

A Look at National and Statewide Pediatric COVID-19 Trends

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The Menges Group

Strategic Health Policy & Care Coordination Consulting

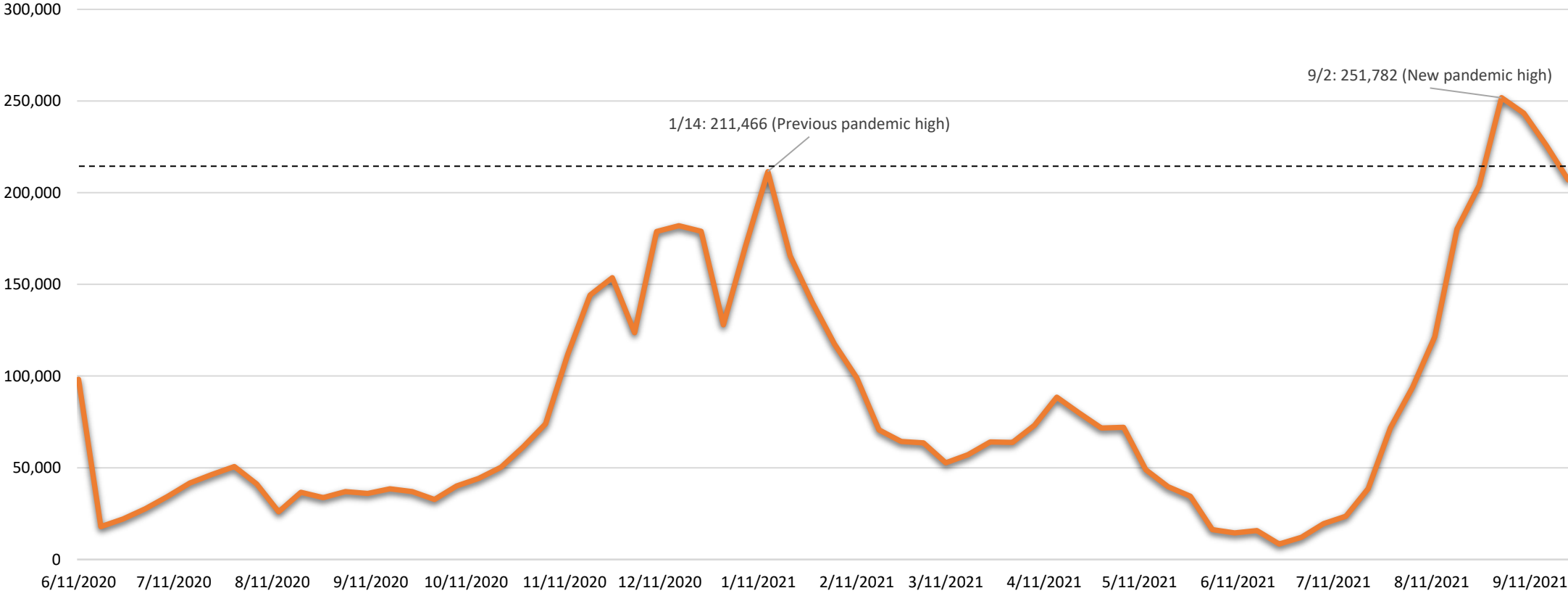
National Pediatric COVID-19 Trends

- For this edition of our 5 Slide Series, we revisit national and state-level pediatric COVID-19 trends in the United States. Schools have now been opened for several weeks, providing an opportunity to assess the initial effects of student gatherings in classrooms.
- Data predominantly come from state-level reports aggregated by the American Academy of Pediatrics (AAP) and the Children's Hospital Association in their most recent report (9/23/21).
 - Age ranges reported for children varied by state, with most states reporting child age ranges of either 0-19 or 0-17.
- More recently, some states have revised case counts previously reported, begun reporting less frequently, or dropped metrics previously reported. This makes it more difficult to compare tallies across different states. These discrepancies are noted in the ensuing analyses.

Pediatric COVID-19 Cases

- **About 27% of all cases during the week ending September 23rd were among children.**
 - This proportion is up from 22% two weeks ago and 13% from the first week of January.
 - Since the onset of the pandemic, 5.7 million of the 35.8 million (16.0%) confirmed COVID-19 cases have occurred among children.
- Pediatric cases, while still extremely high, have decreased during the most recent week.
 - Pediatric cases during the week of September 23 were roughly back where they were four weeks ago, following a record stretch of weeks in between.

New Weekly Pediatric COVID-19 Cases

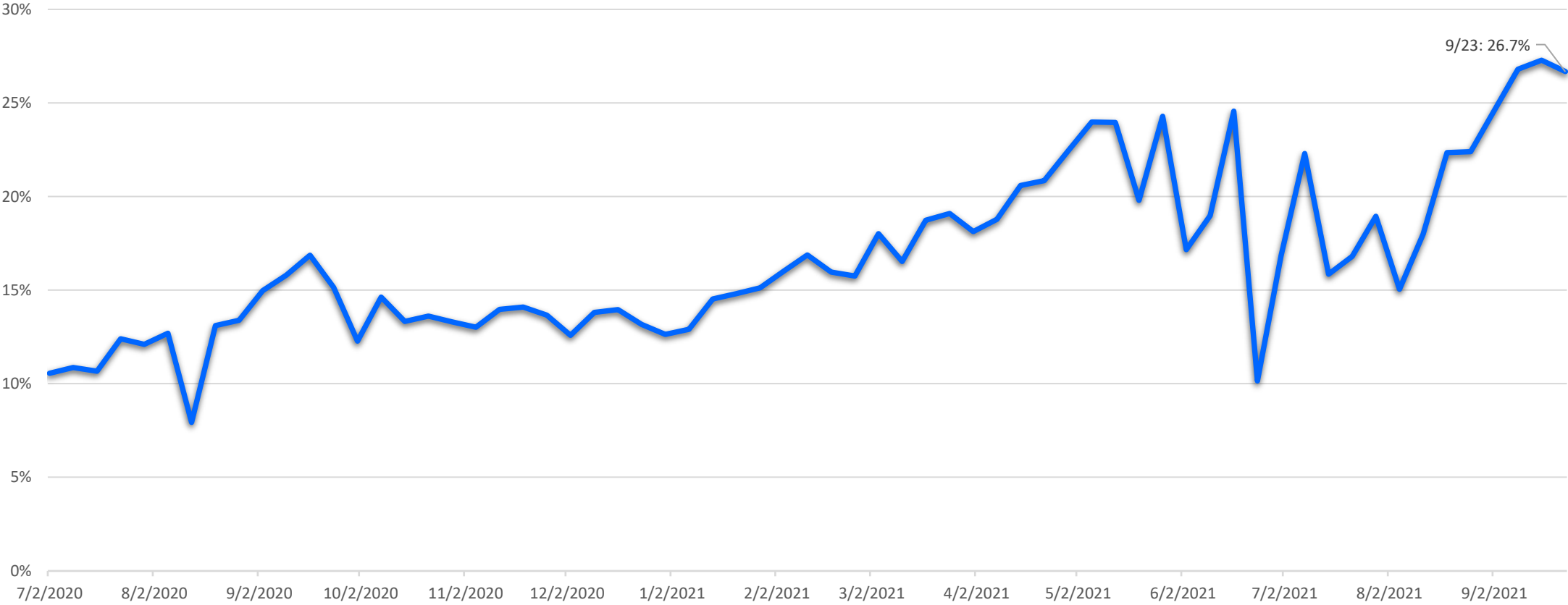


Note: NY did not provide age distribution for state-wide cases (only NYC); AL, HI, RI, MO, and WV changed definitions of child cases throughout the observed period; TX, MA, AK, FL, NE, and LA ceased or omitted case reports during certain time periods, or revised case definitions, leading to subsequent count changes.



Source: American Academy of Pediatrics and the Children's Hospital Association, The Menges Group calculations

Pediatric COVID-19 Cases as Share of All New Weekly Cases



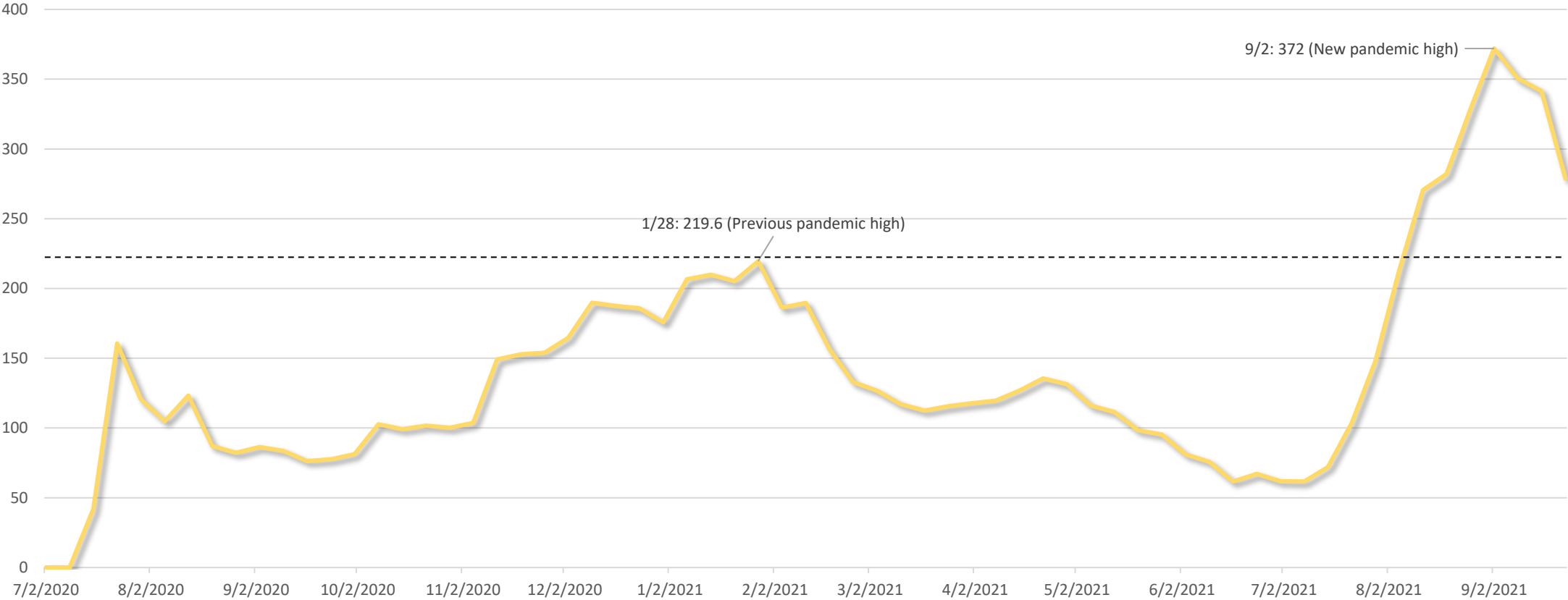
Source: American Academy of Pediatrics and the Children's Hospital Association, The Menges Group calculations



Pediatric COVID-19 Hospitalizations

- **During the week of September 23, an average of 278 children were newly admitted to the hospital each day due to COVID-19.** This was below the record 350 and 372 average daily pediatric admissions during the weeks of September 9 and September 2, respectively.
 - Pediatric hospitalizations are still 27% above their previous peak in late January, and 450% higher than that reported on July 1.
- New adult hospitalizations are also falling from their recent peak during the week of August 26 (12,143 per day), which was still one-quarter below its all-time pandemic high during the week of January 7 (16,179 per day).
- Notwithstanding the recent pediatric case increases, pediatric hospitalizations represented a small share (3.1%) of overall COVID hospitalizations during the week of September 23.

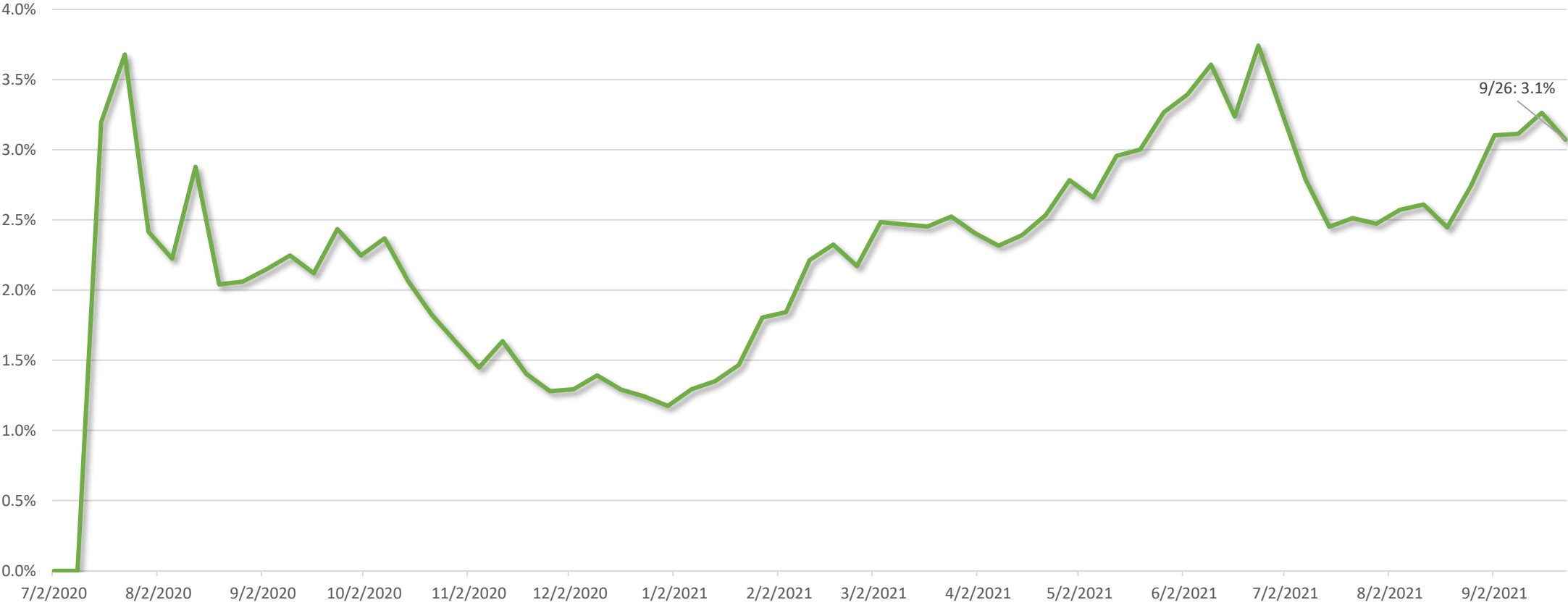
New Daily Pediatric COVID-19 Hospitalizations, 7-Day Average



Source: U.S. Department of Health & Human Services, The Menges Group calculations



Pediatric COVID-19 Daily Hospitalizations as Share of All Hospitalizations, 7-Day Average



Source: U.S. Department of Health & Human Services, The Menges Group calculations



Pediatric COVID-19 Deaths

- Pediatric deaths attributable to COVID-19 have been rare. Fewer than 500 COVID deaths have occurred among children since the start of the pandemic.
- Among states reporting, children were 0.00%-0.27% of all COVID-19 deaths, and 7 states have reported zero child deaths.
- Across states reporting, the case fatality rate range was only 0.00%-0.03%.

School COVID-19 Policies by State

- We also examined pediatric COVID-19 trends by states with different school mask and vaccine policies.
- 15 states require teachers to wear masks in school. 28 states have no school mask mandate, and 7 states proscribe any mask mandate within the state.
- 8 states require teachers to receive a COVID-19 vaccine. 30 states have no school faculty vaccine mandate, and 12 states have prohibited vaccine mandates.
- We tabulate pediatric state-level COVID-19 cases, hospitalizations, and deaths based upon these policies.

Comparison of State COVID-19 Trends by School Mask Policy

- States that require masks to be worn in schools have the lowest total pediatric case numbers (7,648 cases per 100,000 children), while states that have barred local governments from implementing mandates have the highest caseloads (11,834 per 100,000 children), or **54% higher than states with mask mandates**.
- States with masking requirements also had the lowest per capita pediatric hospitalization levels – **42% and 63% lower than states with mandate bans and states without mask mandate laws**.
- Mask mandate states also had a 40% lower per capita pediatric death rate than states that banned such mandates (0.64 vs. 1.11 per 100,000 children).
- States with school mask mandates had higher pediatric (age 12-17) vaccination rates than other states.

Comparison of State COVID-19 Trends by School Vaccine Policy

- Similar trends are visible for state vaccination policies.
- States with vaccine mandates had **27%, 62%, and 42% lower** pediatric case, hospitalization, and death counts, respectively, than states that outlawed mandates.
- Such states also had **12%, 35%, and 22% lower** pediatric case, hospitalization, and death counts compared to states with no vaccine requirements.
- States with school vaccine mandates had higher pediatric vaccination rates than other states.

States with Mask and Vaccine Mandates are Crushing the Virus

States by Policy	States	Weighted State Average, Cumulative Pediatric Cases per 100,000 Children	Weighted State Average, Cumulative Pediatric Hospitalizations per 100,000 Children	Weighted State Average, Cumulative Pediatric Deaths per 100,000 Children	Weighted State Average, Pediatric Vaccination Rate
Mask Mandates Prohibited	AZ, IA, OK, SC, TN, TX, UT	11,833.55	92.16	1.11	52.7%
No Masking Requirement	AK, AL, AR, CO, FL, GA, ID, IN, KS, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NH, OH, PA, RI, SD, VT, WI, WV, WY	8,591.29	104.95	0.52	49.7%
Masks Required	CA, CT, CO, DE, HI, IL, KY, LA, MA, NJ, NM, NV, NYC, OR, VA, VT, WA	7,647.89	64.53	0.64	64.5%
States by Policy	States	Weighted State Average, Cumulative Pediatric Cases per 100,000 Children	Weighted State Average, Cumulative Pediatric Hospitalizations per 100,000 Children	Weighted State Average, Cumulative Pediatric Deaths per 100,000 Children	Weighted State Average, Pediatric Vaccination Rate
Vaccine Mandates Prohibited	AL, AR, AZ, FL, GA, MT, NH, OK, SD, TN, TX, UT	10,221.76	133.98	0.89	52.0%
No Vaccine Requirement	AK, CO, DE, IA, ID, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, NC, ND, NE, NV, NYC, OH, PA, RI, SC, VA, VT, WI, WV, WY	8,500.52	77.72	0.66	52.3%
Vaccines Required	CA, CT, HI, IL, NJ, NM, OR, WA	7,445.92	50.42	0.52	66.5%

Note: TX case numbers not reported; NY case and death numbers are only NYC. MI, MT, RI, UT, and WV death counts not reported. Vaccine rates are for at least one dose for those between the ages of 12 and 17. Idaho pediatric vaccination excluded due to data abnormality.

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Source: American Academy of Pediatrics and the Children's Hospital Association, HHS, Mayo Clinic, The Menges Group calculations

Pediatric COVID-19 Trends by State Vaccination Rate

- Categorizing states by pediatric vaccination status, we find that per capita pediatric cases, hospitalizations, and deaths were lowest in states with the highest share of their pediatric populations vaccinated.
- States with the lowest pediatric vaccinations levels (30%-30.9%) had **49%, 164%, and 53% higher** per capita pediatric cases, hospitalizations, and deaths than the highest vaccinated states (70%+ vaccinated).

Pediatric Vaccination Rate	States	Weighted State Average, Cumulative Pediatric Cases per 100,000 Children	Weighted State Average, Pediatric Hospitalizations per 100,000 Children	Weighted State Average, Cumulative Pediatric Deaths per 100,000 Children
30%-39.9%	AL, IN, LA, MS, ND, TN, WV, WY	10,819.95	105.49	0.97
40%-49.9%	AR, GA, IA, KS, KY, MI, MO, MT, NC, OH, OK, SC	8,868.30	98.90	0.51
50%-50.9%	AK, AZ, DE, FL, MN, NE, NV, PA, SD, TX, UT, WI	9,669.21	109.62	0.81
60%-60.9%	CA, CO, IL, ME, NH, NJ, NYC, OR, VA, WA	7,276.09	63.34	0.65
70%-70.9%	CT, HI, MA, MD, NM, RI, VT	7,262.97	40.02	0.63

Note: TX case numbers not reported; NY case and death numbers are only NYC. MI, MT, RI, UT, and WV death counts not reported. Vaccine rates are for at least one dose for those between the ages of 12 and 17. Idaho pediatric vaccination excluded due to data abnormality.



Source: American Academy of Pediatrics and the Children’s Hospital Association, HHS, Mayo Clinic, The Menges Group calculations

5 Slide Series Overview

Our 5 Slide Series is typically a monthly publication whereby we briefly discuss/address a selected topic outside the confines of our client engagements. The Menges Group has developed a variety of datasets that we use to support our 5 Slide Series and client projects.

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