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**UAMS Study Found Large Segment of Arkansans
Still Susceptible to COVID-19 in Late 2020, 2021**

LITTLE ROCK — A team of scientists at the University of Arkansas for Medical Sciences (UAMS) carried out an eight-month seroprevalence survey that found 85% of the state’s population was still susceptible to the virus in late 2020.

This project – which the *Public Library of Science ONE* recently published – focused on the number of Arkansans who were infected with the virus that causes COVID-19 between May to December 2020 and the primary commonalities of the infections.

Victor Cardenas, a now-retired epidemiologist from the UAMS Fay W. Boozman College of Public Health and lead author of the report said, “We used a random sample of adults to search for where the positives cases, their demographics, occupation and lifestyles were in state, and to find out if they recalled being around a COVID-19 patient within or outside their household.

“More recent seroprevalence data from the Centers for Disease Control and Prevention said 64% of Arkansas residents had been infected by the coronavirus. Our study ended in late 2020, and the level of infection quadrupled since then.”

A seroprevalence survey uses antibody tests to estimate the percentage of people in a population who have antibodies against COVID-19. Antibodies are proteins that your immune system makes to help fight an infection. When a person gets a virus such as the one that causes COVID-19, their immune system makes antibodies. An individual’s immune system can also create antibodies through the vaccination for a virus. Once a person has antibodies to a particular ailment, they gain some protection against that disease or virus.

For the survey, 1,500 subjects were studied. Based on the data and estimates, there was a prevalence of slightly more than 15% of Arkansas’ population that had COVID-19 antibodies by December 2020 — or one in six people in Arkansas had evidence of COVID-19 infection.

Therefore, most of the state was still susceptible to infection despite the vaccines being available. By the summer of 2021, only 46% of Arkansas adults were fully vaccinated.

Combine that with the arrival of the Delta and Omicron variants, both of which were extremely transmissible, and Arkansas had a situation conducive to massive surges.

“The state is lagging behind in the number of people who have gotten the vaccine,” Cardenas said. “That impacts even what’s going on today. It isn’t too late to get immunized and get your loved ones immunized. The vaccines work.”

“Our study emphasized the importance of the residents of this state getting the vaccination,” he said. Currently, 56% of Arkansans 5 and up are fully immunized and 13.2% are partially immunized, according to the Arkansas Department of Health.

The survey also brought attention to the vast number of people who had COVID-19 but didn’t know they were infected. That too advanced the spread of the virus.

Using info from a statewide probability sample, researchers learned that there were portions of Arkansas’ population that had abnormally high infection rates.

People with lower education levels or low income had high infection rates. People with an infected person living in the same household had high rates of infection. Some of the biggest in-state infection numbers were also connected to minorities.

The study also found that people with an essential job or who had an occupation where they couldn’t work from home or socially distance from their co-workers had a higher prevalence of infection. The survey also reports that independently of the other risk factors, it seemed like a significant portion of people infected contracted the virus while visiting with a friend or family member.

Meanwhile, Arkansans who stayed at home, worked from home and limited their in-person interactions with others had a much smaller infection rate.

“At the start of the pandemic there was a major emphasis on contact tracing,” Cardenas said. “Early on, there was also a major emphasis on social distancing and effectively limiting the contact of people with one another. The social distancing worked.”

While simple, protective measures make a difference, Arkansans must be willing to use them, he said.

“The transmissibility did not change, but the rate of contact decreased because of the lockdown. Every time we relaxed it, the transmission resumed,” Cardenas said. “The restriction of movements, wearing of the masks — those things work.”

Cardenas acknowledged that most of the findings from the survey were not a surprise; however, the research gave further validity to what is known about the best practices to protect Arkansans from another COVID-19 surge.

“Each time we let our guard down, the number of COVID-19 cases increase,” he said. “The reasons for that is many people in Arkansas are still susceptible to the virus.”

“We have to pay attention to what’s going on and the most recent trends. We must get vaccinated. That also includes getting boosted. You must make sure you’re protected, and your household members are, too.”

UAMS is the state's only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; a hospital; a main campus in Little Rock; a Northwest Arkansas regional campus in Fayetteville; a statewide network of regional campuses; and seven institutes: the Winthrop P. Rockefeller Cancer Institute, Jackson T. Stephens Spine & Neurosciences Institute, Harvey & Bernice Jones Eye Institute, Psychiatric Research Institute, Donald W. Reynolds Institute on Aging, Translational Research Institute and Institute for Digital Health & Innovation. UAMS includes UAMS Health, a statewide health system that encompasses all of UAMS' clinical enterprise. UAMS is the only adult Level 1 trauma

center in the state. U.S. News & World Report recognized UAMS Medical Center as a Best Hospital for 2021-22; ranked its ear, nose and throat program among the top 50 nationwide for the third year; and named five areas as high performing — colon cancer surgery, diabetes, hip replacement, knee replacement and stroke. UAMS has 3,047 students, 873 medical residents and fellows, and six dental residents. It is the state's largest public employer with more than 11,000 employees, including 1,200 physicians who provide care to patients at UAMS, its regional campuses, Arkansas Children's, the VA Medical Center and Baptist Health. Visit www.uams.edu or www.uamshealth.com. Find us on [Facebook](#), [Twitter](#), [YouTube](#) or [Instagram](#).

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