OUTLINE

COVID-19 Updates in Pediatrics

MASKS

ABC Science Collaborative Efforts
• 173,469 new child COVID-19 cases were reported from (9/23-9/30/2021)
• Over the period 2 weeks (9/16/21-9/30/21) there was a 7% increase in cases
Fig 7. United States: Child COVID-19 Cases Added in Past Week, by Region*

* Note: Regions are the US Census Regions.
5 states changed their definition of child cases: AL as of 8/13/20, HI as of 8/27/20, RI as of 9/10/20, MO as of 10/1/20, WV as of 8/12/21.
TX reported age for only a small proportion of total cases each week (eg. 5-20%); TX cumulative cases through 8/26/21
As of 6/29/21, NE COVID-19 dashboard is no longer available; NE cumulative cases through 9/24/21
Use to available data and changes made to dashboard, AL cumulative cases through 1/29/21
Due to available data and calculations required to obtain USA child race/ethnicity estimates (eg. as of 9/10/21, 5,070 cases were added)
See detail in Appendix: Data from 49 states, DC, PR and GU
All data reported by state/territorial health departments are preliminary and subject to change. Analysis by American Academy of Pediatrics and Children's Hospital Association

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Week ending in

- Midwest
- Northeast
- South
- West

Cases added in past week
MASKS in School

CDC recommends that schools require universal indoor mask use for students, staff members, and others in kindergarten through grade 12 (K–12) school settings.
Our history with pandemics and masks

A FIGHT AGAINST INFLUENZA MASKS

San Francisco, Jan. 18.—Representatives of organizations of citizens opposed to the mask-wearing ordinance which was passed as a measure to check influenza, met last night and formed the Anti-Mask League. The announced purpose of the League is to “oppose by all lawful means” the compulsory wearing of masks.
They went fine up in "Frisco!"

Dr. Woods Hutchinson, The Masked Marvel.

Who laughed?
Do masks requirements in school work?

• Mask efficacy
• Impact on cases
• Impact on school-related outbreaks
Recruited 49 acute COVID-19 cases (seronegative) May 2020 through April 2021
- blood, saliva, nasal and fomite (phone) swabs,
- 30-minute breath samples while vocalizing with and without masks at up to two visits two days apart

They sequenced viral RNA, cultured virus, and checked participants for antibodies to COVID-19
- detected SARS-CoV-2 RNA in 45% of fine (≤5 µm), 31% of coarse (>5 µm) aerosols
- 65% of fomite samples overall
- found SARS-COV-2 RNA in all samples from four alpha-variant cases

Results: Masks reduced viral RNA by 48% in fine aerosols; 77% in coarse aerosols
- The alpha variant was associated with a 43-fold increase in aerosol viral RNA, compared with earlier viruses
Impact on cases

• Scientists compared pediatric county case rates in schools with and without mask requirements July 1- Sept 4, 2021.
  • Looked at all 3,142 U.S. counties
  • Inclusion criteria: schools had to have clear mask policies (all in masks or none required to mask), school was open for at least 3 weeks
  • Ultimately included 520 counties across the U.S.

• Results: Counties without school mask requirements experienced larger increases in pediatric COVID-19 case rates compared to counties that had school mask requirements
  • Remained true even after controlling for confounders

Pediatric COVID-19 Cases in Counties With and Without School Mask Requirements — United States, July 1–September 4, 2021

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On September 24, 2021, this report was posted online as an MMWR Early Release.

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Impact on school-related outbreaks

- Scientists assessed impact of mask policies on school-related outbreaks
- Studied 1,020 K-12 schools in Arizona from July 15-Aug 31 2021
- At the time the area had high cases and moderate vaccination rates
- 21% had “early mask requirement” (before school started)
- 31% had “late mask requirement” (after school started)
- 48% had no mask requirement

Results: 191 school-associated outbreaks
- 8.4% in “early mask requirement” schools
- 32.5% in “late mask requirement” schools
- 59% in schools with no mask requirement

In case you are interested...

Doctors & scientists at @AbcCollab conducted studies involving nearly 1 million students & concluded that universal masking in schools helped keep transmission rates to under 1% last fall and spring. abcsciencecollaborative.org/wp-content/...
Bottom line

• Delta variant is 200% more transmissible
• up to 1000x higher viral load per person
• one person can infect 6-10 people
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