TO: Vermont Health Care Providers and Health Care Facilities
FROM: Jennifer S. Read, MD, FIDSA, Medical Epidemiologist

Monoclonal Antibody Treatment for COVID-19

The Health Update of March 3, 2021 provided information regarding SARS-CoV-2 monoclonal antibodies for the treatment of COVID-19. As noted, several monoclonal antibody preparations have been developed for the treatment of COVID-19.

1. National guidelines exist and are continuously being updated regarding utilization of these treatments. In order to have the most up-to-date information, it is important to access and review these guidelines on a regular basis.

    a. According to the National Institutes of Health COVID-19 Treatment Guidelines and the COVID-19 Treatment Guidelines Panel's Statement on the Emergency Use Authorization of the Bamlanivimab Plus Etesevimab Combination for the Treatment of COVID-19:

    - **Bamlanivimab** and the **casirivimab plus imdevimab combination** should not be considered standard of care for the treatment of patients with COVID-19.
    - The Panel recommends the use of **bamlanivimab 700 mg plus etesevimab 1,400 mg** for the treatment of outpatients with mild to moderate COVID-19 who are at high risk of clinical progression*. Treatment should be started as soon as possible after the patient has received a positive result on a SARS-CoV-2 antigen or nucleic acid amplification test and within 10 days of symptom onset.

        - Laboratory studies suggest that **bamlanivimab and etesevimab** have activity against the SARS-CoV-2 B.1.1.7 variant but have markedly reduced activity against the B.1.351 variant. At this time, the B.1.351 variant has rarely been detected amongst SAR-CoV-2 samples sequenced in the United States. Ongoing population-based genomic surveillance of the types and frequencies of circulating SARS-CoV-2 variants will be important in defining the utility of **bamlanivimab plus etesevimab** in the future.
        - The Panel recommends against the use of **bamlanivimab 700 mg plus etesevimab 1,400 mg** for patients who are hospitalized because of COVID-19, except in a clinical trial. However, **bamlanivimab 700 mg plus etesevimab 1,400 mg** should be considered for persons with mild to moderate COVID-19 who are hospitalized for a reason other than COVID-19 but who otherwise meet the EUA criteria.
        - There are insufficient pediatric data to recommend either for or against the use of **bamlanivimab plus etesevimab or other monoclonal antibody products** for

children with COVID-19 who are not hospitalized but who have risk factors for severe disease. Based on adult studies, **bamlanivimab plus etesevimab** may be considered on a case-by-case basis for children who meet EUA criteria, especially those who meet more than one criterion or are aged ≥16 years. In such cases, consultation with a pediatric infectious disease specialist is recommended.

b. Recommendations in the Infectious Diseases Society of America treatment guidelines are as follows:

- Among ambulatory patients with mild to moderate COVID-19 at high risk for progression to severe disease, the IDSA guideline panel suggests **bamlanivimab/etesevimab** rather than no bamlanivimab/etesevimab.
  - Patients with mild to moderate COVID-19 who are at high risk* of progression to severe disease admitted to the hospital for reasons other than COVID-19 may also receive **bamlanivimab/etesevimab**.
  - For patients at high risk* for progression to severe disease, the data are strongest for **bamlanivimab/etesevimab**. **Bamlanivimab monotherapy** or **casirivimab/imdevimab** may have similar clinical benefit, but data are more limited.
  - There are limited data on efficacy of **bamlanivimab/etesevimab** in high-risk patients between 12 and 18 years of age.
- Among hospitalized patients with severe COVID-19, the IDSA guideline panel recommends against **bamlanivimab monotherapy**.

*The U.S. Food and Drug Administration's Emergency Use Authorization allows for the use of **bamlanivimab plus etesevimab** for the treatment of COVID-19 in non-hospitalized adults and children aged ≥12 years and weighing ≥40 kg who are at high risk for progressing to severe COVID-19 and/or hospitalization. High-risk individuals are those who meet at least one of the following criteria:

- BMI ≥35
- Chronic kidney disease
- Diabetes mellitus
- Immunocompromising condition
- Currently receiving immunosuppressive treatment
- Aged ≥65 years
- Aged ≥55 years and have:
  - Cardiovascular disease; or

- Hypertension; or
- Chronic obstructive pulmonary disease/other chronic respiratory disease.

- Aged 12 to 17 years and have:
  - BMI ≥85th percentile for their age and gender based on the Centers for Disease Control and Prevention growth charts; or
  - Sickle cell disease; or
  - Congenital or acquired heart disease; or
  - Neurodevelopmental disorders, for example, cerebral palsy; or
  - A medical-related technological dependence, for example, tracheostomy, gastrostomy, or positive pressure ventilation (not related to COVID-19); or
  - Asthma or a reactive airway or other chronic respiratory disease that requires daily medication for control.

2. Monoclonal antibodies for COVID-19 treatment are no longer being allocated by the state. Infusion sites can order these therapies directly. Sites with recent orders can be found here: https://protect-public.hhs.gov/pages/therapeutics-distribution#distribution-locations

3. The Health Update of March 3, 2021 provided contact information for three of the medical facilities offering SARS-CoV-2 monoclonal antibody treatment in Vermont: Gifford Hospital, Northeastern Vermont Regional Hospital, and Rutland Regional Medical Center. Contact information for two additional facilities are listed here:
   - **Porter Medical Center:** Referring providers can contact the PMC Infusion Center at (802) 388-4701.
   - **Brattleboro Memorial Hospital:** Referring providers can call (802) 257-8838 for infusion services.

4. Because circulating SARS-CoV-2 variants may be resistant to monoclonal antibodies. Clinicians can refer to the following website for reports of viral variants of importance in their region: https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/variant-proportions.html

   Because of the sustained increase in SARS-CoV-2 variants in the U.S. that are resistant to **bamlanivimab** monotherapy, and the availability of other authorized monoclonal antibody therapies that are expected to retain activity to these variants (**bamlanivimab plus etesevimab** and **casirivimab plus imdevimab**), the U.S. Government (in coordination with Eli Lilly and Company, stopped the distribution of **bamlanivimab** alone (monotherapy) starting on March 24, 2021.

Requested Actions:

1. Be familiar with current national recommendations regarding use of monoclonal antibodies for the treatment of COVID-19.
2. Be familiar with the location of sites where monoclonal antibody infusions for the treatment of COVID-19 are available.

If you have any questions, please contact the HAN Coordinator at 802-859-5900 or vthan@vermont.gov.

HAN Message Type Definitions

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.
Info Service Message: Provides general correspondence from VDH, which is not necessarily considered to be of an emergent nature.