The following summarizes key literature pertaining to treatment of COVID-19 during the past week. *Note: some of the data discussed below may be in pre-print form that has not yet been peer-reviewed. We have noted some discrepancies in some of this data, and final printed versions may ultimately differ from what is shown here. We will update as soon as possible; caution is advised when interpreting this literature.*

### NIH Guideline Updates

No additional updates this week.

### Therapeutic/Regulatory Information

Yesterday, the North Carolina Department of Health and Human Services (NCDHHS) sent a communication to pharmacy managers and remdesivir contacts. I am including the information provided here in case you may not have seen it or our members outside of North Carolina had not seen this information.

Text from the NCDHHS e-mail:
We were recently made aware of the possibility that within the next 1-2 weeks FDA may take action and issue Emergency Use Authorization (EUA) for one or more monoclonal antibody treatments for COVID-19 in an outpatient setting. While we do not have many specific details and likely won’t get many until an EUA is officially released, we wanted to share with you the planning assumptions we do have so you can begin planning for the use of these products in an outpatient setting.

Here are the current planning assumptions regarding EUAs for monoclonal antibodies as treatment for COVID-19:

- Action from the FDA is anticipated to occur within the next 1-2 weeks for at least one, but possibly two, monoclonal antibody products
- These EUAs are anticipated to be for treatment in COVID+ patients in an outpatient setting.
- The EUAs are likely to include:
  - Age restrictions
  - Some requirement related to time since positive COVID test result and/or time since symptom onset.
- These products are likely to require cold storage conditions in a range of 2-8°C.
- These products are likely to require some level of mixing prior to administration and will likely come with specific pharmacy handling instructions.
- We anticipate that these products will be administered as one-time, IV infusions lasting approximately 1 hour, followed by an observation period.
- Allocation and distribution of these products will likely be similar to how phase 2 of the Remdesivir process was handled:
  - The Federal government will make virtual allocations to States on a weekly basis
  - States will offer weekly allocations to providers who can accept or deny
States will communicate confirmed allocations to Federal Government
Product will be shipped direct to end users via a commercial distributor

Allocations to states will likely be based mainly on two data elements:
- Confirmed COVID-19 Hospitalization numbers
- Confirmed COVID-19 total cases by state

Due to stockpiling by operation warp speed, supply of these products is expected to be relatively robust, compared to initial supplies of Remdesivir, but still a limited resource overall.

We anticipate that these products would initially be provided to locations free of charge.

Please keep in mind that these assumptions are subject to change as we learn more about the situation.

**COVID and Influenza**
NCDHHS also released updated guidance on testing, particularly during times when seasonal influenza is circulating. Most relevant to our stewards is this statement:

**For hospitalized patients:**
Empiric oseltamivir treatment for suspected influenza should be started as soon as possible regardless of illness duration and without waiting for influenza testing results.

**For patients not requiring hospitalization:**
Prescribe antiviral treatment if on-site influenza testing is positive OR prescribe empiric antiviral treatment without influenza testing based upon a clinical diagnosis of influenza for patients of any age with progressive disease of any duration, and for children and adults at high risk for influenza complications with illness. For otherwise healthy non-high-risk persons with influenza-like illness (fever and either cough or sore throat) with illness ≤2 days, empiric antiviral treatment of suspected influenza can be prescribed based upon clinical judgement. For otherwise healthy non-high-risk persons without influenza-like illness or with illness duration >2 days, antiviral treatment of influenza is unlikely to provide significant clinical benefit.

The full document can be found at this link: [https://files.nc.gov/covid/documents/guidance/healthcare/COVID-19-Provider-Guidance-Final.pdf](https://files.nc.gov/covid/documents/guidance/healthcare/COVID-19-Provider-Guidance-Final.pdf)

**New Literature This Week**
Interim results of a phase II trial of the Lilly monoclonal antibody were published in *The New England Journal* on Wednesday. This trial compared three different doses of the Lilly monoclonal antibody to placebo in outpatients with COVID. The primary outcome was change in viral load.

All doses of the monoclonal antibody were associated with enhanced viral clearance compared to placebo (pooled analysis for difference in viral load: -0.49, -0.87 to -0.11). The investigators reported that there was a lower rate of subsequent hospital admission or return to ED among patients who received the monoclonal antibody (1.6% vs 6.3% in monoclonal and placebo groups respectively). Hospitalization rates were greatest among patients with a high viral load on day 7. Of note, for the analysis, hospitalization included admitted patients and patients who returned to the ED without subsequent admission.

These data provide initial insight into the potential role of this data and did not raise any significant safety concerns. Ongoing trials will provide further insight.

Treatment Summary Tables

NIH Treatment Guidelines Summary:

The remdesivir summary table with the information of published studies to date can be found at this link:

The hydroxychloroquine summary table is available at this link:

The tocilizumab summary table with the information of published studies to date can be found at this link

The convalescent plasma summary table is available at this link:

All FAQs available here: https://dason.medicine.duke.edu/covid-19-novel-coronavirus-resources