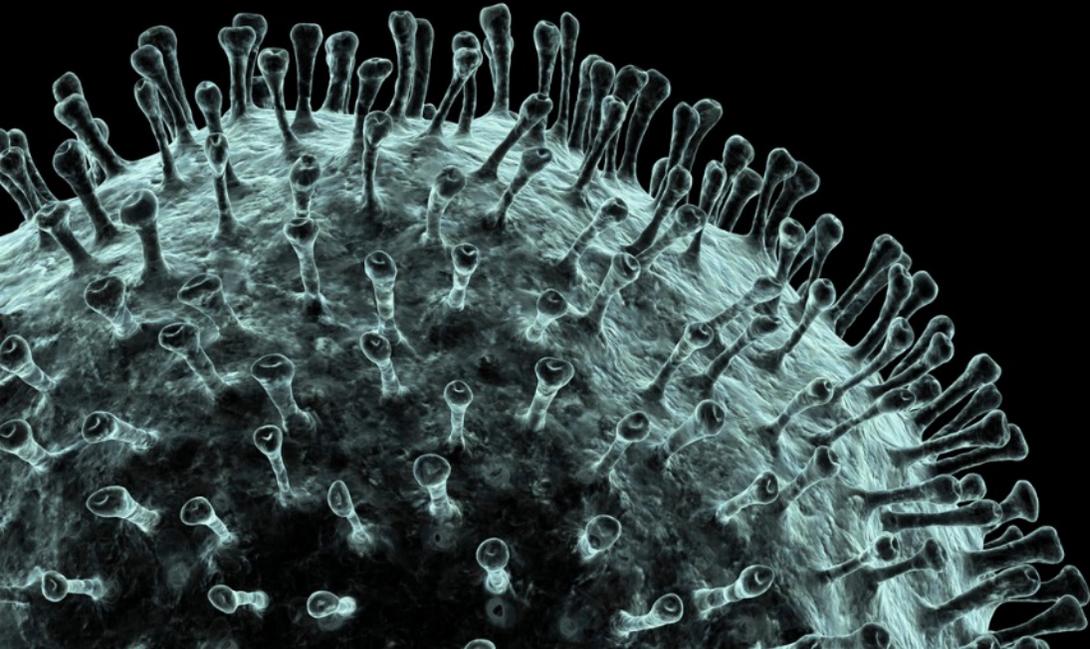


COVID-19 Conversations



Charlene Wong

Duke University School of Medicine



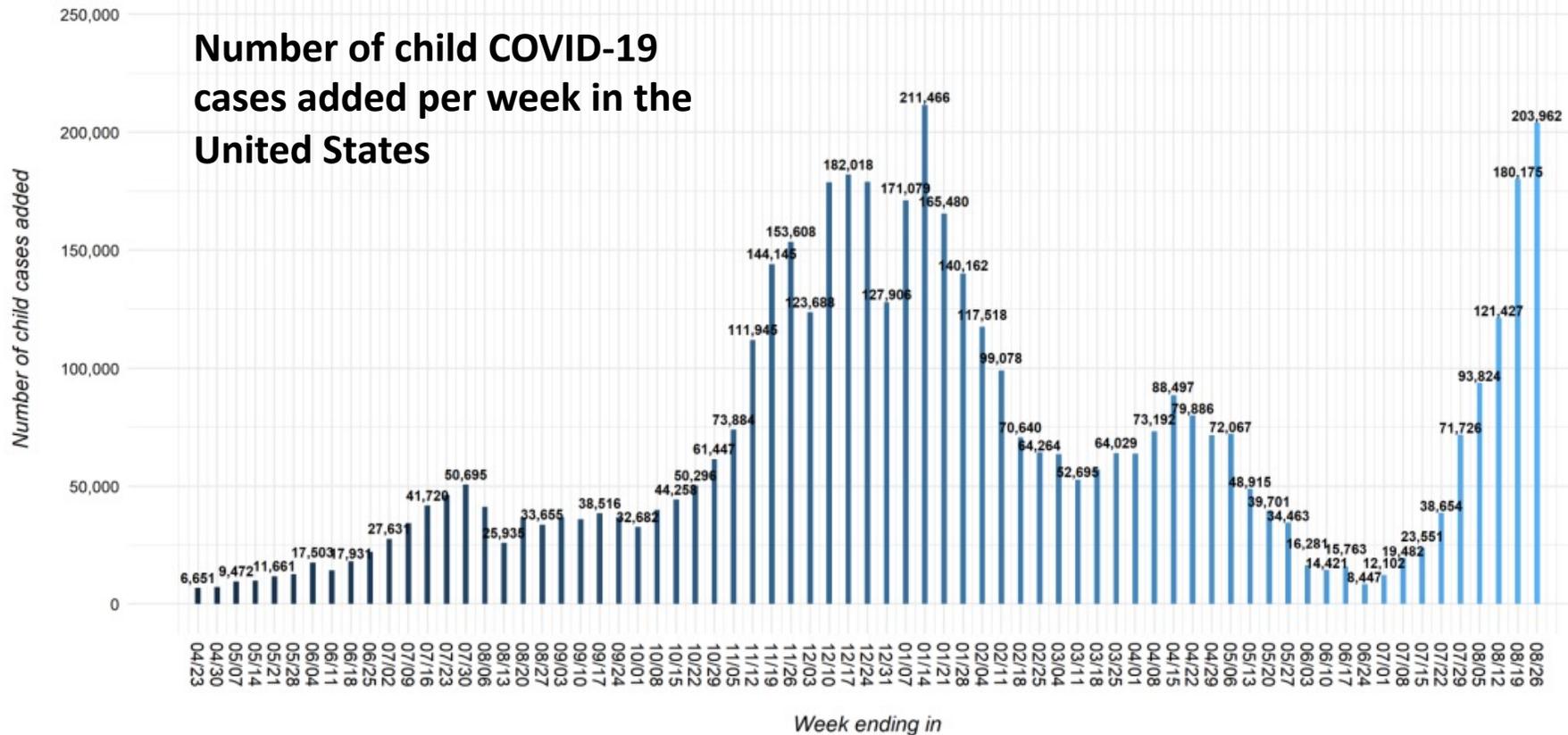
COVID19Conversations.org

[#COVID19Conversations](https://twitter.com/COVID19Conversations)



Children and COVID-19

Charlene Wong, MD MSHP
 Pediatrics & Public Policy, Duke University
 @DrCharleneWong
 September 1, 2021



As of Aug 26, over **4.79M children** have tested positive for COVID-19

>203,000 pediatric cases added in a week matches winter surge peaks. Children were 22.4% of the weekly reported COVID-19 cases

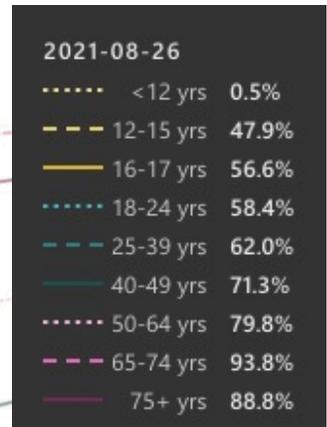
Child hospitalizations reached a new peak: 330 children/day

~500 US children have died from COVID-19

<https://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/children-and-covid-19-state-level-data-report>
<https://covid.cdc.gov/covid-data-tracker/#demographics>

Protecting Children from COVID-19: Don't wait to vaccinate

- **COVID-19 Vaccines** are the first and best defense against COVID-19
 - 470k children received their first COVID-19 vaccine in the last week
- **Get as many people around children vaccinated as possible**
 - Vaccinations lagging among younger adults – parents, caregivers, staff in childcare and schools
 - Parental vaccination status is a marker for adolescent vaccination status – vaccine hesitancy among parents may lead to missed opportunities to vaccinate adolescents
 - Also includes all eligible adolescents age 12+
- **Strategies**
 - **Make getting vaccinated easy:** On-site vaccine events (e.g., at schools)
 - **Educate and earn trust:** Adapt [key messages](#) and use [toolkits](#) to fit the needs of the community and is responsive to concerns. Work with trusted messengers and host info sessions.
 - **Employer roles:** Flexible/paid sick leave, vaccine mandates



Jan 2021 Feb 2021 Mar 2021 Apr 2021 May 2021 Jun 2021 Jul 2021 Aug 2021

Protecting Children from COVID-19: Layered Protection

- **Proper Masking:** Most effective mitigation strategy when COVID-19 is circulating and vaccination is unavailable or insufficient uptake
 - Focus on comfort and fit
 - Children <2 years old should not wear masks
 - Evidence that children can recognize social/emotional cues from unmasked parts of face
- **Physical Distancing:** >6 feet is best and choose outdoors when possible
- **Handwashing and Respiratory Etiquette:** Elbows, not hands
- **Getting Tested Early if You or Your Child Has Symptoms:**
 - Monoclonal antibodies available under EUA for people with high-risk conditions ages 12+ (e.g., obesity)
 - Insufficient data in children, but a multidisciplinary panel is revisiting their recommendation against routine administration in children because of Delta



Keep up with children's usual care: Bring children in for well visits

- *Routine vaccines are critical for health:* Flu, RSV. Can co-administer COVID-19 with childhood vaccines
- *Do not delay care:* If you think your child is sick, call your doctor for advice or instructions

Protecting Children from COVID-19: Schools

Schools are a safe environment for children & staff, if mitigation strategies are followed

Masks

- **Spread in schools was <1% in masked environments:** [NC](#) (in winter, 209 cases, 26,610 quarantined), [UT](#) (5 cases, 1,041 close contacts), [WI](#) (7 cases, 5530 students/staff contacts), NE (2 cases, >4000 quarantined)
- **Higher rates of spread in unmasked school settings:** 30% at wrestling tournament in [FL](#), 13-16% in [Israel](#), 37% higher in [GA](#)
- High vaccination rates (>70-80%) and low community transmission may safely allow transitioning away from universal masking of students and staff in K-12 schools

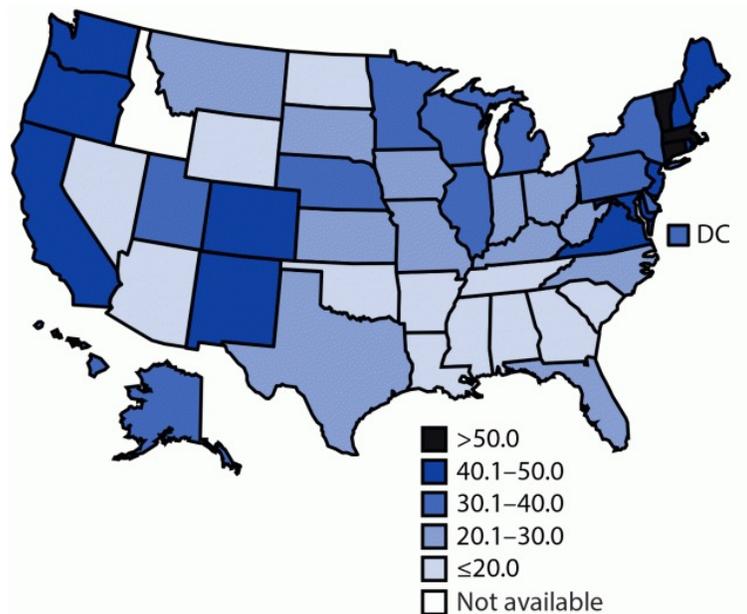
Physical distancing

- Inability to physically distance should not limit in-person instruction when appropriate masking adherence and other strategies are used
- NC data suggests: Districts permitting 1, 2, or 3 students per bus seat with masks saw no difference in secondary transmission



- **Modified quarantine policies in schools** (i.e., no quarantine for appropriately masked students) has been shown to be safe and promotes in-person education
- **Surveillance and symptomatic testing.** Consider more frequent testing for unvaccinated students/staff engaged in higher risk extracurricular activities

Adolescents & COVID-19 Vaccines: Coverage & Acceptability



COVID-19 Adolescent Vaccination Coverage (ages 12-17, as of July 31, 2021)

- At that time: 42.4% for at least 1 dose; 31.9% for series completion
- **Wide state variation:** 20.2% in MS to 70.1% in VT for series initiation
- **Increasing coverage with age.** Vast majority received second dose
 - 12-13 yr olds: 36.0% first dose, 25.4% completion
 - 14-15 yr olds: 40.9% and 30.5%
 - 16-17 yr olds: 50.6% and 40.3%
- **Inequities:** White children had higher COVID-19 vaccination rates than Black children in all 7 states reporting race/ethnicity adolescent vaccination data
 - 64% White vs 15% Black in DC
 - 55% White vs 23% Black in CT

- **Intentions:** 56% parents of unvaccinated 12-17 year olds would definitely/probably have their teen vaccinated (April 2021)
 - Lower intentions among parents who were female, Hispanic, living in MW or South, or with lower education.
- **Factors that would increase vaccine intentions:** Receiving more information about COVID-19 vaccine safety and efficacy; COVID-19 vaccine requirements in schools

Adolescents and the COVID-19 Vaccines: Efficacy

- Protects well against symptomatic, lab-confirmed COVID-19
 - Age 16+: **90.9%** (95%CI 88.5%, 92.8%)
 - Age 16-17: **100%** (95%CI 62.4%, 100%)
 - Age 12-15: **100%** (95%CI 78.1%, 100%)
 - 2,229 adolescents 12-15 years old in the US
 - 18 cases in placebo group vs 0 in vaccinated group
 - No severe cases of COVID-19
- Protects very well against COVID-19 associated hospitalization for age 16+: **100%** (95% CI -0.0%, 100%)
- **Strong immune response** in 12-15 year olds



Age Group	No. of Participants	Geometric Mean 50% Neutralizing Titer (95% CI) [†]	Geometric Mean Ratio (95% CI), 12 to 15 Yr vs. 16 to 25 Yr [‡]
12–15 yr	190	1239.5 (1095.5–1402.5)	1.76 (1.47–2.10)
16–25 yr	170	705.1 (621.4–800.2)	—

- Multiple studies showing that vaccines are working very well in the real world: **≥89%**

Adolescents and the COVID-19 Vaccines: Safety

The benefits of the COVID-19 vaccines far outweigh the risks for adolescents

- Among 8.9M US adolescents 12-17 vaccinated through July 16, 2021:
 - **VAERS** 9,246 reports received: 58.1% in ages 12-15 years; 41.9% in ages 16-17 years
 - **90.7% nonserious adverse events.** Common conditions were **dizziness** (20.1%), **syncope** (13.3%, 61% in females, median age 15, 16% transported to ED for evaluation), **headache** (11.1%)
 - **9.3% serious adverse events.** Common conditions were chest pain (56.4%), increased troponin level (41.7%), myocarditis (40.3%), increased CRP (30.6%) → all consistent with **myocarditis diagnosis**
 - **v-safe** 129,000 adolescents enrolled: 63.4% local reactions, 48.9% systemic reactions (more after 2nd dose)
 - Most common: injection site pain, fatigue, headache, and myalgia
 - In week after dose 2: ~1/3 reported fever, ~1/4 unable to perform normal daily activities
- **Myocarditis**
 - **Rare after vaccination:** ~12.6 cases out of every million second dose administrations, mostly among younger males
 - **More common after infection:** More common in infected (11 extra cases per 100k) than vaccinated (2.7 extra cases) persons. 12-17 yr old boys ~6 times more likely to develop myocarditis after infection than vaccination (preprint data)

COVID-19 Vaccines in Younger Children: What's Next?

	16-17 years	12-15 years	5-11 years	6mo - 5yrs
	Full approval on Aug 23, 2021 (after EUA on Dec 11, 2020)	EUA approved May 10, 2021 . Additional time required before approval	Started March 2021, expect EUA submission in Sept	Started March 2021, ongoing
	EUA requested Jun 10 (93% effective, safe)	EUA requested Jun 10 (93% effective, safe)	Started March 2021, expect EUA submission in fall	Started March 2021, ongoing
	Announced in April 2021, ongoing	Ongoing	Planned	Planned

- **Pfizer:** Examining increasing doses (dose-escalation) on safety, tolerability, and immunogenicity in a two-dose schedule in 3 age groups: 5-11 years, 2-5 years, and 6 months-2 years. Expected enrollment of ~4,500 children.
- **Moderna**
 - [TeenCOVE](#): 3,732 participants 12-17 years old. 0 cases in vaccinated arm. Similar safety, tolerability profile as in adult study.
 - [KidsCOVE](#): Expected enrollment ~12,000 children age 6 months to 12 years
- **Smaller Dose:** Anticipate smaller dose for children <12 years old due to size & stronger immune response
- [AAP](#) has urged FDA to authorize COVID-19 vaccines for children <12 as soon as possible

FDA and [AAP](#) Strongly Discourage Off-Label Use in Children <12 years Old:

Providers risk violation of provider agreement, liability for adverse events, & potentially forfeiting payment