Economic factors associated with increase in closures of emergency departments

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Over the last 20 years, the number of hospital emergency departments in nonrural areas in the U.S. has declined by nearly 30 percent, with for-profit ownership, location in a competitive market, low profit margin and safety-net status associated with an increased risk of emergency department closure, according to a study in the May 18 issue of *JAMA*.

"As the only place in the U.S. health care system that serves all patients, emergency departments (EDs) are the 'safety net of the safety net.' Federal law requires hospital EDs to evaluate and treat all patients in need of emergency care regardless of ability to pay," according to background information in the article. "Between 1998 and 2008, the number of hospital-based EDs in the United States declined, while the number of ED visits increased, particularly visits by patients who were publicly insured and uninsured. Little is known about the hospital, community, and market factors associated with ED closures."

Renee Y. Hsia, M.D., M.Sc., of the University of California, San Francisco, and colleagues conducted a study to examine the factors that may be associated with the closure of hospital EDs. The study included emergency department and hospital organizational information from 1990 through 2009, acquired from the American Hospital Association Annual Surveys and merged with hospital financial and payer mix information available through 2007 from Medicare hospital cost reports.

The researchers evaluated 3 sets of risk factors: hospital characteristics (safety net [as defined by hospitals caring for more than double their

Medicaid share of discharges compared with other hospitals within a 15-mile radius], ownership, teaching status, system membership, ED size, case mix), county population demographics (race, poverty, uninsurance, elderly), and market factors (ownership mix, profit margin, location in a competitive market, presence of other EDs).

The researchers found that from 1990 to 2009, the number of hospitals with EDs in nonrural areas in the U.S. decreased from 2,446 to 1,779, a decline of 27 percent, with an average of 89 closing per year. Over an 18-year study interval (1990-2007), EDs that closed were more likely to be at for-profit hospitals than EDs that remained open (26 percent vs. 16 percent). Smaller facilities were more likely to close their ED; and twice as many hospitals that closed their EDs were in the lowest quartile of the profit margin distribution, compared with those that kept their EDs open. Emergency departments that closed tended to be located in counties with high shares of minority populations (36 percent vs. 31 percent), high shares of populations in poverty (37 percent vs. 31 percent), and more than 15 percent of its individuals without insurance (42 percent vs. 36 percent). Thirty-four percent of EDs that closed were in highly competitive markets, compared with 17 percent of those with EDs that did not close.

Adjusted analysis indicated that three hospital-specific characteristics were associated with an increased risk of ED closures, including safety-net status, for-profit status (compared with not-for-profit or government hospitals), and hospitals with profit margins in the lowest quartile. And after fully adjusting for all factors in the model, EDs in communities with the highest percentage of population in poverty were at increased risk of closure. Also, presence of another ED within a 15-mile radius was associated with increased risk of ED closure, and hospitals in areas with high levels of competition were at higher risk of closure.

"Our findings underscore that market-based approaches to health care do

not ensure that care will be equitably distributed. In fact, the opposite may be true. As long as tens of millions of Americans are uninsured, and tens of millions more pay well below their cost of care, the push for 'results-driven competition' will not correct system-level disparities that markets cannot— and should not—be expected to resolve," the authors write.

"It is critical to determine whether and how to engage society in decisions to maintain or close EDs and other safety-net services."

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