

COVID-19 and the Potential Devastation of Rural Communities:  
Concern from the Southeastern Belts

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As the urgent efforts to reduce the death toll of COVID-19 continue, there is substantial concern across the nation regarding who will be next. The Centers for Disease Control and Prevention (CDC) suggests that older adults and those with serious underlying medical conditions (heart disease, lung disease, asthma, liver disease, obese, diabetes, kidney disease, and/or immunocompromised) are at greater risk of severe illness or death from COVID-19.<sup>1</sup> As of April 7th, 2020, the United States (US) had more than 370,000 confirmed COVID-19 cases and over 11,000 deaths. Cities across the nation are preparing to battle the virus as it spreads to their communities. But there is concern that, with low early numbers, some states and metropolitan areas have been slow to respond. While large urban centers such as Seattle, Chicago, and New York were imposing lockdowns, vast rural regions remained relatively open. Five states in the southeastern US (South Carolina, Georgia, Alabama, Mississippi and Florida) were some of the last to enact statewide “shelter in place” mandates.<sup>2</sup>

In addition, there is evidence that less testing for COVID-19 is occurring in the southeastern US. Lower testing rates in southeastern states, where populations are primarily rural with low population density could contribute to slower identification of the disease. Many of the afflicted individuals in these southeastern states report recent interstate travel. Georgia, South Carolina, North Carolina, Mississippi, Virginia and Kentucky are all testing at rates <400 per 100,000 people compared to larger more populous areas like New York and Washington who are testing at rates >1000 per 100,000 people.<sup>3</sup> More recent southern hotspots such as Louisiana with substantial community spread have seen a dramatic increase in testing with recent rates >1000 per 100,000 people.<sup>3</sup> The major outbreaks in rural areas such as North Carolina appear to be related to facility spread among old sick adults as well as staff in long-term care facilities.<sup>4</sup> Finally, it is unclear how delays in testing may be contributing to disparities in testing numbers given that test results can sometimes take 5-7 days resulting a backlog of cases.<sup>5</sup> The spread of COVID-19 from urban to rural communities should be alarming for two primary reasons

**First**, it is well established that rural residence contributes to poor health and lack of health equity relative to urban residence. Individuals residing in rural areas frequently experience barriers to **access to care**.<sup>6</sup> In general, life expectancy is lower in rural communities due to lack of healthcare infrastructure and personnel.<sup>6</sup> Rural residents frequently receive care at small rural hospitals that are “financially fragile” without the necessary resources to offer the preferred level of care.<sup>6</sup> Unfortunately, many hospital closures in the past decade have occurred in rural areas and in the southeastern US—further reducing health capital and access to care.<sup>7</sup> Recent estimates suggest that there may be only 2,300 rural hospitals across the country and more than 70 percent of those hospitals have less than 50 beds.<sup>6</sup> As the virus moves to rural communities in southeastern states, the few remaining rural hospitals may quickly become overburdened by COVID-19 patients in dire need of care. Many small, rural, community hospitals frequently rely on larger, urban, resource-rich hospitals to treat the most critically ill patients. Unfortunately, as urban hospitals near capacity and face resource constraints those doors may be closed. As most urban hospitals struggle with limited supplies (surgical masks, gowns, and other personal protective equipment) and equipment (e.g. ventilators), many are also facing a shortage of medicines (e.g. sedatives, anesthetics, etc.). Under-resourced rural

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hospitals are likely to soon experience similar shortages, further putting healthcare workers at greater risk for getting sick.

**Second**, for some it is not simply their rural residence that is the greatest concern, but rather exactly where they live. A recent report suggests that the southeastern US will be hit particularly hard because of high rates of obesity and diabetes.<sup>8</sup> The southeastern US is home to a high percentage of rural residents who live in the “stroke belt” and “diabetes belt” where stroke and diabetes rates are far greater than the rest of the US.<sup>9-11</sup> Hypertension rates are similarly very high. These are also some of last states to issue “shelter in place” orders.<sup>2</sup> Beyond high rates of disease, southeastern US residents are more likely to live in poverty, experience high underemployment/unemployment rates and lack health insurance or usual source of care. And southern states were least likely to expand Medicaid under the Affordable Care Act<sup>8</sup>—leaving a large vulnerable population without routine access to care and facing increasing hospital closures.<sup>8</sup> As the current pandemic moves to the southeast, there should be a major concern given the region’s pre-COVID-19 high rates of chronic disease, unemployment, uninsured and limited access to care. Early evidence from COVID-19 healthcare providers indicate that those individuals with underlying health conditions are most likely to have the least manageable COVID-19 symptomatology and highest mortality. As the virus spreads throughout the southeast, the combination of large rural populations with high rates of underlying health conditions will create the perfect storm for COVID-19 to have devastating effects on rural America, particularly in the southeastern US.

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