Key Findings

- Hospitalist use by Critical Access Hospitals (CAHs) and other rural hospitals more than doubled over the five-year period from 2005 to 2009. In 2009, 13.7% of CAHs and 41.2% of other rural hospitals reported using hospitalists, compared to 60.6% of urban hospitals.

- The most common reasons why rural hospitals use hospitalists are that physicians on their medical staff asked the hospital to provide hospitalist coverage, the hospital wanted to cover call and reduce the workload for medical staff, quality of care, allowing physicians to focus on their clinical practices, and recruitment and retention of physicians.

- In three-fourths of the rural hospitals that use them, hospitalists care for more than half of the inpatients. They are most likely to care for adult medical and surgical patients.

- The majority of rural hospitals report that hospitalist use has had positive impacts on quality (84%) and recruitment and retention of primary care physicians (74%), and that most of their patients (89%) and admitting physicians (97%) are very satisfied or satisfied with using hospitalists.

- The financial impacts of hospitalist use are more mixed, with 45% of hospitals reporting positive financial impacts, 17% reporting negative financial impacts, and one-third of hospitals reporting both positive and negative financial impacts.

Background

The use of hospitalists who assume responsibilities for patient care during inpatient hospital stays is a relatively new phenomenon. Hospitalist programs were initially established in the mid-1990s in markets with high rates of managed care enrollment and large urban teaching hospitals, and most research has focused on the implementation and outcomes of hospitalist programs in teaching hospitals and other large urban hospitals. The use of hospitalists has spread to smaller rural hospitals, but the peer-reviewed literature has not examined their use in these settings.

Purpose of the Study

The purpose of this study was to describe trends in hospitalist use by rural hospitals, the characteristics of the hospitalists, the types of hospitalist models being used, and the impact of hospitalist use on the provision of care in rural areas.

Approach

Secondary data from the American Hospital Association Annual Survey were analyzed to examine trends in the number of all rural hospitals using hospitalists over a five-year period from FY 2005 through FY 2009. The AHA data were also used to identify CAHs and other rural hospitals with less than 100 beds that were using hospitalists to serve as the sample population for a national telephone survey.
The Use of Hospitalists in Small Rural Hospitals

From May to August 2011, we conducted a national telephone survey of all CAHs and rural hospitals with fewer than 100 staffed beds that had reported using hospitalists in the AHA survey. Our survey included a combination of closed- and open-ended questions; the topics included:

- primary reason for using hospitalists;
- types of hospitalist models being used;
- hospitalist numbers and specialties and characteristics of hospitalist practices;
- impact of hospitalist use on quality of care, hospital finances, and recruitment and retention of primary care physicians; and
- satisfaction of admitting physicians and patients with hospitalists.

A total of 329 hospitals responded to the survey for a response rate of 86.4%. The respondents included hospital CEOs and administrative and clinical staff members who were knowledgeable about the hospitalist program.

Results of AHA Survey Data Analysis

Use of Hospitalists by Rural Hospitals

From FY 2005 through FY 2009, the percentage of hospitals that reported using hospitalists in the American Hospital Association Annual Survey increased steadily (Figure 1). Hospitalist use by CAHs and by rural hospitals more than doubled over the five-year period, although CAHs (13.7%) and other rural hospitals (41.2%) remained less likely than urban hospitals (60.6%) to use hospitalists in 2009.

Figure 1. Use of Hospitalists 2005-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>CAHs</th>
<th>Rural Hospitals</th>
<th>Urban Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>5.9%</td>
<td>19.8%</td>
<td>48.7%</td>
</tr>
<tr>
<td>2006</td>
<td>8.5%</td>
<td>25.2%</td>
<td>53.0%</td>
</tr>
<tr>
<td>2007</td>
<td>10.6%</td>
<td>32.1%</td>
<td>56.3%</td>
</tr>
<tr>
<td>2008</td>
<td>12.2%</td>
<td>37.5%</td>
<td>57.8%</td>
</tr>
<tr>
<td>2009</td>
<td>13.7%</td>
<td>41.2%</td>
<td>60.6%</td>
</tr>
</tbody>
</table>

FY 2006: N = 1,264 CAHs, 1,021 other rural hospitals, 2,495 urban hospitals
FY 2007: N = 1,275 CAHs, 1,017 other rural hospitals, 2,558 urban hospitals
FY 2008: N = 1,280 CAHs, 1,008 other rural hospitals, 2,534 urban hospitals
FY 2009: N = 1,303 CAHs, 993 other rural hospitals, 2,528 urban hospitals

Use of Hospitalists by Rural Hospitals

From FY 2005 through FY 2009, the percentage of hospitals that reported using hospitalists in the American Hospital Association Annual Survey increased steadily (Figure 1). Hospitalist use by CAHs and by rural hospitals more than doubled over the five-year period, although CAHs (13.7%) and other rural hospitals (41.2%) remained less likely than urban hospitals (60.6%) to use hospitalists in 2009.
The Use of Hospitalists in Small Rural Hospitals

Results of National Survey of Small Rural Hospitals

Reasons for Using Hospitalists

In our national telephone survey of rural hospitals using hospitalists, respondents gave a variety of primary reasons to an open-ended question about why their hospital began using hospitalists. The most common reason, reported by almost 27% of hospitals, was that physicians on the medical staff either requested that the hospital set up a hospitalist program or required that the hospital do it by refusing to provide inpatient coverage. Other frequently cited reasons for using hospitalists included the desire to cover call and give physicians time off (13.5%), quality of care issues (13.5%), the need for primary care physicians to focus on their outpatient clinical practices (10.3%), recruitment and retention of physicians (8.6%), and coverage of patients who were admitted to the hospital without a primary care physician (and often without insurance) (6.9%).

Table 1. Characteristics of Hospitalist Practices in Critical Access Hospitals and Small Rural Hospitals

<table>
<thead>
<tr>
<th>Types of Patients Cared for by Hospitalists</th>
<th>Hospitals with Hospitalists (N = 329)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>329 (100%)</td>
</tr>
<tr>
<td>Surgical</td>
<td>276 (83.9%)</td>
</tr>
<tr>
<td>Pediatric</td>
<td>127 (38.6%)</td>
</tr>
<tr>
<td>Newborns</td>
<td>35 (10.6%)</td>
</tr>
<tr>
<td>Obstetrical</td>
<td>26 (7.9%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Types of Care Provided by Hospitalists in Addition to Inpatient Care</th>
<th>Hospitals with Hospitalists (N = 329)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital outpatient department</td>
<td>97 (29.5%)</td>
</tr>
<tr>
<td>Primary care in clinic or physician office</td>
<td>97 (29.5%)</td>
</tr>
<tr>
<td>Emergency department</td>
<td>56 (17.0%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage of Inpatients Cared for by Hospitalists</th>
<th>Hospitals with Hospitalists (N = 329)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25%</td>
<td>16 (4.9%)</td>
</tr>
<tr>
<td>25% to 50%</td>
<td>67 (20.4%)</td>
</tr>
<tr>
<td>More than 50% but less than 100%</td>
<td>215 (65.4%)</td>
</tr>
<tr>
<td>100%</td>
<td>31 (9.4%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage of Admitting Physicians that Use Hospitalists to Care for Their Inpatients</th>
<th>Hospitals with Hospitalists (N = 329)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25%</td>
<td>39 (11.9%)</td>
</tr>
<tr>
<td>25% to 50%</td>
<td>57 (17.3%)</td>
</tr>
<tr>
<td>More than 50% but less than 100%</td>
<td>183 (55.6%)</td>
</tr>
<tr>
<td>100%</td>
<td>35 (15.2%)</td>
</tr>
</tbody>
</table>

Data Source: University of Minnesota survey of CAHs and rural hospitals, 2011.

Rural Hospitalists’ Specialties

Many of the surveyed rural hospitals use more than one type of physician specialist as hospitalists. A majority (82%) of the hospitals report using internists in the hospitalist role. Over half (57%) of the hospitals use family physicians. Just under one-fourth use physician assistants or nurse practitioners in the hospitalist role, and about 6% of the hospitals use emergency medicine physicians.
Characteristics of Hospitalist Practices

All the rural hospitals in the survey reported that their hospitalists care for adult medical patients (Table 1). The vast majority (84%) of hospitals also have hospitalists care for adult surgical patients. Pediatric patients are cared for by hospitalists in 39% of the hospitals. Hospitalists are less likely to care for obstetrical patients and newborns (11% and 8% of hospitals).

Hospitalists cared for all inpatients in the last year in 9.4% of the surveyed hospitals. In 65% of the hospitals, hospitalists cared for more than half but less than 100% of the inpatients. In 71% of the hospitals, more than half of admitting physicians use hospitalists to care for their hospitalized patients.

Impact on Quality of Care

The vast majority of respondents (84%) reported that hospitalists have had a positive impact on quality of care in their hospital. They described a wide range of positive effects on quality from using hospitalists, with many citing multiple effects. In the most frequently reported category of positive effects related to the availability of hospitalists (17.9% of responses), respondents indicated that they are available when needed, are able to respond quickly to changes in patient condition, and spend more time with patients. Other positive impacts included improvements in the hospitals’ quality and patient safety scores (e.g., Centers for Medicare and Medicaid and Joint Commission measures: 17.8%); the hospitalists’ expertise and ability to handle more acute patients (10.2%); provision of consistent, standardized care (9.7%); use of evidence-based medicine (7.9%), and improved communication with nurses and better teamwork (7.2%).

Ten percent of respondents indicated that the use of hospitalists has had both positive and negative quality impacts. The most common negative aspect was that patients wanted to see their own primary care physician when hospitalized, which was cited by 18 of the 32 hospitals in this group. No hospitals reported that hospitalists had only a negative impact on quality of care, and 6% reported no change in the quality of care.

Impact on Hospital Financial Status

Assessments of the financial impact of hospitalist use were more mixed. Forty-five percent of hospitals reported positive financial impacts, while 17% reported negative financial impacts. One-third of hospitals reported both positive and negative financial impacts, and 6% had no change in financial status.

Of the 279 responses related to the positive financial impacts, 42% indicated that hospitalist use had resulted in increases in inpatient or swing bed admissions or both, fewer transfers to other hospitals, and improved ability to treat higher acuity patients. Other positive financial impacts included decreases in average length of stay (18% of responses); helping hospitals to recruit and retain physicians (7%); better resource utilization or improved efficiency (6%); improved primary care physician productivity (e.g., the use of hospitalists allows the primary care physicians to see more clinic patients) (5%); and improved quality or reductions in complications (5%).

Among the 160 responses regarding the negative financial impacts of hospitalist use, the most common were that the hospitalist program costs more than the revenue directly generated by hospitalists (18%) and that the hospital has to subsidize the hospitalist program (18%). Sixteen percent of responses cited the high costs of hospitalist salaries or contracts, and 13% indicated that the hospital had insufficient patient volume to cover the costs of the hospitalists. Hospitals are choosing to maintain their hospitalist programs despite negative financial impacts because of the earlier cited reasons for starting the programs.

Impact on Recruitment and Retention

Three-quarters of hospitals (74%) reported that the use of hospitalists has made it easier for the hospital to recruit and retain primary care physicians and one-quarter indicated that there was no change. Only two hospitals indicated that hospitalists made it harder to recruit and retain. The most common reasons why recruitment and retention were judged to be easier
were that hospitalists cover the inpatient care that primary care physicians do not want to do (32% of responses), and that hospitalists allow primary care physicians to have no call or reduced call schedules (30%). Sixteen percent of responses cited better work–life balance and quality of life for primary care physicians, while 11% indicated that new physician candidates were only interested in places with hospitalists.

**Admitting Physician Satisfaction and Patient Satisfaction**

Survey respondents were asked to describe hospital patients’ responses to being cared for by hospitalists and admitting physicians’ responses to having their patients cared for by hospitalists as 1) very satisfied, 2) satisfied, 3) neither satisfied nor dissatisfied or 4) dissatisfied. They reported that the majority of hospital patients are either very satisfied (36%) or satisfied (53%) with being cared for by hospitalists. They also reported that nearly all admitting physicians are very satisfied (62%) or satisfied (35%) with having their patients cared for by hospitalists.

**Policy Implications**

Survey respondents report strong positive impacts of hospitalist use on rural hospital quality, recruitment and retention of primary care physicians, and patient and physician satisfaction. The financial impacts of hospitalist use are more mixed. These results suggest that hospitalist use offers many potential benefits to rural hospitals, but those benefits may need to be balanced against negative financial impacts for some hospitals. Achieving a balance between the expenses and revenues of a hospitalist program may be especially difficult in small rural hospitals with low inpatient volumes and where the hospitalists care for significant numbers of uninsured and Medicaid patients.

Workforce issues (e.g., the need to reduce medical staff inpatient workloads to retain current physicians and recruit new physicians) featured prominently in rural hospitals’ reasons for using hospitalists. The positive impact of hospitalist use on recruitment and retention suggests that hospitalists may be a partial solution to the primary care workforce shortages that affect many rural communities.

**References**


**Additional Information**

The survey interviews were conducted by the Survey Research Center in the Division of Health Policy and Management at the University of Minnesota. The survey respondent was the CEO in 65% of the hospitals. In the remaining hospitals, the survey was conducted with administrative and clinical staff members who were knowledgeable about the hospitalist program such as chief medical officers and directors of nursing. In four hospitals, two individuals were interviewed.

The survey sample included all 402 Critical Access Hospitals (CAHs) and rural hospitals with fewer than 100 beds that reported using hospitalists in the FY 2008 American Hospital Association survey. Rural areas were based on the Office of Management and Budget non-metropolitan county definition. Twenty-one responding hospitals indicated that they did not
currently use hospitalists; of those, seven had used hospitalists in the past but stopped, while the others reported never using them. After removing the 21 hospitals from the sample, the final survey response rate was 86.4% (329 completed surveys among the remaining 381 hospitals). These hospitals included 150 CAHs and 179 other rural hospitals.

For more information, contact Michelle Casey, 612.623.8316, mcasey@umn.edu
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