

Study finds that COVID-19 hit Indiana Black and rural communities harder than other populations

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The largest study of its kind to date has found that Black communities and rural residents were hit harder than other populations by the COVID-19 pandemic, demonstrated by data from across the state of Indiana. Researchers at Regenstrief Institute and Indiana University say this information highlights important disparities that need to be addressed by public health efforts.

"This large-scale study shows that racial and ethnic minorities as well as those in [rural communities](#) were more likely to be hospitalized and die from COVID-19, confirming results of smaller studies and highlighting the disparities we know exist," said lead author Brian Dixon, Ph.D., MPA, director of public health informatics at Regenstrief and IU Richard M. Fairbanks School of Public Health. "We hope this information will help to shape both pandemic response and recovery efforts."

The research team used data from the Indiana Network for Patient Care, managed by Indiana Health Information Exchange (IHIE), which contains patient information from 38 health systems and more than 100 hospitals in Indiana as well as COVID testing results from the Indiana Department of Health. Testing data were linked with hospitalizations and death records. The data used in this study came from 1.8 million Indiana residents who were tested for COVID-19 between March 2020 and the end of December 2020.

The data showed that during the first wave of the virus beginning in March 2020, infections were highest in urban areas, and specifically among Black residents. Starting in the summer, hospitalizations and deaths in rural areas outpaced urban areas. And across the majority of 2020, Black populations and those in rural areas suffered more than white and urban populations.

"This study was conducted before vaccines were widely available, but

now that they are, these two populations are some of the most reluctant to receive shots," said Dr. Dixon. "COVID-19 has already greatly impacted these groups, so it's important that public health officials focus their attention on interventions to help these populations. In addition to virus mitigation through vaccination, they may need programs to address social determinants of health and help in recovery from the pandemic."

Data identifies disparities

This large-scale study was made possible by the data sharing infrastructure that exists in Indiana.

"The ability to link community-based testing with hospital data and death records allows us to measure and monitor these disparities," said Dr. Dixon. "This helps to demonstrate the power of health [information exchanges](#) and the multiple ways they can be leveraged to improve healthcare and public [health](#)."

"The synchronicity of COVID-19 disparities: Statewide epidemiologic trends in SARS-CoV-2 morbidity, hospitalization, and mortality among [racial minorities](#) and in rural America" is published online *PLOS One*.

More information: Brian E. Dixon et al, The synchronicity of COVID-19 disparities: Statewide epidemiologic trends in SARS-CoV-2 morbidity, hospitalization, and mortality among racial minorities and in rural America, *PLOS ONE* (2021). [DOI: 10.1371/journal.pone.0255063](https://doi.org/10.1371/journal.pone.0255063)

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