Prioritization and Use of Monoclonal Antibody Therapy during COVID-19 Pandemic Response in Michigan

Michigan.gov/Coronavirus

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Background

Throughout the last year, monoclonal antibody (mAb) therapy has become essential for treating individuals who are experiencing mild-to-moderately severe COVID-19 and meet high risk criteria outlined in the FDA Emergency Use Authorizations (EUA). There are three mAb therapies in circulation: bamlanivimab/etesevimab, casirivimab/imdevimab (REGEN-COV); and sotrovimab. bamlanivimab/etesevimab, is approved for use in pediatric patients under 12 years of age. Additionally, bamlanivimab/etesevimab and REGEN-COV are authorized for post-exposure prophylaxis in certain qualifying patients under the EUA.

The three therapies are delivered by the intravenous (IV) route, with only REGEN-COV authorized for subcutaneous (SC) injection. The SC route allows patients to be treated more efficiently, resulting in more providers now preferring this route over the IV route. While the SC route provides for patients to be treated more quickly than IV, improving throughput, it has resulted in demand for REGEN-COV that exceeds current bi-weekly supplies allocated to Michigan by the federal government.

Currently, all three mAb products are effective against the Delta Coronavirus variant. Recently, the manufacturers of REGEN-COV and bamlanivimab/etesevimab report their medications have “diminished potency” and “reduced neutralization activity”, respectively, against the Omicron variant. Several independent pre-clinical studies report both products lose most of their effectiveness when exposed in laboratory studies to the Omicron variant. Recent, preliminary information indicated that two of the three authorized mAb medications (REGEN-COV and bamlanivimab/etesevimab) may be less effective in treating the Omicron variant.

Based on this, the following are being put in place for Michigan. Future revisions are anticipated based on rapidly evolving clinical and epidemiological information. Please monitor for additional updates from MDHHS.

Effective immediately and remaining in effect until further notice:

1. Those ordering or providing mAb therapy should prioritize eligibility using the Michigan Monoclonal Antibody Priority Criteria (below).
    a) Healthcare systems may enact more restrictive criteria if determined to be necessary by their Scarce Resource Allocation (or similar) Committee.

b) Future statewide or regional changes in prioritization levels will occur based on available supply, current demand, dominant variant, and other clinical/epidemiologic considerations.
c) Patients who have been scheduled for mAb under FDA EUA criteria may receive treatment.

2. REGEN-COV should be limited to SC administration only, unless it is the only mAb available

3. IV administration of mAb:
   a) At this time, with the Delta variant continuing to be the dominant variant in Michigan, bamlanivimab/etesevimab should be considered first line therapy for IV administration.
   b) Based on future regional/state activity of the omicron variant, it is anticipated that mAb providers will need to switch to IV sotrovimab.
   c) For those healthcare providers who can administer mAb intravenously, but are primarily using the SC route, it is recommended they develop/revise plans to efficiently provide mAb primarily/exclusively via the IV route if REGEN-COV becomes unavailable or ineffective.

4. At this time, sotrovimab should be restricted as follows:
   a) Sotrovimab should be considered for IV administration if bamlanivimab/etesevimab or REGEN-COV is unavailable. Sotrovimab should not be withheld from high-risk patients if the only medication available.
   b) If a high-risk individual has a suspected close exposure to the omicron variant, and is symptomatic, sotrovimab may be administered as first line therapy.
   c) For high-risk patients who receive REGEN-COV or bamlanivimab/etesevimab and subsequently clinically worsen (i.e., after 36 to 48 hours) and are felt to be at increased risk of hospitalization or death, it is reasonable, and not contrary to the FDA EUA, to administer sotrovimab for the purpose of preventing hospitalization or death, provided patients meet the criteria for this medication, including being within 10 days of symptoms.

5. Failure to comply with Federal and state reporting requirements, may lead to decreased or withheld future allocations.

6. Those treated with bamlanivimab/etesevimab or REGEN-COV and clinically worsen may suggest infection with the Omicron variant. It is currently recommended to pursue genetic sequencing through the MDHHS Bureau of Laboratories or other qualified laboratory whenever Omicron is suspected.

Michigan Department of Health and Human Services
Priority Criteria[2] for Monoclonal Antibody Therapy Treatment of Mild to Moderate COVID-19
and
Limited Post-Exposure Prophylaxis

These criteria are to be used when there are supply shortages and/or delays in the ability to provide timely treatment of higher-risk patients with mild to moderate COVID-19. Note: During Priority Criteria Post-Exposure Prophylaxis is not provided[3] except in significantly immunocompromised patients as specified below.

Core Requirements for Treatment of Mild to Moderate COVID-19 (Must meet ALL of the following)

1. Patient tests positive for SARS-CoV-2 (PCR or antigen, including home test)
2. Outpatient not hospitalized for COVID-19 (use in emergency department, observation or outpatient setting)
3. No requirement for supplemental oxygen due to COVID -19 (or no increase from baseline supplemental oxygen)
4. Symptoms ≤10 days
5. Patient has a **Priority Condition** making them more susceptible to severe COVID-19 illness as listed below

Priority Conditions (Must include at least ONE of the following)

1. Vaccinated or unvaccinated adult ≥18 years old and ≥40 kg:
   a) Obesity (BMI > 35)
   b) Age ≥65
   c) Chronic respiratory disease (e.g., COPD, moderate or severe asthma requires daily inhaled corticosteroid, bronchiectasis, CF, ILD)
   d) On renal replacement therapy (hemodialysis or peritoneal dialysis)
   e) Immunosuppressed: congenital or acquired immunodeficiency, solid organ transplant, active malignancy receiving chemotherapy, bone marrow transplant, or autoimmune diseases requiring immunosuppressive therapy, splenectomy, sickle cell disease (auto-splenectomy), Down Syndrome)
   f) Pregnancy
2. Additional qualifying conditions for not fully vaccinated adults ≥18 years old and ≥40 kg:
   a) Cardiovascular disease (e.g., HTN, valvular disease, CVA, PAD, CHF)
   b) Diabetes
   c) Chronic Kidney Disease (stage III, IV, or end stage CKD-GFR)
3. Pediatric patient 12-17 years old weighing ≥40 kg AND one of the following:
   (Bamlanivimab/etesevimab is authorized by the FDA for treatment in children <12 years old)
   a) BMI ≥95% for age on CDC growth chart
   b) Immunosuppressed: congenital or acquired immunodeficiency, solid organ transplant, active hematologic malignancy receiving chemotherapy, bone marrow transplant, or autoimmune diseases requiring immunosuppressive therapy
   c) Pregnancy
4. Healthcare provider concern for and determination of patient being at high-risk for disease progression to hospitalization or death AND patient otherwise meets criteria of applicable FDA EUA
   a) Rationale documented in medical record AND
   b) Requires agreement with second provider (authorized to prescribe)

Post-Exposure Prophylaxis Exception for Close Contact Exposure in Immunocompromised:

Vaccinated or Unvaccinated and age ≥12 years old* and ≥40 kg AND Immunosuppressed:
(Bamlanivimab/etesevimab is authorized by the FDA for PEP in children <12 years old)

a) congenital or acquired immunodeficiency
b) solid organ transplant recipient
c) active malignancy receiving chemotherapy
d) bone marrow transplant recipient
e) autoimmune diseases requiring immunosuppressive therapy

[2] Adapted from mAb treatment and PEP criteria developed by Michigan Medicine – University of Michigan
[3] National Institutes of Health COVID-19 Treatment Panel Recommendations for mAb Use with Logistical or Supply Constraints