

Hospitalists: Evidence-based medicine or just another mirage?

The rapid rise of hospitalists in the US over the past ten years is a testament to the power and peril of evidence-based decision making in health care management. The term “hospitalists” was first coined in 1996 to refer to generalist physicians who only care for hospitalized patients. After some initial evidence of relative cost-effectiveness in the *Journal of the American Medical Association* and other sources, the number of hospitalists in the US has ballooned to 12,000 and is soon expected to rival the number of cardiologists in the country.¹ In December of 2007, however, a more comprehensive retrospective cohort study in the *New England Journal of Medicine* suggests that the impact of hospitalists on cost and quality of care is less substantial than previously thought. Closer examination of the available data suggests that hospital administrators should be cautious about the sustainability of hospitalist programs, and more fundamentally, that evidence-based medicine can only be as good as the evidence itself.

The origins of the hospitalist movement can be traced to an article by Robert Wachter and Lee Goldman in *NEJM* in 1996.² In this article, the authors outline the need for physicians that specialize in inpatient hospital care. By working only in the hospital, hospitalists can focus on developing the best practices for hospital care and can help patients navigate the hospital faster, thus reducing the length of stay. These benefits of

¹ Lindenaer, PK et al. “Outcomes of Care by Hospitalists, General Internists, and Family Physicians.” *New England Journal of Medicine*. 2007; 357:2589-2600.

² Wachter RM, Goldman L. “The emerging role of ‘hospitalists’ in the American health care system.” *New England Journal of Medicine*. 1996 Aug 15;335(7):514-7.

reduced cost and improved quality are particularly important to hospital administrators because of managed care's emphasis on efficiency and because of other pressures to reduce hospital errors and to reduce workload for medical residents. As a result, Wachter and Goldman "anticipate the rapid growth of [this] new breed of physicians."³

Five years later, the number of hospitalists had grown substantially and Wachter and Goldman came together again to assess the available evidence on hospitalists in a meta-study published in *JAMA*.⁴ By looking at 19 published studies with different methodologies, they found that hospitalists were associated with an average decrease in hospital costs of 13.4% and an average reduction in length of stay of 16.6%. The authors conclude from this study that the debate over whether hospitalists should even exist is solved: "The dominant questions no longer relate to whether the hospitalist model is here to stay – even skeptics concede that it is – but rather, the myriad organizational, financial, ethical, educational, and clinical issues that arise with a major change in the organization of US hospital care. We hope that these issues will continue to be settled on the basis of rigorous analysis of the evidence."⁵ Indeed, this article and other evidence in support of hospitalists did make a powerful mark on the profession of hospitalists: Membership in the Society of Hospital Medicine quadrupled from about 1,500 in 2001 to over 6,000 today.⁶

Following Wachter and Goldman's call for more "rigorous analysis of the evidence," Lindenauer et al. recently conducted the most comprehensive and scientifically rigorous evaluation of hospitalists to date, which was published in

³ Wachter RM, Goldman L. (1996):514

⁴ Wachter, RM and Goldman, L. "The Hospitalist Movement 5 Years Later." *Journal of the American Medical Association*. 2002; 287:487-494.

⁵ Wachter, RM and Goldman, L. (2002) p. 493

⁶ "Society for Hospital Medicine." Accessed 4 Apr 2008. Available at: <http://www.hospitalmedicine.org/>.

December 2007 in the *New England Journal of Medicine*.⁷ This study was a retrospective cohort study using data from 2002 to 2005 at 45 hospitals across the US in order to compare the performance of hospitalists with the performance of general internists and family physicians. The results showed a modest reduction in the length of the hospital stay for hospitalists (about half a day or 12% reduction) as well as modest cost reductions (\$268 or about 5% of costs) when compared to internists, although no difference in costs was observed when compared with family physicians. While these findings are significant, the magnitude of the difference was substantially less than the impact Wachter and Goldman had found about six years earlier. Moreover, the authors note that their findings suggest a different perspective on the added value of hospitalists: “The lack of clear cost savings, despite more than 10% reduction in the length of stay, suggests that, as compared with their counterparts, hospitalists compress the same or even greater amounts of testing and treatment into a shorter amount of time.”⁸ Following this interpretation, the added value of hospitalists is not that they deliver better care than internists or family doctors, but rather that they help navigate patients through the hospital faster. This shorter length of stay may help overcrowded hospitals open more beds, but it will not address more fundamental concerns of cost and quality.

Nevertheless, a commentary accompanying Lindenauer et al.’s study echoed Wachter and Goldman’s earlier claim that it is “time to move on” past the debate of whether hospitalists are cost effective and add value to a hospital.⁹ Hospital administrators, however, should be skeptical of these persistent claims by hospitalist

⁷ Lindenauer, PK et al. “Outcomes of Care by Hospitalists, General Internists, and Family Physicians.” *New England Journal of Medicine*. 2007; 357:2589-2600.

⁸ Lindenauer, PK et al. (2007) p. 2598.

⁹ McMahon LF Jr. “The Hospitalist Movement—Time to Move On.” *New England Journal of Medicine*. 2007 Dec 20; 357(25):2627-9.

advocates, if only because the new specialty of hospitalists has a vested interest in establishing its credibility. Evidence-based medicine means not only accepting new evidence when it is fashionable, but also trying to understand the evidence when it is not different than expected.

With studies on hospitalists, there are many confounding factors that have not fully been taken into account. Most notably, since the field of hospital medicine is so new, many schools do not have hospitalist training programs and many hospitals have only recently added hospitalists units. As a result, the initial cohort of hospitalists that have been studied so far are largely comprised of a self-selected group of physicians who chose to switch from other fields, like internal medicine, and many hospitalists must work to prove their effectiveness to hospital administrators in order to maintain institutional support. Moreover, hospitalists tend to be younger than most other physicians and they are paid slightly higher than general internists, which may introduce the possibilities of other biases.¹⁰ Given these potential confounders, the inherent benefits of hospitalists may have little to do with their job description or their title.

In the end, do these confounders even matter for administrators? Does it matter how we improve cost and quality as long as we do so? Well, if hospitalist performance is indeed confounded by the field's newness, then as hospitalists become more established, any cost and quality improvements may largely disappear. Meanwhile, the rise of hospitalists may have unforeseen effects on continuity of care, physician morale, and the overall health care system because we don't have any good way of measuring these

¹⁰ Darves, Bonnie. "Here come the hospitalists." *NEJM Jobs.org*. Nov. 2003. Available at: <http://www.nejmjobs.org/career-resources/here-come-the-hospitalists.aspx>

factors. In the long run, administrators may find that pursuing hospitalist practices as part of evidence-based quality improvement may leave them no better off than before.

In many ways, it is “time to move on” simply because there is no turning back. Given the available evidence on hospitalist programs, we can expect that they will continue to grow substantially as hospitals are driven to try all means to reduce costs and improve performance.

As we look forward, however, we must seek to better understand how to use evidence to drive quality improvement. In March 2008, Don Berwick, the head of the Institute for Health Care Improvement, wrote a commentary in *JAMA* criticizing the accepted forms of evidence in quality improvement studies.¹¹ Berwick quotes Pawson and Tilley’s book *Realistic Evaluation*: “[E]xperimentalists have pursued too single-mindedly the question of whether a [social] program works at the expense of knowing why it works.”¹² Wachter, one of the founders of the hospitalist movement, recently have criticized Berwick’s position on his blog,¹³ but the case-study of hospitalists suggests otherwise. Despite the myriad of statistical studies, we still know little about why hospitalist programs work and why they don’t. As a result, hospital administrators must gauge the strength of the evidence for themselves – are hospitalists a permanently positive structural change or just a temporary fad whose effectiveness will fade with time? At the end of the day, will we have found a panacea to issues of cost and quality, or just another mirage?

¹¹ Berwick, D. “The Science of Improvement.” *Journal of the American Medical Association*. (2008) 299:(10) 1182-1184.

¹² Pawson R and Tilley N. *Realistic Evaluation*. London, England: Sage Publications Ltd; 1997.

¹³ Wachter, R. “The Quality Debate: Berwick’s Plea for Action vs.Evidence-Based Medicine.” *Wachter’s World*. 17 Mar 2008. Available at http://www.the-hospitalist.org/blogs/wachters_world/archive/2008/03/17/this-week-s-jama-berwick-s-plea-for-action-confronts-evidence-based-medicine.aspx.