

COVID-19 Update: Grand Rounds

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Medical Director, Infection Prevention

8/31/2021

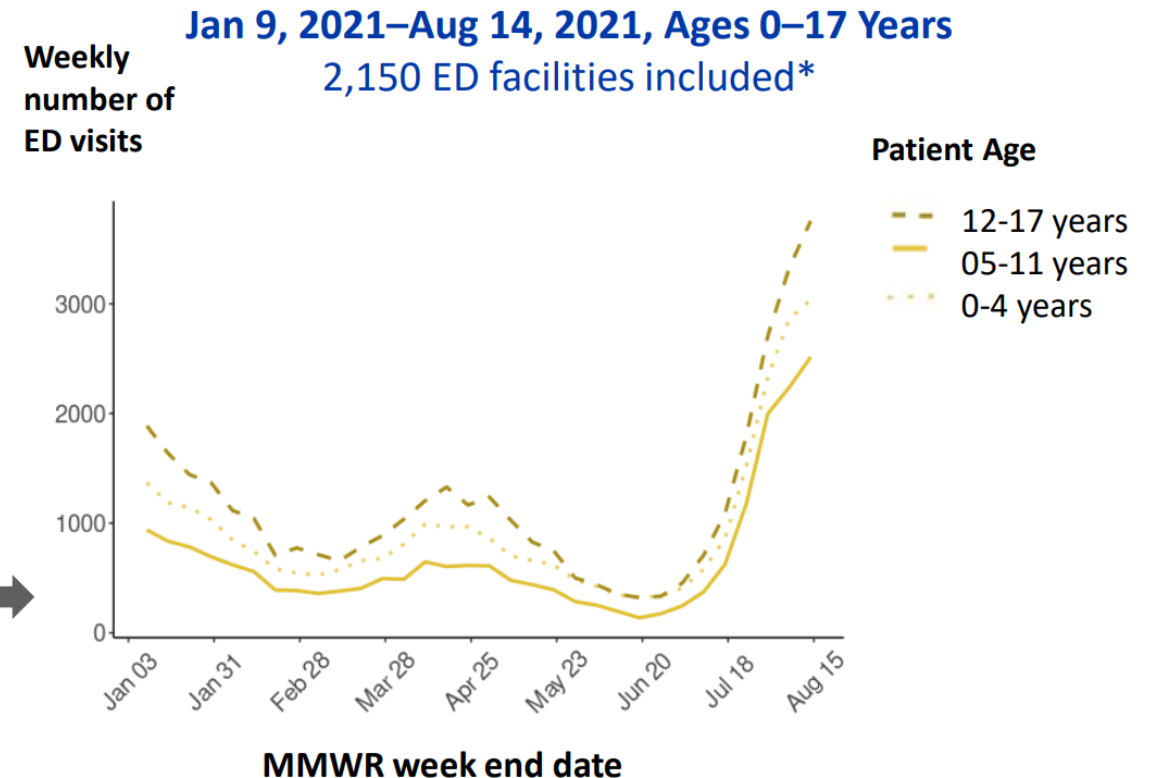
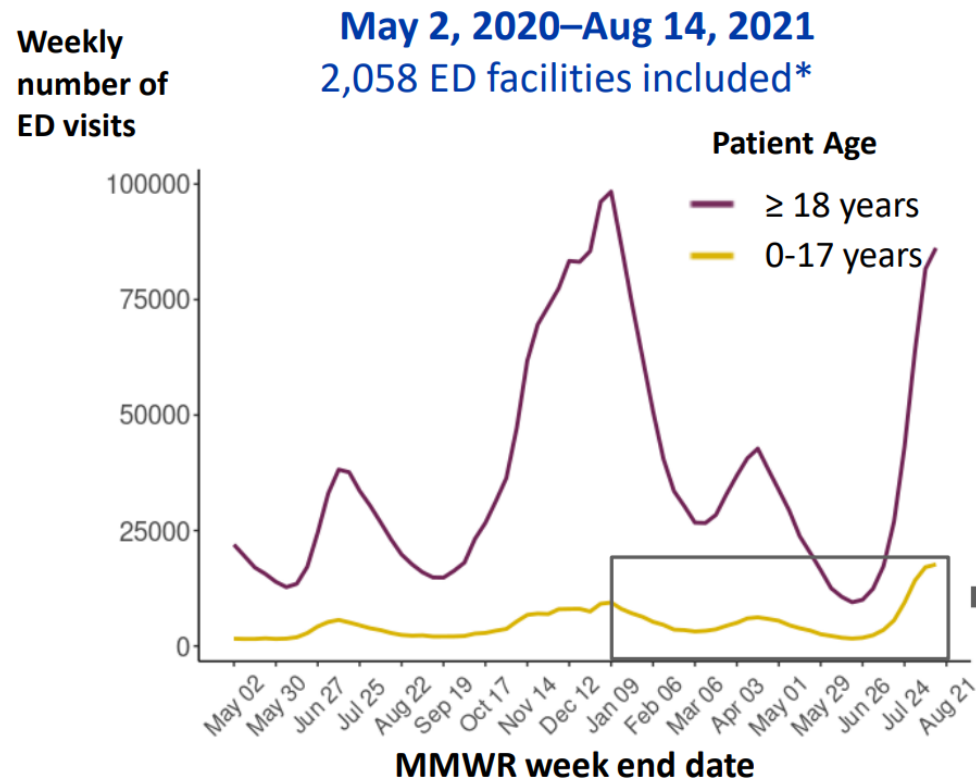
Main Points of Discussion

- **COVID-19 in Peds**
- **Contact Info for CDC questions**
- **Further Questions on Monoclonal Antibody**
- **Topics for Conversation**
- **Questions**

High-Level Summary

- Children and adolescents are susceptible to SARS-CoV-2.
- Children tend to have fewer respiratory symptoms than adults.
- From prospective cohort and household transmission studies, infection rates are similar across age groups; children can transmit SARS-CoV-2 to others and with similar efficiency as adults.
- Children have lower rates of hospitalization and mortality compared to adults.

U.S. Emergency Department (ED) Visits in Patients Diagnosed with COVID-19 by Age in a Sample of Reporting Facilities*



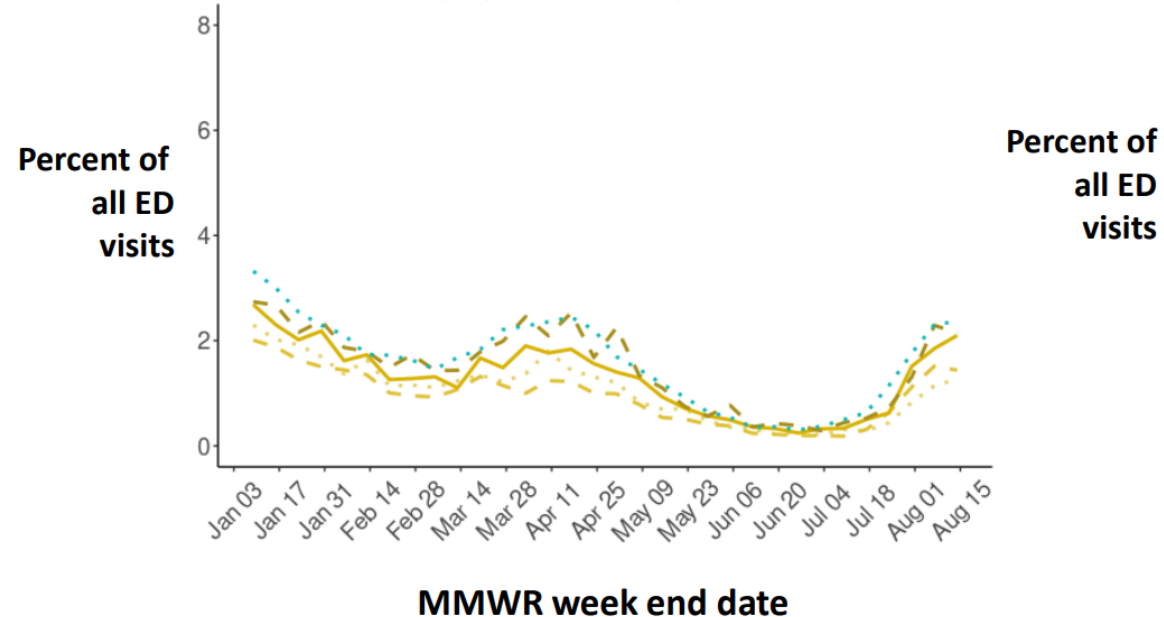
Data Source: ED visits from the National Syndromic Surveillance Program (NSSP).

*Counts include only the subset of the 5,225 NSSP facilities with consistent reporting to NSSP and with high quality diagnosis codes throughout the time period. Fewer than 50% of facilities in California, Hawaii, Iowa, Minnesota, Oklahoma, and Ohio report to NSSP.

U.S. Emergency Department (ED) Visits for COVID-19 in Children and Young Adults, by State Vaccination Rate; Jan 9–Aug 14, 2021

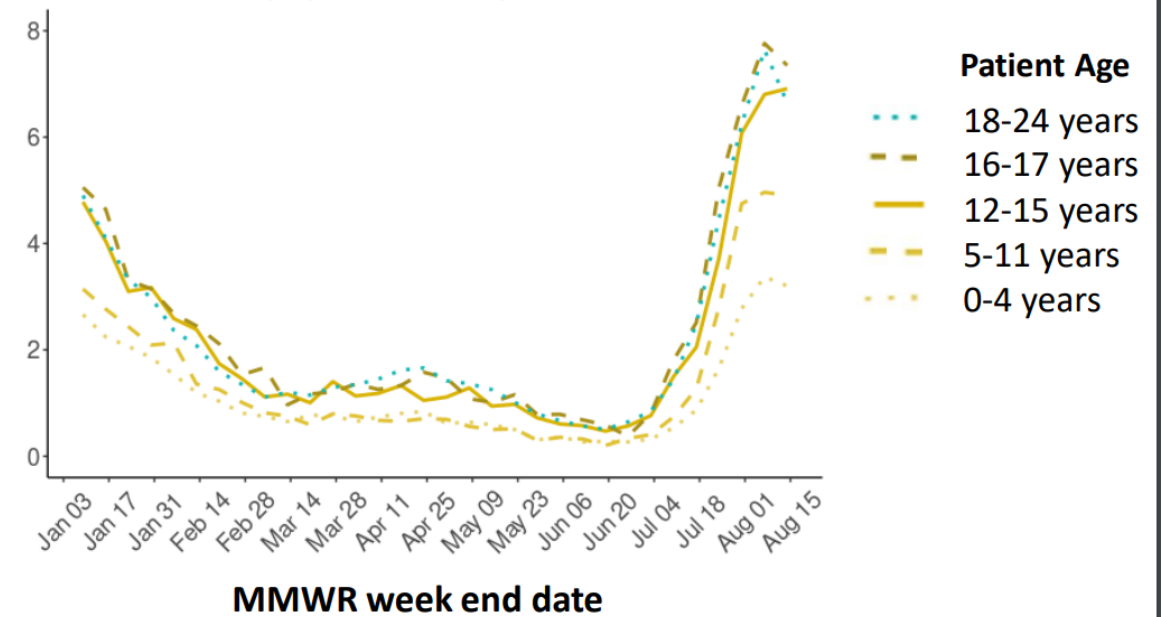
ED visits in quartile of states with highest vaccination rates*

(>56% total population fully vaccinated; 12 states)



ED visits in quartile of states with lowest vaccination rates**

(<42% total population fully vaccinated; 12 states)

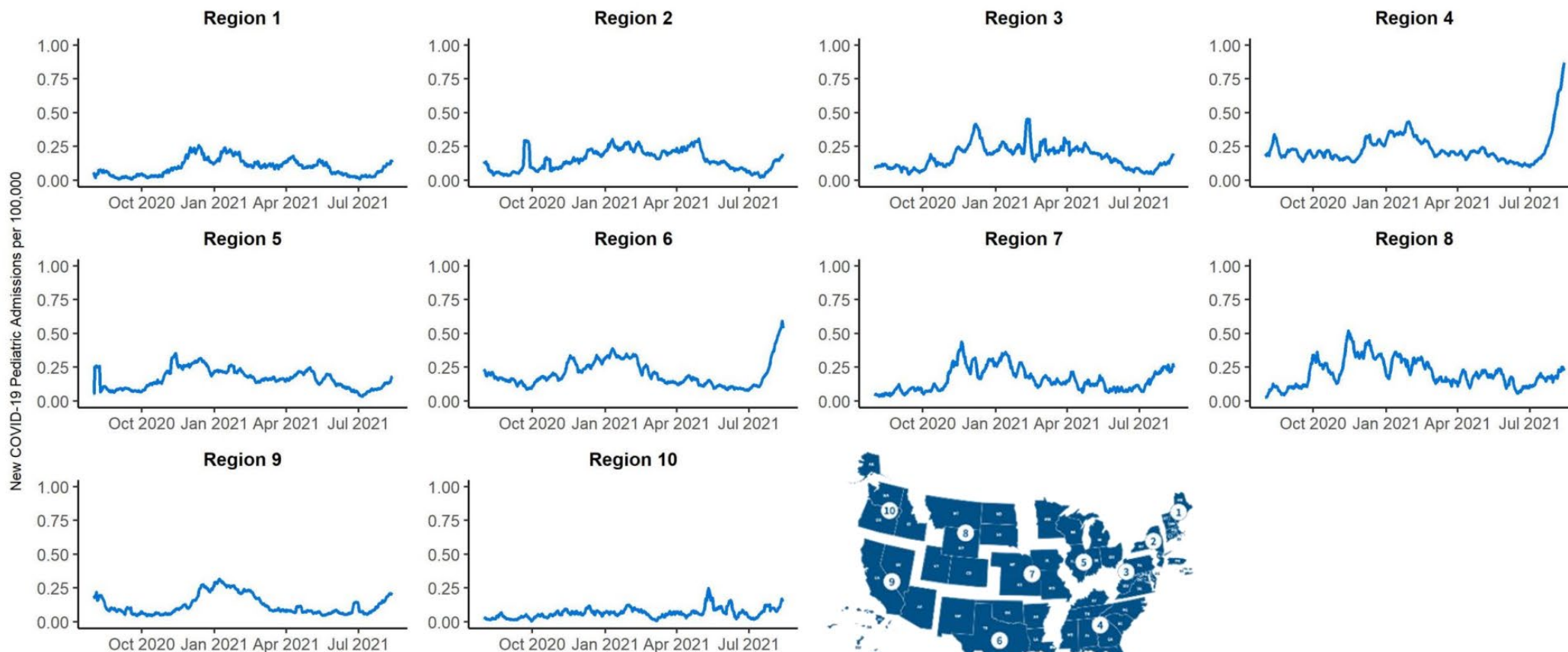


Data Source: ED visits from the National Syndromic Surveillance Program (NSSP). Fewer than 50% of facilities in CA, HI, IA, MN, OK, and OH report to NSSP.

* Highest vaccination states: VT, MA, ME, CT, RI, MD, NJ, NH, WA, NM, NY, OR.

** Lowest vaccination states: AL, MS, WY, AR, LA, ID, GA, WV, TN, ND, OK, SC. Two states; WY and OK excluded because they did not have consistent data.

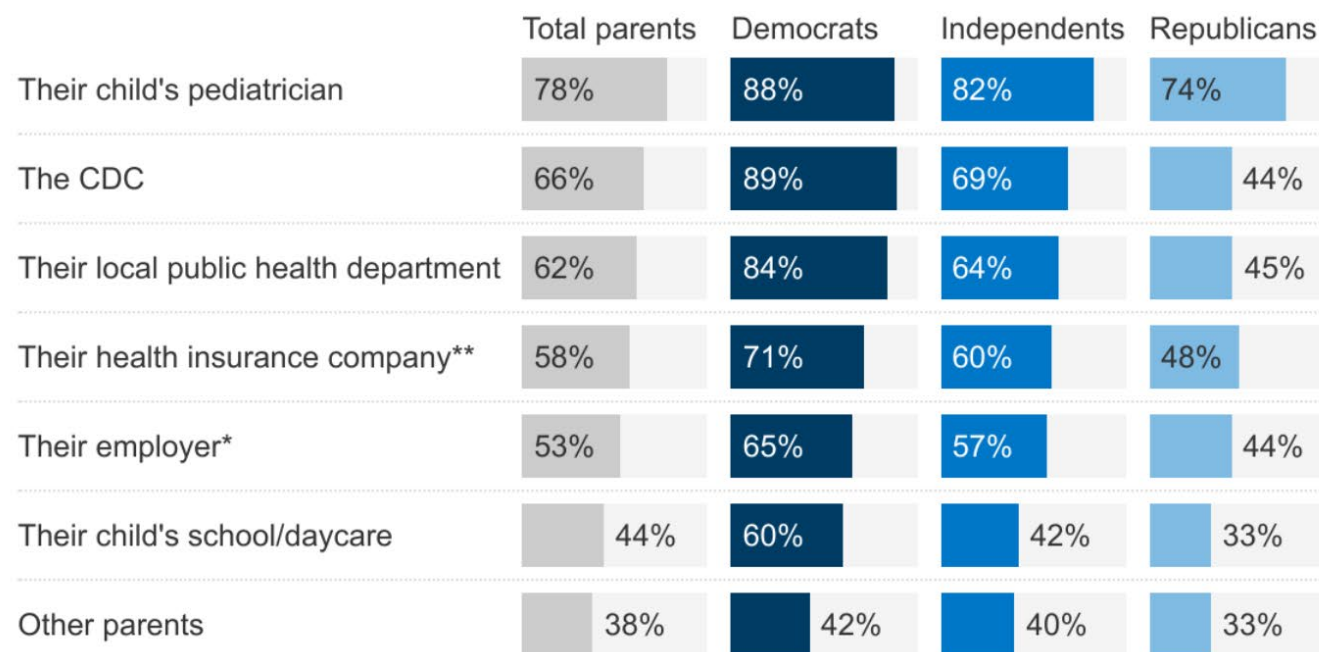
New Admissions of Pediatric Patients with Confirmed COVID-19 per 100,000 Population, August 1, 2020–August 13, 2021, HHS Regions



Source: Unified Analytic Hospital Dataset, based on reporting from all hospitals (N = 5,253).

Parents Are Most Likely To Trust Pediatricians To Provide Reliable Information About The COVID-19 Vaccine For Children

Percent of parents who say trust each of the following **a great deal** or **a fair amount** to provide reliable information about the COVID-19 vaccines for children:



NOTE: *Among those who are employed and not self-employed. **Among those who are insured. See topline for full question wording.

SOURCE: KFF COVID-19 Vaccine Monitor: Parents And The Pandemic (Jul. 15-Aug. 2, 2021).

**KFF COVID-19
Vaccine Monitor**

All Policy Considerations for School Plans Should Start with the Goal of Keeping Students Safe and Physically Present in School

- All students and staff who are eligible for a COVID-19 vaccine should get vaccinated.
- Families should make sure their children are up to date on *all* vaccines.
- All children over the age of two and all adult staff should wear face masks, regardless of whether they are vaccinated.
- Research shows if we follow public health precautions and using a multi-layer approach – getting vaccinated, universal mask use, distancing, testing, ventilation, cleaning and disinfecting – there is very low spread of COVID in schools.
- Schools should be prepared to offer resources to support student's mental health.



CDC-IDSA Partnership: Clinical Management Call Support

FOR WHOM?

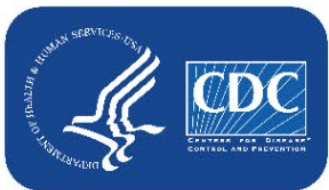
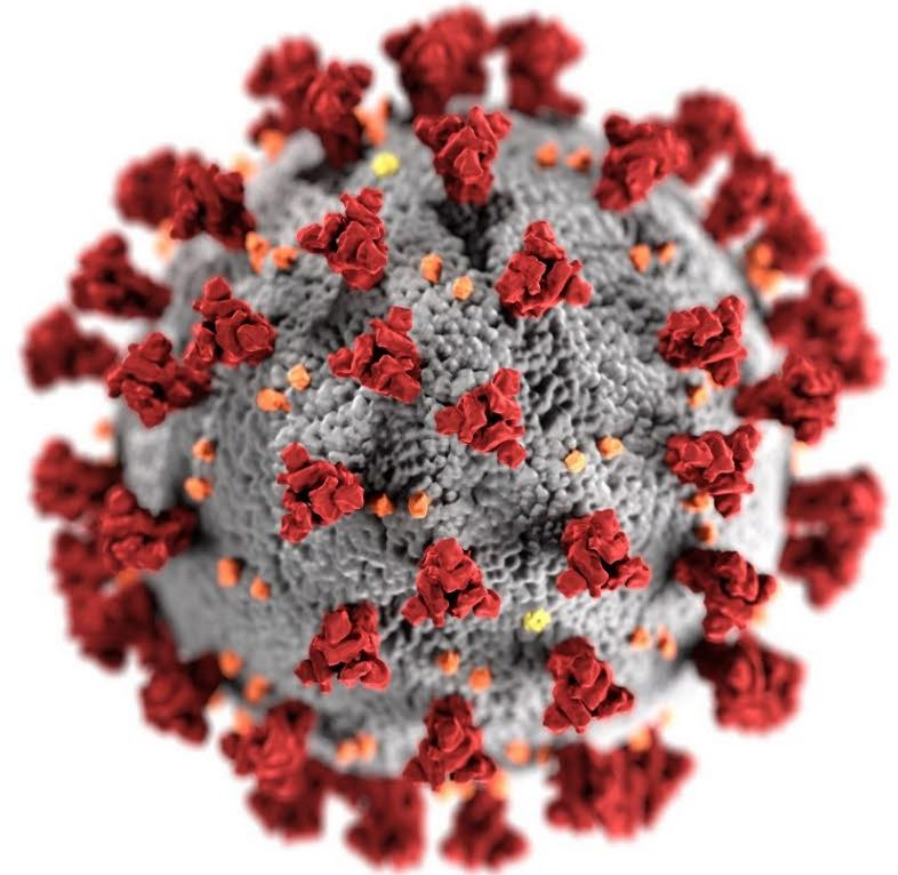
- Clinicians who have questions about the clinical management of COVID-19

WHAT?

- Calls from clinicians will be triaged by CDC to a group of IDSA volunteer clinicians for peer-to-peer support

HOW?

- Clinicians may call the main CDC information line at 800-CDC-INFO (800-232-4636)
- To submit your question in writing, go to www.cdc.gov/cdc-info and click on Contact Form



IDSA
Infectious Diseases Society of America

cdc.gov/coronavirus

COVID-19 Monoclonal Antibodies Side-By-Side



David Weber

David Weber

	Casirivimab/Imdevimab (Regeneron)	Bamlanivimab/Etesevimab (Eli Lilly & Co)	Sotrovima																																																																		
Available at UNC?	YES (preferred)	NO (use paused by FDA, 25 June 2021)																																																																			
Authorized Use	Post-exposure prophylaxis in those not fully vaccinated but at high risk for progression to severe disease Treatment of mild-moderate COVID-19 in adults and pediatrics (≥12 years, ≥40 kg) who present within 10 days of a positive SARS-CoV-2 viral test who are at high risk for progression to severe COVID-19 NOT authorized for inpatient admitted for COVID-19																																																																				
Clinical Data Updated 06/2021	Select Data from COV-2067 (Phase I/ II/ III) <ul style="list-style-type: none">n = 4,567 patients (3,067 CAS/IMD, 1,500 PLB); tx w/in 3 daysIncidence of COVID-19 related hospitalization or death from any cause at day 29 → 3.2% PLB vs 1% CAS/IMD (Δ -2.2%; RRR 0.69; p<0.001)Time to syx resolution: 14 days PLB vs 10 days CAS/IMD (p<0.001)	Select Data from BLAZE-1 (Phase III) <ul style="list-style-type: none">N = 769 patients (511 BAM/ETE, 258 PLB); tx w/in 4 daysIncidence of COVID-19 related hospitalization or death from any cause at day 29 → 6% PLB vs 0.8% BAM/ETE (Δ -5.2%; RRR 0.86; p<0.001)COVID-19 related deaths: 4 deaths (PLB) vs 0 (p<0.01)	Select Data from COMET-ICE (Phase I/ II/ III) <ul style="list-style-type: none">n = 583 patients (291 sotrovimab, 292 PLB); tx w/in 5 daysIncidence of COVID-19 related hospitalization or death from any cause at day 29 → 7% PLB vs 1% CAS/IMD (Δ -6%; RRR 0.85; p<0.01)COVID-19 related deaths: 1 death (PLB) vs 0 (p<0.01)																																																																		
Variant Activity	<table><thead><tr><th>WHO Nomenclature</th><th>Lineage/Spike Substitution</th><th>Fold Reduction in Susceptibility</th></tr></thead><tbody><tr><td>Alpha</td><td>B.1.1.7</td><td>No change</td></tr><tr><td>Beta</td><td>B.1.351</td><td>No change</td></tr><tr><td>Gamma</td><td>P.1</td><td>No change</td></tr><tr><td>Epsilon</td><td>B.1.427/B.1.429</td><td>No change</td></tr><tr><td>Iota</td><td>B.1.526</td><td>No change</td></tr><tr><td>Kappa</td><td>B.1.617.1/B.1.617.3</td><td>No change</td></tr><tr><td>Delta</td><td>B.1.617.2</td><td>No Change</td></tr></tbody></table>	WHO Nomenclature	Lineage/Spike Substitution	Fold Reduction in Susceptibility	Alpha	B.1.1.7	No change	Beta	B.1.351	No change	Gamma	P.1	No change	Epsilon	B.1.427/B.1.429	No change	Iota	B.1.526	No change	Kappa	B.1.617.1/B.1.617.3	No change	Delta	B.1.617.2	No Change	<table><thead><tr><th>WHO Nomenclature</th><th>Lineage/Spike Substitution</th><th>Fold Reduction in Susceptibility</th></tr></thead><tbody><tr><td>Alpha</td><td>B.1.1.7</td><td>No change</td></tr><tr><td>Beta</td><td>B.1.351</td><td>215</td></tr><tr><td>Gamma</td><td>P.1</td><td>>46</td></tr><tr><td>Epsilon</td><td>B.1.427/B.1.429</td><td>9</td></tr><tr><td>Iota</td><td>B.1.526</td><td>31</td></tr><tr><td>Delta</td><td>B.1.617.2</td><td>No Change (ETE component only)</td></tr></tbody></table>	WHO Nomenclature	Lineage/Spike Substitution	Fold Reduction in Susceptibility	Alpha	B.1.1.7	No change	Beta	B.1.351	215	Gamma	P.1	>46	Epsilon	B.1.427/B.1.429	9	Iota	B.1.526	31	Delta	B.1.617.2	No Change (ETE component only)	<table><thead><tr><th>WHO Nomenclature</th><th>Lineage/Spike Substitution</th><th>Fold Reduction in Susceptibility</th></tr></thead><tbody><tr><td>Alpha</td><td>B.1.1.7</td><td>No change</td></tr><tr><td>Beta</td><td>B.1.351</td><td>No change</td></tr><tr><td>Gamma</td><td>P.1</td><td>No change</td></tr><tr><td>Epsilon</td><td>B.1.427/B.1.429</td><td>NOT DETERMINED</td></tr><tr><td>Iota</td><td>B.1.526</td><td>NOT DETERMINED</td></tr><tr><td>Delta</td><td>B.1.617.2</td><td>NOT DETERMINED</td></tr></tbody></table>	WHO Nomenclature	Lineage/Spike Substitution	Fold Reduction in Susceptibility	Alpha	B.1.1.7	No change	Beta	B.1.351	No change	Gamma	P.1	No change	Epsilon	B.1.427/B.1.429	NOT DETERMINED	Iota	B.1.526	NOT DETERMINED	Delta	B.1.617.2	NOT DETERMINED
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EUA Approved Dosing	1200 mg (600 mg CAS, 600 mg IMD) IV x1 dose (preferred) OR 1200 mg (600 mg CAS, 600 mg IMD) SubQ as 4 x 2.5 mL injections Post-exp ppx only: 600 mg q4weeks	700 mg BAM IV and 1400 mg ETE IV x1 dose	500 mg sotrovimab IV x 1 dose																																																																		
Supplied As	Concentrated solution, preservative free <ul style="list-style-type: none">CAS/IMD: 600 mg/600 mg (10 mL vial)	Concentrated solution, preservative free <ul style="list-style-type: none">Bamlanivimab: 35 mg/mL (20 mL vial)Etesevimab: 35 mg/mL (20 mL vial)	Concentrated solution, preservative free <ul style="list-style-type: none">Sotrovimab: 62.5 mg/mL (8 mL vial)																																																																		
Vial Storage	Store under refrigeration; protect from light	Store under refrigeration; protect from light	Store under refrigeration; protect from light																																																																		
Preparation*	IV Prep: Dilute 10 mL co-formulated CAS/IMD in 100 mL 0.9% sodium chloride SubQ prep: N/A, dilution not required	Dilute 20 mL BAM and 40 mL ETE in 100 mL 0.9% sodium chloride	Dilute 8 mL sotrovimab in 50-100 mL 0.9% sodium chloride																																																																		
IV Stability after dilution	36 hours under refrigeration 4 hours at room temperature	24 hours under refrigeration 7 hours at room temperature (includes infusion time)	24 hours under refrigeration 4 hours at room temperature (includes infusion time)																																																																		
Infusion Details*	<ul style="list-style-type: none">Infusion time [IV Only]: 21 minutesObservation time [IV and SubQ]: 60 minutesEquipment: infuse through in-line or add-on 0.2 micron filter	<ul style="list-style-type: none">Infusion time: 31 minutesObservation time: 60 minutesEquipment: infuse through in-line or add-on 0.2/0.22 micron filter	<ul style="list-style-type: none">Infusion time: 30 minutes; flush with 0.9% NaCl to ensure deliveryObservation time: 60 minutesEquipment: infuse through in-line or add-on 0.2 micron filter																																																																		

* Can be diluted to different final volume per EUA; preparation and administration in this chart reflects practice at UNC Health as built into the EHR (Epic)

RCT OF BAMLANIVIMAB FOR PRE- AND POST-EX PROPHYLAXIS, NURSING HOMES & ASSISTED L



David Weber

- Goal: To determine the effect of bamlanivimab on the incidence of COVID-19 among residents and staff of skilled nursing and assisted living facilities.
- Methods: RCT, single-dose (4200 mg), phase 3 trial, of residents and staff of 74 skilled nursing and assisted living facilities in the US with at least 1 confirmed SARS-CoV-2 index case; 1175 participants enrolled 8/2 to 11/20/20
- Results: The prevention population comprised a total of 966 participants (666 staff and 300 residents) who were negative at baseline for SARS-CoV-2 infection and serology (mean age, 53.0 [range, 18-104] years; 722 [74.7%] women). Bamlanivimab significantly reduced the incidence of COVID-19 in the prevention population compared with placebo (8.5% vs 15.2%; odds ratio, 0.43 [95% CI, 0.28-0.68]; $P < .001$; absolute risk difference, -6.6 [95% CI, -10.7 to -2.6] percentage points). Five deaths attributed to COVID-19 were reported by day 57; all occurred in the placebo group. Rates of AEs: Bam = 20.1%, Placebo = 18.9%.
- Conclusion: Among residents and staff in skilled nursing and assisted living facilities, treatment during August-November 2020 with bamlanivimab monotherapy reduced the incidence of COVID-19 infection.

Cohen MS, et al. JAMA 2021;326:46-55



Other topics for Conversation

- **3rd doses in moderate to severe immune suppression**
 - Care Gaps firing in EPIC
- **3rd doses anticipated recs coming September**
 - Will open vaccine clinics at Goodrich and Anaheim in September
- **Flu vaccine has arrived including high dose flu vaccine**
- **We are making COVID-19 vaccine binders for each clinical site**
- **Any issues with giving COVID-19 vaccines in clinic?**
- **Higher demand for URI/COVID Testing**
 - We will be opening testing centers, Next week Goodrich, 2 weeks Anaheim
- **Questions about kids going back to school?**

Questions?

- CDC COCA Calls
- IDSA/Clinician Calls Every Other Week
- SHEA Weekly TownHall



AltaMed

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