

COVID-19 BRIEF

Changes in COVID-19 Cases, Hospitalizations, and Death Projections

UAMS

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UAMS's College of Public Health (COPH) publishes periodic briefings designed to update 15- and 30-day COVID-19 projections of cases, hospitalizations, and deaths between each of the monthly releases of the *UAMS COPH COVID-19 Report*. We are publishing this *Brief* because of the rapidly changing pandemic landscape in the state.

The briefing was prepared using data from the Arkansas Department of Health through Jan. 9, 2022.

Key Findings. COVID-19 cases, hospitalizations, and deaths in Arkansas are increasing and will continue to do so for at least the next 30 days. The 30-day models, as shown in the figures on the next three pages, indicate we should expect increasing cases, hospitalizations, and deaths.

In summary:

- The models are forecasting 106,419 new COVID-19 cases by Jan. 24 and 285,642 new cases by Feb. 8, an increase of over 36% in next 30 days. New daily cases are expected to average more than 10,000 per day.
- We should expect approximately 855 individuals to be newly hospitalized by Jan. 24 and 1,764 by Feb. 8. The state is expected to reach 85 daily hospitalizations by Feb. 8.
- The models are forecasting 176 new COVID-19 deaths by Jan. 24 and 341 by Feb. 8, or approximately 11 new deaths due to COVID-19 per day.

The models strongly suggest significant growth in the second week following the holidays. Unlike last year's winter wave, this wave will impact far more Arkansans. If current trends continue unabated through February, as many as 500,000 Arkansans may be infected with the Omicron variant.

As noted by us in previous reports and by other scientists, the Omicron variant is different from all previous COVID variants. Omicron is far more infectious — having an estimated R value as high as 17 — resulting in far more infections. This is borne out by the high number of infections reported in the state on a daily basis. Omicron also appears to be far more able to escape an immune response, whether natural or induced, resulting in higher rates of reinfection and breakthrough infections. According to some credible sources, states are reporting a high number of individuals presenting at emergency rooms with a second COVID-19 infections. Omicron is also infecting children at a much higher rate than previous variants. The reason children are more susceptible to Omicron than previous variants is not entirely clear.

The risk of hospitalization and death presented by Omicron, though, are lower. Some have suggested that Omicron causes “milder” disease than the Delta variant. However, Omicron infection is not “milder” in the sense of a producing a more benign disease. Omicron disease is a life-threatening illness. Even if symptoms are less severe, Omicron is capable of producing severe pneumonia and other manifestations that are extremely serious. Furthermore, we expect at least a third of those infected with Omicron will have long lasting, sometimes debilitating symptoms, such as chronic fatigue, cardiopulmonary complications, and mental health issues.

We again caution that the models should not be used to project exact number of cases, hospitalizations, or deaths for any given day. What is important are the trends. The 30-day model of cases clearly shows a strong upward, linear trend. The 30-day models of hospitalizations and deaths only slightly less so. The pandemic in Arkansas is changing so rapidly week-to-week, the pandemic is outrunning our models. By this we mean, actual increases are so steep on a daily basis, our projections are behind the day after the models are run.

Because COVID-19 is now so highly infectious and so many people are getting sick, should we just accept that COVID is going to infect all of us? The answer is a resounding, “No!” If we all use the simple public health tools available to us, we can prevent an Omicron infection. In combination, up-to-date vaccinations (two plus a booster), conscientious mask wearing, and avoiding large groups of people significantly reduce the risk of Omicron infection.

Figure 1a: Cumulative COVID cases

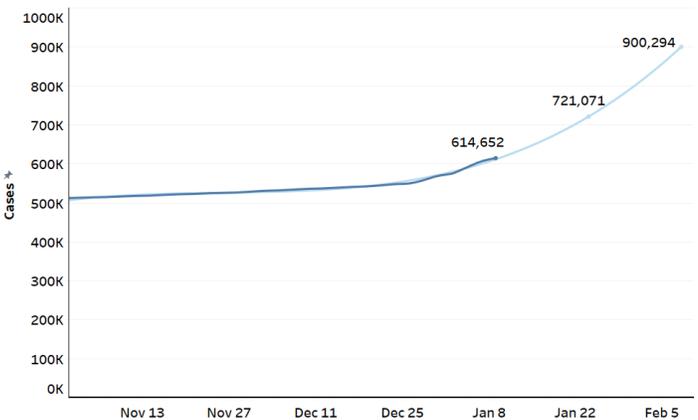


Figure 1b: 15-day COVID cases

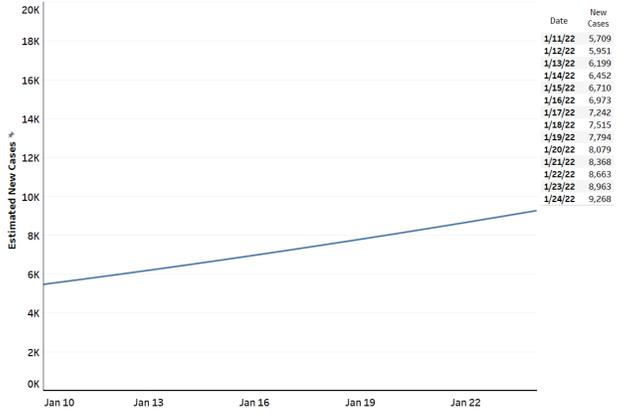


Figure 1c: 30-day COVID cases

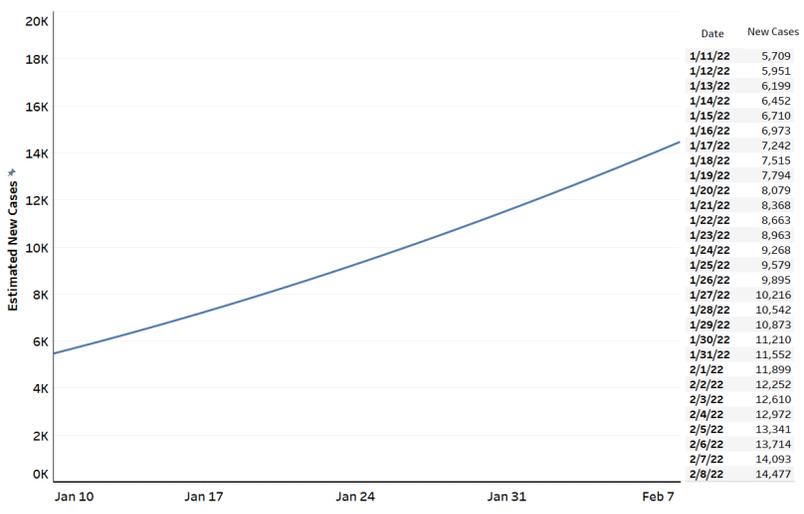


Figure 2a: Cumulative COVID hospitalizations

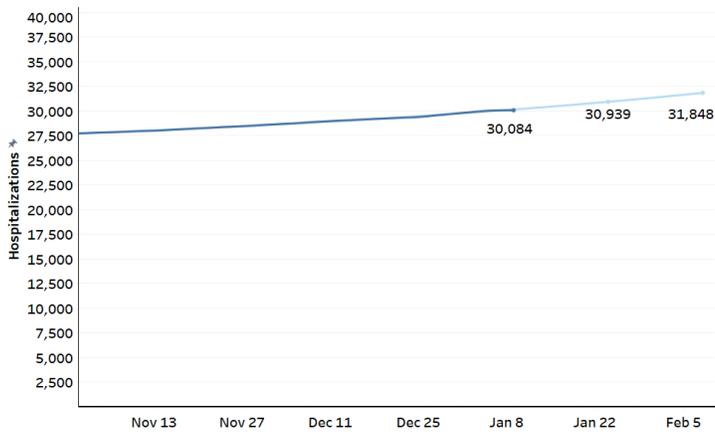


Figure 2b: 150-day COVID hospitalizations

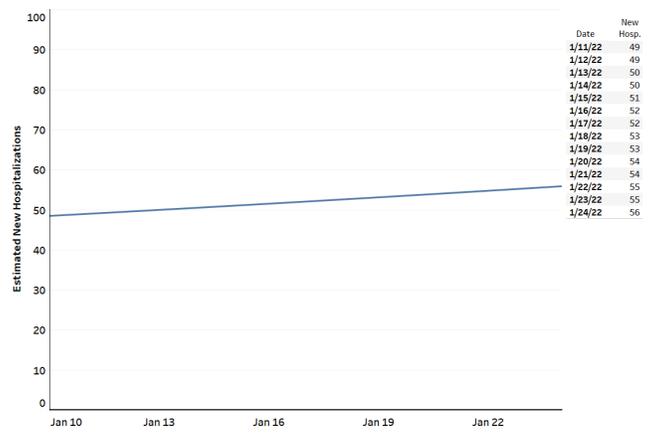


Figure 2c: 30-day COVID hospitalizations

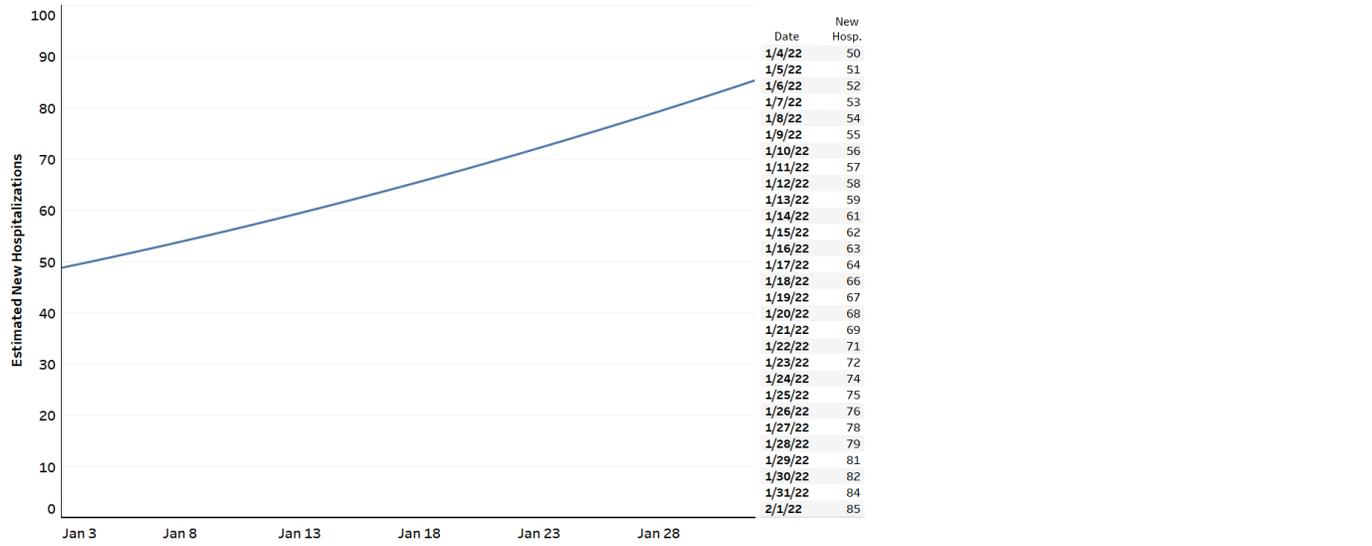


Figure 3a: Cumulative COVID-19 deaths

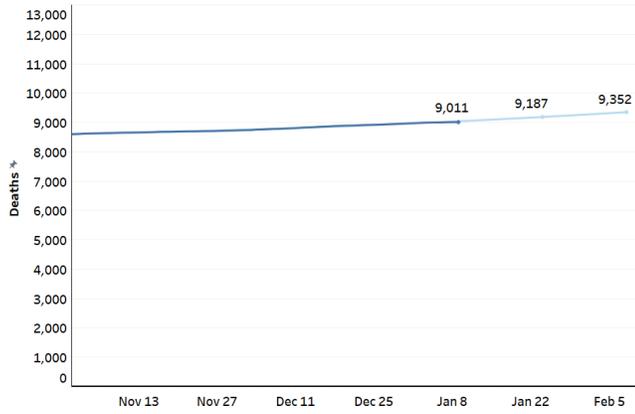


Figure 3b: 15-day COVID-19 deaths

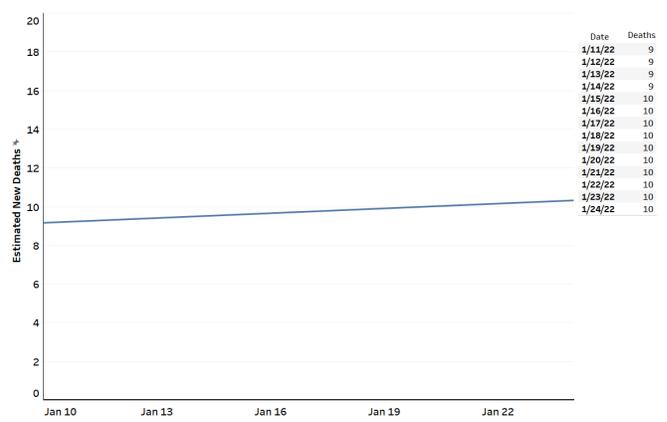


Figure 3c: 30-day COVID-19 deaths

