What are variants?
Variants are different strains of a virus, such as SARS-CoV-2 (the virus that causes COVID-19), that arise as a virus mutates or changes. Viruses naturally mutate as they multiply to make more virus particles, and new variants are expected over time. Some variants will die out. Other variants may persist and even become common if they are more easily spread. Variants may also become more resistant to treatments or vaccines.

Why are variants important?
Some of the spreading variants are concerning because they can be spread much more easily that other strains and can cause more severe infection. These are called variants of concern and include B.1.1.7 (Alpha), B.1.351 (Beta), P.1 (Gamma), B.1.427/1.429 (Epsilon), and B.1.617.2 (Delta). Public health officials track these variants to see if they are causing more disease, hospitalizations and deaths and to make sure that treatments and vaccines still work.

What is variant surveillance (testing)?
Variant surveillance gives public health officials information about which variants are spreading in a community. Not all samples need to be tested to get a good picture of which variants are present and how they are changing over time, and this saves resources. The Indiana Department of Health works in partnership with other laboratories in Indiana to test a subset of positive samples from different areas of the state. Samples from people who are newly hospitalized or are thought to have a second COVID-19 infection or infection after being vaccinated are also tested for variants.

How are variant testing results reported?
Results of variant testing do not make a difference in COVID-19 treatment or isolation precautions, so results of sequencing for variant surveillance are not reported to individual health care providers and patients. These results are reported to local health officials so they know what is circulating in their communities. The Centers for Disease Control and Prevention (CDC) also tracks variant mutations and results from variant testing to inform state and local public health officials on how treatments and vaccines may be affected.

Sequencing results on specimens submitted specifically for sequencing, such as suspect breakthrough cases, suspect re-infection case, and outbreak cases, will be released to submitters.

How do variants impact vaccines?
If the variant is different enough from the vaccine, the vaccine may not give good immunity to that variant. Currently available vaccines are effective against the variants of concern that have been detected in Indiana. As more people get vaccinated and become immune, communities will have more protection against variants. Virus cannot multiply or mutate in people who are immune, so variants will not emerge or spread. Vaccination prevents mutation, so get vaccinated as soon as you can.