Monoclonal Antibody Therapies for COVID-19: What Governors Need to Know

Preparing for Emergency Use Authorization (EUA) of Antibody Therapies

Ahead of anticipated authorization of vaccines for COVID-19, state and local leaders must also begin planning for the imminent availability and distribution of monoclonal antibodies (mAbs), which represent a potentially valuable type of treatment to prevent serious complications of COVID-19. An EUA may be granted by the Food and Drug Administration (FDA) as early as this week.

While mAb therapies are likely to be an important tool in reducing the toll of COVID-19, these will initially be in limited supply relative to patients who might benefit. As a result, state and local policymakers will have to make decisions about how the therapies can get to the populations that need them most. Clinical trials indicate mAbs are likely to work best when administered soon after infection occurs and must be "infused" in specialty clinics or similar medically-supervised settings, requiring further planning arrangements.

Governors and other state health officials should proactively engage health system leaders, public health experts, and local and community leaders to understand their state's health system capacity for administering antibody treatments, develop guidance for efficiently targeting limited resources to populations who are most likely to benefit, and address potential barriers to access for populations at highest risk of serious outcomes from COVID-19.

What are monoclonal antibody therapies?

Antibodies are produced naturally by the immune system to recognize components of disease-causing agents, such as bacteria, viruses, or cancer cells, and to mark them for destruction. They are also induced by vaccines. Man-made mAbs can be synthesized in a laboratory to mimic these natural antibodies. COVID-19 mAbs have a range of potential uses under investigation, including prophylaxis. They may also be useful for patients with compromised immune systems who may not be good candidates for receiving a vaccine. Because of these features, mAbs may represent a substantial step toward having a full complement of treatments for COVID-19.

The mAb treatment is administered through a one-time intravenous infusion that generally takes at least an hour, performed by health professionals using protective equipment in a setting that isolates the COVID-19 patients from others to prevent infection. Patients must be monitored for adverse reactions. Early evidence from clinical trials shows that leading mAb candidates significantly reduce hospitalizations when administered early, with a larger effect for older and obese patients who are at higher risk for COVID-19 complications.

How will these therapies be authorized and made available for patients?

There are an estimated 70 mAbs currently in development to treat COVID-19. Of these, two candidates from Eli Lilly and Company (Lilly) and Regeneron are in late stage clinical trials and are expected to be authorized for use in patients that have recently been infected with COVID-19. Both Lilly and Regeneron have submitted applications under the agency's EUA program, an abbreviated review pathway that allows the agency additional flexibility and discretion during a public health emergency.

The EUA applications submitted by Lilly and Regeneron are both based on clinical trials for use in patients soon after they have tested positive for COVID-19 as opposed to those with severe disease. Notably, Lilly recently ended its trial of mAbs for hospitalized COVID-19 patients after researchers concluded the therapy produced no marked improvement. The FDA is reviewing this evidence and will decide whether to authorize an EUA for limited use in certain recently-infected COVID-19 patients. Such authorization may come as early as this week.

How can Governors and other state officials prepare for the authorization of these therapies?

Governors and other state officials will need to address a set of special planning considerations to ensure that the available supply of these promising new therapies, when authorized, can quickly, efficiently, and equitably be targeted to populations where they are most needed. The initial distribution of mAbs will be managed by the Federal government. The Department of Health and Human Services (HHS) has already entered into an advance purchase

arrangement with both Lilly and Regeneron. The distribution process is likely to be similar to that for Remdesivir in that the Federal government allocates a certain volume of treatments to each state, based on COVID-19 case rates and the relative rates of older and obese patients in the state, and states will be responsible for allocating to providers who have the capacity to administer the treatments.

While manufacturing capacity is ramping up for both Lilly and Regeneron products, initial supply will be limited in the near term compared to current COVID-19 case rates. Lilly has signed a contract with the U.S. Department of Defense (DOD) and HHS for 300,000 initial doses over the next two months and the federal government can purchase up to an additional 650,000 through the end of June 2021. Regeneron's contract with DOD and HHS is for an estimated 70,000-300,000 doses over the next several months. Current national case rates exceed 75,000 per day. This will likely necessitate difficult decisions by policymakers and health care providers in determining how to allocate the limited mAb supply to maximize public health benefit.

In preparing for imminent EUA authorization of mAbs, Governors should identify processes for prioritizing access to mAbs, while allocating limited supply in a fair, equitable, and transparent process that maximizes public health benefit. Such actions should include:

- **Engage with federal partners:** Provide input to the Federal government to inform the methodology and plan for allocating initial mAbs to states.
- **Identify capacity**: Assess the capacity for delivering mAbs to COVID-positive patients in different settings through engagement of hospitals, independent infusion clinics, community care centers, nursing homes, and home health agencies. In identifying such capacity, state leaders should build upon their local public health partnerships for managing testing, remdesivir access, and other key COVID-19 response activities.
- **Define target areas**: To effectively target mAb distribution, map areas of COVID-19 outbreaks where high-risk populations have the potential to benefit from access to treatment, along with providers with capacity to deliver mAb treatments.
- **Consider how to prioritize eligible populations:** States should seek guidance from the Centers for Disease Control and Prevention on how to prioritize populations who are eligible for this treatment given that eligibility will far exceed the amount of treatment available.
- **Develop testing referral plans**: To ensure timely delivery of mAbs before an individual develops complicating symptoms, consider the development of referral plans that would provide individuals with information on their mAb eligibility at the same time that they receive their positive COVID-19 test result.
- **Address cost of treatment for patients**: Although the federal government will likely purchase initial doses of mAbs, states should work with providers and payers to ensure that administration costs and copays do not serve as a barrier to access.
- **Communicate plan for equitable allocation**: Build a clear message explaining the limited supply of treatment available, who will be eligible for the treatment and where they will be able to go to receive it.
- **Ensure Data Collection and Reporting**: Ensure data systems collect demographic data on patients receiving treatments and use such data to understand who is receiving the treatment and whether the treatment is effective for those populations.

For additional information about monoclonal antibodies, please contact Kate Johnson (kjohnson@nga.org) or Hemi Tewarson (hemi.tewarson@duke.edu).