overstretched surgeons and specialists and extend their capacity. A hospital with only one neurosurgeon on staff might reasonably ask its hospitalists to primarily manage carefully selected low-acuity neurosurgical patients, allowing the neurosurgeon to serve as a consultant. However, in communities where specialists and surgeons are abundant, this justification is less credible. In such cases, it is difficult not to suspect that the primary reason that hospitalists admit surgical and specialty patients is to enhance the income and quality of life of the surgeons and specialists.

Expanding hospitalist comanagement services for no other reason than to keep specialists and surgeons happy might be justifiable if hospital medicine was not faced with its own critical manpower shortage. Hospital medicine is expected to grow from approximately 20,000 current practi-

tioners to more than 40,000 within a decade.<sup>12</sup> The growing shortage of qualified hospitalists has become a preoccupation for hospitalist employers across the country.<sup>13</sup> At its 2006 strategic planning retreat, the Board of Directors of the Society of Hospital Medicine identified this issue as one of the greatest threats to the future health of hospital medicine.<sup>14</sup> Demand for hospitalists will not abate for at least a decade, which will leave many hospitalist programs significantly understaffed for the foreseeable future. Understaffing forces hospitalist programs to lower hiring standards, jeopardizes patient care, accelerates physician burnout, and may ultimately destabilize hospital medicine.<sup>15</sup> Understaffed hospitalist programs should be very circumspect about how and where they expand their clinical coverage.

Another principle underlying hospitalist comanagement is that it improves care by allowing surgeons and specialists to focus on their areas of expertise. Surgeons and specialists who do not have to manage their patients' medical issues can presumably spend more time focusing on their own disciplines. Although this argument is conceptually appealing, there is no evidence that this actually occurs. In fact, it is equally conceivable that hospitalist comanagement could jeopardize care by disengaging surgeons and specialists from their patients' progress (or lack thereof). Furthermore, evidence suggests that hospitalists are underprepared to manage diagnoses that have historically been the purview of surgeons and specialists. Practicing hospitalists who manage acute neurological and neurosurgical conditions, orthopedic trauma, and acute psychiatric illnesses have reported relative undertraining in all of these disease states.<sup>10,16</sup> Generally, hospitalists are expected to deliver this care in the absence of any regime to assess their competence, provide targeted training to fill knowledge gaps, and monitor their progress. At minimum, this should raise concerns about the quality and consistency of care that hospitalists provide to nonmedical patients.

Finally, working collaboratively with other specialties should be a major professional benefit of comanagement. In well-designed comanagement arrangements, hospitalists and specialists work equitably under clearly defined and mutually agreed upon rules of engagement. They share responsibility for patients, collaborate to improve care, and teach and learn from each other. Unfor-

tunately, in many instances, the power structure becomes lopsided, with surgeons and specialists dictating how, when, and why hospitalists manage their patients.<sup>17</sup> Emergency departments have learned to default surgical and specialty patient admissions to hospitalists when surgeons and specialists balk. Hospital administrations may tacitly or overtly expect their financially subsidized hospitalists to cheerfully accept any and all referrals, irrespective of how inappropriate they may be. Practicing hospitalists frequently complain about their subordinate status and inability to control their working conditions, both of which are identified risk factors for career dissatisfaction and burnout.<sup>14,16,18</sup> Once again, as a specialty facing a critical manpower shortage, hospitalist programs should be very attuned to defining work conditions that foster career satisfaction and physician retention.

### REFRAMING COMANAGEMENT

The history of healthcare is laden with examples of new ideas that were widely and indiscriminately adopted only to subsequently fail to withstand rigorous scrutiny.<sup>19,20</sup> The unchecked expansion of hospitalist comanagement has the potential to become another case in point. In the absence of clear definitions of comanagement and good evidence to define best practices, hospitalists are left to use their best judgment to define the parameters of their comanagement services. At minimum, hospitalist leaders should ask some basic questions as they ponder potential comanagement relationships:

- Why are we being asked to provide this service?
- Do the patients have comorbidities that require our input?
- Is there a legitimate quality or efficiency case to be made to support our participation?
- Do we have the manpower to provide the service? If not, what will suffer as a result?
- Will the relationship be equitable?
- What might go wrong?

Comanagement is an appealing construct that has grown to fill many niches of healthcare delivery.<sup>10</sup> Given compelling reasons to be skeptical about the purported benefits of comanagement, hospitalists should be circumspect about how and where they offer such services. Comanagement should be applied carefully and methodically, paying close attention to the consequences, intended and unintended. Applying comanagement in a

rational, evidence-based, and sustainable fashion will ultimately better serve patients, the healthcare community, and hospital medicine.

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