



# Weekly COVID-19 Vaccination Report

The Weekly COVID-19 Vaccination Report includes the most currently available information on vaccines administered, as well as more granular information by geography, demographic factors, and more.

This report will be posted each Wednesday.

## An important note regarding vaccination progress

Source: Centers for Disease Control and Prevention. COVID Data Tracker.

Atlanta, GA: US Department of Health and Human Services, CDC; October 27, 2022.

<https://covid.cdc.gov/covid-data-tracker>

Massachusetts currently ranks tied for first among US states for the rate of persons with one or more doses administered per capita.

Massachusetts currently ranks first for the rate of persons with one or more doses per capita among states with populations of five million people or more.



Please note: This report reflects data available in the Massachusetts Immunization Information System (MIIS) as of Monday at 11:59PM and is pulled every Tuesday. Due to provider reporting of administration data and data processing, data may be available in MIIS 24-48 hours or more after administration. Due to time needed for inputting shipment data, shipment data may be available in MIIS 24-48 hours or more after shipment. MIIS data are available for analysis one calendar day after they are reported to the MIIS. Data are current as of time of publication and may be subject to change in future publications as additional data are reported. All data are from MIIS unless otherwise noted.

# COVID-19 Vaccines Administered

Data as of October 31, 2022

## Administered (MIIS)\* through Monday, October 31, 2022 (Running totals by day)

	October 25, 2022	October 26, 2022	October 27, 2022	October 28, 2022	October 29, 2022	October 30, 2022	October 31, 2022
At least one dose -- number of <b>people</b> who received at least one dose of Moderna, Pfizer, or Johnson & Johnson vaccine	6,439,496	6,443,011	6,445,935	6,449,265	6,450,946	6,451,929	6,453,250
Fully vaccinated -- number of <b>people</b> who received a primary series of Moderna, Pfizer, or Johnson & Johnson vaccine**	5,548,085	5,549,954	5,551,555	5,553,293	5,554,110	5,554,517	5,555,220
First booster doses -- number of <b>people</b> who received a booster dose of Moderna, Pfizer, or Johnson & Johnson vaccine***	3,331,601	3,334,540	3,337,013	3,339,722	3,341,181	3,341,945	3,343,111
Second booster doses -- number of <b>people</b> who have received at least 2 booster doses****	1,121,432	1,132,463	1,141,901	1,153,150	1,158,338	1,161,465	1,165,686
<b>Total Doses Administered (MIIS)</b>	16,440,936	16,467,734	16,490,217	16,515,941	16,527,925	16,534,735	16,544,996

\*Data from the Massachusetts Immunization Information System (MIIS) are as of midnight the night before.

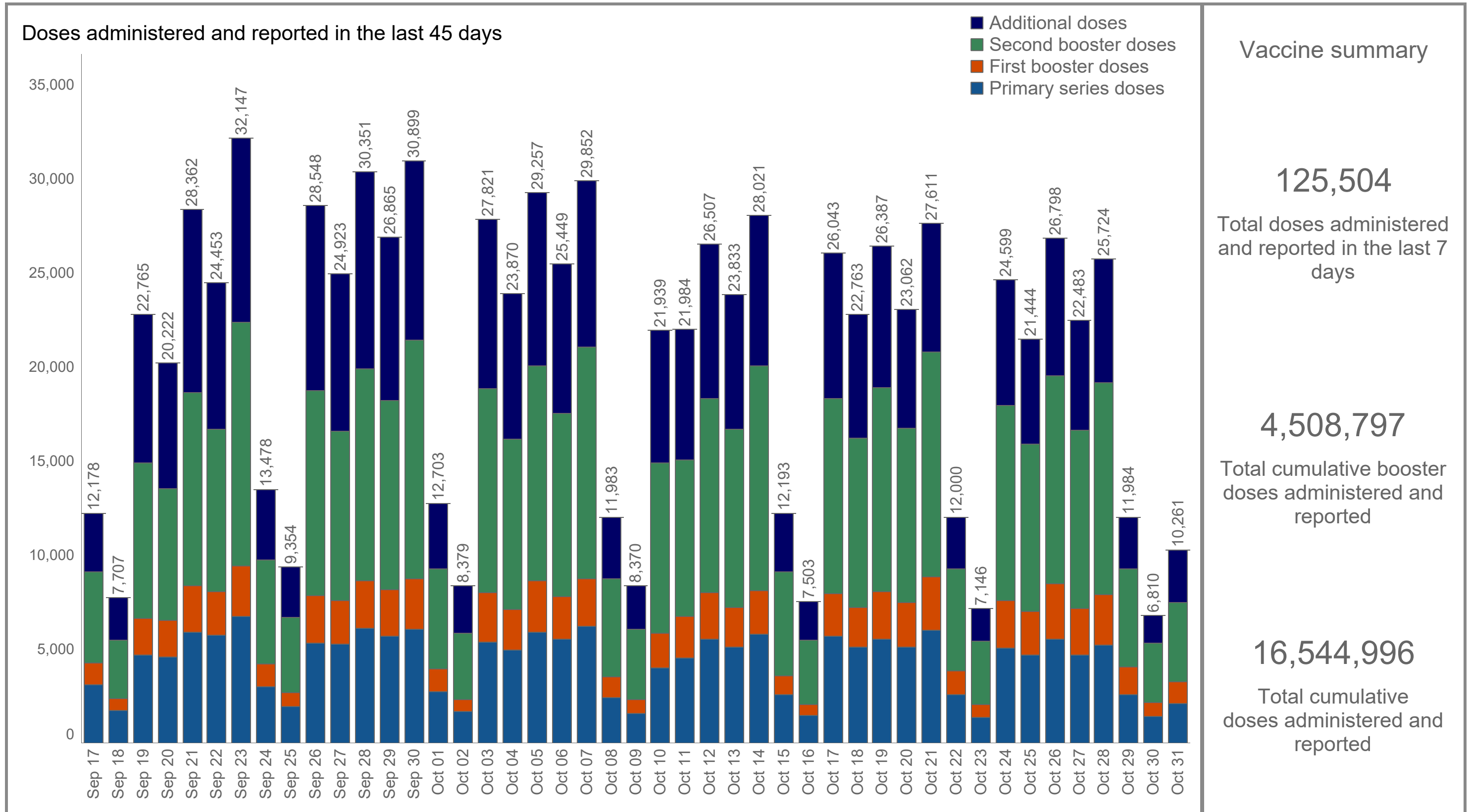
\*\*An individual is counted as fully vaccinated if they have received the number of doses required to complete the primary series for their age and all of these doses have been reported to MIIS. Pfizer recipients under 5 years of age require three doses of vaccine; all other Pfizer recipients require two doses. Moderna and Novavax recipients require two doses of vaccine. Janssen/Johnson & Johnson recipients require one dose of vaccine.

\*\*\*See the definitions page at the end of this document for the full definition. Booster doses are currently recommended for everyone aged 5 years and older. See <https://www.mass.gov/info-details/covid-19-booster-frequently-asked-questions> for details on which formulation of vaccine is recommended at which intervals.

\*\*\*\*Second booster doses: Number of individuals who have received an additional dose after their first booster dose.

# COVID-19 Vaccine Doses Administered

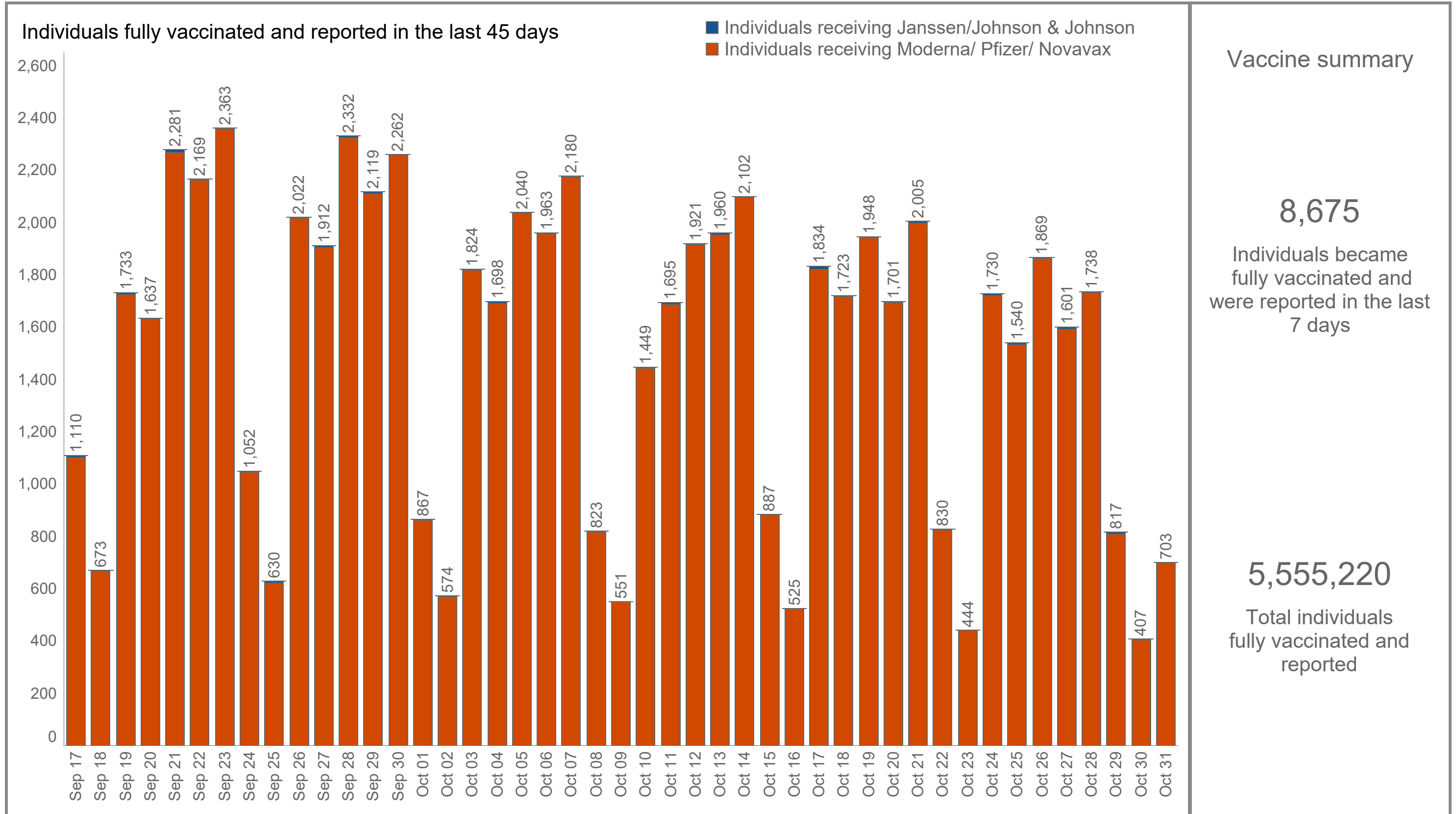
Data as of October 31, 2022



Note: Data from MIIS (see "definitions"). Data reflect doses administered (see "definitions"). Dates reflect the date doses were administered. Doses administered: All valid doses of Janssen/Johnson & Johnson, Moderna, Novavax, and Pfizer COVID-19 vaccine that have been given to people by providers and reported to MIIS are included in this measurement. Primary series doses: the number of doses required to complete the primary series for their age and all of these doses have been reported to MIIS. Pfizer recipients under 5 years of age require three doses of vaccine; all other Pfizer recipients require two doses. Moderna and Novavax recipients require two doses of vaccine. Janssen/Johnson & Johnson recipients require one dose of vaccine. See the definitions page at the end of this document.

# Individuals Fully Vaccinated

Data as of October 31, 2022



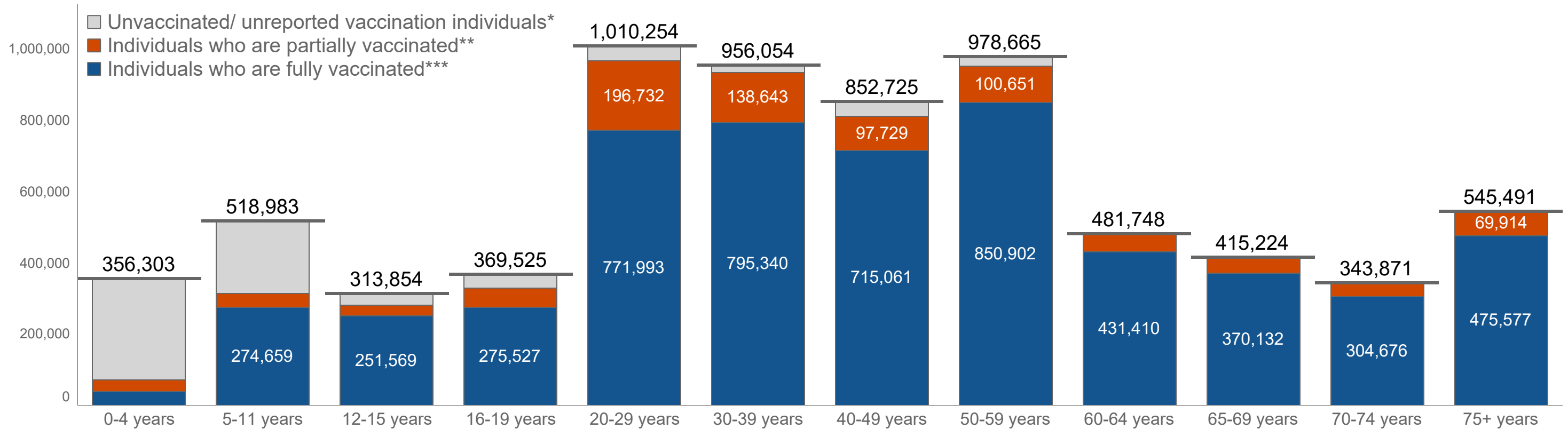
NOTE: Data from MIIS (see "definitions"). Dates reflect the date doses were administered. Individuals fully vaccinated: An individual is counted as fully vaccinated if they have received the number of doses required to complete the primary series for their age and all of these doses have been reported to MIIS. Pfizer recipients under 5 years of age require three doses of vaccine; all other Pfizer recipients require two doses. Moderna and Novavax recipients require two doses of vaccine. Janssen/Johnson & Johnson recipients require one dose of vaccine.

# Individuals with at Least One Dose

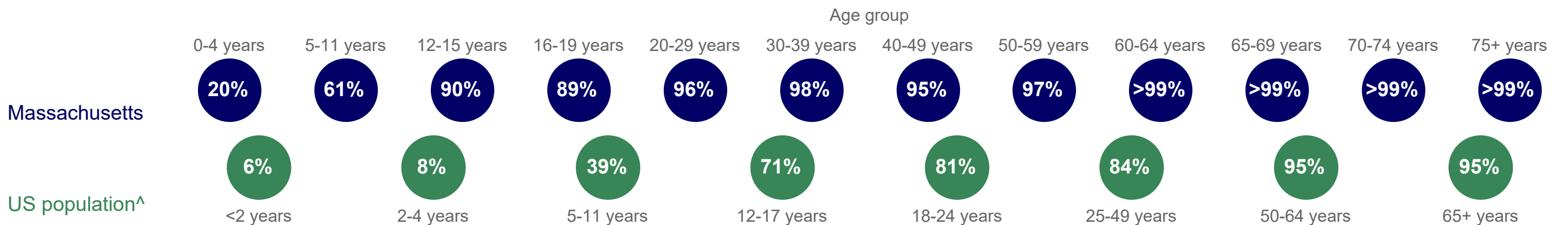
Data as of October 31, 2022

In Massachusetts, 92% of the population has received at least one dose, compared with 80% of the US population.

Vaccination status of individuals by age group (cumulative)



Percent of population with at least one dose



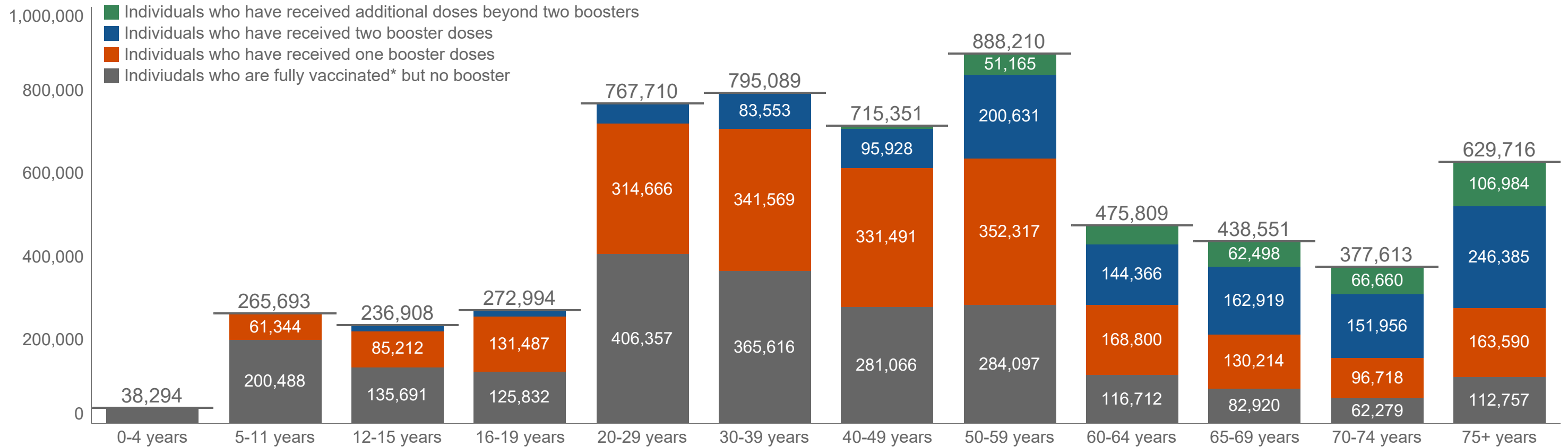
Vaccination status is reported at the age at which the vaccine was administered. Individuals transition into older age groups over time keeping aggregate totals consistent across the sum of all age categories.  
 \*Unvaccinated/unreported vaccination individuals: This is the population estimate for the subpopulation minus the number of people who received at least one dose of vaccine. It is important to recall that not being represented in MIIS does not necessarily mean someone has not received vaccine. \*\*Individuals who are partially vaccinated are those who have received at least one dose, but have not completed a primary series. \*\*\*Individuals fully vaccinated: An individual is counted as fully vaccinated if they have received the number of doses required to complete the primary series for their age and all of these doses have been reported to MIIS. Pfizer recipients under 5 years of age require three doses of vaccine; all other Pfizer recipients require two doses. Moderna and Novavax recipients require two doses of vaccine. Janssen/Johnson & Johnson recipients require one dose of vaccine. ^CDC percent of population coverage metrics are capped at 95%. For more information: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/reporting-vaccinations.html> Sources: (1) Massachusetts Immunization Information System (MIIS). MIIS data are available for analysis one calendar day after they are reported to the MIIS. Data are current as of time of publication and are subject to change in future publications as additional data are reported. (2) Centers for Disease Control and Prevention. COVID Data Tracker. Atlanta, GA: US Department of Health and Human Services, CDC;2022-10-27://[covid.cdc.gov/covid-data-tracker](https://www.cdc.gov/covid-data-tracker) (3) MDPH calculates rates per 100,000 population using denominators estimated by the University of Massachusetts Donahue Institute using a modified Hamilton-Perry model (Strate S, et al. Small Area Population Estimates for 2011 through 2020, report, Oct 2016.)

# Individuals who have Received Booster Doses

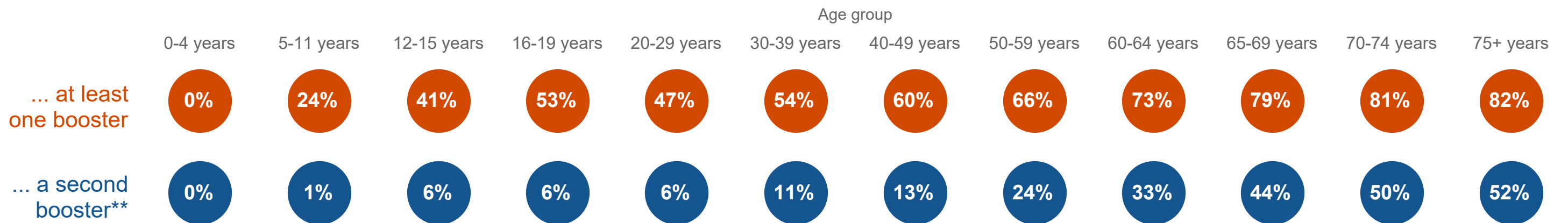
Data as of October 31, 2022

In Massachusetts, 60% of those fully vaccinated have received a booster dose.

## Booster status of fully vaccinated individuals by age group



## Percent of the Massachusetts fully vaccinated\* population with...



Vaccination status is reported at the age at which the vaccine was administered. Individuals transition into older age groups over time keeping aggregate totals consistent across the sum of all age categories.

\*Individuals fully vaccinated: An individual is counted as fully vaccinated if they have received the number of doses required to complete the primary series for their age and all of these doses have been reported to MIIS. Pfizer recipients under 5 years of age require three doses of vaccine; all other Pfizer recipients require two doses. Moderna and Novavax recipients require two doses of vaccine. Janssen/Johnson & Johnson recipients require one dose of vaccine. This includes some individuals who may not be eligible for a booster (i.e. less than 2 months after primary series). \*\*Not mutually exclusive. The 'second booster' row includes all those counted in the first row, with at least one booster, plus those individuals who have received an additional dose. Sources: (1) Massachusetts Immunization Information System (MIIS). MIIS data are available for analysis one calendar day after they are reported to the MIIS. Data are current as of time of publication and are subject to change in future publications as additional data are reported. (2) Centers for Disease Control and Prevention. COVID Data Tracker. Atlanta, GA: US Department of Health and Human Services, CDC;2022-10-27. <https://covid.cdc.gov/covid-data-tracker> (3) MDPH calculates rates per 100,000 population using denominators estimated by the University of Massachusetts Donahue Institute using a modified Hamilton-Perry model (Strate S, et al. Small Area Population Estimates for 2011 through 2020, report, Oct 2016.)

# Individuals Fully Vaccinated

Data as of October 31, 2022

## Individuals fully vaccinated by county, race, and Hispanic ethnicity (1 of 2)

Number of people in the county and race/ethnicity group who are fully vaccinated divided by the estimated population in the county and race/ethnicity group

	American Indian or Alaskan Native	Asian	Black or African American	Hispanic	Multi-race	Native Hawaiian or Pacific Islander	White	Unknown/ Other race**	Total
Barnstable	45% of 1,171 residents	70% of 3,230 residents	80% of 6,644 residents	>95% of 7,637 residents	36% of 12,144 residents	>95% of 53 residents	78% of 198,117 residents	3% of 228,996 Barnstable county residents	80% of 228,996 residents
Berkshire	55% of 153 residents	72% of 1,978 residents	63% of 4,132 residents	62% of 6,619 residents	38% of 5,666 residents	*	76% of 110,470 residents	3% of 129,026 Berkshire county residents	76% of 129,026 residents
Bristol	46% of 1,045 residents	64% of 13,752 residents	76% of 24,506 residents	62% of 53,995 residents	35% of 32,048 residents	>95% of 148 residents	66% of 453,707 residents	3% of 579,200 Bristol county residents	67% of 579,200 residents
Dukes	51% of 219 residents	94% of 181 residents	>95% of 809 residents	>95% of 452 residents	21% of 1,899 residents	*	80% of 17,031 residents	8% of 20,600 Dukes county residents	86% of 20,600 residents
Essex	47% of 808 residents	75% of 29,651 residents	79% of 27,604 residents	58% of 181,759 residents	65% of 26,257 residents	>95% of 155 residents	79% of 543,595 residents	3% of 809,829 Essex county residents	77% of 809,829 residents
Franklin	54% of 122 residents	82% of 1,215 residents	66% of 985 residents	55% of 3,329 residents	34% of 3,207 residents	*	76% of 62,163 residents	3% of 71,029 Franklin county residents	76% of 71,029 residents
Hampden	59% of 646 residents	71% of 12,176 residents	59% of 36,442 residents	50% of 120,694 residents	52% of 15,087 residents	>95% of 165 residents	70% of 280,615 residents	4% of 465,825 Hampden county residents	68% of 465,825 residents
Hampshire	52% of 199 residents	50% of 10,709 residents	52% of 4,398 residents	49% of 11,248 residents	41% of 6,930 residents	>95% of 43 residents	75% of 128,781 residents	3% of 162,308 Hampshire county residents	72% of 162,308 residents

\* Vaccination figures with fewer than 30 people are suppressed for privacy.

\*\* "Unknown/other race" is shown as a % of the row population (county or state). "Unknown/unspecified county" is shown as a % of the column population (age or race/ethnicity group).

Individuals fully vaccinated: An individual is counted as fully vaccinated if they have received the number of doses required to complete the COVID-19 vaccine series for their age and all of these doses have been reported to MIIS. Pfizer recipients under 5 years of age require three doses of vaccine; all other Pfizer recipients require two doses. Moderna and Novavax recipients require two doses of vaccine. Janssen/Johnson & Johnson recipients require one dose of vaccine.

Source: Massachusetts Immunization Information System (MIIS). MIIS data are available for analysis one calendar day after they are reported to the MIIS. Data are current as of time of publication and are subject to change in future publications as additional data are reported. Data reflect doses administered (see "definitions"). Population estimates source: MDPH calculates rates per 100,000 population using denominators estimated by the University of Massachusetts Donahue Institute using a modified Hamilton-Perry model (Strate S, et al. Small Area Population Estimates for 2011 through 2020, report, Oct 2016.) Note about totals: The difference in the Massachusetts state population total created by summing the age categories and by summing the race categories is expected due to the manner in which the estimates were created with small, compounded rounding and records with unknown demographic information.



# Individuals Fully Vaccinated

Data as of October 31, 2022

## Individuals fully vaccinated by county, race, and Hispanic ethnicity (2 of 2)

Number of people in the county and race/ethnicity group who are fully vaccinated divided by the estimated population in the county and race/ethnicity group

	American Indian or Alaskan Native	Asian	Black or African American	Hispanic	Multi-race	Native Hawaiian or Pacific Islander	White	Unknown/ Other race**	Total
Middlesex	66% of 1,511 residents	76% of 212,123 residents	72% of 84,324 residents	75% of 141,738 residents	81% of 81,692 residents	>95% of 380 residents	80% of 1,110,235 residents	4% of 1,632,002 Middlesex county residents	83% of 1,632,002 residents
Nantucket	*	77% of 274 residents	>95% of 1,025 residents	89% of 2,175 residents	27% of 615 residents	*	75% of 10,149 residents	7% of 14,255 Nantucket county residents	83% of 14,255 residents
Norfolk	51% of 736 residents	75% of 88,772 residents	75% of 50,563 residents	70% of 37,460 residents	>95% of 29,540 residents	>95% of 151 residents	79% of 518,759 residents	3% of 725,981 Norfolk county residents	81% of 725,981 residents
Plymouth	34% of 893 residents	67% of 7,962 residents	80% of 48,249 residents	67% of 23,417 residents	44% of 35,840 residents	60% of 220 residents	74% of 414,238 residents	2% of 530,819 Plymouth county residents	75% of 530,819 residents
Suffolk	51% of 1,235 residents	80% of 81,295 residents	77% of 142,086 residents	74% of 177,973 residents	61% of 37,543 residents	>95% of 357 residents	70% of 357,446 residents	4% of 797,936 Suffolk county residents	77% of 797,936 residents
Worcester	46% of 1,183 residents	71% of 46,778 residents	60% of 45,164 residents	67% of 110,448 residents	53% of 37,582 residents	>95% of 145 residents	71% of 620,810 residents	3% of 862,111 Worcester county residents	72% of 862,111 residents
Unknown/ Unspecified**	3% of 9,939 AI/AN residents	3% of 510,096 Asian residents	2% of 476,930 Black residents	1% of 878,944 Hispanic residents	1% of 326,050 Multi-race residents	7% of 1,841 NH/PI residents	3% of 4,826,116 White residents	0% of 7,029,917 MA residents	3% of 7,029,917 residents
Massachusetts	53% of 9,939 residents	77% of 510,096 residents	75% of 476,930 residents	67% of 878,944 residents	63% of 326,050 residents	>95% of 1,841 residents	78% of 4,826,116 residents	4% of 7,029,917 MA residents	79% of 7,029,917 residents

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# Individuals Fully Vaccinated

Data as of October 31, 2022

## Individuals fully vaccinated by county and age group (1 of 2)

Number of people in the county and age group who are fully vaccinated divided by the estimated population in the county and age group

	0-4 years	5-11 years	12-15 years	16-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-64 years	65-69 years	70-74 years	75+ years	Total
<b>Barnstable</b>	5% of 8,117 residents	42% of 12,225 residents	73% of 7,999 residents	81% of 8,444 residents	73% of 22,109 residents	84% of 20,313 residents	80% of 21,363 residents	82% of 34,083 residents	89% of 21,351 residents	89% of 21,806 residents	92% of 19,831 residents	>95% of 31,352 residents	80% of 228,996 residents
<b>Berkshire</b>	6% of 5,429 residents	54% of 8,296 residents	73% of 5,380 residents	68% of 6,484 residents	65% of 15,369 residents	79% of 13,757 residents	78% of 13,736 residents	80% of 19,125 residents	88% of 10,525 residents	90% of 9,518 residents	>95% of 8,017 residents	90% of 13,390 residents	76% of 129,026 residents
<b>Bristol</b>	4% of 30,091 residents	30% of 45,540 residents	61% of 27,527 residents	66% of 29,121 residents	60% of 74,766 residents	66% of 73,958 residents	70% of 73,224 residents	77% of 85,414 residents	86% of 39,125 residents	91% of 31,728 residents	93% of 25,741 residents	86% of 42,964 residents	67% of 579,200 residents
<b>Dukes</b>	7% of 882 residents	58% of 1,267 residents	>95% of 785 residents	>95% of 653 residents	95% of 2,070 residents	>95% of 2,359 residents	94% of 2,432 residents	84% of 3,147 residents	84% of 1,702 residents	80% of 1,801 residents	87% of 1,574 residents	90% of 1,929 residents	86% of 20,600 residents
<b>Essex</b>	8% of 44,345 residents	51% of 64,079 residents	79% of 38,871 residents	78% of 41,764 residents	71% of 102,396 residents	81% of 101,407 residents	82% of 99,259 residents	85% of 118,474 residents	92% of 56,226 residents	95% of 46,143 residents	>95% of 36,776 residents	92% of 60,087 residents	77% of 809,829 residents
<b>Franklin</b>	8% of 3,011 residents	45% of 4,819 residents	71% of 2,910 residents	88% of 2,764 residents	69% of 7,572 residents	76% of 8,732 residents	74% of 8,315 residents	79% of 10,333 residents	84% of 6,159 residents	91% of 5,875 residents	>95% of 4,581 residents	91% of 5,954 residents	76% of 71,029 residents
<b>Hampden</b>	3% of 24,918 residents	34% of 38,042 residents	63% of 23,128 residents	62% of 26,022 residents	58% of 65,472 residents	69% of 59,405 residents	75% of 53,671 residents	80% of 62,992 residents	88% of 31,187 residents	93% of 25,936 residents	>95% of 20,519 residents	89% of 34,534 residents	68% of 465,825 residents
<b>Hampshire</b>	15% of 5,278 residents	64% of 8,930 residents	82% of 5,934 residents	37% of 16,019 residents	46% of 33,434 residents	83% of 16,604 residents	84% of 16,047 residents	86% of 20,206 residents	95% of 10,664 residents	>95% of 9,895 residents	>95% of 7,914 residents	>95% of 11,383 residents	72% of 162,308 residents

\* Vaccination figures with fewer than 30 people are suppressed for privacy.

\*\* "Unknown/unspecified county" is shown as a % of the column population (age or race/ethnicity group).

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# Individuals Fully Vaccinated

Data as of October 31, 2022

## Individuals fully vaccinated by county and age group (2 of 2)

Number of people in the county and age group who are fully vaccinated divided by the estimated population in the county and age group

	0-4 years	5-11 years	12-15 years	16-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-64 years	65-69 years	70-74 years	75+ years	Total
Middlesex	19% of 83,667 residents	68% of 121,734 residents	91% of 73,083 residents	79% of 82,715 residents	77% of 242,436 residents	85% of 242,118 residents	88% of 206,995 residents	89% of 222,367 residents	94% of 100,804 residents	>95% of 81,083 residents	>95% of 64,640 residents	94% of 110,359 residents	83% of 1,632,002 residents
Nantucket	*	46% of 1,012 residents	87% of 562 residents	>95% of 507 residents	>95% of 1,722 residents	93% of 2,214 residents	92% of 2,184 residents	92% of 2,082 residents	87% of 945 residents	92% of 764 residents	>95% of 562 residents	80% of 847 residents	83% of 14,255 residents
Norfolk	17% of 37,515 residents	64% of 56,630 residents	85% of 35,180 residents	84% of 36,428 residents	79% of 90,767 residents	84% of 95,497 residents	83% of 93,243 residents	88% of 105,961 residents	93% of 48,444 residents	>95% of 39,164 residents	>95% of 31,323 residents	90% of 55,829 residents	81% of 725,981 residents
Plymouth	6% of 27,514 residents	43% of 42,518 residents	71% of 26,597 residents	78% of 27,177 residents	69% of 61,517 residents	76% of 61,280 residents	77% of 65,393 residents	83% of 81,528 residents	90% of 38,334 residents	94% of 31,886 residents	>95% of 26,374 residents	94% of 40,701 residents	75% of 530,819 residents
Suffolk	10% of 40,171 residents	53% of 47,420 residents	86% of 26,325 residents	58% of 46,527 residents	78% of 176,345 residents	81% of 145,860 residents	87% of 88,768 residents	88% of 87,549 residents	88% of 40,123 residents	91% of 32,272 residents	95% of 24,580 residents	86% of 41,995 residents	77% of 797,936 residents
Worcester	6% of 45,082 residents	44% of 68,600 residents	72% of 42,016 residents	71% of 46,659 residents	66% of 114,476 residents	74% of 111,763 residents	76% of 108,360 residents	81% of 126,900 residents	88% of 58,820 residents	93% of 46,033 residents	>95% of 35,450 residents	88% of 57,952 residents	72% of 862,111 residents
Unknown/ Unspecified**	0% of 356,875 MA residents 0-4 Years	1% of 521,112 MA residents 5-11 Years	1% of 316,296 MA residents 12-15 Years	2% of 371,285 MA residents 16-19 Years	5% of 1,010,451 MA residents 20-29 Years	4% of 955,267 MA residents 30-39 Years	3% of 852,990 MA residents 40-49 Years	2% of 980,162 MA residents 50-59 Years	2% of 464,409 MA residents 60-64 Years	2% of 383,903 MA residents 65-69 Years	2% of 307,883 MA residents 70-74 Years	2% of 509,277 MA residents 75+ Years	3% of 7,029,917 residents
Massachusetts	11% of 356,875 residents	53% of 521,112 residents	80% of 316,296 residents	74% of 371,285 residents	76% of 1,010,451 residents	83% of 955,267 residents	84% of 852,990 residents	87% of 980,162 residents	93% of 464,409 residents	>95% of 383,903 residents	>95% of 307,883 residents	93% of 509,277 residents	79% of 7,029,917 residents

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# Individuals who have Received Booster Doses

Data as of October 31, 2022

Individuals with at least one booster dose administered by county, race, and Hispanic ethnicity (1 of 2)

Number of people in the county and race/ethnicity group with at least one booster dose divided by the fully vaccinated population in the county and race/ethnicity group

	American Indian or Alaskan Native	Asian	Black or African American	Hispanic	Multi-race	Native Hawaiian or Pacific Islander	White	Unknown/ Other race**	Total
Barnstable	55% of 523 residents	58% of 2,265 residents	38% of 5,283 residents	48% of 8,055 residents	70% of 4,320 residents	39% of 99 residents	68% of 155,262 residents	1% of 183,069 Barnstable county residents	64% of 183,069 residents
Berkshire	39% of 84 residents	54% of 1,418 residents	45% of 2,611 residents	45% of 4,125 residents	64% of 2,179 residents	*	65% of 83,690 residents	1% of 97,570 Berkshire county residents	62% of 97,570 residents
Bristol	31% of 481 residents	53% of 8,839 residents	43% of 18,610 residents	41% of 33,251 residents	63% of 11,226 residents	35% of 178 residents	58% of 297,274 residents	1% of 385,368 Bristol county residents	54% of 385,368 residents
Dukes	55% of 112 residents	66% of 170 residents	44% of 868 residents	42% of 935 residents	66% of 405 residents	*	67% of 13,586 residents	2% of 17,802 Dukes county residents	60% of 17,802 residents
Essex	35% of 377 residents	61% of 22,169 residents	47% of 21,744 residents	43% of 105,560 residents	68% of 17,105 residents	46% of 207 residents	65% of 430,759 residents	1% of 623,156 Essex county residents	59% of 623,156 residents
Franklin	*	57% of 991 residents	49% of 645 residents	50% of 1,845 residents	73% of 1,080 residents	*	68% of 47,066 residents	1% of 53,690 Franklin county residents	65% of 53,690 residents
Hampden	36% of 379 residents	54% of 8,592 residents	48% of 21,643 residents	42% of 60,805 residents	63% of 7,895 residents	42% of 192 residents	62% of 197,814 residents	2% of 316,612 Hampden county residents	55% of 316,612 residents
Hampshire	58% of 103 residents	60% of 5,362 residents	55% of 2,296 residents	55% of 5,458 residents	76% of 2,834 residents	*	71% of 96,085 residents	1% of 117,138 Hampshire county residents	68% of 117,138 residents

\* Vaccination figures with fewer than 30 people are suppressed for privacy.

\*\* "Unknown/other race" is shown as a % of the row population (county or state). "Unknown/unspecified county" is shown as a % of the column population (age or race/ethnicity group).

Booster doses administered: See the definitions page at the end of this document.

Source: Massachusetts Immunization Information System (MIIS). MIIS data are available for analysis one calendar day after they are reported to the MIIS. Data are current as of time of publication and are subject to change in future publications as additional data are reported. Data reflect doses administered (see "definitions"). Population estimates source: MDPH calculates rates per 100,000 population using denominators estimated by the University of Massachusetts Donahue Institute using a modified Hamilton-Perry model (Strate S, et al. Small Area Population Estimates for 2011 through 2020, report, Oct 2016.)

Note about totals: The difference in the Massachusetts state population total created by summing the age categories and by summing the race categories is expected due to the manner in which the estimates were created with small, compounded rounding and records with unknown demographic information.

# Individuals who have Received Booster Doses

Data as of October 31, 2022

## Individuals with at least one booster dose administered by county, race, and Hispanic ethnicity (2 of 2)

Number of people in the county and race/ethnicity group with at least one booster dose divided by the fully vaccinated population in the county and race/ethnicity group

	American Indian or Alaskan Native	Asian	Black or African American	Hispanic	Multi-race	Native Hawaiian or Pacific Islander	White	Unknown/ Other race**	Total
Middlesex	40% of 997 residents	65% of 161,088 residents	53% of 61,085 residents	47% of 105,901 residents	74% of 66,313 residents	49% of 498 residents	70% of 892,222 residents	1% of 1,347,264 Middlesex county residents	65% of 1,347,264 residents
Nantucket	*	58% of 211 residents	35% of 984 residents	27% of 1,928 residents	65% of 164 residents	*	62% of 7,587 residents	1% of 11,826 Nantucket county residents	50% of 11,826 residents
Norfolk	39% of 377 residents	67% of 66,907 residents	53% of 37,999 residents	53% of 26,378 residents	74% of 30,832 residents	50% of 230 residents	68% of 408,121 residents	1% of 589,491 Norfolk county residents	66% of 589,491 residents
Plymouth	36% of 308 residents	62% of 5,348 residents	43% of 38,755 residents	46% of 15,690 residents	65% of 15,830 residents	43% of 132 residents	63% of 306,286 residents	1% of 395,560 Plymouth county residents	59% of 395,560 residents
Suffolk	41% of 625 residents	62% of 64,879 residents	54% of 108,829 residents	47% of 132,378 residents	72% of 22,986 residents	49% of 608 residents	66% of 250,913 residents	1% of 612,980 Suffolk county residents	58% of 612,980 residents
Worcester	34% of 548 residents	61% of 33,242 residents	47% of 27,293 residents	43% of 74,264 residents	68% of 19,963 residents	46% of 219 residents	63% of 443,728 residents	1% of 620,927 Worcester county residents	59% of 620,927 residents
Unknown/ Unspecified**	1% of 5,258 AI/AN residents	2% of 394,879 Asian residents	1% of 355,841 Black residents	1% of 588,231 Hispanic residents	1% of 206,633 Multi-race residents	1% of 2,589 NH/PI residents	1% of 3,754,519 White residents	0% of 5,555,220 MA residents	1% of 5,555,220 residents
Massachusetts	39% of 5,258 residents	63% of 394,879 residents	50% of 355,841 residents	45% of 588,231 residents	70% of 206,633 residents	46% of 2,589 residents	65% of 3,754,519 residents	1% of 5,555,220 MA residents	60% of 5,555,220 residents

\* Vaccination figures with fewer than 30 people are suppressed for privacy.

\*\* "Unknown/other race" is shown as a % of the row population (county or state). "Unknown/unspecified county" is shown as a % of the column population (age or race/ethnicity group).

Booster doses administered: See the definitions page at the end of this document.

Source: Massachusetts Immunization Information System (MIIS). MIIS data are available for analysis one calendar day after they are reported to the MIIS. Data are current as of time of publication and are subject to change in future publications as additional data are reported. Data reflect doses administered (see "definitions"). Population estimates source: MDPH calculates rates per 100,000 population using denominators estimated by the University of Massachusetts Donahue Institute using a modified Hamilton-Perry model (Strate S, et al. Small Area Population Estimates for 2011 through 2020, report, Oct 2016.)

Note about totals: The difference in the Massachusetts state population total created by summing the age categories and by summing the race categories is expected due to the manner in which the estimates were created with small, compounded rounding and records with unknown demographic information.

# Individuals who have Received Booster Doses

Data as of October 31, 2022

Individuals with at least one booster dose administered by county and age group (1 of 2)

Number of people in the county and age group with at least one booster dose divided by the fully vaccinated population in the county and age group

	5-11 years	12-15 years	16-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-64 years	65-69 years	70-74 years	75+ years	Total
<b>Barnstable</b>	17% of 5,177 residents	33% of 5,870 residents	50% of 6,851 residents	43% of 16,046 residents	45% of 17,039 residents	54% of 17,185 residents	62% of 27,948 residents	73% of 18,943 residents	80% of 19,392 residents	83% of 18,178 residents	85% of 30,032 residents	64% of 183,069 residents
<b>Berkshire</b>	19% of 4,484 residents	40% of 3,950 residents	52% of 4,418 residents	43% of 9,965 residents	50% of 10,895 residents	58% of 10,734 residents	64% of 15,339 residents	73% of 9,248 residents	81% of 8,529 residents	81% of 7,653 residents	83% of 12,029 residents	62% of 97,570 residents
<b>Bristol</b>	16% of 13,605 residents	28% of 16,871 residents	45% of 19,228 residents	40% of 44,505 residents	42% of 49,109 residents	49% of 51,238 residents	58% of 65,811 residents	68% of 33,703 residents	74% of 29,009 residents	77% of 23,943 residents	78% of 37,134 residents	54% of 385,368 residents
<b>Dukes</b>	12% of 730 residents	42% of 765 residents	54% of 712 residents	35% of 1,963 residents	44% of 2,646 residents	55% of 2,282 residents	67% of 2,650 residents	77% of 1,428 residents	81% of 1,447 residents	85% of 1,377 residents	93% of 1,737 residents	60% of 17,802 residents
<b>Essex</b>	20% of 32,442 residents	38% of 30,886 residents	53% of 32,710 residents	45% of 73,017 residents	50% of 82,297 residents	58% of 81,020 residents	65% of 100,929 residents	73% of 51,736 residents	79% of 43,826 residents	81% of 35,315 residents	82% of 55,421 residents	59% of 623,156 residents
<b>Franklin</b>	24% of 2,188 residents	45% of 2,079 residents	51% of 2,432 residents	47% of 5,247 residents	55% of 6,608 residents	63% of 6,186 residents	67% of 8,191 residents	74% of 5,182 residents	81% of 5,359 residents	88% of 4,534 residents	85% of 5,434 residents	65% of 53,690 residents
<b>Hampden</b>	14% of 13,082 residents	29% of 14,636 residents	42% of 16,059 residents	38% of 38,186 residents	42% of 41,060 residents	51% of 40,111 residents	59% of 50,538 residents	69% of 27,381 residents	76% of 24,234 residents	79% of 19,826 residents	80% of 30,868 residents	55% of 316,612 residents
<b>Hampshire</b>	36% of 5,720 residents	56% of 4,840 residents	57% of 5,940 residents	53% of 15,411 residents	61% of 13,724 residents	68% of 13,474 residents	72% of 17,410 residents	78% of 10,105 residents	84% of 9,846 residents	88% of 8,541 residents	88% of 11,315 residents	68% of 117,138 residents

\* Vaccination figures with less than 30 people are suppressed for privacy.

\*\* "Unknown/unspecified county" is shown as a % of the column population (age or race/ethnicity group).

Booster doses administered: See the definitions page at the end of this document.

Source: Massachusetts Immunization Information System (MIIS). MIIS data are available for analysis one calendar day after they are reported to the MIIS. Data are current as of time of publication and are subject to change in future publications as additional data are reported. Data reflect doses administered (see "definitions"). Booster doses administered: Data on booster doses administered reflect the additional dose of vaccine after completion of the primary series.

Population estimates source: MDPH calculates rates per 100,000 population using denominators estimated by the University of Massachusetts Donahue Institute using a modified Hamilton-Perry model (Strate S, et al. Small Area Population Estimates for 2011 through 2020, report, Oct 2016.) Note about totals: The difference in the Massachusetts state population total created by summing the age categories and by summing the race categories is expected due to the manner in which the estimates were created with small, compounded rounding and records with unknown demographic information.

# Individuals who have Received Booster Doses

Data as of October 31, 2022

## Individuals with at least one booster dose administered by county and age group (2 of 2)

Number of people in the county and age group with at least one booster dose divided by the fully vaccinated population in the county and age group

	5-11 years	12-15 years	16-19 years	20-29 years	30-39 years	40-49 years	50-59 years	60-64 years	65-69 years	70-74 years	75+ years	Total
Middlesex	31% of 82,793 residents	51% of 66,327 residents	62% of 65,710 residents	53% of 187,458 residents	61% of 206,735 residents	68% of 182,100 residents	72% of 197,526 residents	78% of 94,933 residents	83% of 79,272 residents	85% of 64,968 residents	85% of 103,946 residents	65% of 1,347,264 residents
Nantucket	11% of 463 residents	32% of 488 residents	43% of 491 residents	26% of 1,643 residents	37% of 2,065 residents	51% of 2,004 residents	60% of 1,911 residents	71% of 825 residents	80% of 703 residents	82% of 537 residents	82% of 679 residents	50% of 11,826 residents
Norfolk	28% of 36,522 residents	49% of 30,063 residents	63% of 30,764 residents	54% of 71,432 residents	61% of 80,638 residents	68% of 77,114 residents	72% of 93,100 residents	78% of 45,245 residents	83% of 37,866 residents	85% of 30,522 residents	85% of 50,025 residents	66% of 589,491 residents
Plymouth	15% of 18,112 residents	33% of 18,805 residents	52% of 21,305 residents	46% of 42,722 residents	48% of 46,768 residents	56% of 50,228 residents	63% of 67,393 residents	72% of 34,343 residents	79% of 30,109 residents	82% of 25,623 residents	83% of 38,371 residents	59% of 395,560 residents
Suffolk	24% of 24,912 residents	37% of 22,571 residents	44% of 26,918 residents	46% of 137,694 residents	57% of 118,869 residents	61% of 77,173 residents	66% of 76,643 residents	74% of 35,281 residents	79% of 29,519 residents	81% of 23,274 residents	83% of 36,021 residents	58% of 612,980 residents
Worcester	18% of 30,317 residents	37% of 30,447 residents	53% of 33,235 residents	45% of 75,967 residents	49% of 83,030 residents	57% of 82,802 residents	64% of 102,396 residents	73% of 51,733 residents	80% of 42,770 residents	82% of 34,075 residents	83% of 51,256 residents	59% of 620,927 residents
Unknown/ Unspecified**	0% of 274,659 MA residents 5-11 Years	0% of 251,569 MA residents 12-15 Years	1% of 275,527 MA residents 16-19 Years	3% of 771,993 MA residents 20-29 Years	2% of 795,340 MA residents 30-39 Years	1% of 715,061 MA residents 40-49 Years	1% of 850,902 MA residents 50-59 Years	1% of 431,410 MA residents 60-64 Years	1% of 370,132 MA residents 65-69 Years	1% of 304,676 MA residents 70-74 Years	1% of 475,577 MA residents 75+ Years	1% of 5,555,220 residents
Massachusetts	24% of 274,659 residents	41% of 251,569 residents	53% of 275,527 residents	47% of 771,993 residents	54% of 795,340 residents	60% of 715,061 residents	66% of 850,902 residents	73% of 431,410 residents	79% of 370,132 residents	81% of 304,676 residents	82% of 475,577 residents	60% of 5,555,220 residents

\* Vaccination figures with less than 30 people are suppressed for privacy.

\*\* "Unknown/unspecified county" is shown as a % of the column population (age or race/ethnicity group).

Booster doses administered: See the definitions page at the end of this document.

Source: Massachusetts Immunization Information System (MIIS). MIIS data are available for analysis one calendar day after they are reported to the MIIS. Data are current as of time of publication and are subject to change in future publications as additional data are reported. Data reflect doses administered (see "definitions"). Booster doses administered: Data on booster doses administered reflect the additional dose of vaccine after completion of the primary series.

Population estimates source: MDPH calculates rates per 100,000 population using denominators estimated by the University of Massachusetts Donahue Institute using a modified Hamilton-Perry model (Strate S, et al. Small Area Population Estimates for 2011 through 2020, report, Oct 2016.) Note about totals: The difference in the Massachusetts state population total created by summing the age categories and by summing the race categories is expected due to the manner in which the estimates were created with small, compounded rounding and records with unknown demographic information.

# Critical definitions

**Please note:** the following terms and definition apply to COVID-19 only. Updated 9/20/2022.

**Doses administered:** All valid doses of Janssen/Johnson & Johnson, Moderna, Pfizer, and Novavax COVID-19 vaccine that have been given to people by providers and reported to MIIS are included in this measurement. Duplicate patient records may be created when patient information is not entered consistently. Data include doses administered by MA providers as well as through the Federal Pharmacy Partnership for Long-term Care Program and the retail pharmacies in the jurisdictional transfer program and Community Health Centers (CHCs) receiving vaccine from the U.S. Health Resources and Services Administration (HRSA). Some doses are administered as part of a separate federal distribution system and would not be included here.

**Individuals with a least one dose:** An individual is counted as at least one dose if they have received one or more doses of vaccine. This is measured as the total number of first doses of Moderna, Pfizer, and Novavax vaccine administered and reported, plus the total number of Janssen/Johnson & Johnson doses administered and reported.

**Individuals who are fully vaccinated:** An individual is counted as fully vaccinated if they have received the number of doses required to complete the primary series for their age and all of these doses have been reported to MIIS. Pfizer recipients under 5 years of age require three doses of vaccine; all other Pfizer recipients require two doses. Moderna and Novavax recipients require two doses of vaccine. Janssen/Johnson & Johnson recipients require one dose of vaccine.

**Booster doses administered:** On 8/13/21, a third dose was recommended for severely immunocompromised individuals to complete their primary series. These doses are counted as 'booster' doses. On 9/24/21, booster doses of Pfizer vaccine were recommended for individuals aged 65 and older, for those at risk for severe disease, or for those at high risk for occupational exposure six months after completing their primary series. On 10/22/21, booster doses of Moderna vaccine were recommended for the same population. Additionally, booster doses of any vaccine, including Johnson & Johnson, were recommended for everyone 18 years and older at least two months after receiving initial Johnson & Johnson vaccine. On 12/9/21, mix and match and Johnson & Johnson boosters were added to the booster counts, which redistributed shots that had previously been counted in other rows. This also adjusted for people who have completed a primary series and had previously been double counted. On 1/4/22, the Pfizer vaccine booster dose recommendation was revised to be five months after completing primary series. On 1/7/22, the Moderna vaccine booster dose recommendation was revised to be five months after completing primary series. On 3/29/22, second monovalent booster doses were recommended for adults aged 50 years and older.

On 9/1/22, bivalent boosters were recommended for everyone aged 12 years and older whose primary series or most recent booster dose were administered at least two months ago. This recommendation replaced all previous booster recommendations for this age group.

See, <https://www.mass.gov/info-details/covid-19-booster-frequently-asked-questions> for details on which formulation of vaccine is recommended at which intervals.

**Additional doses beyond second booster:** Some individuals with certain health conditions are eligible to receive additional doses of vaccine. These doses are counted in this category. For more information, see: <https://www.mass.gov/info-details/covid-19-vaccinations-for-individuals-with-certain-medical-conditions>

**Individuals who are unvaccinated/unreported vaccination:** This is the population estimate for the subpopulation minus the number of people who received at least one dose of vaccine. It is important to recall that not being represented in MIIS does not necessarily mean someone has not received vaccine.

**MIIS:** Immunization data from most (but not all) providers in Massachusetts are reported into the Massachusetts Immunization Information System (MIIS) through direct messages from electronic health records or direct entry by users. Due to inputting and processing, it may take 24-48 hours or more for shipping or administration data to appear in MIIS. MIIS data are available for analysis one calendar day after they are reported to the MIIS. Data are current as of time of publication and may be subject to change in future publications as additional data are reported. As of 11/4/21, MIIS numbers include vaccinations reported from the Veterans Administration for MA residents. MIIS does not include data on health states or occupations of individuals.