NC Rural Health Research & Policy Analysis Center

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Rural Hospital Support for Emergency Medical Services

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OVERVIEW

Prehospital emergency care is an important component of a comprehensive health care system. Rural EMS agencies face continual challenges to ensure a qualified workforce to meet prehospital emergency care needs. While most EMS agencies function as independent entities or are affiliated with fire departments, affiliation with a local hospital is one option for sustaining rural EMS. Little is known about the rural hospitals that operate EMS units, and most of what is known has focused on Critical Access Hospitals (CAHs).

We used Medicare Hospital Cost Reports to identify rural hospitals, with and without EMS, for this study. Study questions included: what proportion of rural hospitals support or operate EMS units; has this changed in last five years; what are the characteristics of rural hospitals that support or operate EMS; what are the financial investments made by these hospitals in EMS; and what describes the communities in which these hospitals are located?

KEY FINDINGS

- Most hospitals (>95%) had no change in their support for EMS over the five years studied. Almost 73% never supported this service (n=1664) and 23% always supported it (n=523). Only a few hospitals (n=100 or 4.3%) added or dropped support for EMS during the five years.
- Of those hospitals that support EMS, 58.5% are CAHs. Just under 50% of hospitals that do not support EMS are CAHs.
- Only 10.9% of CAHs that support EMS receive cost-based reimbursement for this service.
- Rural hospitals supporting EMS have a lower median average daily census (7.4 vs. 10.8) and are slightly farther from the next nearest hospital compared to hospitals without support for EMS.
- Those CAHs that support EMS have a median annual cost for support (salary + other expenses) of just over $235,000 while median charges for ambulance services are twice that amount at $507,000. Median dollars of EMS costs at other rural hospitals are substantially higher at over $750,000 with median charges exceeding $1.5 million.
- Hospitals that support EMS are located in counties that are less densely populated and that have a higher percent of the population over the age of 65 years. The counties where they are located are less likely to be designated as counties with housing stress, persistent poverty or low employment.
- The percent of rural hospitals supporting EMS range from 48.9% in Iowa to 0% in six states. States with the highest participation rates are present in all Census regions but are most common in the Midwest.

DISCUSSION

The level of financial investment and potential benefit from supporting EMS varied across the 549 hospitals that support EMS. Rural counties where the hospital supports EMS are less densely populated with a higher rate of population loss than are counties with hospitals not supporting EMS. A certain level of both demand and financial and human resources are needed to support rural health care providers. In sparsely populated

areas, providers may take on multiple functions in order to provide needed services with the limited workforce available. Some measures of poverty differed between the two groups of hospitals. Hospitals that support EMS were less likely to be located in counties with these challenges, suggesting again that a basic and sufficient level of resources was available to the hospital to take on the additional responsibility of providing EMS.

The Medicare Rural Hospital Flexibility Program, which established and supports CAHs, emphasizes strengthening the health care infrastructure including EMS, and it is not surprising that CAHs are more likely than other rural hospitals to support EMS. One factor that continues to discourage provision of EMS by CAHs is the 35-mile rule that prohibits cost-based reimbursement for ambulance services for hospitals located within 35 miles of another EMS provider. Of the CAHs reported to support EMS, only 10.9% get cost-based reimbursement. Historically, even the most remote rural communities have stepped up to provide essential public safety services ensuring that, in many areas, there is an EMS provider within 35 miles of a hospital. Rural EMS units are, however, often volunteer-based and may be the very ones that are currently threatened with closure largely due to their inability to recruit and retain volunteers. Further, rural units are often Basic Life Support level services and do not have the equipment or staff to provide critical care during transport of critically ill patients. Therefore, it is likely that while a number of CAHs have another EMS provider within 35 miles, that provider is not capable of delivering the full range of emergency services that may be needed.

Hospitals that support EMS were more likely to be in states in the Midwestern United States, an area where CAHs are also prevalent. State policies regarding EMS, such as a lack of exclusive operating areas, may encourage the provision of EMS by hospitals but without a state-by-state analysis of health care regulation, it is not possible to determine how state policies support or limit hospital-based EMS.

CONCLUSIONS

There is no indication that challenges to rural EMS will ease, and the potential benefit from hospital assumption of these essential health care services remains to be explored in more detail. Programs to support rural EMS would benefit from a comprehensive description of why and how hospitals support EMS and what types and levels of support are best for what types of communities. More information is needed to determine the population and economic resources needed to facilitate the merger of hospital and EMS. Further, rescindment of the 35-mile rule or revision that considers the capabilities of existing local EMS would facilitate provision of EMS by more CAHs.

METHODS

Our universe of hospitals was all short-term acute care rural hospitals with rurality defined as location in either a nonmetropolitan county or in a metropolitan county ZIP code area with a Rural Urban Commuting Area code of 4 or greater. Medicare Hospital Cost Reports for 2004-2008 were used to identify rural hospitals with and without EMS; expense and charge variables were indicators that a hospital participates in the provision of prehospital emergency care. Because we cannot determine ownership nor are there guidelines for levels of financial support indicating ownership, we refer to hospitals meeting these Cost Report criteria as hospitals that support EMS. Data from the Area Resource File, the Bureau of Labor Statistics, and the US Census Bureau were used to characterize counties where hospitals were located. Trends in hospital support for EMS were examined and hospitals with support for EMS in the most recent year were compared to those without.

More detailed study results can be found in the final report "Rural Hospital Support for Emergency Medical Services" available at http://www.shepscenter.unc.edu/research_programs/rural_program/.

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