

Children and COVID-19 Vaccinations Trends

**AAP Analysis of Data Posted by the Centers for Disease Control and Prevention
as of December 14, 2022**

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®



Updated Version of the Vaccination Report

Please note the following changes to the methods in this weekly report:

A. Child Age Groupings:

12-17 year-olds: We are combining data for 12-15 and 16-17 year-olds. COVID-19 vaccines have been available for all in this group since 5.12.21.

5-11 year-olds: This report tracks COVID-19 vaccination rates beginning the week of 11.3.2021, following CDC recommendation for its use for 5-11 year-olds on 11.2.2021.

6 month – 4 year-olds: This report tracks COVID-19 vaccination rates beginning the week of 6.22.2022, following CDC recommendation for its use for under age 5 on 6.18.2022.

B. Data Sources: The data cover the 50 states & District of Columbia. In reports up through 11.10.21, we used 2 different sources from the CDC to provide breakouts by age and geography: “Demographic Trends of People Receiving COVID-19 Vaccinations in the United States” (URL: <https://covid.cdc.gov/covid-data-tracker/#vaccination-demographics-trends>) and “COVID-19 Vaccinations in the United States, Jurisdiction” (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/unsk-b7fc>). To combine ages 12-17, we are using only the jurisdiction file which may create minor shifts in the cumulative trends. Population totals are based on estimates published by the US Census Bureau. 2020 population estimates were used for reports through September 14, 2022. 2021 population estimates are used in current reports.

Interested readers should refer to the CDC and individual states where more information might be available.



COVID-19 Vaccine Eligibility: Timeline for Children

The FDA issued the first Emergency Use Authorization (EUA) for use of the Pfizer-BioNTech COVID-19 Vaccine in **people 16 years and older** on 12.11.2020, followed by ACIP recommendations and CDC approval for its use on 12.12.2020. However, the vaccine was not available for the non-elderly general public in most states until sometime in the Spring of 2021. Persons aged 16+ in Massachusetts, for example, started to receive their first COVID shots on 4.19.2021.

The FDA approved the use of the Pfizer-BioNTech COVID-19 Vaccine in **children ages 12 to 15** on an emergency use basis on 5.10.2021, followed by CDC recommendation the same week.

The FDA issued an EUA for the Pfizer-BioNTech COVID-19 Vaccine for **children ages 5 to 11** on 10.29.2021, followed by CDC recommendation on 11.2.2021.

The FDA authorized the use of Moderna and Pfizer-BioNTech COVID-19 vaccines for **children ages 6 months to 4** on 6.15.2022, followed by CDC recommendation on 6.18.2022.



Status of COVID-19 Vaccinations for US Children as of 12.14.2022

Ages 6 months - 4 Years

- ❑ **1.8 million (11%)** have received their initial dose of COVID-19 vaccine.
- ❑ At this time about **15.2 million** have yet to receive their first vaccine. This past week about **29,000** received their initial COVID-19 vaccine dose.
- ❑ Vaccination rates vary highly across states: In **22** states, over 10% have received their initial dose; in **8** states, under 5% have received their first vaccine.

Ages 5-11 Years

- ❑ **11.0 million (38%)** have received their initial dose of COVID-19 vaccine.
- ❑ **9.0 million (32%)** completed the 2-dose vaccination series.
- ❑ At this time about **17.6 million** have yet to receive their initial COVID-19 vaccine dose. This past week about **19,000** received their first vaccine.
- ❑ Vaccination rates vary highly across states: In **9** states, over half have received their initial dose; in **21** states, under a third have received their first vaccine.

Ages 12-17 Years

- ❑ **17.7 million (68%)** have received their initial dose of COVID-19 vaccine.
- ❑ **15.2 million (58%)** completed the 2-dose vaccination series.
- ❑ At this time about **8.4 million** have yet to receive their initial COVID-19 vaccine dose. This past week about **14,000** received their first vaccine.
- ❑ Vaccination rates vary highly across states: In **13** states, over 3 quarters have received their initial dose; in **11** states, under half have received their first vaccine.

Source: AAP analysis of data series titled “COVID -19 Vaccinations in the United States, Jurisdiction”. CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdi/uns-k-b7fc>). Data cover the 50 states & District of Columbia. Check state web sites for additional or more recent information.

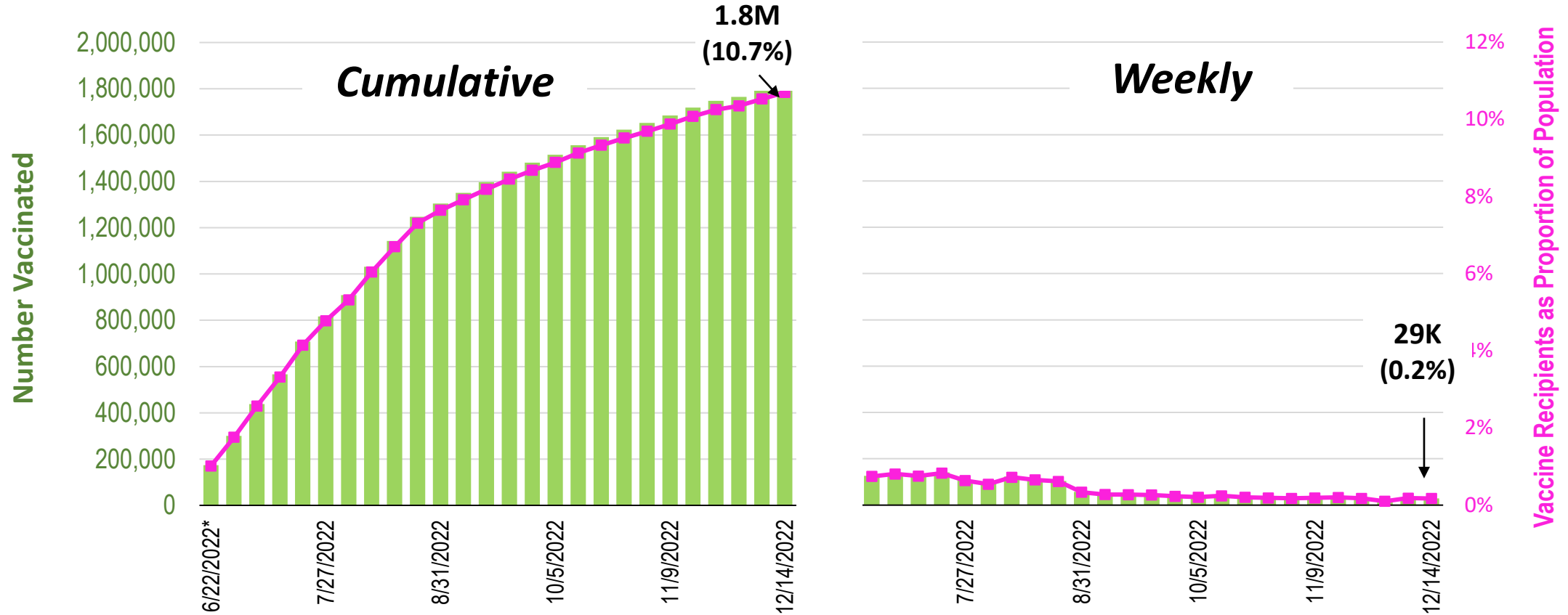
Ages 6 Months - 4 Years

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Number and Proportion of US Infants and Children Ages 6 Months - 4 Years Receiving Initial Dose of COVID-19 Vaccine

6.22.2022 to 12.14.2022



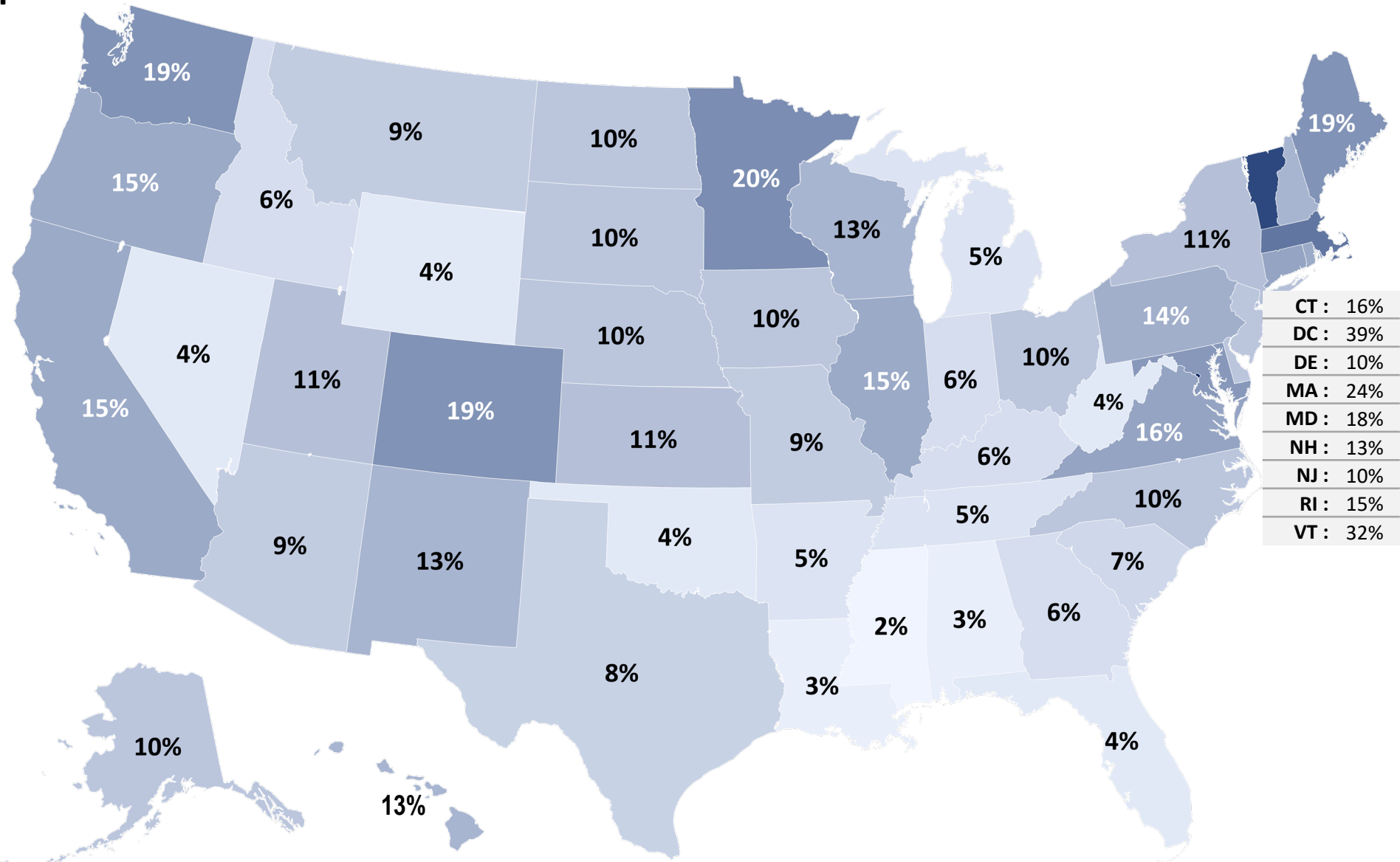
* Includes clinical trial participants and all others under age 5 who received any COVID-19 vaccine prior to CDC recommendations for age group. **Source:** AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/unsk-b7fc>).

Proportion of US Children Ages 6 Months - 4 Years Who Received the Initial Dose of the COVID-19 Vaccine, by State of Residence

Received Initial Dose



as of 12.14.2022



Note: Infants 6 months and older are estimated as half of infant population.

Source: AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/unsk-b7fc>). Check state web sites for additional or more recent information.

Initial Dose Among US Children Ages 6 Months through 4 Years ---3 Week Improvement

State	%Children Having Received At Least One Dose			State (continued)	%Children Having Received At Least One Dose		
	11/23/2022	12/14/2022	Increase by Percentage Point		11/23/2022	12/14/2022	Increase by Percentage Point
50 States + DC	10.3%	10.7%	0.4%	Missouri	8%	9%	1%
Alabama	3%	3%	0%	Montana	8%	9%	1%
Alaska	10%	10%	0%	Nebraska	10%	10%	0%
Arizona	9%	9%	0%	Nevada	4%	4%	0%
Arkansas	5%	5%	0%	New Hampshire	11%	13%	2%
California	14%	15%	1%	New Jersey	10%	10%	0%
Colorado	18%	19%	1%	New Mexico	12%	13%	1%
Connecticut	16%	16%	0%	New York	11%	11%	0%
Delaware	8%	10%	2%	North Carolina	10%	10%	0%
District of Columbia	38%	39%	1%	North Dakota	9%	10%	1%
Florida	4%	4%	0%	Ohio	9%	10%	1%
Georgia	5%	6%	1%	Oklahoma	4%	4%	0%
Hawaii	13%	13%	0%	Oregon	14%	15%	1%
Idaho	5%	6%	1%	Pennsylvania	14%	14%	0%
Illinois	14%	15%	1%	Rhode Island	15%	15%	0%
Indiana	6%	6%	0%	South Carolina	6%	7%	1%
Iowa	9%	10%	1%	South Dakota	9%	10%	1%
Kansas	10%	11%	1%	Tennessee	5%	5%	0%
Kentucky	6%	6%	0%	Texas	7%	8%	1%
Louisiana	3%	3%	0%	Utah	10%	11%	1%
Maine	18%	19%	1%	Vermont	31%	32%	1%
Maryland	17%	18%	1%	Virginia	15%	16%	1%
Massachusetts	23%	24%	1%	Washington	18%	19%	1%
Michigan	5%	5%	0%	West Virginia	4%	4%	0%
Minnesota	19%	20%	1%	Wisconsin	13%	13%	0%
Mississippi	2%	2%	0%	Wyoming	4%	4%	0%

Source: AAP analysis of data series titled “COVID -19 Vaccinations in the United States, Jurisdiction”. CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/uns-kb7fc>). Check state web sites for additional or more recent information.

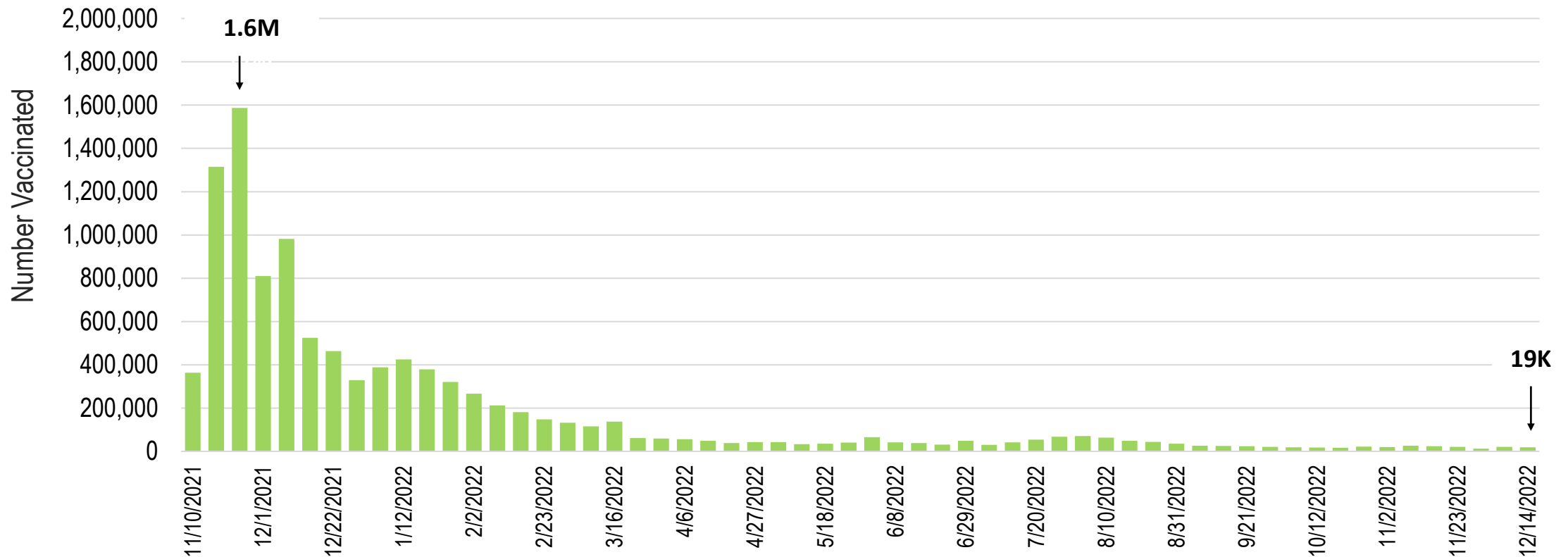
Ages 5-11

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Weekly Increase in the Number of US Children Ages 5-11 Receiving Their Initial COVID-19 Vaccination

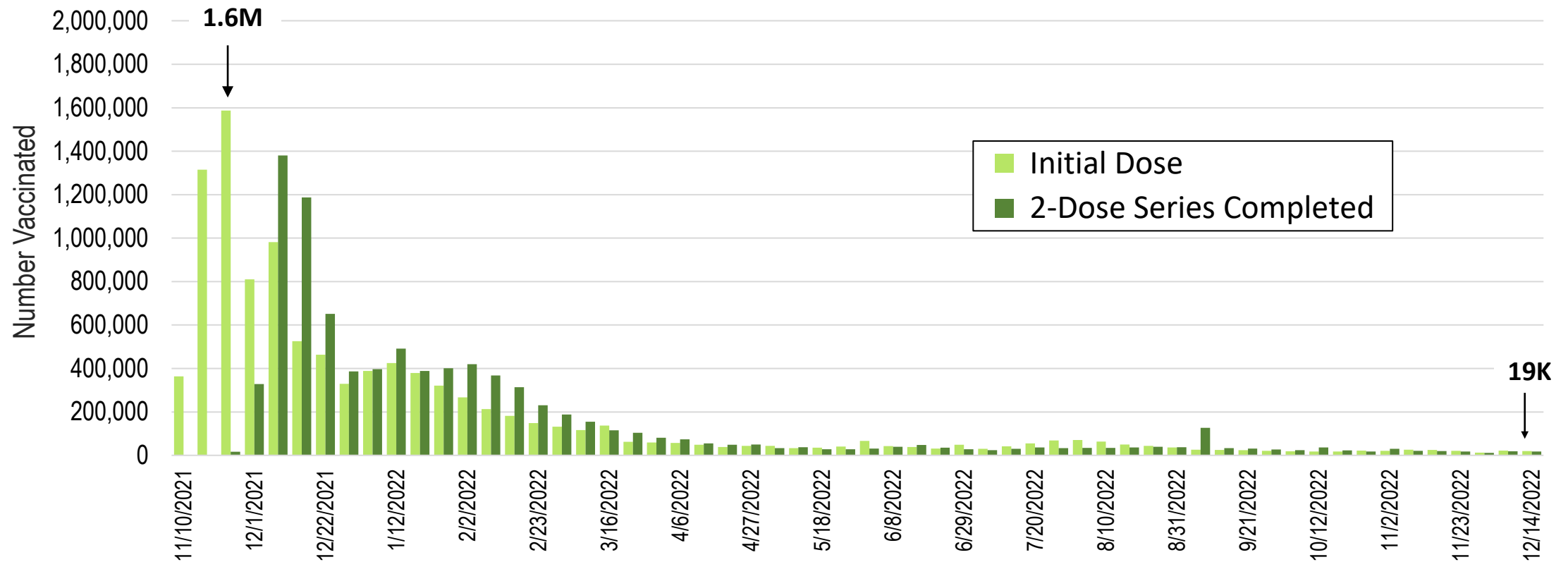
11.10.2021 to 12.14.2022



Source: AAP analysis of data series titled “COVID -19 Vaccinations in the United States, Jurisdiction”. CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction>). Check state web sites for additional or more recent information. **Note:** Age information was provided with Idaho data since 1.25.2022. Inclusion of this information added 31K initial-dose recipients to the 5-11 age group nationally as of 2.2.2022.

Weekly Increase in Initial and Completed COVID-19 Vaccination for US Children Ages 5-11

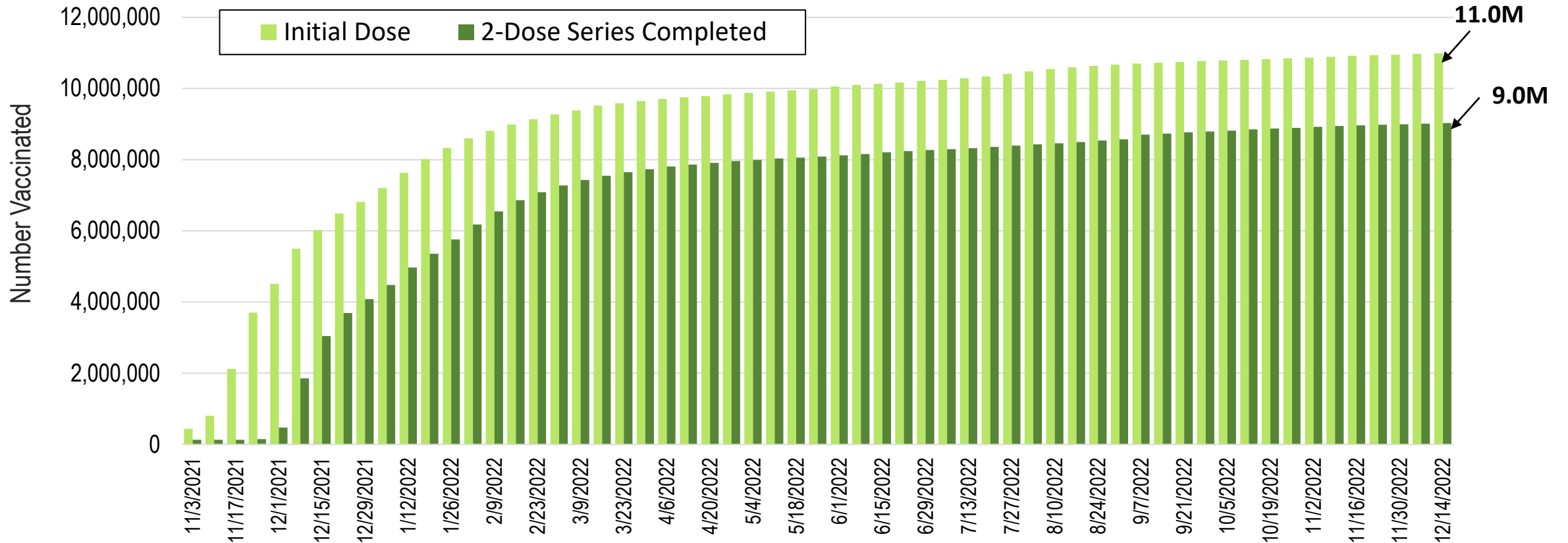
11.10.2021 to 12.14.2022



Source: AAP analysis of data series titled “COVID -19 Vaccinations in the United States, Jurisdiction”. CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/uns-k-b7fc>). Check state web sites for additional or more recent information. **Note:** Age information was provided with Idaho data since 1.25.2022. Inclusion of this information added 31K initial-dose recipients to the 5-11 age group nationally as of 2.2.2022.

Cumulative Number of US COVID-19 Vaccine Recipients Ages 5-11

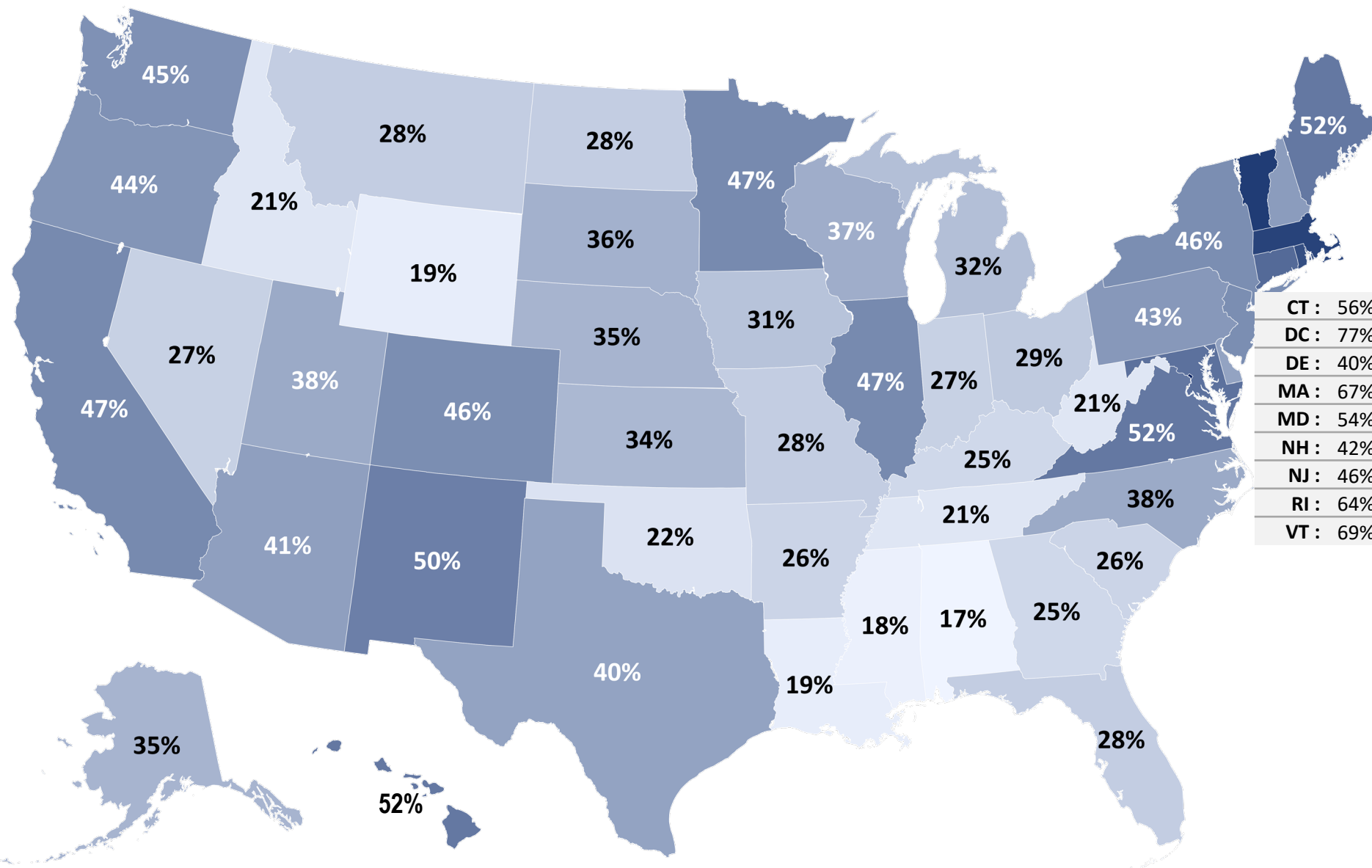
11.3.2021 to 12.14.2022



Source: AAP analysis of data series titled “COVID -19 Vaccinations in the United States, Jurisdiction”. CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdj/uns-k-b7fc>). Check state web sites for additional or more recent information. Check state web sites for additional or more recent information. **Notes:** Age information was provided with Idaho data since 1.25.2022. Inclusion of this information added 31K initial-dose recipients to the 5-11 age group nationally as of 2.2.2022.

Proportion of US Children Ages 5-11 Who Received the Initial Dose of the COVID-19 Vaccine, by State of Residence

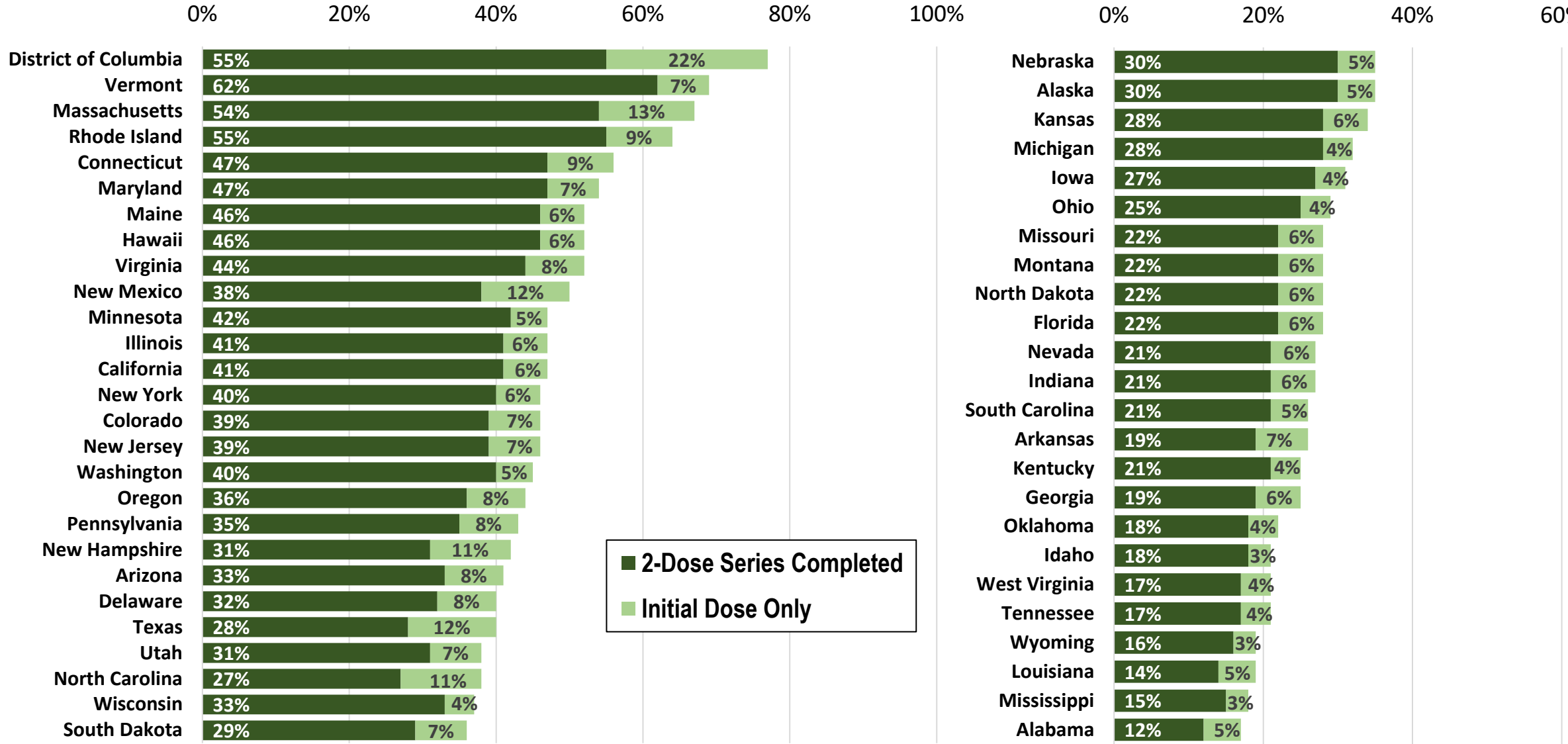
Received Initial Dose  as of 12.14.2022
17% 77%



Source: AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/uns-k-b7fc>). Check state web sites for additional or more recent information.

Proportion of US Children Ages 5-11 Vaccinated Against COVID-19 by State of Residence

as of 12.14.2022



Source: AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdi/unsk-b7fc>). Check state web sites for additional or more recent information.

Initial Dose Among US Children Ages 5-11 ---3 Week Improvement

State	%Children Having Received At Least One Dose			State (continued)	%Children Having Received At Least One Dose		
	11/23/2022	12/14/2022	Increase by Percentage Point		11/23/2022	12/14/2022	Increase by Percentage Point
50 States + DC	38.3%	38.5%	0.2%	Missouri	28%	28%	0%
Alabama	17%	17%	0%	Montana	28%	28%	0%
Alaska	35%	35%	0%	Nebraska	35%	35%	0%
Arizona	41%	41%	0%	Nevada	27%	27%	0%
Arkansas	26%	26%	0%	New Hampshire	41%	42%	1%
California	47%	47%	0%	New Jersey	46%	46%	0%
Colorado	46%	46%	0%	New Mexico	50%	50%	0%
Connecticut	56%	56%	0%	New York	46%	46%	0%
Delaware	39%	40%	1%	North Carolina	38%	38%	0%
District of Columbia	76%	77%	1%	North Dakota	28%	28%	0%
Florida	28%	28%	0%	Ohio	28%	29%	1%
Georgia	25%	25%	0%	Oklahoma	22%	22%	0%
Hawaii	51%	52%	1%	Oregon	44%	44%	0%
Idaho	21%	21%	0%	Pennsylvania	42%	43%	1%
Illinois	47%	47%	0%	Rhode Island	64%	64%	0%
Indiana	27%	27%	0%	South Carolina	26%	26%	0%
Iowa	30%	31%	1%	South Dakota	36%	36%	0%
Kansas	34%	34%	0%	Tennessee	21%	21%	0%
Kentucky	25%	25%	0%	Texas	40%	40%	0%
Louisiana	19%	19%	0%	Utah	38%	38%	0%
Maine	52%	52%	0%	Vermont	69%	69%	0%
Maryland	53%	54%	1%	Virginia	52%	52%	0%
Massachusetts	67%	67%	0%	Washington	45%	45%	0%
Michigan	31%	32%	1%	West Virginia	21%	21%	0%
Minnesota	47%	47%	0%	Wisconsin	37%	37%	0%
Mississippi	18%	18%	0%	Wyoming	19%	19%	0%

Source: AAP analysis of data series titled “COVID -19 Vaccinations in the United States, Jurisdiction”. CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/uns-kb7fc>). Check state web sites for additional or more recent information.

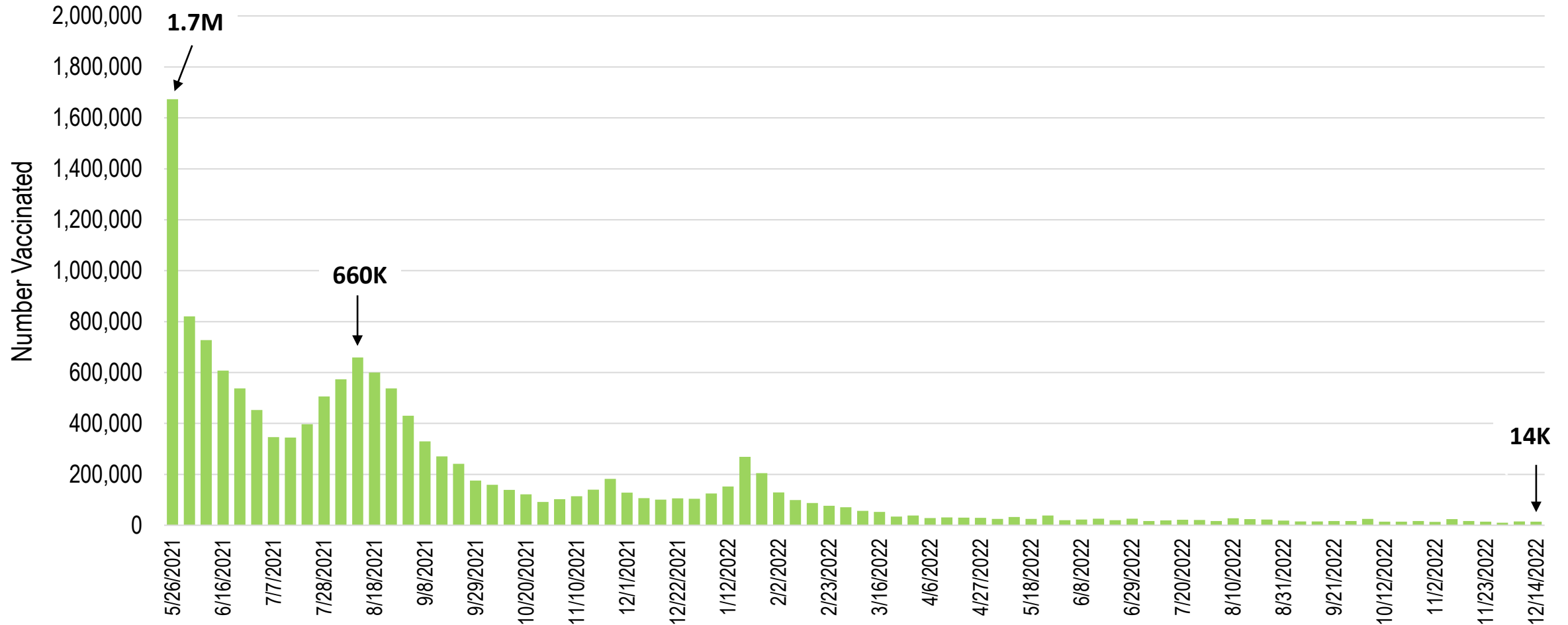
Ages 12-17

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Weekly Increase in the Number of US Children Ages 12-17 Receiving Their Initial COVID-19 Vaccination

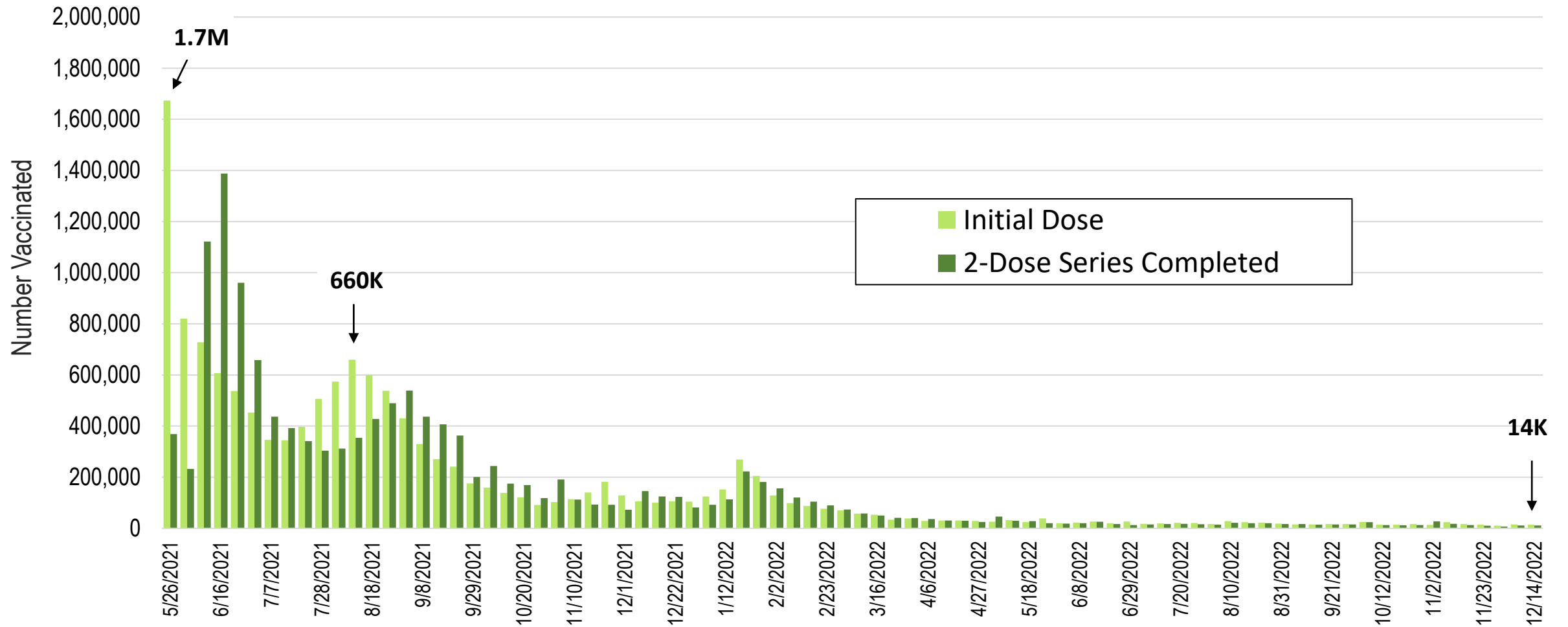
5.26.2021 to 12.14.2022



Source: AAP analysis of data series titled “COVID -19 Vaccinations in the United States, Jurisdiction”. CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/unsk-b7fc>). Check state web sites for additional or more recent information. **Notes:** Age information was provided with Idaho data since 1.25.2022. Inclusion of this information added 67K initial dose recipients to the 12-17 group nationally as of 2.2.2022.

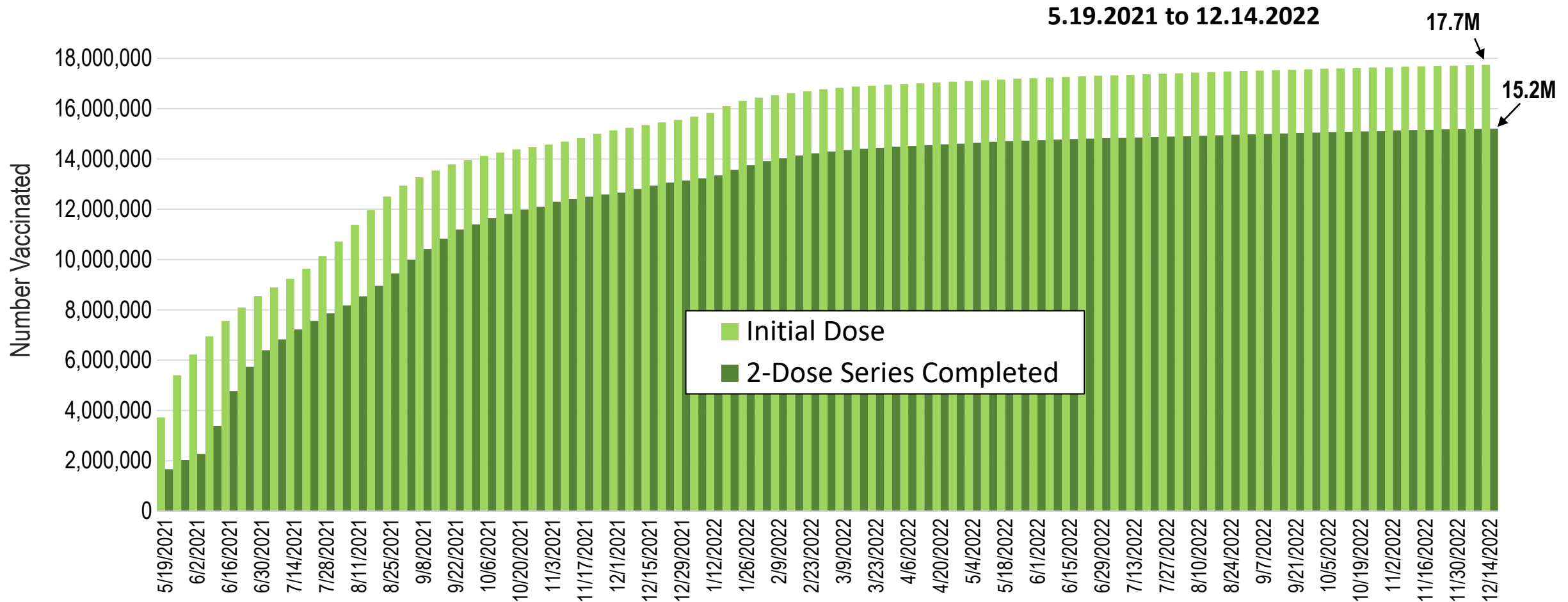
Weekly Increase in Initial and Completed COVID-19 Vaccination for US Children Ages 12-17

5.26.2021 to 12.14.2022



Source: AAP analysis of data series titled “COVID -19 Vaccinations in the United States, Jurisdiction”. CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction>). Check state web sites for additional or more recent information. **Notes:** Age information was provided with Idaho data since 1.25.2022. Inclusion of this information added 67K initial dose recipients to the 12-17 group nationally as of 2.2.2022.

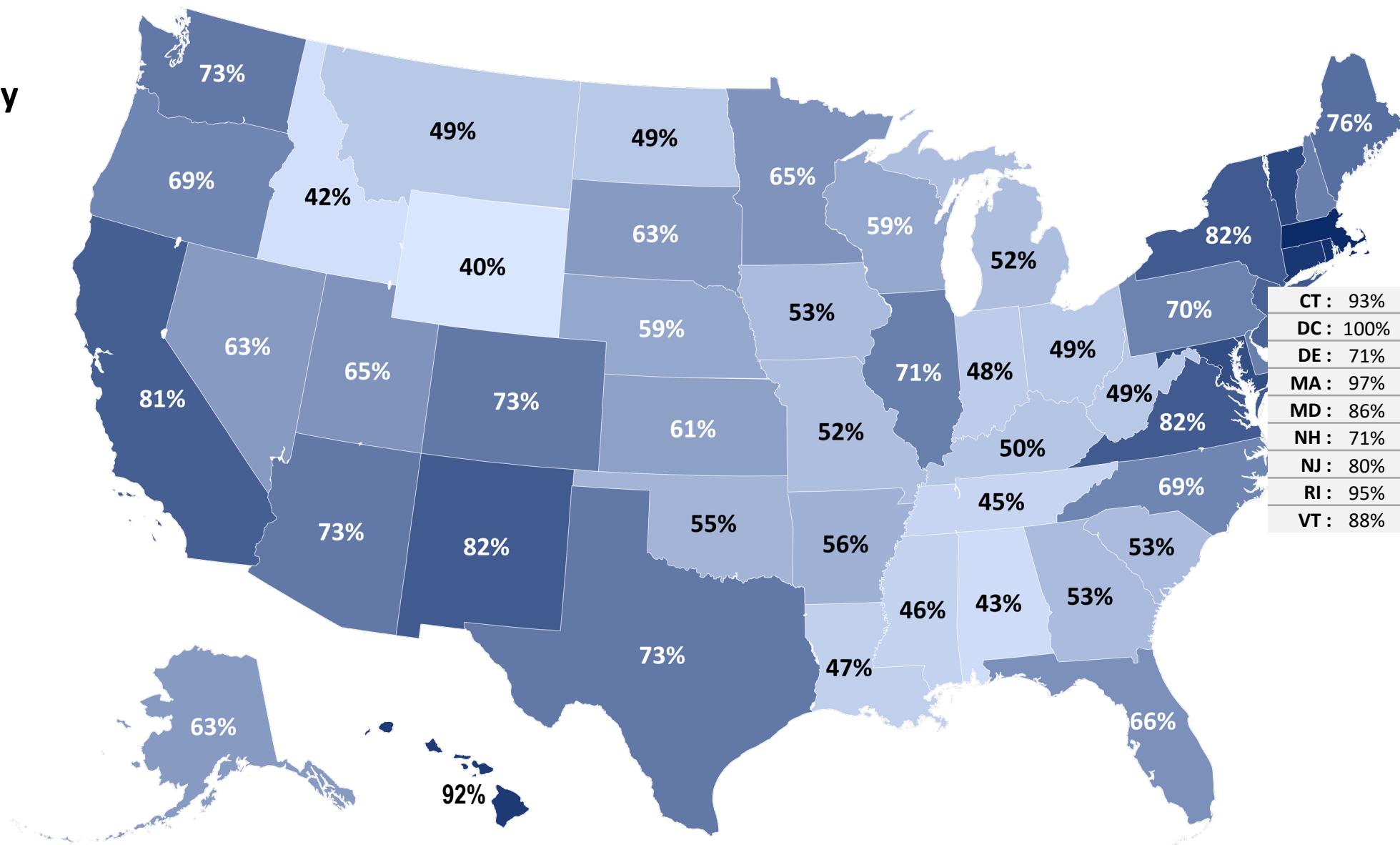
Cumulative Number of US COVID-19 Vaccine Recipients Ages 12-17



Source: AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisd/uns-k-b7fc>). Check state web sites for additional or more recent information. **Notes:** Age information was provided with Idaho data since 1.25.2022. Inclusion of this information added 67K initial dose recipients to the 12-17 group nationally as of 2.2.2022.

Proportion of US Children Ages 12-17 Who Received the Initial Dose of the COVID-19 Vaccine, by State of Residence

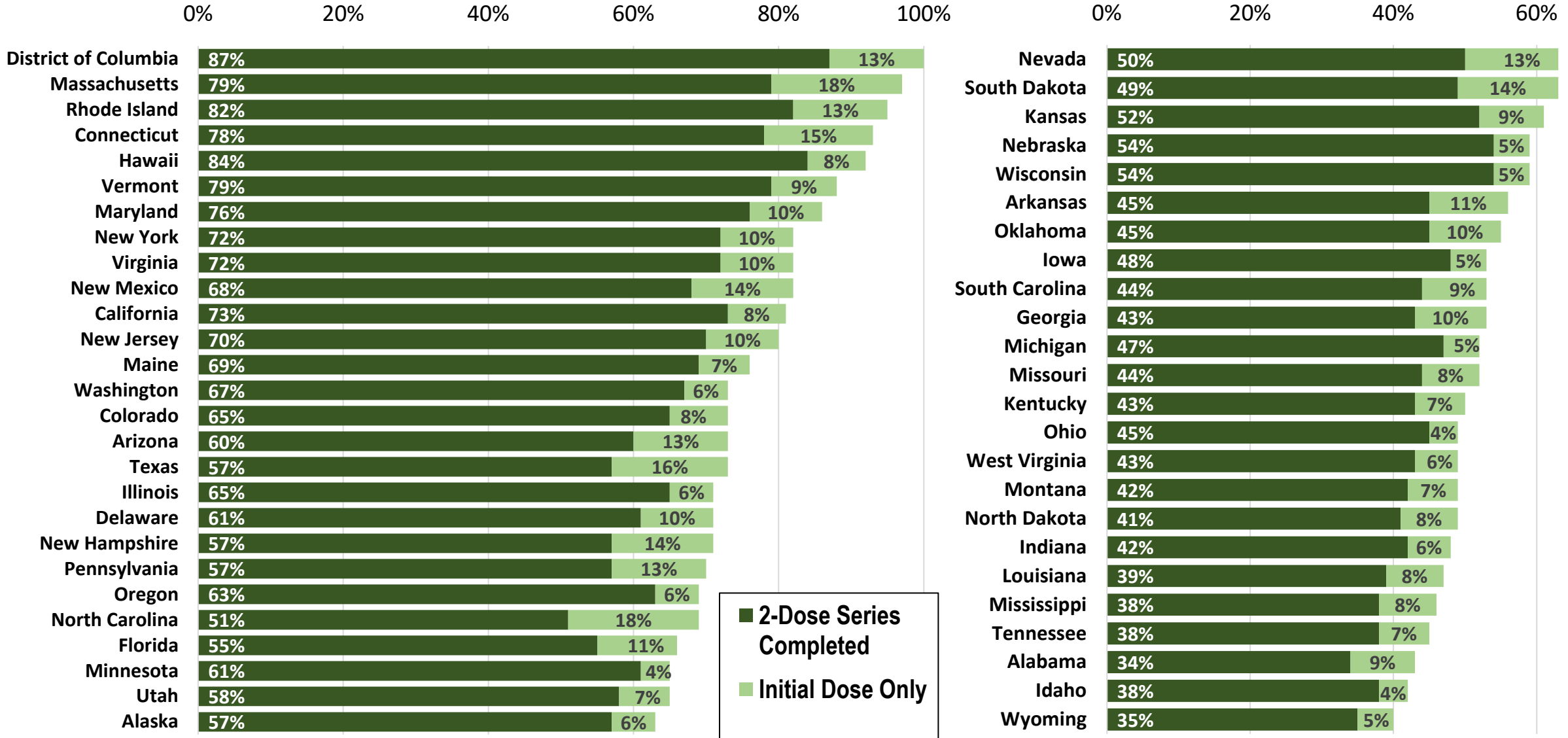
Received Initial Dose as of 12.14.2022
 40% 100%



Source: AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/unsk-b7fc>). Check state web sites for additional or more recent information.

Proportion of US Children Ages 12-17 Vaccinated Against COVID-19 by State of Residence

as of 12.14.2022



Source: AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/unsk-b7fc>). Check state web sites for additional or more recent information.

Initial Dose Among US Children Ages 12-17 ---3 Week Improvement

State	%Children Having Received At Least One Dose			State (continued)	%Children Having Received At Least One Dose		
	11/23/2022	12/14/2022	Increase by Percentage Point		11/23/2022	12/14/2022	Increase by Percentage Point
50 States + DC	67.7%	67.8%	0.1%	Missouri	52%	52%	0%
Alabama	43%	43%	0%	Montana	49%	49%	0%
Alaska	63%	63%	0%	Nebraska	59%	59%	0%
Arizona	73%	73%	0%	Nevada	63%	63%	0%
Arkansas	56%	56%	0%	New Hampshire	70%	71%	1%
California	80%	81%	1%	New Jersey	80%	80%	0%
Colorado	73%	73%	0%	New Mexico	82%	82%	0%
Connecticut	93%	93%	0%	New York	82%	82%	0%
Delaware	70%	71%	1%	North Carolina	68%	69%	1%
District of Columbia	100%	100%	--	North Dakota	49%	49%	0%
Florida	65%	66%	1%	Ohio	49%	49%	0%
Georgia	53%	53%	0%	Oklahoma	55%	55%	0%
Hawaii	92%	92%	0%	Oregon	69%	69%	0%
Idaho	42%	42%	0%	Pennsylvania	70%	70%	0%
Illinois	71%	71%	0%	Rhode Island	95%	95%	0%
Indiana	48%	48%	0%	South Carolina	53%	53%	0%
Iowa	53%	53%	0%	South Dakota	63%	63%	0%
Kansas	61%	61%	0%	Tennessee	45%	45%	0%
Kentucky	50%	50%	0%	Texas	73%	73%	0%
Louisiana	47%	47%	0%	Utah	65%	65%	0%
Maine	76%	76%	0%	Vermont	88%	88%	0%
Maryland	86%	86%	0%	Virginia	82%	82%	0%
Massachusetts	97%	97%	0%	Washington	73%	73%	0%
Michigan	52%	52%	0%	West Virginia	49%	49%	0%
Minnesota	65%	65%	0%	Wisconsin	59%	59%	0%
Mississippi	46%	46%	0%	Wyoming	40%	40%	0%

Source: AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction/uns-kb7fc>). Check state web sites for additional or more recent information.

Vaccination Across Age Groups

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Trends Across the 3 Child Age Groups

- ❑ The receipt of at least one dose of the COVID-19 vaccine has varied across the 3 child age groups at comparable stages following the authorization of the vaccine

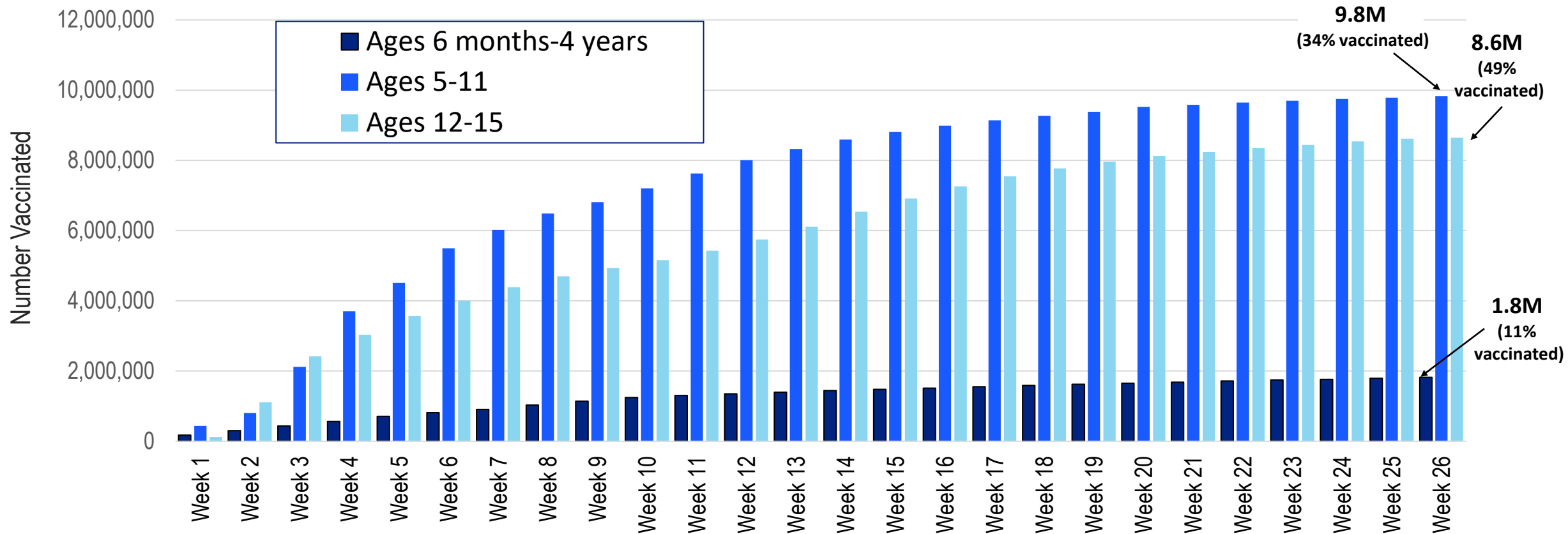
- ❑ At 26 weeks following vaccine authorization:
 - Children 6 Months-4 Years: 11% had received at least one dose of COVID-19 vaccine
 - Children Ages 5-11 Years: 34% had received at least one dose of COVID-19 vaccine
 - Children Ages 12-15 Years*: 49% had received at least one dose of COVID-19 vaccine

- ❑ Portion of US Children who have received vaccination:
 - Across the total of US children 6 months to 17 years, approximately 57% have not received a first dose

*Note: 16-17 year olds were included in the adult Emergency Use Authorization.



Cumulative Number of US Children Receiving At Least Initial Dose of COVID-19 Vaccine During Weeks 1 Through 26 Following Vaccine Authorization, by Age Group

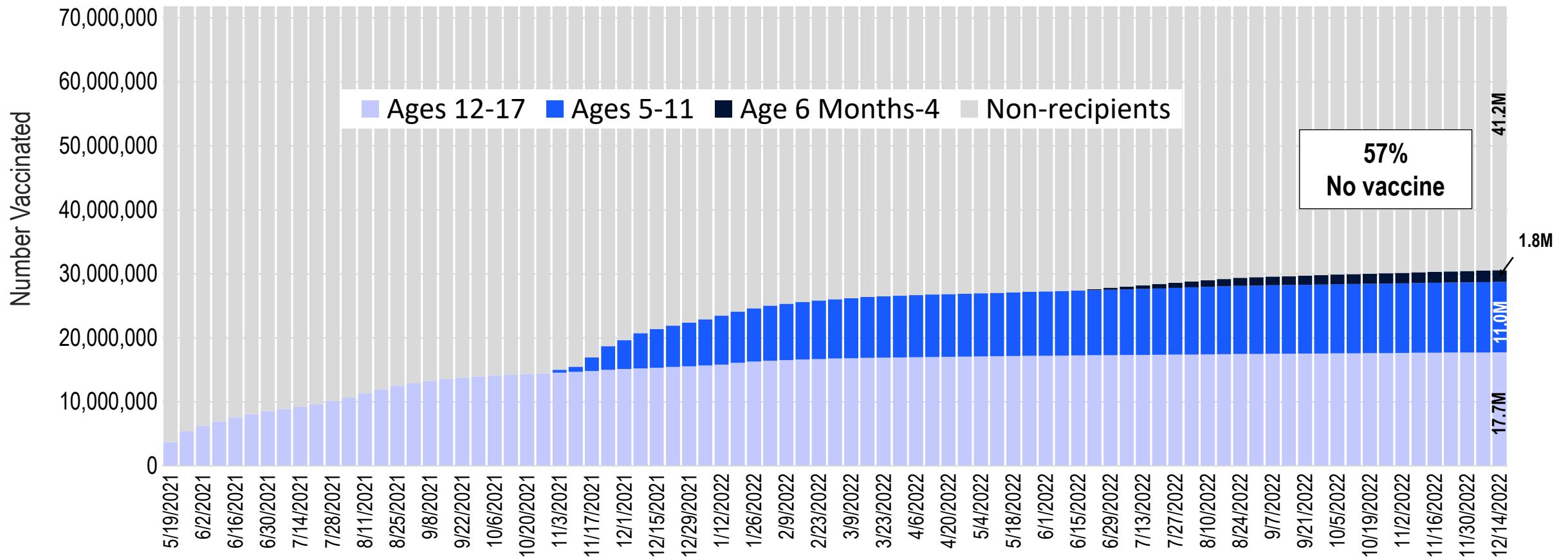


Note: The FDA approved the use of the Pfizer-BioNTech COVID-19 Vaccine in children ages 12 to 15 on an emergency use basis on 5.10.2021, followed by CDC recommendation the same week. The Agency issued an EUA for the Pfizer-BioNTech COVID-19 Vaccine for children ages 5 to 11 on 10.29.2021, followed by CDC recommendation on 11.2.2021, and authorized the use of Moderna and Pfizer-BioNTech COVID-19 vaccines for children under age 5 on 6.15.2022, followed by CDC recommendation on 6.18.2022. This chart includes 50 states and DC only. **Sources:** AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdiction>). Population totals are based on 2021 population estimates (SC-EST2021) published by the US Census Bureau (URL: <https://www.census.gov/data/datasets/time-series/demo/popest/2020s-state-detail.html>).



Cumulative Number of US Children (6 months – 17 years) Receiving At Least Initial Dose of COVID-19 Vaccine

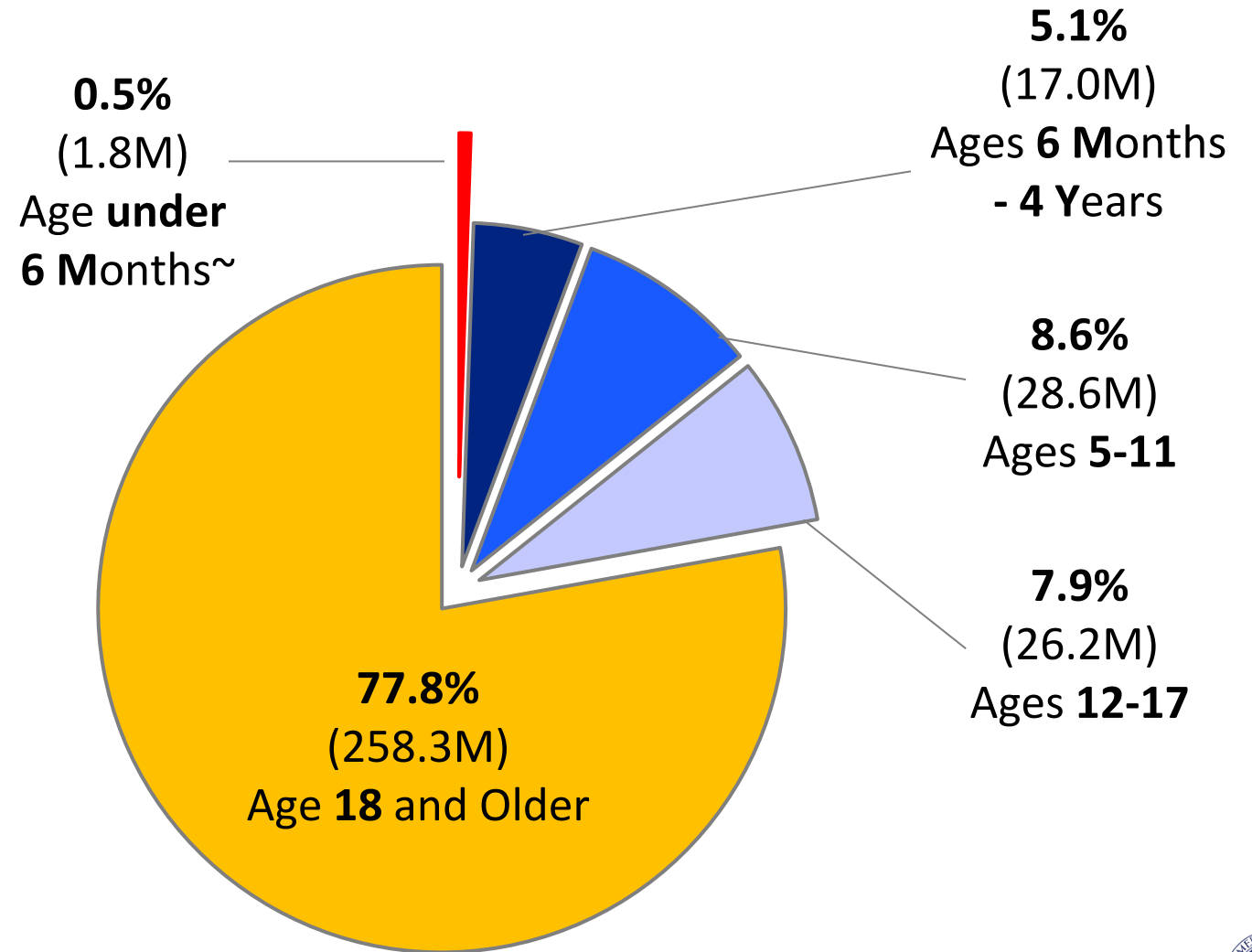
5.19.21 to 12.14.2022



Sources: AAP analysis of data series titled “COVID -19 Vaccinations in the United States, Jurisdiction”. CDC COVID -19 Data Tracker. Includes 50 states and DC. (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdi/unsk-b7fc>). Population totals are based on 2021 population estimates (SC-EST2021) published by the US Census Bureau (URL: <https://www.census.gov/data/datasets/time-series/demo/pepest/2020s-state-detail.html>).

US Population by Age Group, 2021

In 2021, children (73.6M under Age 18) made up **22.2%** of the total US population



~ Age under 6 months are estimated as half of infant population. **Note:** Percents do not sum to 100.0% due to rounding. **Source:** AAP analysis of report published by US Bureau of Census: Annual State Resident Population Estimates for 6 Race Groups by Age, Sex, and Hispanic Origin: April 1, 2020 to July 1, 2021 (SC-EST2021-ALLDATA6) [Link: <https://www.census.gov/data/datasets/time-series/demo/popest/2020s-state-detail.html>]



Data Sources and Methods

This report includes US COVID-19 vaccine child recipients in the 50 states and the District of Columbia based on provisional data released by the CDC in a data series titled “COVID-19 Vaccinations in the United States, Jurisdiction.” (URL: <https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdi/unsk-b7fc>).

Cumulative trends and weekly changes are updated weekly as the CDC revises and updates its data series. Previously-reported cumulative vaccine recipient counts higher than revised counts are replaced by the latter in this report. Sporadic vaccinations prior to CDC recommendations for all pediatric age groups are included in the cumulative counts although not shown by week in the charts. Recipients under age 5 are calculated by subtracting (a) recipients 5 or older, and (b) recipients without age data (from separate file provided by the CDC), from total recipient counts.

Individual states may have additional or more recent information on their web sites. State population totals are based on 2021 population estimates (SC-EST2021) published by the US Census Bureau (URL: <https://www.census.gov/data/datasets/time-series/demo/popest/2020s-state-detail.html>).



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