

## COVID-19 Acute Care Management of Severe Infections: Where Do We Stand?

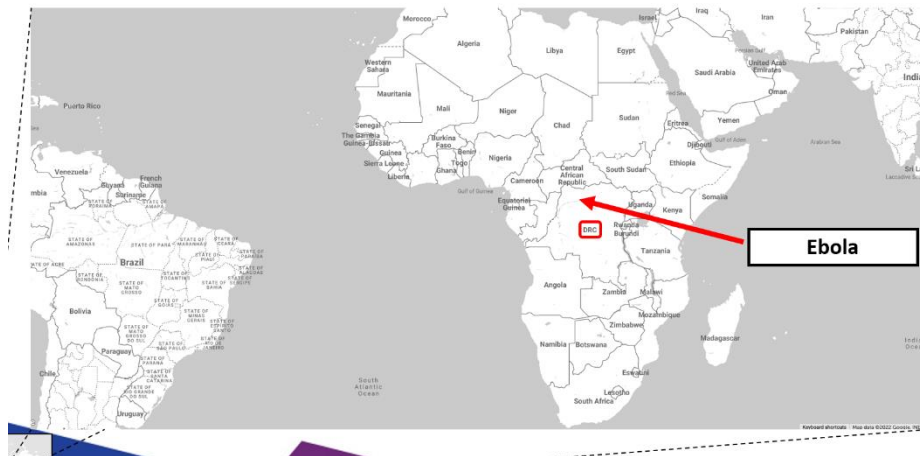
### Additional Resources

The following resources were shared during the live session:

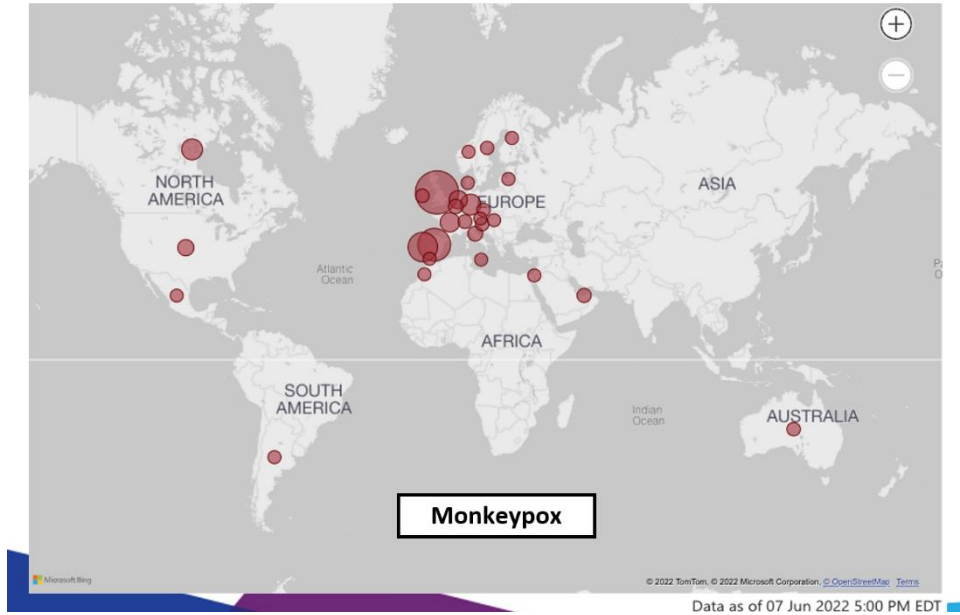
- Post session resources (podcast of webinar, presentation slides, responses to unanswered questions) can be found on our website next week:
  - <https://med.emory.edu/departments/medicine/divisions/infectious-diseases/serious-communicable-diseases-program/covid-19-resources/access-past-echo-recordings.html>
- Register for upcoming sessions on our website:
  - <https://med.emory.edu/departments/medicine/divisions/infectious-diseases/serious-communicable-diseases-program/covid-19-resources/echo-upcoming-session.html>

### **Session Recap:**

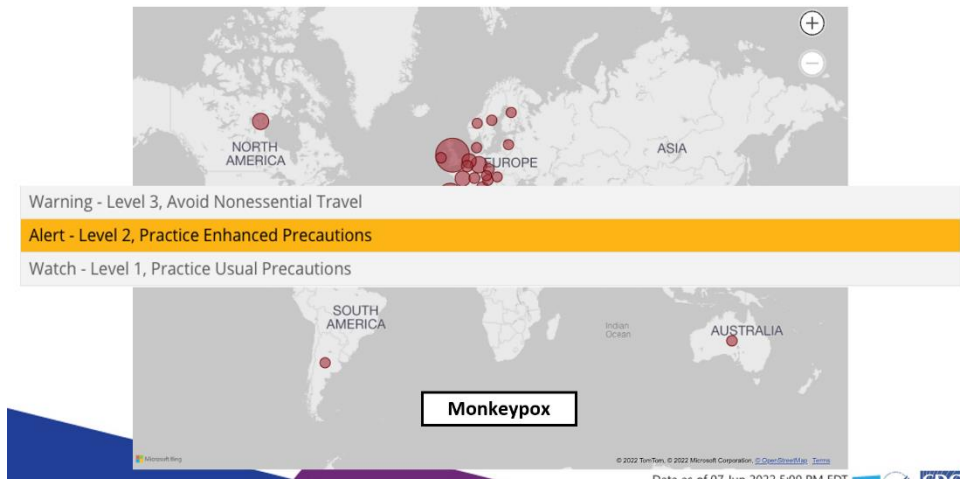
- Situation Report:



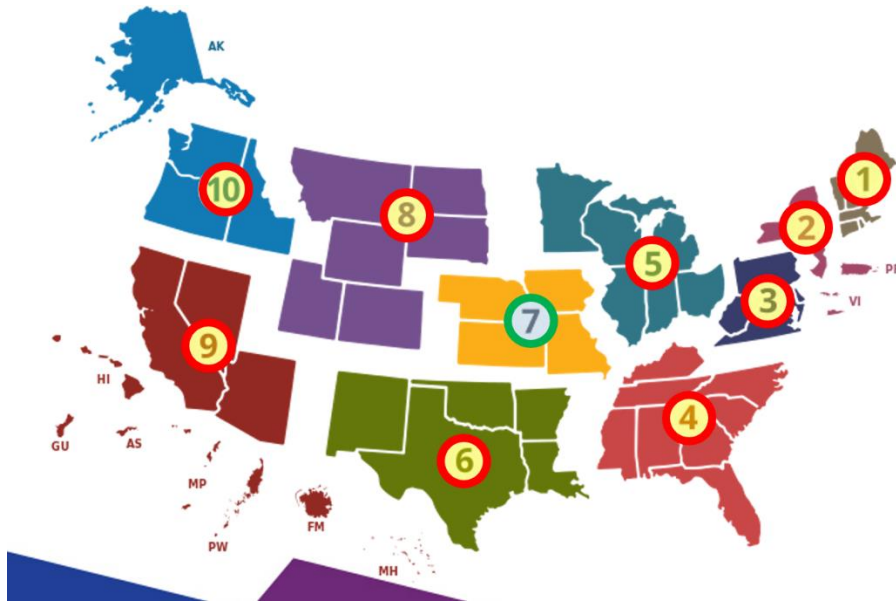
- First, Ebola in Africa. In total there have been 5 confirmed cases in the Democratic Republic of the Congo and it has been 21 days since the last recorded case. However, surveillance and response efforts have been hampered by a healthcare workers strike and a lack of information sharing.



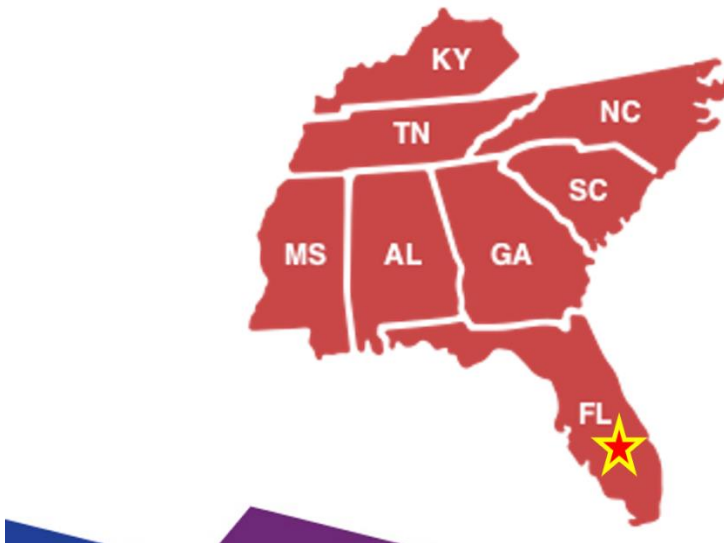
- Now to monkeypox. As of yesterday 6.7.22, there are now 1088 confirmed cases in 29 non-endemic countries. Few hospitalizations and no deaths have been reported, though case numbers are likely an undercount as transmission dynamics continue to be elucidated.



- Because of this, the WHO has raised the global threat level to moderate, and the US CDC has raised its' risk assessment to level 2. Healthcare workers are advised that aerosol transmission is possible among close contacts and appropriate PPE is strongly recommended.



- In the US, there are now 35 confirmed cases of Monkeypox in every region except 7.



- In region 4, there has been one new confirmed case this past week in Florida, in a resident tested in the UK bringing the regions total to 5. Once again, the general risk to the public remains low.
- This concludes the special pathogens of concern sitrep for the 8<sup>th</sup> of June.
- Management of Severe MIS-C and Pediatric COVID-19
  - *Case definition:*

- An individual aged <21 years presenting with fever ( $\geq 38^{\circ}\text{C} \geq 24$  hours, or report of subjective fever lasting  $\geq 24$  hours), laboratory evidence of inflammation, and evidence of clinically severe illness requiring hospitalization, with multisystem ( $\geq 2$ ) organ involvement (cardiac, renal, respiratory, hematologic, gastrointestinal, dermatologic or neurological)
    - AND no alternative plausible diagnoses
    - AND Positive for current or recent SARS-CoV-2 infection by RT-PCR, serology, or antigen test; or COVID-19 exposure within the 4 weeks prior to the onset of symptoms.
  - *Who is affected by MIS-C?*
    - In relation to race and ethnicity, the White Non-Hispanic population is most affected, followed by Black Non-Hispanics, and the Hispanic/Latino population.
    - When focusing on age, individuals aged 5-11 years are most affected.
    - In relation to sex, males are most effected - at 60.71%, compared to 39.26% in females, and 0.04% unknown.
  - *What is the treatment for MIS-C?*
    - Treatments vary by patient, but may consist of IVIG, steroids, antiplatelet medicine, vasoactive medications, noninvasive respiratory support, immune modulators, intubation/MV, ECMO, or dialysis.
  - *Management of Severe Pediatric COVID-19:*
    - Treatment options vary by patient, but may consist of Remdesivir, Dexamethasone, or Baricitinib.
- Management of Severe COVID
  - *Severe Disease Case Definition:*
    - Existence of at least one of the following: dyspnea, RR > 30, SpO<sub>2</sub> < 94% on room air, P:F < 300, and/or Infiltrates in more than 50% of lung field
  - *Critical Illness Case Definition:*
    - Requiring advanced oxygen therapy, such as HFNC, NRB, HHFNC, CPAP, NIPPV, mechanical ventilation, or ECMO, and other organ failure.
  - Significant variations in definitions for severe disease and critical illness do exist in the literature. There are also difficulties in generalizing against changes in variants, testing rates, data collection, immunization rates, therapeutics, system stresses, and population selection.
  - *Treatment Options:*
    - Options vary by patient, but may consist of steroids, anticoagulation, or ECMO.
- Management of Severe COVID-19 in Adults: Antivirals and Beyond
  - *Is Treatment authorization the same as approval?*
    - Emergency Use Authorization (EUA) is used for national emergencies to help address the need to bypass the legal obstacles and time constraints associated with formal FDA approval.
    - Examples of this would be Anthrax, H1N1 2009, etc.

- EUA does not equate to FDA approval status, as use can only be within criteria that is specifically defined in EUA letter of authorization. No “off-label” use is allowed.
- *Therapeutics based on COVID-19 Severity:*

COVID-19 Severity	Therapeutics
Severe and on O <sub>2</sub> but not yet HF	<ul style="list-style-type: none"> <li>• Remdesivir IV 200 mg x1 day 1, then 100 mg IV Q24hr x 4 days (up to 9 days w/ progression)</li> <li>• Dexamethasone 6 mg IV/PO x 10 days or until discharge</li> <li>• +/- baricitinib 4 mg PO x 14 days or until discharge (if cannot take dexamethasone or if progressively worsening)</li> <li>• +/- tocilizumab 8 mg/kg x 1 (if progressively worsening and did not start baricitinib)</li> </ul>
Severe on escalating O <sub>2</sub> (HF, NIMV, etc.)	<ul style="list-style-type: none"> <li>• Remdesivir IV 200 mg x1 day 1, then 100 mg IV Q24hr x 4 days (up to 9 days w/ progression)</li> <li>• Dexamethasone 6 mg IV/PO x 10 days or until discharge</li> <li>• baricitinib 4 mg PO x 14 days or until discharge OR tocilizumab 8 mg/kg x 1 IV</li> </ul>
Critical requiring MV or ECMO	<ul style="list-style-type: none"> <li>• Dexamethasone 6 mg IV/PO x 10 days or until discharge</li> <li>• Tocilizumab 8 mg/kg x 1 (if w/in 24 hours since ICU admission)</li> </ul>