

Scientists find the highly transmissible delta variant in New York state

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Jennifer Surtees and colleagues at UB will continue to conduct genomic surveillance on COVID-19 samples in Western New York. Credit: University at Buffalo

University at Buffalo scientists who are doing genomic sequencing of COVID-19 samples report that the delta variant of the coronavirus has

been detected in Erie County. First identified in India and now responsible for a significant outbreak in the United Kingdom, the delta variant is believed to be as much as 200%, or twice as transmissible, as the original coronavirus strain.

That information, coming as more COVID-19 restrictions are being lifted now that 70% of New York State's population over the age of 18 has had at least one vaccine dose, is concerning to UB scientists and Erie County public health officials.

They stressed that the finding of the delta variant in Western New York reinforces the critical importance of getting fully vaccinated (with both doses) as soon as possible for those eligible to do so because, they noted, the vaccines thus far have been shown to effectively protect people against the variants and provide a higher level of protection than natural immunity.

Individuals who are unvaccinated, or who are immunocompromised because of a medical condition, are cautioned to continue to wear masks in public settings.

"The highly transmissible delta variant is a real concern," said Jennifer Surtees, Ph.D., associate professor of biochemistry in the Jacobs School of Medicine and Biomedical Sciences at UB and co-director of the Genome, Environment and Microbiome Community of Excellence. Surtees and her colleagues at UB's New York State Center of Excellence in Bioinformatics and Life Sciences have been conducting the only genomic sequencing of COVID-19 samples in Western New York.

She noted that early evidence from the United Kingdom demonstrates that most likely two doses of the Pfizer shot is 90% effective against the delta variant but a single vaccination dose of Pfizer vaccine is only 30% effective.

Surtees continued: "This is particularly an issue for those individuals who are not vaccinated or are under vaccinated [one shot]. These people, including children, are really at risk as this variant circulates. This makes me concerned about schools in particular. We've already seen an increase in cases among children—they are the big unvaccinated pool. The delta variant could exacerbate this."

So far, only one Erie County sample had the delta variant but that sample was taken last month.

"I would predict we will see more of it in more recent samples," said Surtees. "The good news is that case rates in the region are quite low, a direct result of vaccination uptake. This is cause for some optimism about what summer will be like in Western New York. But there are still folks who are not vaccinated, or are not fully vaccinated who are extremely vulnerable to this variant. The second dose is extremely important for protection against delta."

She added that the delta variant is more prevalent in the southern U.S., primarily regions with lower vaccination rates. "This is something to keep in mind when thinking about travel to different parts of the country," Surtees cautioned.

And while the [delta](#) variant is currently in the news, she added that the alpha variant, which emerged late last year and became known as the U.K. variant, which is about 40% more transmissible than the original virus strain, is now the most prevalent strain in Erie County.

"The alpha variant became predominant in Western New York," said Gale Burstein, MD, MPH, Erie County commissioner of health and clinical professor of pediatrics in the Jacobs School. "These findings from our colleagues at UB reinforce the continued importance of getting vaccinated to protect yourself and, ultimately, the community from

severe illness, and of getting a diagnostic test immediately if you develop any COVID-19 symptoms."

Surtees and her colleagues at UB will continue to conduct genomic sequencing on COVID-19 samples, which Burstein called one of several key factors in keeping rates of the virus low in Western New York.

"With continued spread within the U.S. and globally, there is always the possibility of further mutations that will make the virus better able to evade vaccine-induced immune responses and antibody treatments," said Surtees.

Provided by University at Buffalo

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