Rising hospital closures disproportionately affect disadvantaged communities

April 26 2024

Credit: Unsplash/CC0 Public Domain

Over the past three decades, hospital closures have been on the rise in both urban and rural areas. Real-life consequences take many forms: creating barriers to accessing medical care, increasing transport times

and potentially leading to higher morbidity and mortality rates for time-sensitive conditions. More recently, the COVID-19 pandemic highlighted the issue as many areas faced dire shortages of hospital beds.

Some studies have explored the effects of closures on patient outcomes, but a group of experts at the University of Chicago recently set out to identify the risk factors that may be determining which hospitals close.

Past discussions frequently pointed to intrinsic factors like financial instability and low patient volume, but the researchers suspected there are also extrinsic risk factors rooted in social inequities at the population level.

"Among clinicians on the ground, there's a sense that hospitals taking care of more vulnerable patients have a harder time making ends meet," said Elizabeth Tung, MD, Assistant Professor of Medicine at UChicago Medicine.

"The existing literature explained some of those financial issues by pointing to straightforward practical factors like lower Medicare reimbursements. But there was a gap in empirical analyses examining whether structural, societal issues are actually associated with more hospital closures that lead to the loss of health care resources in communities."

Tung and her fellow UChicago researchers recently published a paper in the *Annals of Epidemiology* that filled this empirical gap by exploring the connection between hospital closures and the socioeconomic and racial composition of communities in the United States.

They uncovered significant disparities that confirmed the "on the ground" impression Tung described, revealing that hospitals in areas burdened with higher levels of socioeconomic disadvantage and larger

racial and ethnic minority populations faced disproportionately high hospital closure rates.

Connecting closures with structural disadvantages

The researchers analyzed data from the American Hospital Association's annual survey of nearly 6,500 hospitals across the U.S. They broke down the population characteristics of hospitals that closed anytime between 2007 and 2018 and compared those characteristics with hospitals that remained open during that period.

Even after adjusting for a wide range of confounding variables, they found that both socioeconomic disadvantage and majority Black racial composition of a health care service area increased the likelihood of hospital closure in that area. In contrast, Hispanic/Latino racial composition and rural location did not have a significant impact on the likelihood of closure.

Are hospital closures really a bad thing?

Some commentators have suggested that closing low-performing hospitals may not be a bad thing, arguing that patients then get funneled into larger, higher-performing hospitals where they may receive better care. Tung, the study's lead author, acknowledged the face-value logic of this reasoning but pushed back.

"Given that so many of the 'low-performing' hospitals that are closing are in poor and Black communities, it becomes an access issue," she said. "Even if there isn't a quantitative impact on certain health-related endpoints like overall mortality, it's problematic if already-disadvantaged groups end up needing to make an extra effort to travel to get good health care."

Furthermore, she pointed out that factors like distance do have a quantitative impact on more granular outcomes such as patient satisfaction, emergency department volume at still-open hospitals, and mortality for time-sensitive and surgical conditions.

Evidence in favor of designing race-conscious policies

"Our initial hypothesis was that the socioeconomic disadvantage would be the largest driver of disparities in hospital closures, but we actually found that race—specifically Black racial composition of neighborhoods—was the largest driver of those disparities," Tung said.

Communities characterized by the highest proportion of Black residents faced four times the likelihood of hospital closure compared to those with the fewest Black residents, demonstrating elevated closure rates regardless of socioeconomic status levels. Even among wealthy and middle-class neighborhoods, they found that more closures occurred in predominantly Black affluent communities compared to those with other racial and ethnic compositions.

Tung said results like these should indicate to policymakers that economic-focused solutions alone are not sufficient to resolve persistent inequalities in health care outcomes and access.

"An ideal system would locate health care services where there is health care need, but current incentives have created a misalignment between health care financing what is good for health care corporations, and then patient need and what is good for communities," she said.

She and her collaborators recommended supplementing poverty-conscious policies such as public hospital funding with race-conscious solutions such as race-based adjustments in hospital reimbursement.

"Ours is just one of many studies that have shown over and over again that there exist race-based disparities that aren't driven by economic differences," she said. "The larger body of research points to the fact that we need race-conscious policies in place in order to bridge gaps in health care equity."

More information: Elizabeth L. Tung et al, Associations of U.S. hospital closure (2007-2018) with area socioeconomic disadvantage and racial/ethnic composition, *Annals of Epidemiology* (2024). DOI: 10.1016/j.annepidem.2024.02.010

Provided by University of Chicago Medical Center