HHS Public Access

Author manuscript

J Hosp Med. Author manuscript; available in PMC 2023 November 01.

Published in final edited form as:

J Hosp Med. 2022 November ; 17(11): 938–939. doi:10.1002/jhm.12973.

Causes & Consequences of Rural Hospital Closures

Paula Chatterjee, MD MPH[a]

[a]Department of Medicine, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA.

Rural hospitals and health care systems have been in a slow-burning crisis for decades. Since 2010, over 130 rural hospitals have closed.[1] Over the same period, rural adults have experienced higher rates of mortality from heart disease, cancer, unintentional injury, and stroke relative to urban adults.[2] This dual challenge of declining access and diminishing health status for rural populations has presented one of the most formidable policy challenges for US health care.

A new study by Ramedani et al[3] begins to chip away at this challenge by asking, what happens to local "bystander" hospitals after a rural hospital closes? This question is important: if bystander hospitals are overwhelmed by increased occupancy rates after a local hospital closes, there may be consequences for patient care due to facility strain. The authors compare the number of hospital admissions and emergency department visits at hospitals within 30 miles of 53 rural hospital closures, pre and post closure. They find that admissions at local hospitals increased by 1.2 percentage points in the two years following closure.

The effect sizes are reassuring though difficult to generalize across all rural hospitals given heterogeneity in size and service capabilities. An important consideration when considering the patterns of "bystander hospitals" is the growing prevalence of "bypass behaviors" by rural patients. In 2018, 1 in 3 hospitalizations for rural Medicare beneficiaries did not take place at the local hospital.[4] Instead, rural patients frequently bypass the closest hospital, even if it has the services available needed to provide them with care. The causes of these "bypass behaviors" are still being elucidated, but importantly, the behavior itself is increasingly common. Furthermore, if patients are more often bypassing their local hospitals, defining who exactly a "bystander" hospital is becomes an altogether different challenge.

A related question is whether bypass behavior is contributing to rural hospital closures, by contributing to declining inpatient volume and growing financial strain, or are other causes driving the accelerating rate of rural hospital closures? Despite the persistence of a 20-year trend, the causes of these closures are not well understood. In fact, some recent evidence suggests that rural hospital closures might actually be a symptom of broader community-level decline as opposed to a cause.[5] To stem their tide, we may need to fundamentally change the way that policymakers are approaching the problem. Instead of focusing on

Corresponding Author: Paula Chatterjee, MD MPH, 423 Guardian Drive, Room 1318, Philadelphia, PA 19104; pchat@pennmedicine.upenn.edu, Twitter handle: @ChatterjeePaula.

health care-specific interventions, we may need to consider policies that go beyond the hospital and focus more on drivers of upstream rural community solvency like expanded job opportunities or improvements in economic opportunity for rural residents. Bolstering rural communities may be the key to bolstering rural hospitals and health care systems.[6]

What about the consequences for patient outcomes when rural hospitals close? The story is also not clear there. While some studies have suggested that acute care outcomes worsen when rural hospitals close, more recent work has shown that when patients are diverted to other hospitals after the closure of hospital-based obstetric units, maternal and infant health outcomes improved.[7] What about bystander hospitals? When a rural hospital closes, are bystander hospitals so overwhelmed in their capacity that it strains the quality of care provided to patients? Although the Ramedani study does not examine this question, their results suggest this is a natural next step for this research agenda. Importantly, prior work limited to a single state suggests that rural hospital closures may worsen outcomes particularly among minoritized rural populations who already experience disproportionately worse health outcomes.[8,9]

The persistent challenges and complexity of rural health care delivery demand novel policy approaches to bolster rural health care systems. Thankfully, several of these strategies are on the horizon including the Rural Hospital Emergency Program and the Global Budget Demonstration for Rural Hospitals. Evaluating these programs in terms of their impact on the hospitals participating in them, as well as potential spillover effects on local, non-participating rural hospitals, will be crucial to understanding the broader dynamics affecting rural health care markets and patients.

Disclosures:

Dr. Chatterjee receives grants from the NIH/NIA (K23 AG073512-01) and the Laura & John Arnold Foundation. Neither funding source had a role in the preparation, review, or approval of this editorial or the decision to submit this editorial for publication.

References

1. 171 Rural Hospital Closures: January 2005 - Present (129 since 2010). Sheps Center. Accessed June 16, 2020. http://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/
2. Garcia MC. Potentially Excess Deaths from the Five Leading Causes of Death in Metropolitan and Nonmetropolitan Counties — United States, 2010–2017. MMWR Surveill Summ. 2019;68. doi:10.15585/mmwr.ss6810a1
3. Ramedani et al. The Bystander effect: Impact of rural hospital closures the operations and financial wellbeing of surrounding healthcare institutions. J Hosp Med. 2022;17:TBD.
4. Understanding Rural Hospital Bypass Among Medicare Fee-for-Service (FFS) Beneficiaries in 2018. Published online 2020:23.
5. Chatterjee P, Lin Y, Venkataramani AS. Changes in economic outcomes before and after rural hospital closures in the United States: A difference-in-differences study. Health Serv Res. 2022;57(5):1020–1028. doi:10.1111/1475-6773.13988 [PubMed: 35426125]
6. Carroll C, Planey A, Kozhimannil KB. Reimagining and reinvesting in rural hospital markets. Health Serv Res. 2022;57(5):1001–1005. doi:10.1111/1475-6773.14047 [PubMed: 35947345]
7. Fischer SJ, Royer H, White CD. Health Care Centralization: The Health Impacts of Obstetric Unit Closures in the US. Published online June 2022. doi:10.3386/w30141

8. Gujral K, Basu A. Impact of Rural and Urban Hospital Closures on Inpatient Mortality. National Bureau of Economic Research; 2019:w26182. doi:10.3386/w26182

9. Henning-Smith CE, Hernandez AM, Hardeman RR, Ramirez MR, Kozhimannil KB. Rural Counties With Majority Black Or Indigenous Populations Suffer The Highest Rates Of Premature Death In The US. Health Aff (Millwood). 2019;38(12):2019–2026. doi:10.1377/hlthaff.2019.00847 [PubMed: 31794313]