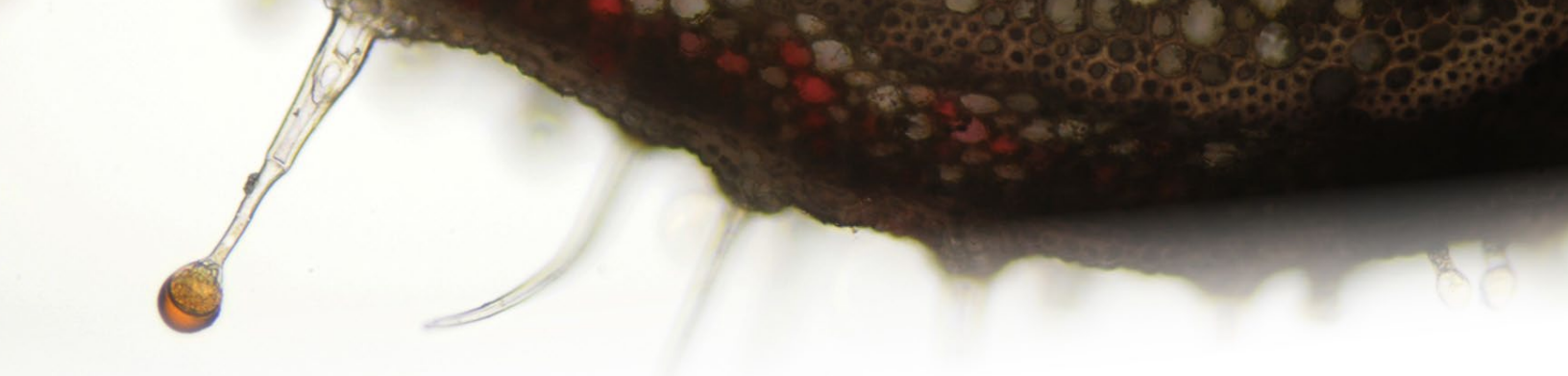

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HISTORY OF MEDICINE: PEER-REVIEWED ARTICLE

What Might the Past Suggest About Rural Emergency Services Amidst Critical Access Hospitals' Decline?

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Abstract

Critical access and other rural hospitals have struggled to remain open, which exacerbates inequity in rural residents' access to routine and emergency health services and strains already-taxed rural emergency medical services (EMS). This article discusses the recent history of rural hospital closures and their effects on rural emergency care. This article also suggests modifications to EMS policy and practice that could improve rural community members' access to health services and bolster EMS services in rural areas.

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Low Population Density and Low Reimbursement

The rise, and subsequent fall, of critical access hospitals (CAHs) across the United States is rooted in financial failure of a historic rural hospital model. During the 1980s and 1990s, the closure of more than 400 rural hospitals was secondary to many factors, including low population density and relatively low reimbursement rates.[1] In response to these closures, Congress created the CAH designation as part of the Balanced Budget Act of 1997.[2] The CAH designation is given by the Centers for Medicare and Medicaid Services (CMS). To receive the designation, a hospital must participate in Medicare; have fewer than 25 acute inpatient beds; be over 35 miles from the closest hospital (15 miles in areas with mountainous or secondary roads); have an average length of stay under 96 hours; have agreements with other hospitals to facilitate transfers; and maintain 24/7 emergency care.[2] CAH designations theoretically provide financial benefits to rural hospitals: they increase reimbursement from CMS; allow for decreased staffing requirements, such as not requiring on-call physicians to remain on-site, which lowers personnel costs; and provide funding for quality improvement and operational functions.[2,3] As of October 2024, there were 1369 CAHs across the country, in all but 5 states.[2] In 2005, the average distance from a CAH to the closest transfer hospital was 64 miles.[4]

Since the creation of CAHs, the program has been modified by several pieces of legislation that increase financial benefits and support operational aspects, such as

reducing workforce shortages and incentivizing technological advancements.[2] The unifying theme of the CAH legislative updates has been bolstering rural facilities, largely financially, with increasing reimbursement rates and decreased staffing requirements. Despite the intent of providing financial support, a CAH designation has not regularly led to the ability of a given hospital to remain functional. Some facilities have only partially closed, losing certain services such as obstetrics but maintaining emergency departments and basic inpatient care.[5] But other rural hospitals, both CAHs and non-CAHs, have continued to close. From 2005 to the end of 2024, 193 rural hospitals closed, 71 of them CAHs.[6] The closure rate has been relatively stable, but since 2011, hospital closures have surpassed new facilities openings.[7]

Unfortunately, rural emergency medical services (EMS) face many of the same financial struggles as CAHs. Both contribute to the inequalities in health care and health disparities faced by residents of rural areas. As health care providers and policy makers work to address challenges facing CAHs, rural EMS agencies should receive similar attention.

Steady Decline

CAH closure trends magnify broader rural hospital closure trends.[6] Despite the increased reimbursement rates from CMS, financial losses have been the biggest factor in the continued closures of CAHs and other rural hospitals.[7,8] Most closures have occurred in states that did not expand Medicaid after passage of the Affordable Care Act in 2010.[7] Many patients in rural areas do not have insurance, even Medicaid, and therefore CAHs were unable to capitalize on the increased reimbursement that Medicaid expansion would have provided.[7] The COVID-19 pandemic dealt multiple blows to rural hospitals; in the initial stages of the pandemic, routine procedures were cancelled, and hospitals could no longer rely on those payments.[9] Smaller hospitals providing fewer services and working within a narrower profit margin felt the brunt of this loss more sharply than larger facilities. Patients were also afraid of being exposed to COVID-19 and thus hesitant to seek care, adding to the decrease in revenue.[10] As a result, a total of 38 rural hospitals, including 14 CAHs, closed completely between the start of the pandemic in 2020 and the end of 2024.[6]

As CAHs continued to close, Congress created a new designation, rural emergency hospital (REH), in the Consolidated Appropriations Act of 2021 to increase reimbursement up to 105% for facilities that do not provide inpatient care.[11] This designation allows rural facilities that lose inpatient beds and other services, such as obstetrics or psychiatry, to still function as emergency departments. This model is similar to that of CAH but targets even smaller facilities than CAHs that are not able to meet the CAH requirements. While REHs are intended to prevent further gaps in rural health care, they are still under threat of closure from pressures similar to those faced by CAHs, and only 36 hospitals met the requirements for REH status between January 2023 and January 2025.[12]

Ambulance Deserts

EMS is not designated an essential service in most states, meaning that local governments are not required to provide funding for it as they are for fire and police services.[13] If funding is provided, it comes largely from state and local governments or from grants, with relatively little federal support.[14] EMS is reimbursed by CMS based on a flat fee plus mileage; a call involving resource-intensive care for a critically ill patient gets reimbursed for the same amount as does care for a stable patient.[10] CMS also

does not reimburse EMS for patients not transported to a hospital, such as those who refuse care or who need simple assistance, such as getting up after a fall.[13,15] Under- or uninsured patients, who make up a large portion of the rural population, are often unable to pay for EMS care or transport.[7,15] As a result, rural EMS agencies struggle to make their operating costs (eg, equipment and staffing), often rely on volunteers rather than paid employees, and have fewer ambulances available and more difficulty staffing them than their urban counterparts.[10,16]

When patients need EMS to treat them and transport them to a hospital, the closest ambulance may be several towns over. These "ambulance deserts" often overlap geographically with areas without hospitals.[10,16,17,18] Rural EMS agencies have always had longer transport times on average than urban agencies; CAH and other rural hospital closures force ambulances to travel further to transport patients, more than doubling transport times for some patients and increasing the time that an ambulance crew spends with one patient.[10,19,20] Another patient who needs care in that time may have to wait longer to receive care and could have a bad outcome because of the delay.[13,16,17,18]

Rural EMS agencies also lose leadership when local hospitals close. An EMS agency owned and operated by a CAH is forced to close or find new ownership and funding when the CAH closes.[21] Rural and isolated EMS agencies are more likely to have volunteer medical directors and less likely to have access to real-time medical direction to guide patient care than urban and large rural EMS agencies.[22] A hospital closure causes physicians to leave the area,[7] decreasing the availability of appropriate medical direction. With fewer local resources, EMS clinicians also must travel further to receive appropriate training and continuing education, adding to difficulties with staff retention.[15] These challenges bring the long-term sustainability of rural EMS agencies into question.[13,17,23,24]

Policy Reform

Emergency medicine, and by extension EMS, is considered the safety net of the health care system: patients with poor health literacy, limited access to primary care, poor social support, and limited or no health insurance often seek care in the emergency department because of an inability to access appropriate care elsewhere. These patients frequently access the emergency department via EMS because of a lack of alternate transportation. To ensure continued access to EMS for rural populations, changes must be made to improve funding for rural agencies. To achieve this goal, multiple policy changes should be introduced, starting with listing EMS as an essential service, a designation that this crucial part of the health care system does not currently receive in most states.[15] Enacting legislation at the state level to include EMS as an essential service would guarantee increased government funding.[15] Although changes to federal regulations would be difficult to implement due to states' authority under the Tenth Amendment,[25] several states have passed their own laws making EMS an essential service.[26] Other states should follow this example, especially ones with large ambulance deserts. Increased funding from all sources must be used to support paid EMS clinicians, rather than forcing rural agencies to rely on volunteers.[22,23]

In addition, the CMS payment model for EMS must be reexamined. EMS clinicians are currently considered "transportation suppliers" rather than health care personnel and therefore have lower base payments because transport alone requires less funding than clinical education or medical equipment.[15] As part of payment reform, agencies should

be reimbursed for calls that do not result in transportation, as well as for calls that result in transportation to non-hospital facilities. Emergency Triage, Treat, and Transport (ET3) was a payment model implemented in 2021 that was limited to EMS agencies, mostly urban, that met specific requirements.[10] The aim of ET3 was to allow for reimbursement for transports to urgent care facilities, psychiatric stabilization centers, and substance use facilities. This model was discontinued in 2023 due to a number of factors, including lower-than-expected participation and interventions.[27] Introducing a similar or expanded payment model that would allow EMS agencies to receive reimbursement for treating patients on-scene or for transporting patients to a local, non-hospital health care facility, such as urgent care or a primary care office, would not only lead to increased revenue for the agency but also decrease the transport time required for agencies in areas where CAHs have closed. Doing so would pave the way toward a thoughtful health care system focused on patient-centered outcomes, one where a patient can receive focused and appropriate care rather than defaulting to the emergency department. Allocating funding and resources to improving rural EMS clinicians' education would also serve to achieve this goal, as clinicians would likely need extra training to be able to appropriately direct patients to these alternate destinations rather than the closest emergency department.

Innovation should be embraced, and forward-thinking models such as mobile integrated health (MIH) and community paramedicine (CP) should be considered essential aspects of EMS. In rural areas with low patient volumes, MIH or CP programs must integrate with local health care providers and other agency partners to maximize efficiency. Implementing field use of telemedicine, which has been widely adopted since the pandemic,[10] would also help EMS clinicians triage patients and determine appropriate destinations, thereby minimizing unnecessary long-distance transports, while mitigating the effects of low-call frequency on staff experience.

Broad changes in EMS will be challenging to implement due to the fragmented oversight of EMS agencies. EMS oversight is mostly done at the local and state level, with minimal guidance at the federal level. Each state has its own set of regulations, protocols, and policies, which in some states even vary regionally. Consolidation of some aspects of EMS oversight and data collection at the local, state, and federal levels could allow for improved efficiency of services and coordination, as long as agencies remain able to adapt to local challenges. This limited consolidation in turn would allow for improved data collection and research, leading to more focused policy recommendations that will be necessary to support these vital rural resources.

Having access to CAHs, REHs, or alternative destinations will aid rural EMS agencies in decreasing their transport times and improve opportunities for education and for collaboration between EMS personnel and other health care practitioners. Moving forward, policy makers should learn from the factors that have contributed to CAH closures and their repercussions and plan future legislative reforms to protect and support REHs and other rural health care facilities, as well as the EMS agencies working with them and the communities they serve.

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