Children and COVID-19 Vaccinations Trends

AAP Analysis of Data Posted by the Centers for Disease Control and Prevention

as of October 19, 2022

American Academy of Pediatrics

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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-Jurisdi/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 10.19.2022

Ages 6 months - 4 Years

- **1.6** million (**9%**) have received their initial dose of COVID-19 vaccine.
- At this time about **15.5** million have yet to receive their first vaccine. This past week about **46,000** received their initial COVID-19 vaccine dose.
- Vaccination rates vary highly across states: In **18** states, over 10% have received their initial dose; in **9** states, under 5% have received their first vaccine.

Ages 5-11 Years

- **10.8** million (**38%**) have received their initial dose of COVID-19 vaccine.
- **8.9** million (**31%**) completed the 2-dose vaccination series.
- At this time about **17.8** million have yet to receive their initial COVID-19 vaccine dose. This past week about **23,000** 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

- **17.6** million (**67%**) have received their initial dose of COVID-19 vaccine.
- **15.1** million (**58%**) completed the 2-dose vaccination series.
- At this time about **8.5** million have yet to receive their initial COVID-19 vaccine dose. This past week about **18,000** received their first vaccine.
- Vaccination rates vary highly across states: In **12** 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/unsk-b7fc). Data cover the 50 states & District of Columbia. Check state web sites for additional or more recent information.

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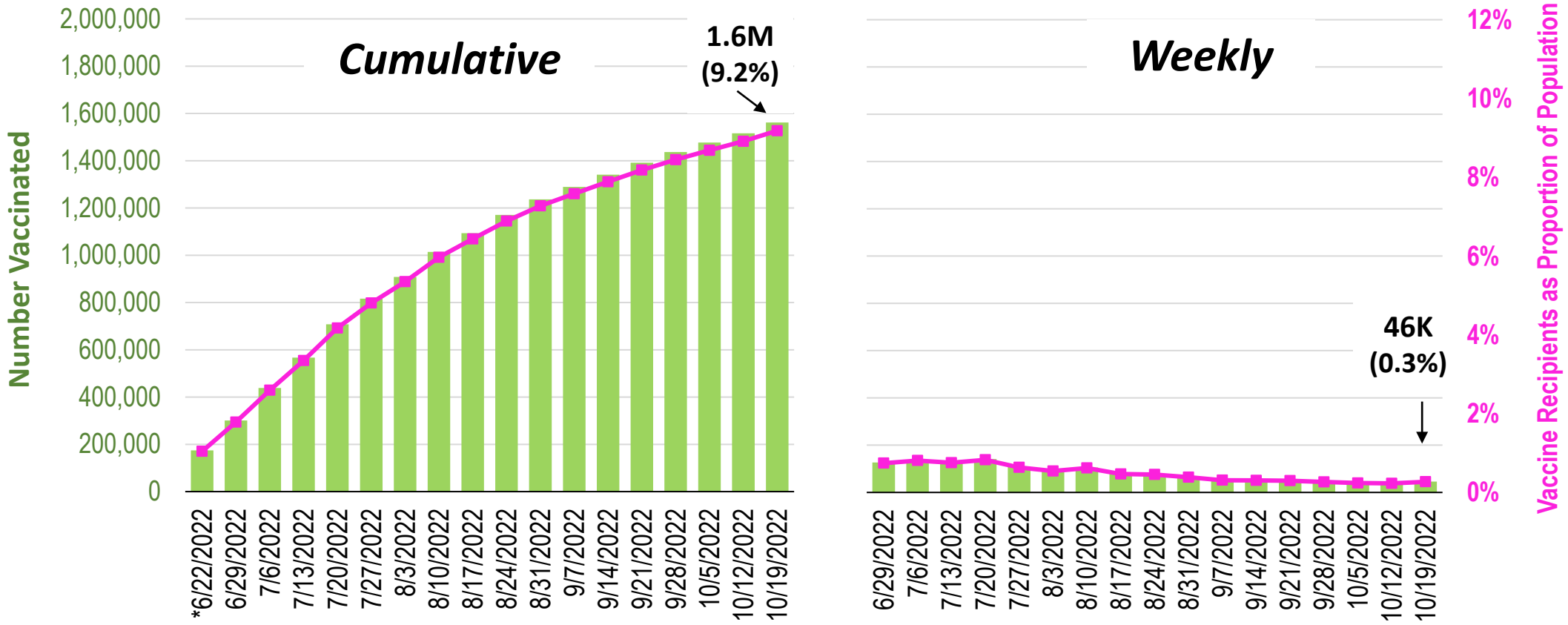
Ages 6 Months - 4 Years

Next 3 Slides

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

6.22.2022 to 10.19.2022



***** 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-Jurisdi/unsk-b7fc).

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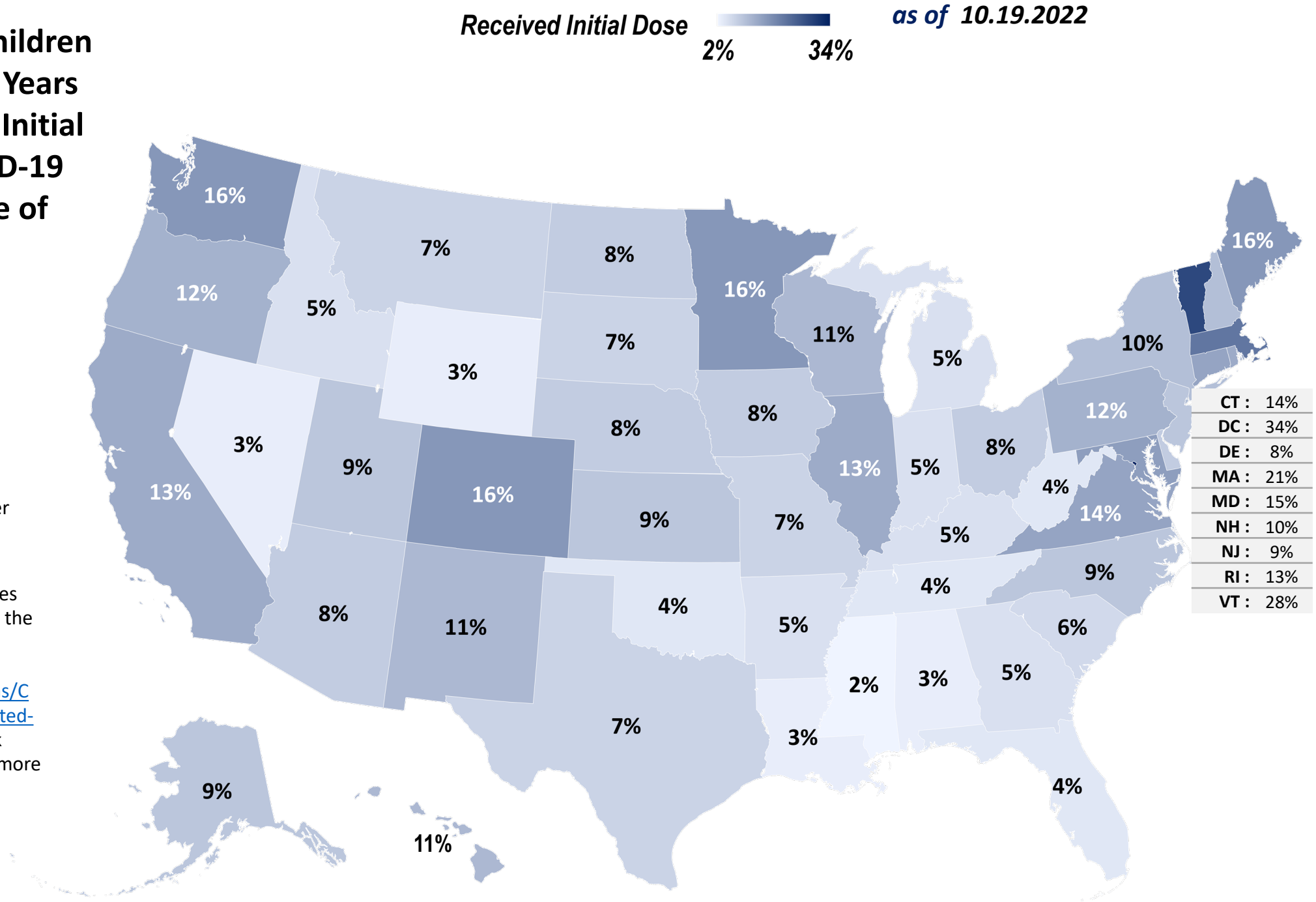
Proportion of US Children Ages 6 Months - 4 Years Who Received the Initial Dose of the COVID-19 Vaccine, by State of Residence



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-Jurisdi/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		
	9/28/2022	10/19/2022	Increase by Percentage Point
50 States + DC	**8.4%**	**9.2%**	**0.8%**
Alabama	2%	3%	1%
Alaska	8%	9%	1%
Arizona	7%	8%	1%
Arkansas	4%	5%	1%
California	12%	13%	1%
Colorado	14%	16%	2%
Connecticut	13%	14%	1%
Delaware	7%	8%	1%
District of Columbia	32%	34%	2%
Florida	3%	4%	1%
Georgia	5%	5%	0%
Hawaii	10%	11%	1%
Idaho	4%	5%	1%
Illinois	12%	13%	1%
Indiana	4%	5%	1%
Iowa	7%	8%	1%
Kansas	8%	9%	1%
Kentucky	5%	5%	0%
Louisiana	2%	3%	1%
Maine	15%	16%	1%
Maryland	14%	15%	1%
Massachusetts	20%	21%	1%
Michigan	4%	5%	1%
Minnesota	15%	16%	1%
Mississippi	2%	2%	0%

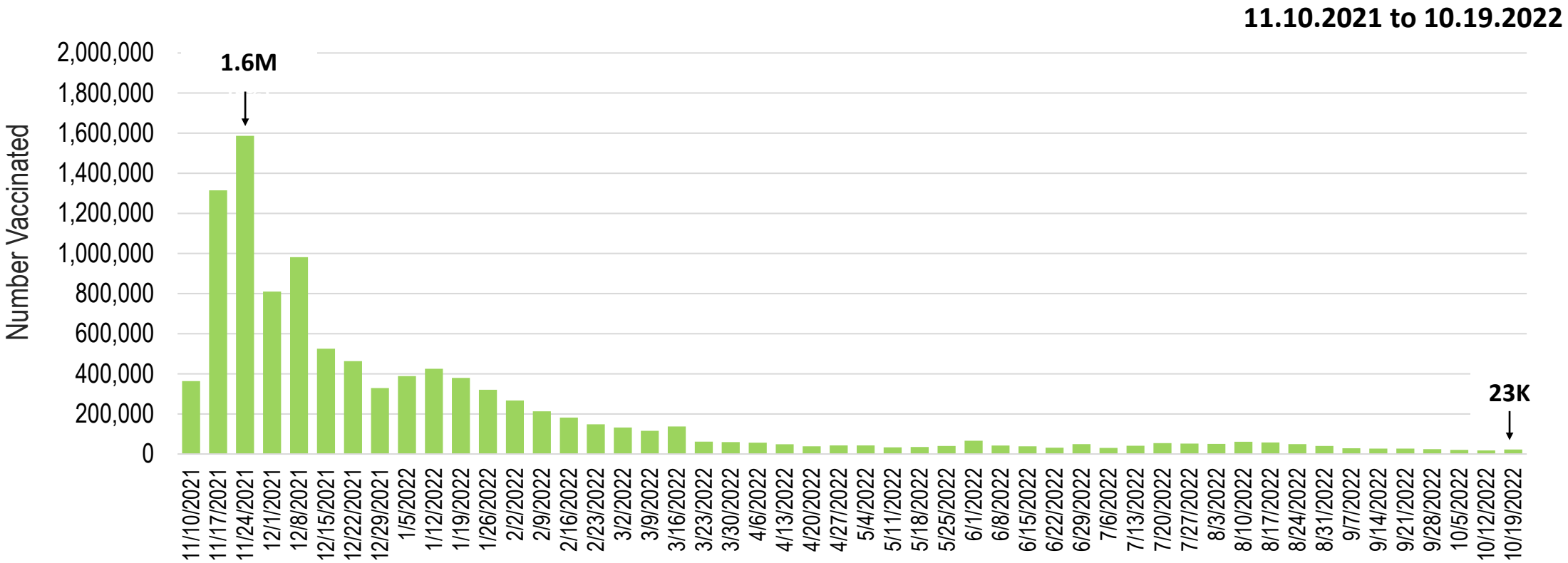
State (continued)	%Children Having Received At Least One Dose		
	9/28/2022	10/19/2022	Increase by Percentage Point
Missouri	7%	7%	0%
Montana	6%	7%	1%
Nebraska	7%	8%	1%
Nevada	3%	3%	0%
New Hampshire	9%	10%	1%
New Jersey	8%	9%	1%
New Mexico	10%	11%	1%
New York	9%	10%	1%
North Carolina	8%	9%	1%
North Dakota	7%	8%	1%
Ohio	7%	8%	1%
Oklahoma	3%	4%	1%
Oregon	11%	12%	1%
Pennsylvania	11%	12%	1%
Rhode Island	11%	13%	2%
South Carolina	5%	6%	1%
South Dakota	6%	7%	1%
Tennessee	4%	4%	0%
Texas	6%	7%	1%
Utah	8%	9%	1%
Vermont	26%	28%	2%
Virginia	13%	14%	1%
Washington	15%	16%	1%
West Virginia	4%	4%	0%
Wisconsin	10%	11%	1%
Wyoming	3%	3%	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-Jurisdi/unsk-b7fc). Check state web sites for additional or more recent information.

Ages 5-11

Next 6 Slides

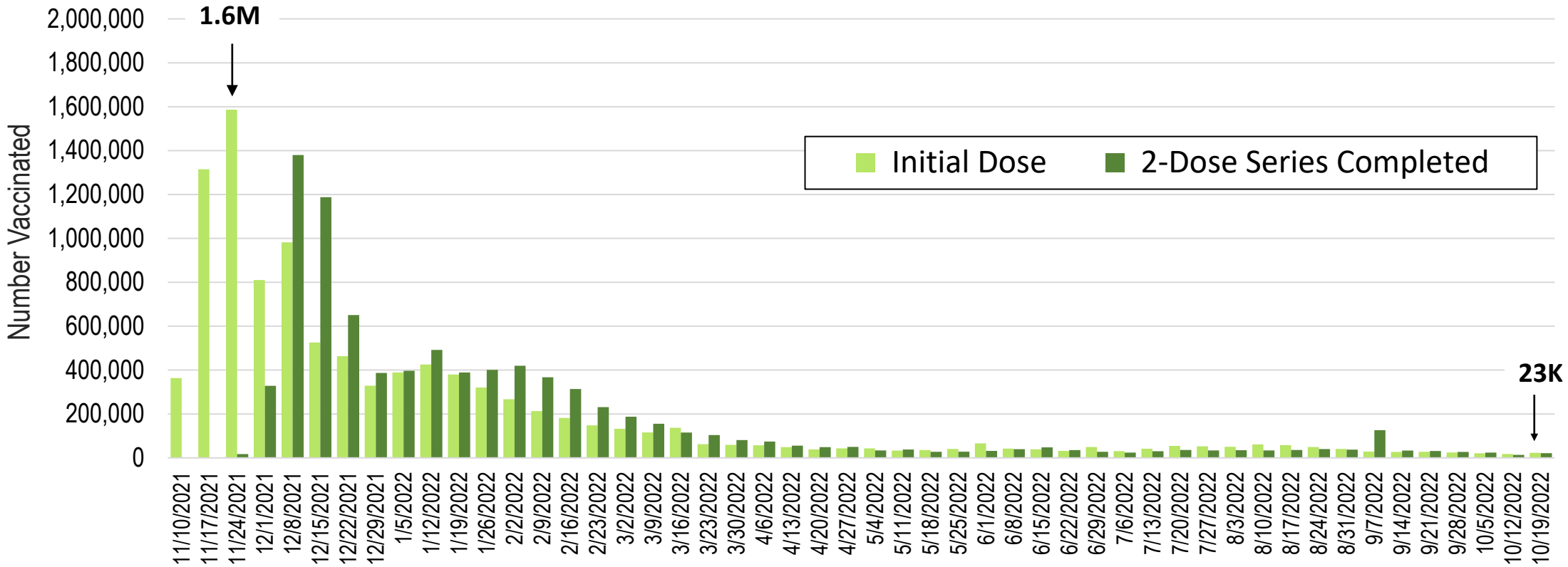
Weekly Increase in the Number of US Children Ages 5-11 Receiving Their Initial COVID-19 Vaccination



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. **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 10.19.2022



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. **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.

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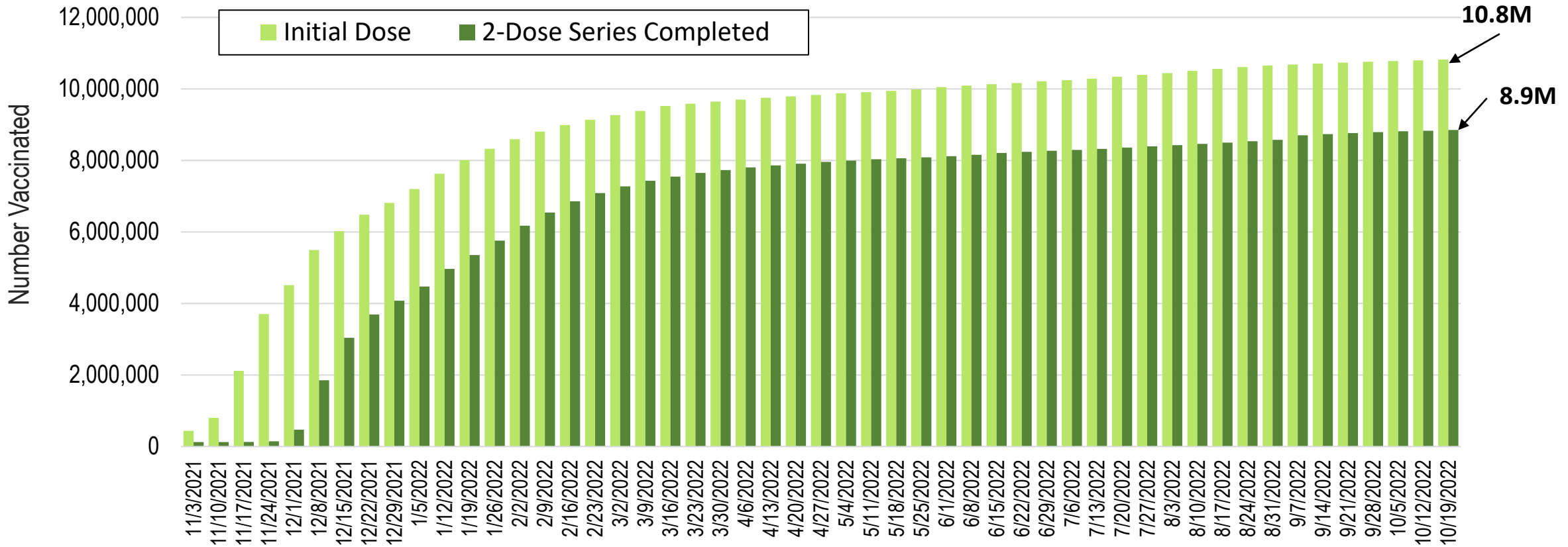
Cumulative Number of US COVID-19 Vaccine Recipients Ages 5-11

11.3.2021 to 10.19.2022



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. 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.

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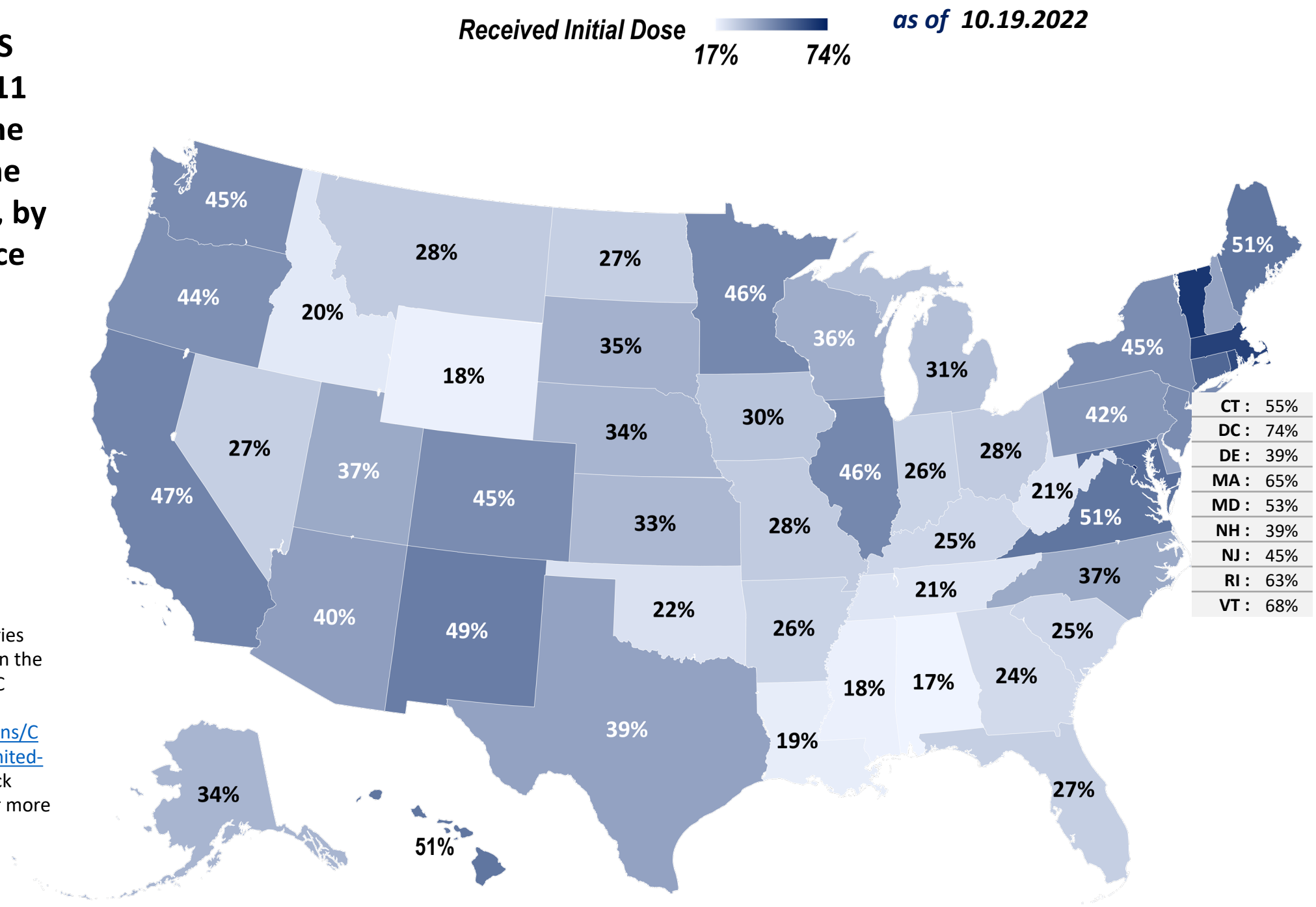
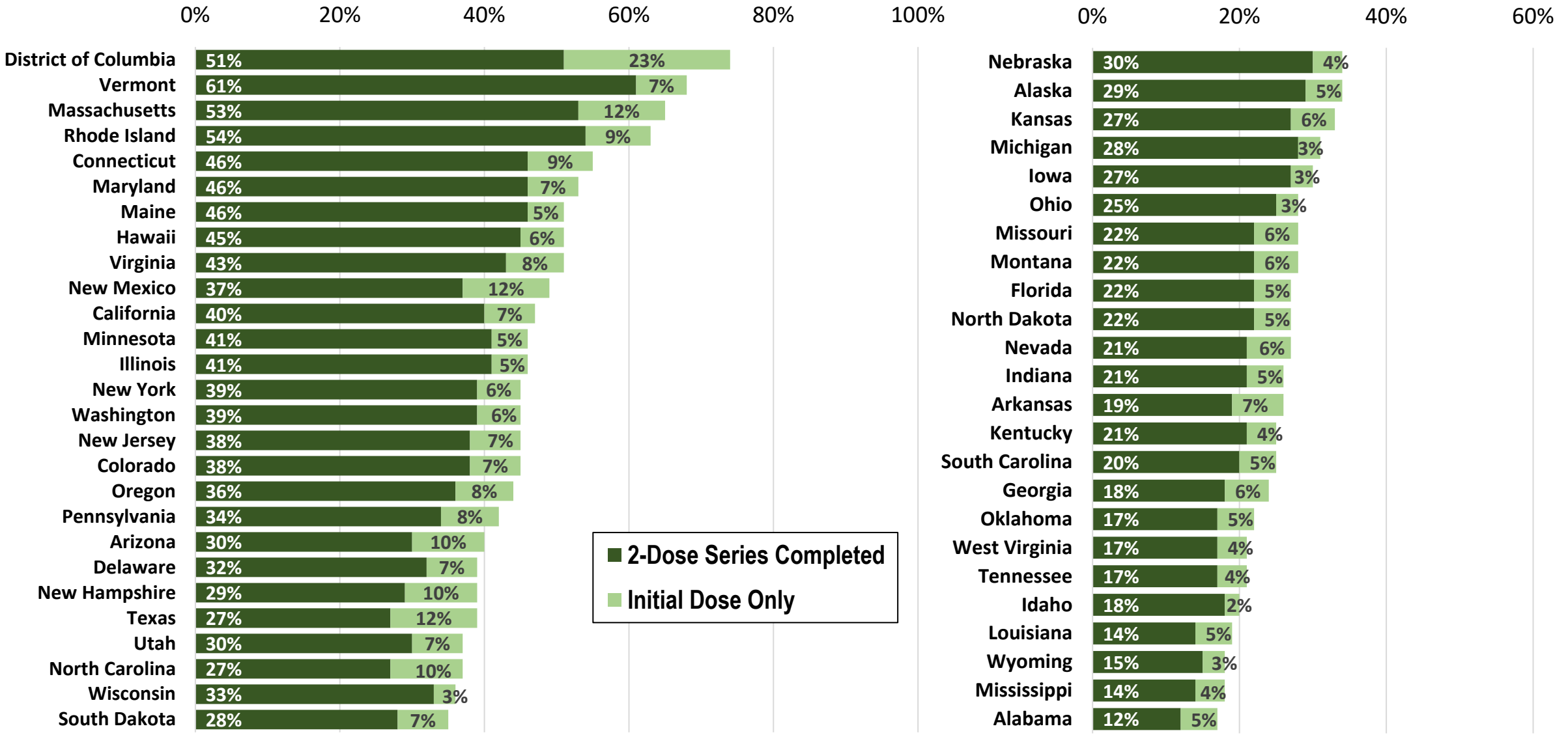
Proportion of US Children Ages 5-11 Who Received the Initial Dose of the COVID-19 Vaccine, by State of Residence



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.

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

as of 10.19.2022



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		
	9/28/2022	10/19/2022	Increase by Percentage Point
50 States + DC	**37.6%**	**37.9%**	**0.3%**
Alabama	17%	17%	0%
Alaska	34%	34%	0%
Arizona	40%	40%	0%
Arkansas	26%	26%	0%
California	47%	47%	0%
Colorado	45%	45%	0%
Connecticut	55%	55%	0%
Delaware	39%	39%	0%
District of Columbia	72%	74%	2%
Florida	27%	27%	0%
Georgia	24%	24%	0%
Hawaii	51%	51%	0%
Idaho	20%	20%	0%
Illinois	46%	46%	0%
Indiana	26%	26%	0%
Iowa	30%	30%	0%
Kansas	33%	33%	0%
Kentucky	25%	25%	0%
Louisiana	19%	19%	0%
Maine	51%	51%	0%
Maryland	52%	53%	1%
Massachusetts	65%	65%	0%
Michigan	31%	31%	0%
Minnesota	46%	46%	0%
Mississippi	18%	18%	0%

State (continued)	%Children Having Received At Least One Dose		
	9/28/2022	10/19/2022	Increase by Percentage Point
Missouri	28%	28%	0%
Montana	27%	28%	1%
Nebraska	34%	34%	0%
Nevada	27%	27%	0%
New Hampshire	38%	39%	1%
New Jersey	45%	45%	0%
New Mexico	49%	49%	0%
New York	45%	45%	0%
North Carolina	36%	37%	1%
North Dakota	27%	27%	0%
Ohio	28%	28%	0%
Oklahoma	22%	22%	0%
Oregon	43%	44%	1%
Pennsylvania	41%	42%	1%
Rhode Island	63%	63%	0%
South Carolina	25%	25%	0%
South Dakota	35%	35%	0%
Tennessee	20%	21%	1%
Texas	39%	39%	0%
Utah	37%	37%	0%
Vermont	68%	68%	0%
Virginia	51%	51%	0%
Washington	44%	45%	1%
West Virginia	21%	21%	0%
Wisconsin	36%	36%	0%
Wyoming	18%	18%	0%

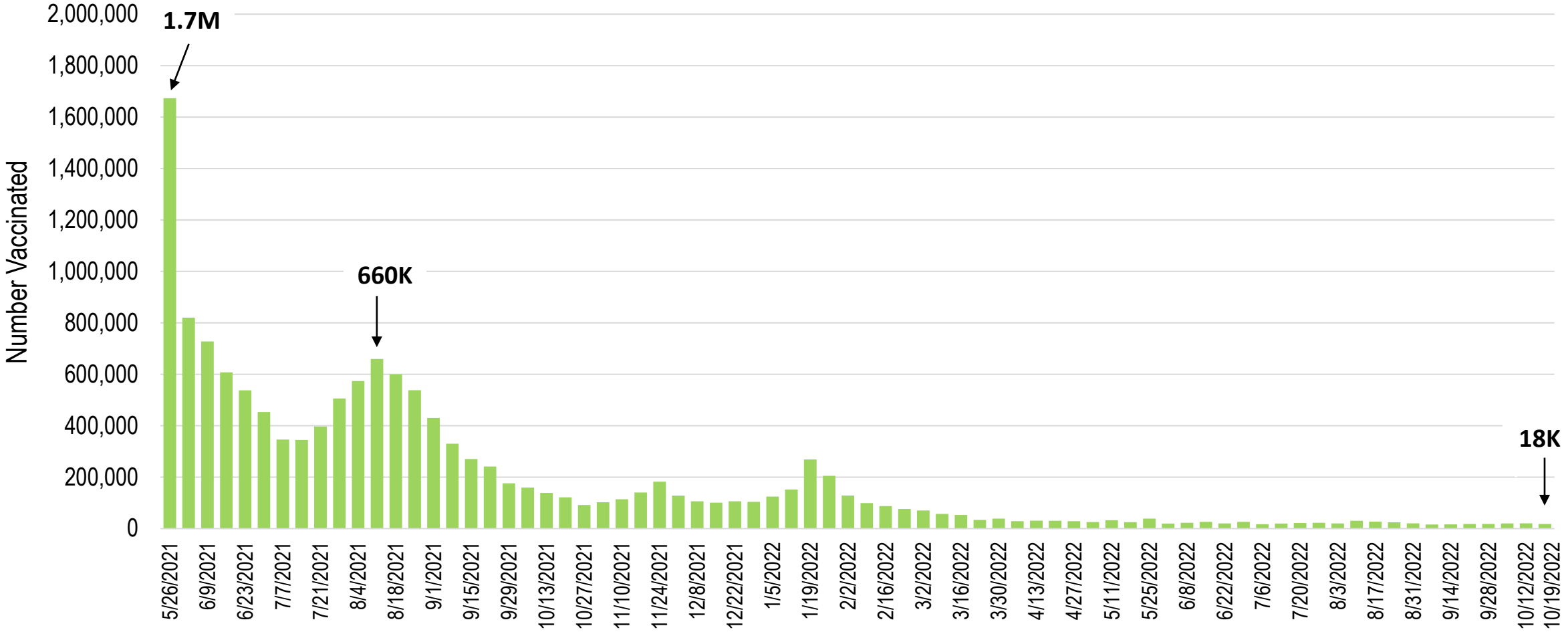
Source: AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdi/unsk-b7fc). Check state web sites for additional or more recent information.

Ages 12-17

Next 6 Slides

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

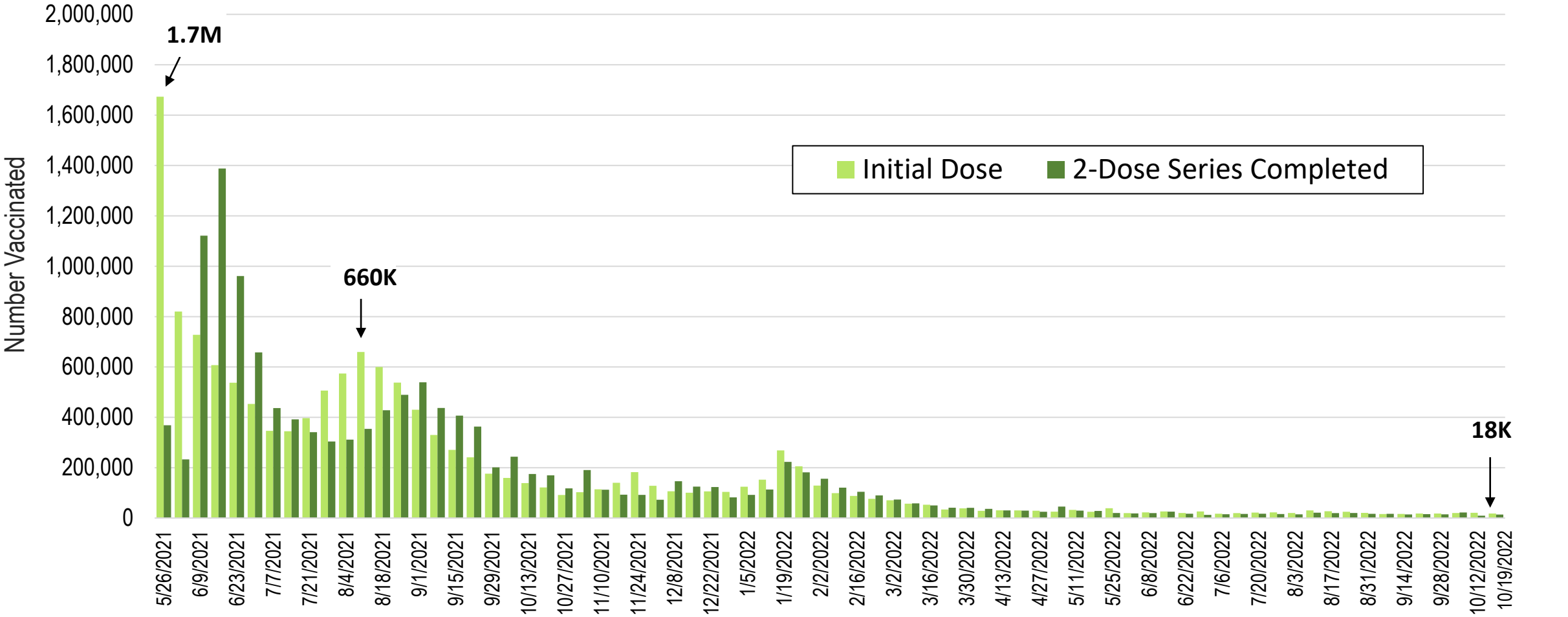
5.26.2021 to 10.19.2022



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. **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.

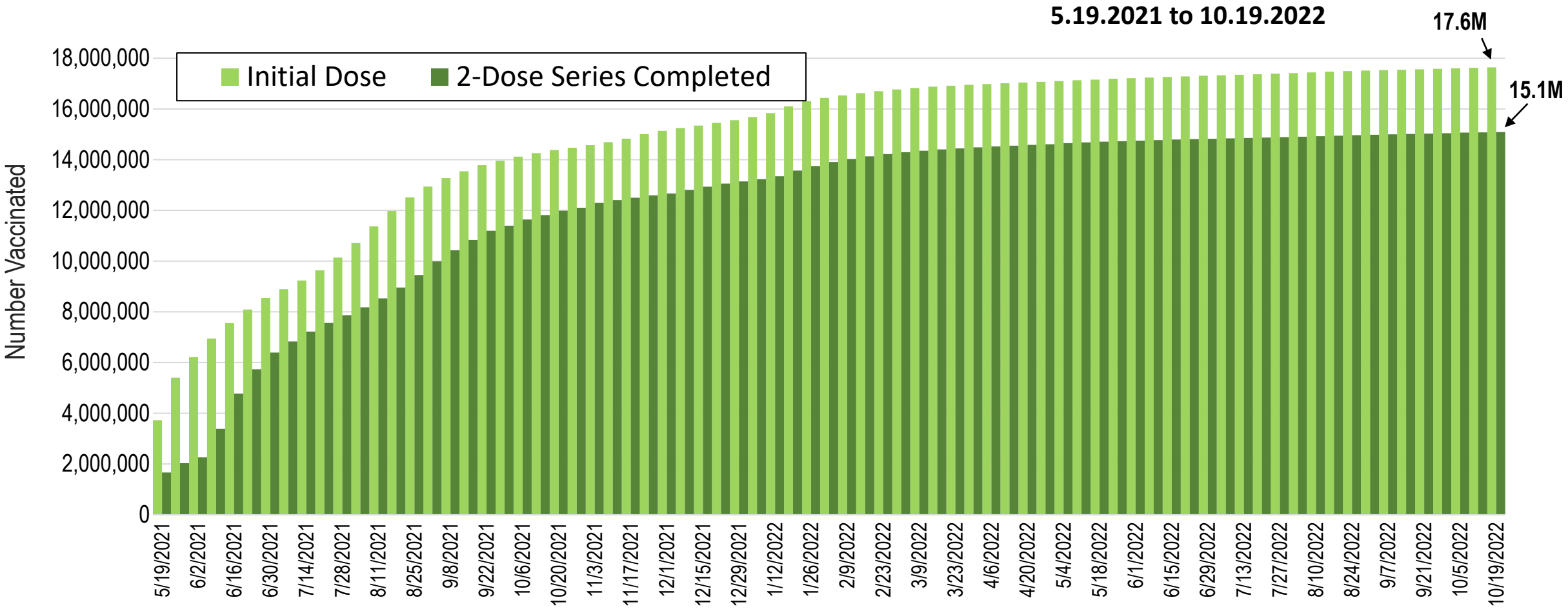
Weekly Increase in Initial and Completed COVID-19 Vaccination for US Children Ages 12-17

5.26.2021 to 10.19.2022



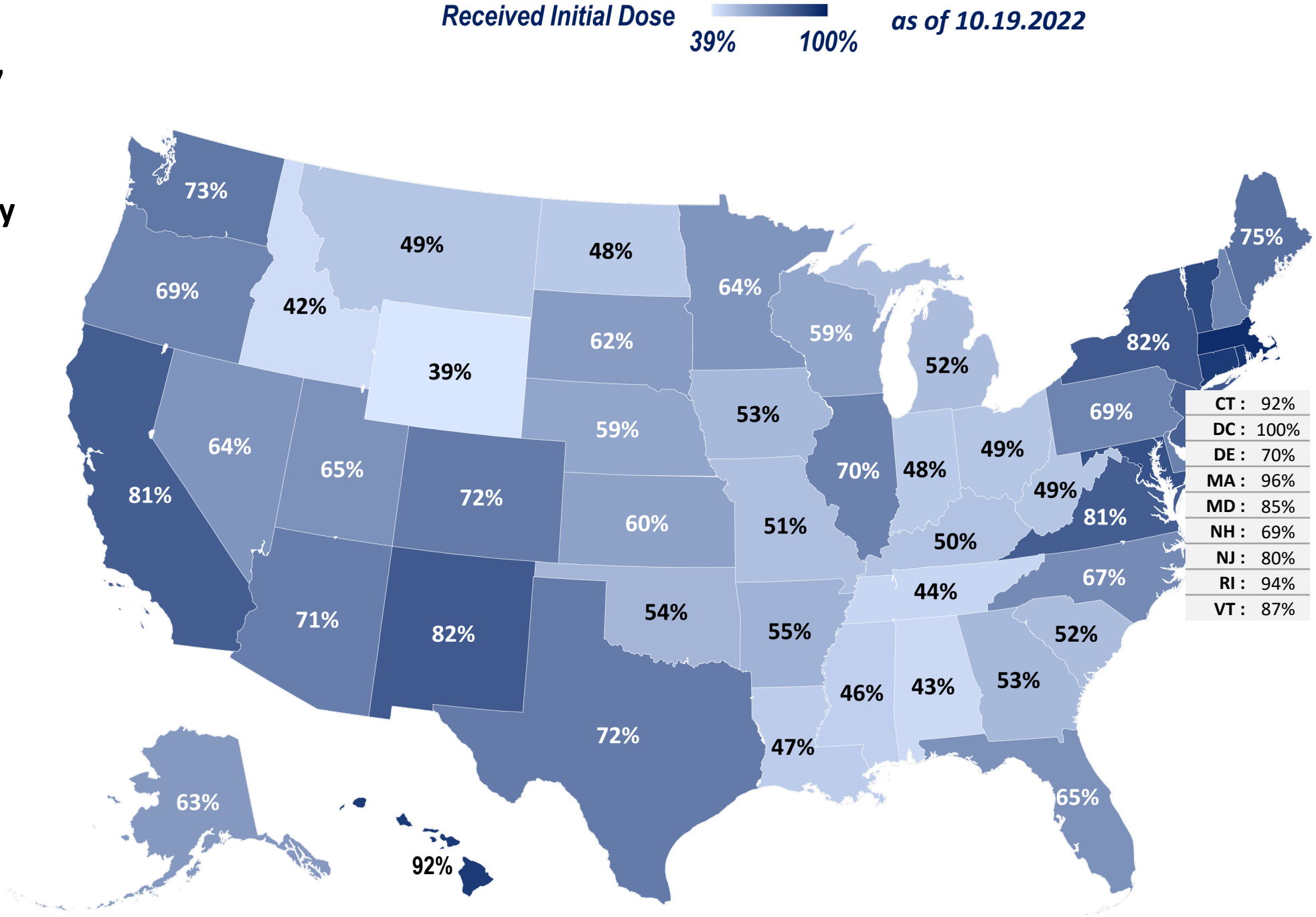
Source: AAP analysis of data series titled "COVID -19 Vaccinations in the United States, Jurisdiction". CDC COVID -19 Data Tracker (URL: https://data.cdc.gov/Vaccinations/COVID-19-Vaccinations-in-the-United-States-Jurisdi/unsk-b7fc). Check state web sites for additional or more recent information. **Notes:**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

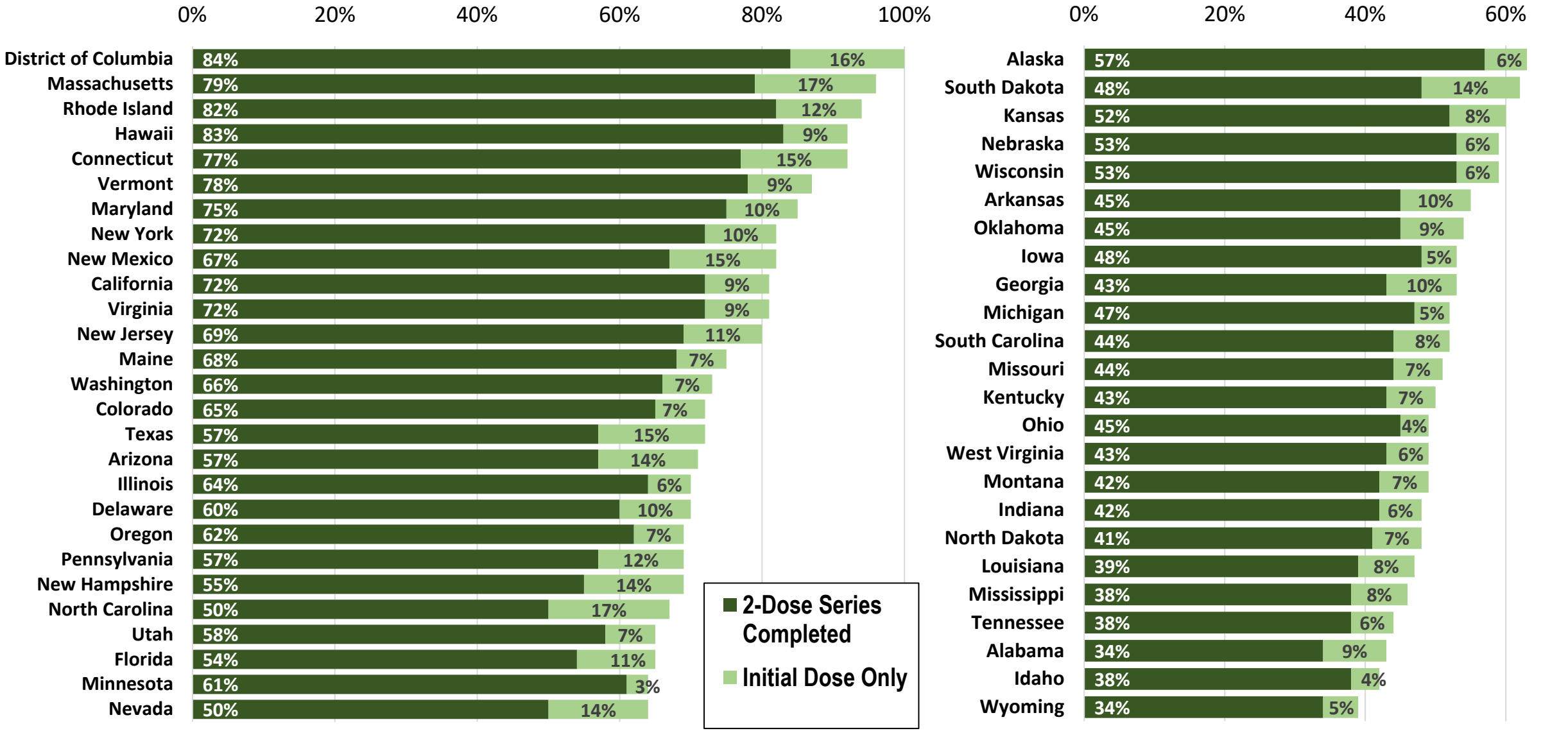
Proportion of US Children Ages 12-17 Who Received the Initial Dose of the COVID-19 Vaccine, by State of Residence



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.

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

as of 10.19.2022



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 12-17 ---3 Week Improvement

State	%Children Having Received At Least One Dose		
	9/28/2022	10/19/2022	Increase by Percentage Point
50 States + DC	**67.2%**	**67.5%**	**0.3%**
Alabama	43%	43%	0%
Alaska	63%	63%	0%
Arizona	71%	71%	0%
Arkansas	55%	55%	0%
California	81%	81%	0%
Colorado	72%	72%	0%
Connecticut	92%	92%	0%
Delaware	70%	70%	0%
District of Columbia	100%	100%	--
Florida	65%	65%	0%
Georgia	53%	53%	0%
Hawaii	92%	92%	0%
Idaho	42%	42%	0%
Illinois	70%	70%	0%
Indiana	48%	48%	0%
Iowa	53%	53%	0%
Kansas	60%	60%	0%
Kentucky	50%	50%	0%
Louisiana	47%	47%	0%
Maine	75%	75%	0%
Maryland	85%	85%	0%
Massachusetts	95%	96%	1%
Michigan	52%	52%	0%
Minnesota	64%	64%	0%
Mississippi	45%	46%	1%

State (continued)	%Children Having Received At Least One Dose		
	9/28/2022	10/19/2022	Increase by Percentage Point
Missouri	51%	51%	0%
Montana	49%	49%	0%
Nebraska	59%	59%	0%
Nevada	64%	64%	0%
New Hampshire	68%	69%	1%
New Jersey	80%	80%	0%
New Mexico	81%	82%	1%
New York	81%	82%	1%
North Carolina	67%	67%	0%
North Dakota	48%	48%	0%
Ohio	48%	49%	1%
Oklahoma	54%	54%	0%
Oregon	69%	69%	0%
Pennsylvania	69%	69%	0%
Rhode Island	94%	94%	0%
South Carolina	52%	52%	0%
South Dakota	62%	62%	0%
Tennessee	44%	44%	0%
Texas	72%	72%	0%
Utah	65%	65%	0%
Vermont	87%	87%	0%
Virginia	81%	81%	0%
Washington	73%	73%	0%
West Virginia	48%	49%	1%
Wisconsin	59%	59%	0%
Wyoming	39%	39%	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-Jurisdi/unsk-b7fc). Check state web sites for additional or more recent information.

Vaccination Across Age Groups

Next 3 Slides

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 18 weeks following vaccine authorization:

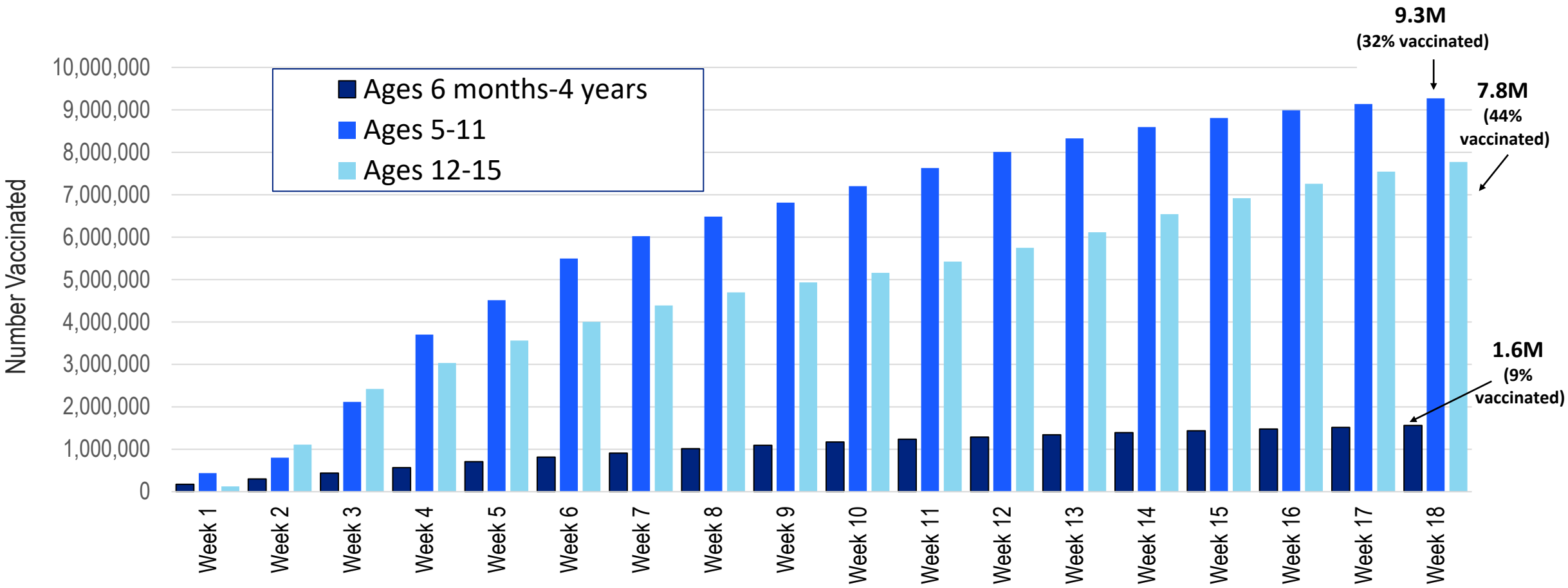
  - Children 6 Months-4 Years: 9% had received at least one dose of COVID-19 vaccine
  - Children Ages 5-11 Years: 32% had received at least one dose of COVID-19 vaccine
  - Children Ages 12-15 Years*: 44% had received at least one dose of COVID-19 vaccine

- Portion of US Children who have received vaccination:

  - Across the total of US children 6 months to 17 years, approximately 58% have not received a first dose

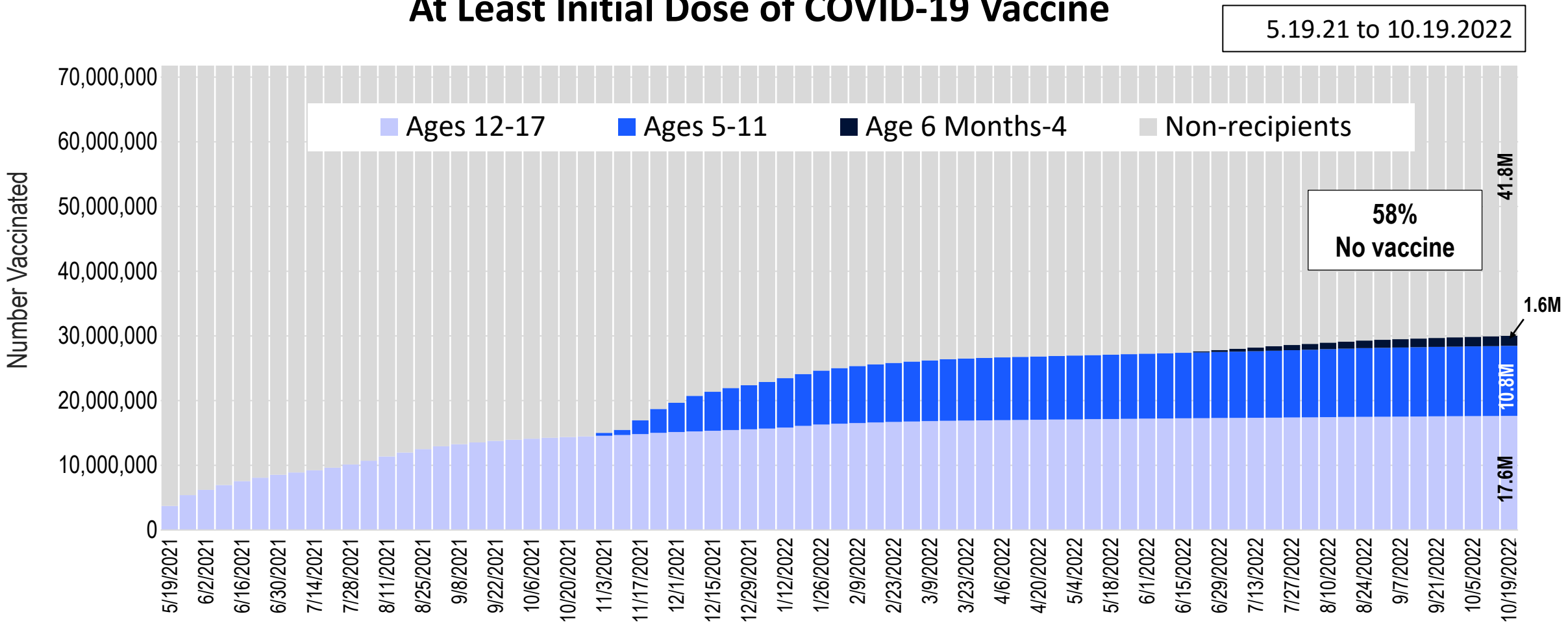
***Note:** 16-17 year olds were included in the adult Emergency Use Authorization.

Cumulative Number of US Children Receiving At Least Initial Dose of COVID-19 Vaccine During Early Weeks of Vaccine Launch, 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-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/popest/2020s-state-detail.html).

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



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/popest/2020s-state-detail.html).

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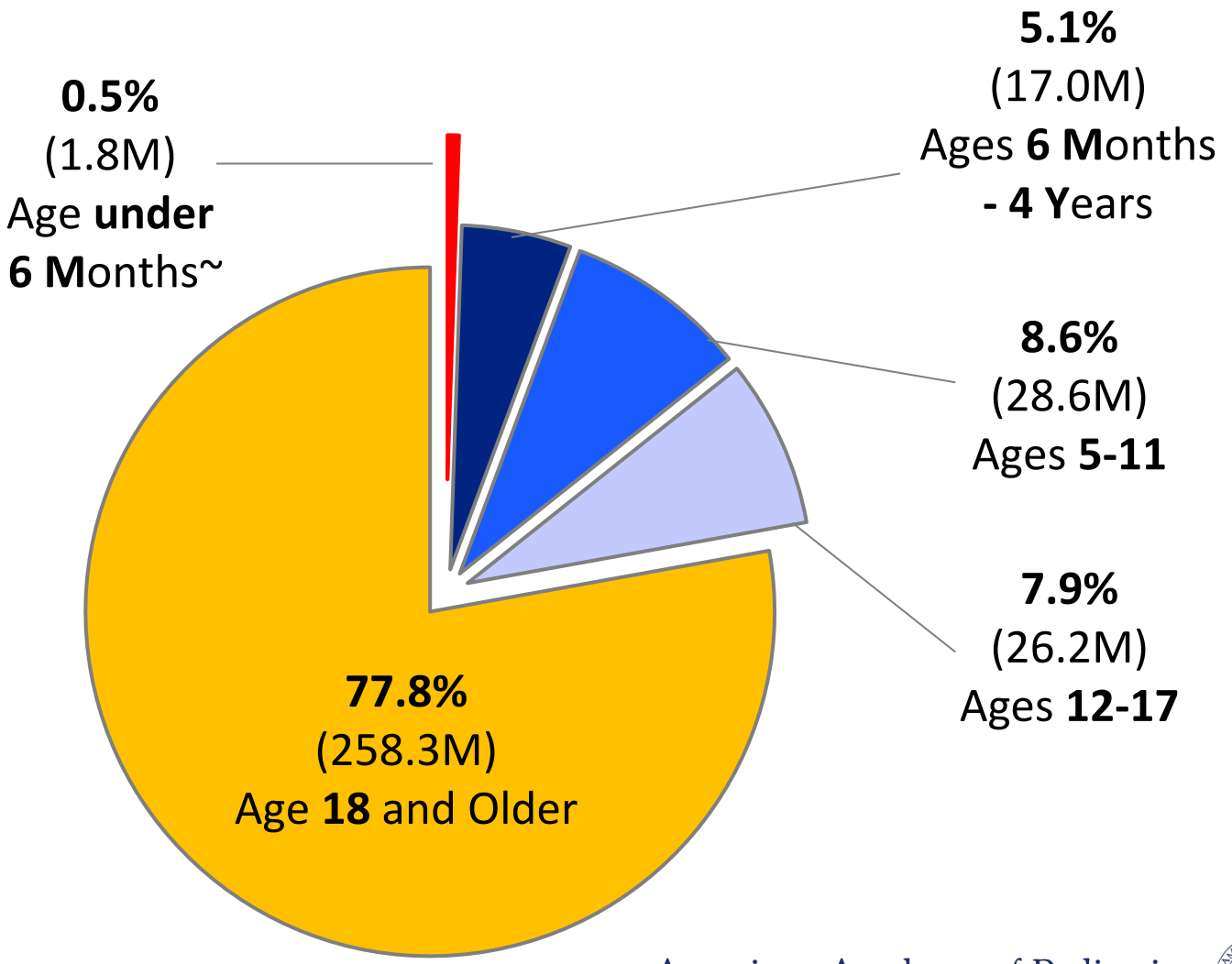
US Population by Age Group, 2021

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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