

# Pediatric Immunizations Drop in the Wake of COVID-19

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Recent EHR data show that immunization administrations for pediatric patients have decreased by 42% in the spring of 2020 compared to prior years. It is estimated that 260,000 immunizations expected for March 8-May 9 were missed or delayed across all age groups at sampled organizations. Patients under 6 months of age showed the smallest reduction in immunization volume, but these patients still missed or delayed an estimated 29,000 immunizations this spring.

This trend has also been observed for immunizations that provide protection against very contagious and sometimes deadly diseases, such as measles. Only 44% of the nearly 2,600 MMR immunizations that were forecasted for the week of March 29, 2020 were administered for patients 6-17 months old. On the week of May 3, those immunization volumes increased to 84% of the expected volume for that week.

Immunizations for these young patients are beginning to return toward the average, but this does not mean that pediatric patients are caught up on their vaccination schedules yet. This is particularly concerning for infants, since most of the protection from maternal antibodies is gone by 6 months.

There is typically a spike in pediatric immunization volume from Mid-July through August as patients get immunizations required for the school year. This year, patients catching up on missed immunizations might result in higher demand for immunizations during the summer months. However, it is also possible that patients will be slow to return to the clinic for immunizations as states gradually reopen.

These data raise concerns that pediatric patients could be missing or delaying immunizations that play an important role in preventive care, not only for individual patients but also for overall herd immunity.

*Over 15 million documented immunization administrations for patients under age 18 from January 1, 2017 – May 9, 2020 were included in the sample, and seasonal flu vaccinations were excluded. The data in this analysis were pooled from 43 health systems, representing 361 hospitals that span 19 states and care for 45 million patients.*

*See details on the recommended child and adolescent immunization schedule [here](#).*

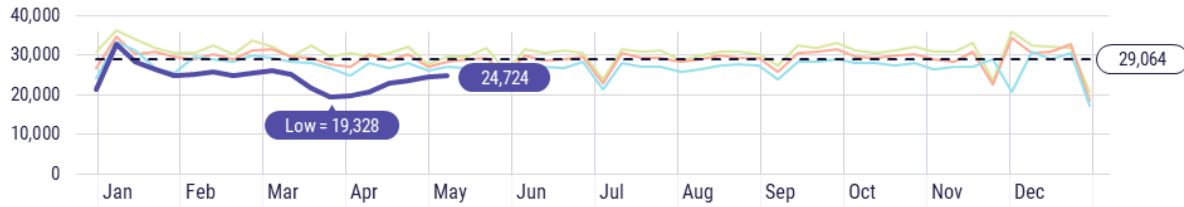
# Weekly Immunization Administration During COVID-19 Pandemic

Compared to Prior Years, by Patient Age Group

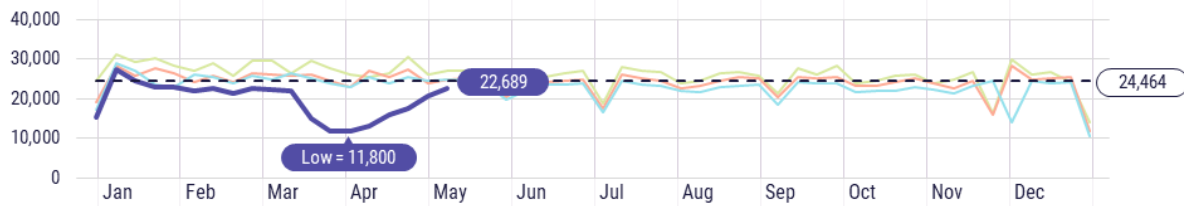
2020 2019 2018 2017 --- Mean Weekly Immunizations 2017-2019

Total Immunizations = 15,265,758

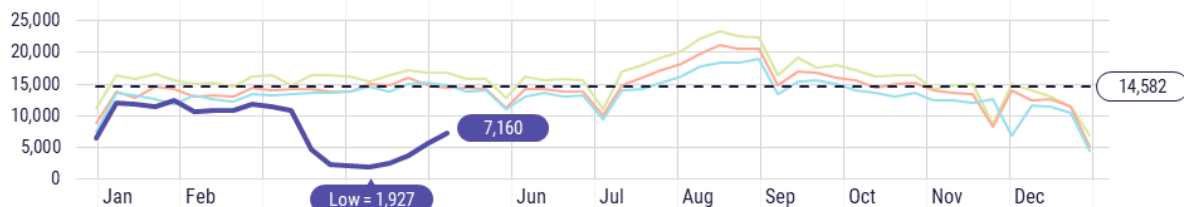
## Under 6 Months



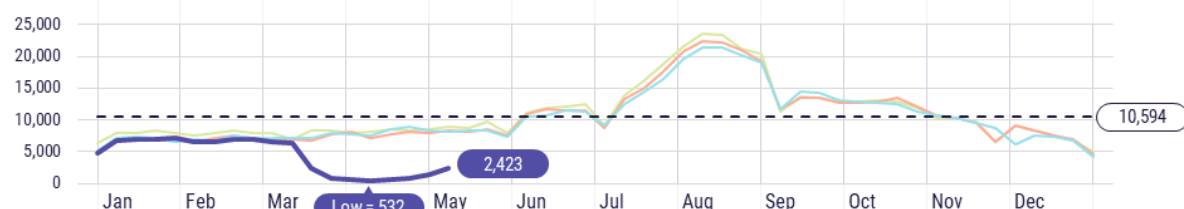
## 6-17 Months



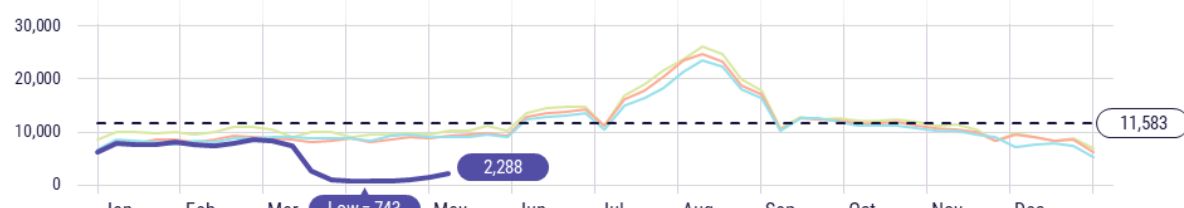
## 18 Months - 6 Years



## 7-12 Years



## 13-18 Years



Month in the Year

Figure 1: Weekly immunization volume over time for each age group. White capsules show the average weekly volume from January 1, 2017-Dec 28, 2019, and colored capsules show the lowest volumes for 2020 and the most recent volumes as of May 9, 2020.

# Estimated Missed or Delayed Immunizations During COVID-19 Pandemic

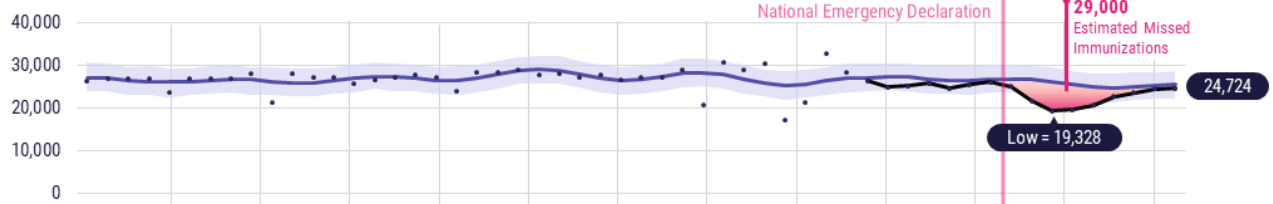
by Patient Age Group

Total Immunizations = 15,265,758

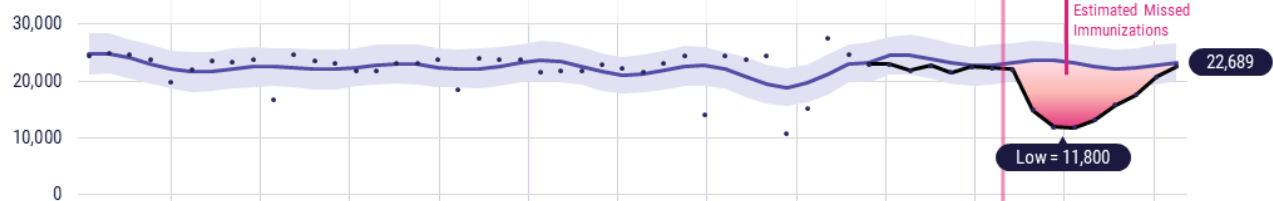
● Weekly Immunizations    — Forecast Trend    ● Uncertainty Bands    — Observed Weekly Immunizations Since Jan 25, 2020

Total Est. Missed Immunizations = **259,000**  
March 8, 2020-May 9, 2020

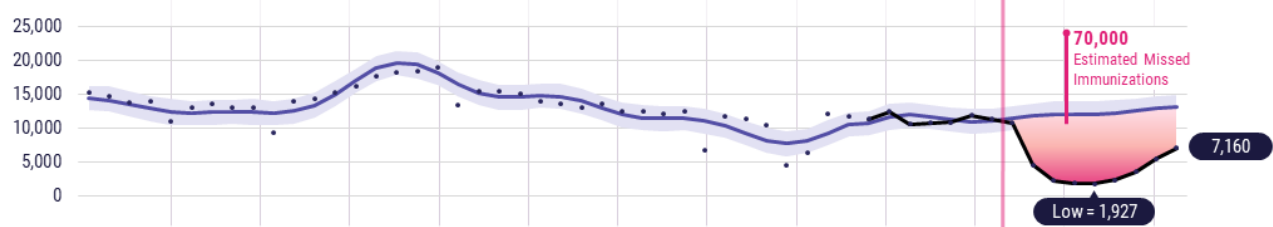
## Under 6 Months



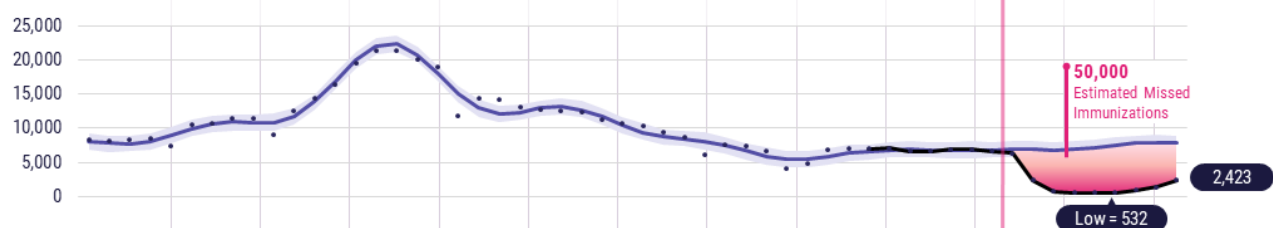
## 6-17 Months



## 18 Months - 6 Years



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## 13-18 Years

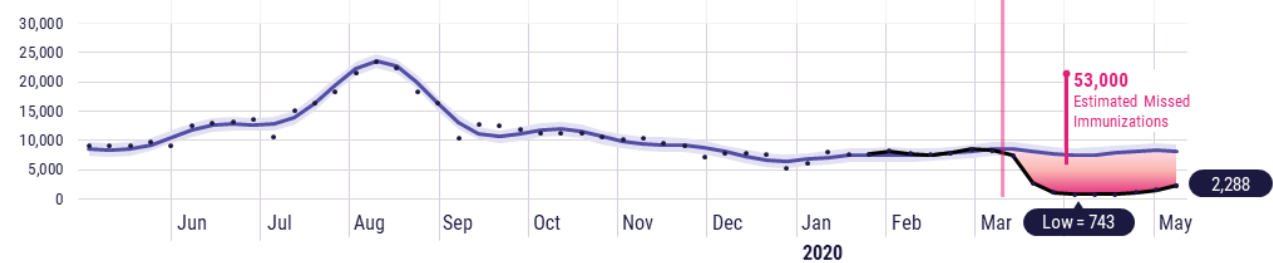


Figure 2. Weekly immunization volumes over time. Colored capsules show the lowest volumes for 2020 and the most recent volumes as of May 9, 2020. The line segments indicate fitted estimates from a general additive model (GAM), combining long term trend, yearly seasonal, and holiday effects. The lighter colored line starting at January 18, 2020 represents a forecast, and the solid darker line indicates actual volumes. The shaded area indicates cumulative immunizations missed or delayed during the pandemic

Term	Definition
<b>Patient Age Group</b>	Patient's age group as of the date of data collection. Age groups are 0-6 months, 6-17 months, 18 months-6 years, 7-12 years, 13-18 years

Document Date: 2020-May-19  
Data Date: 2020-May-9

Check for [updates](https://ehrn.org/wp-content/uploads/Pediatric-Immunizations-during-COVID-19.pdf) at <https://ehrn.org/wp-content/uploads/Pediatric-Immunizations-during-COVID-19.pdf>