Dear Colleagues,

- The Mississippi State Department of Health (MSDH) is identifying an increasing number of cases due SARS-CoV-2 variant strains of interest and concern.
- By far the most common variant strain of concern or interest identified to date in Mississippi is the B.1.1.7 strain of UK origin.
- Today MSDH is reporting a total of 10 newly identified cases of South African origin variant strain B.1.351 associated with outbreaks in two long-term care facilities in Forrest and Covington Counties.
- MSDH is also reporting three cases of B.1.617.2 SARS-CoV-2 variant strain cases identified in Claiborne, Smith, and Hinds Counties. This variant is one of the variants of interest of Indian origin. Investigation is ongoing, but at least two are directly associated with travel from India and Nepal.
- The B.1.351 strain is classified as a Variant of Concern due to an approximately 50% increased transmissibility, a significant decrease in susceptibility to the combination of bamlanivimab and etesevimab monoclonal antibody treatment (Eli Lilly and Company combination product), and reduced neutralization by convalescent and post-vaccination sera. Other EUA approved monoclonal antibody treatments are available, specifically casirivimab plus imdevimab (Regeneron Pharmaceuticals, Inc).
- The B.1.617.2 variant strain is classified as a Variant of Interest and shows a potential reduction in neutralization by some EUA monoclonal antibody treatments and a potential reduction in neutralization by post-vaccination sera. Investigations are ongoing, but at least 2 of the 3 identified cases are in individuals with recent travel to India or surrounding areas.
- Vaccination in employees and residents of long-term care facilities remains vitally important-- vaccine can reduce the impact of transmission within the setting and the risk of outbreaks, reduce the potential for introduction of variant and other strains into the facility, and markedly reduce the severity of illness even if infection occurs in fully vaccinated residents.
Increasingly, outbreaks in long-term care settings are driven by unvaccinated staff, as is the case in these outbreaks. Staff vaccine rates in many long-term care facilities in the state are well below 50%.

Investigation is ongoing, but at least nine of the B.1.351 variant cases are “vaccine breakthrough” cases occurring in fully vaccinated residents of these facilities. The initial investigation indicates the majority of the fully vaccinated individuals have minimal to no symptoms; however, at least two have required hospitalization.

A complete list of variant cases by county is updated weekly and can be found at COVID-19 Cases by Variant Type.xlsx (ms.gov).

Mississippi Physicians and Providers are advised to:

1. Given the identification and emergence of variant strains in the state, consider the use of casirivimab with imdevimab (Regeneron Pharmaceuticals) as first line treatment for eligible COVID-19 individuals infected, especially in the Hattiesburg area and particularly in individuals with recent travel or potential exposure to a variant strain case.

2. Continue to recommend vaccination for all individuals.

3. Report to the Office of Epidemiology (601-576-7725) and submit PCR samples for genomic sequencing to the Mississippi Public Health Laboratory (MPHL), any individuals who are:
   a. PCR or antigen positive contacts to any known SARS-CoV-2 variant of concern or interest within the prior 14 days.
   b. Suspected Re-infection-Individuals with a positive COVID-19 RNA test ≥90 days after the initial laboratory confirmed infection, whether symptomatic or not. MSDH is interested in conducting genomic sequencing at the MPHL even if there are not paired respiratory specimens available (i.e., respiratory sample from the initial infection is not available).
   c. Suspected vaccine failures-Fully vaccinated individuals with a positive viral test (antigen or PCR) ≥2 weeks following receipt of the second dose in a 2-dose series, or ≥2 weeks following receipt of one dose of a single-dose vaccine (only PCR samples are requested for submission to MPHL for genomic sequencing).

As always, please contact the MSDH Office of Epidemiology with questions at 601-576-7725.

Regards,

Paul Byers, MD
State Epidemiologist
Alerting Message Specification Settings

Originating Agency: Mississippi State Department of Health
Alerting Program: MS Health Alert Network (MS HAN)
Message Identifier: MSHAN-20210521-00519-ALT
Program (HAN) Type: Health Alert
Status (Type): Actual
Message Type: Alert
Reference: MSHAN-00519
Severity: Unknown
Acknowledgement: No
Sensitive: Not Sensitive
Message Expiration: Undetermined
Urgency: Undetermined
Delivery Time: 600 minutes

Definition of Alerting Vocabulary and Message Specification Settings

Originating Agency: A unique identifier for the agency originating the alert.
Alerting Program: The program sending the alert or engaging in alerts and communications using PHIN Communication and Alerting (PCA) as a vehicle for their delivery.
Message Identifier: A unique alert identifier that is generated upon alert activation (MSHAN-yyyymmdd-hhmm-TTT (ALT=Health Alert, ADV=Health Advisory, UPD=Health Update, MSG/INFO=Message/Info Service)).
Program (HAN) Type: Categories of Health Alert Messages.

Health Alert: Conveys the highest level of importance; warrants immediate action or attention.
Health Advisory: Provides important information for a specific incident or situation; may not require immediate action.
Health Update: Provides updated information regarding an incident or situation; unlikely to require immediate action.
Health Info Service: Provides Message / Notification of general public health information; unlikely to require immediate action.

Status (Type):
- Actual: Communication or alert refers to a live event
- Exercise: Designated recipients must respond to the communication or alert
- Test: Communication or alert is related to a technical, system test and should be disregarded
Message Type:
Alert: Indicates an original Alert
Update: Indicates prior alert has been Updated and/or superseded
Cancel: Indicates prior alert has been cancelled
Error: Indicates prior alert has been retracted

Reference: For a communication or alert with a Message Type of “Update” or “Cancel”, this attribute contains the unique Message Identifier of the original communication or alert being updated or cancelled. “n/a” = Not Applicable.

Severity:
Extreme: Extraordinary threat to life or property
Severe: Significant threat to life or property
Moderate: Possible threat to life or property
Minor: Minimal threat to life or property
Unknown: Unknown threat to life or property

Acknowledgement: Indicates whether an acknowledgement on the part of the recipient is required to confirm that the alert was received, and the timeframe in which a response is required (Yes or No).

Sensitive:
Sensitive: Indicates the alert contains sensitive content
Not Sensitive: Indicates non-sensitive content

Message Expiration: Undetermined.

Urgency: Undetermined. Responsive action should be taken immediately.

Delivery Time: Indicates the timeframe for delivery of the alert (15, 60, 1440, 4320 minutes (.25, 1, 24, 72 hours)).