



Weekly COVID-19 Vaccination Report

The Weekly COVID-19 Vaccination Report includes the most currently available information on vaccines shipped and administered, as well as more granular information by geography, demographic factors, and more. This report will be posted each Thursday.

An important note regarding vaccination progress (*Source: CDC, 11/23*)

- MA currently ranks 1st out of US states for persons with 1+ doses administered per capita
- MA currently ranks 1st for persons with 1+ doses per capita amongst states with 5M people or more

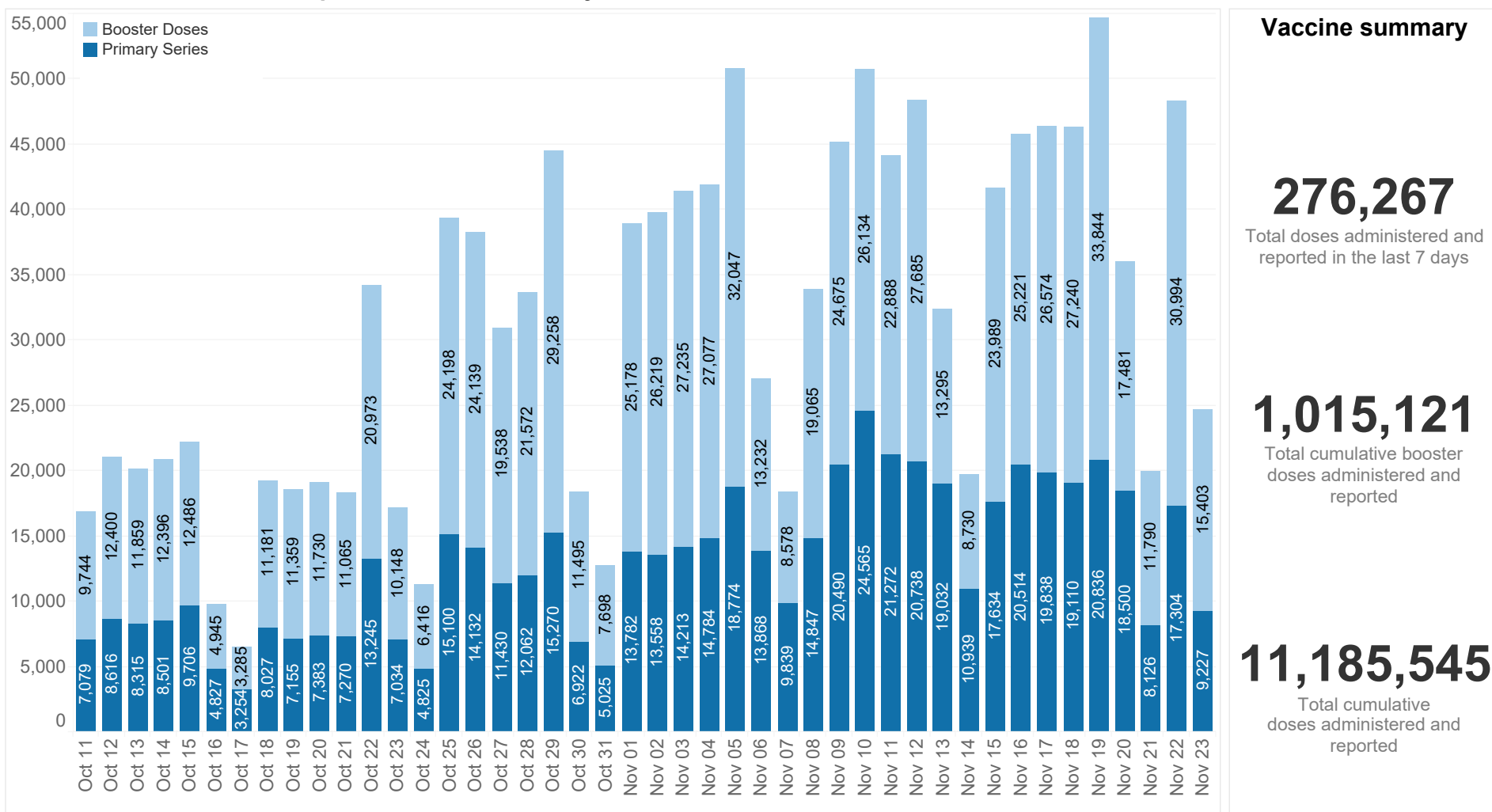


Please note: This report reflects data available in the Massachusetts Immunization Information System (MIIS) as of Tuesday at 11:59PM and is pulled every Wednesday. Due to provider reporting of administration data and data processing, data may be available in MIIS 24-48 hours or more after administration. 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.

Total COVID-19 Vaccine Doses Administered

Data as of November 23, 2021

Doses administered and reported in the last 45 days

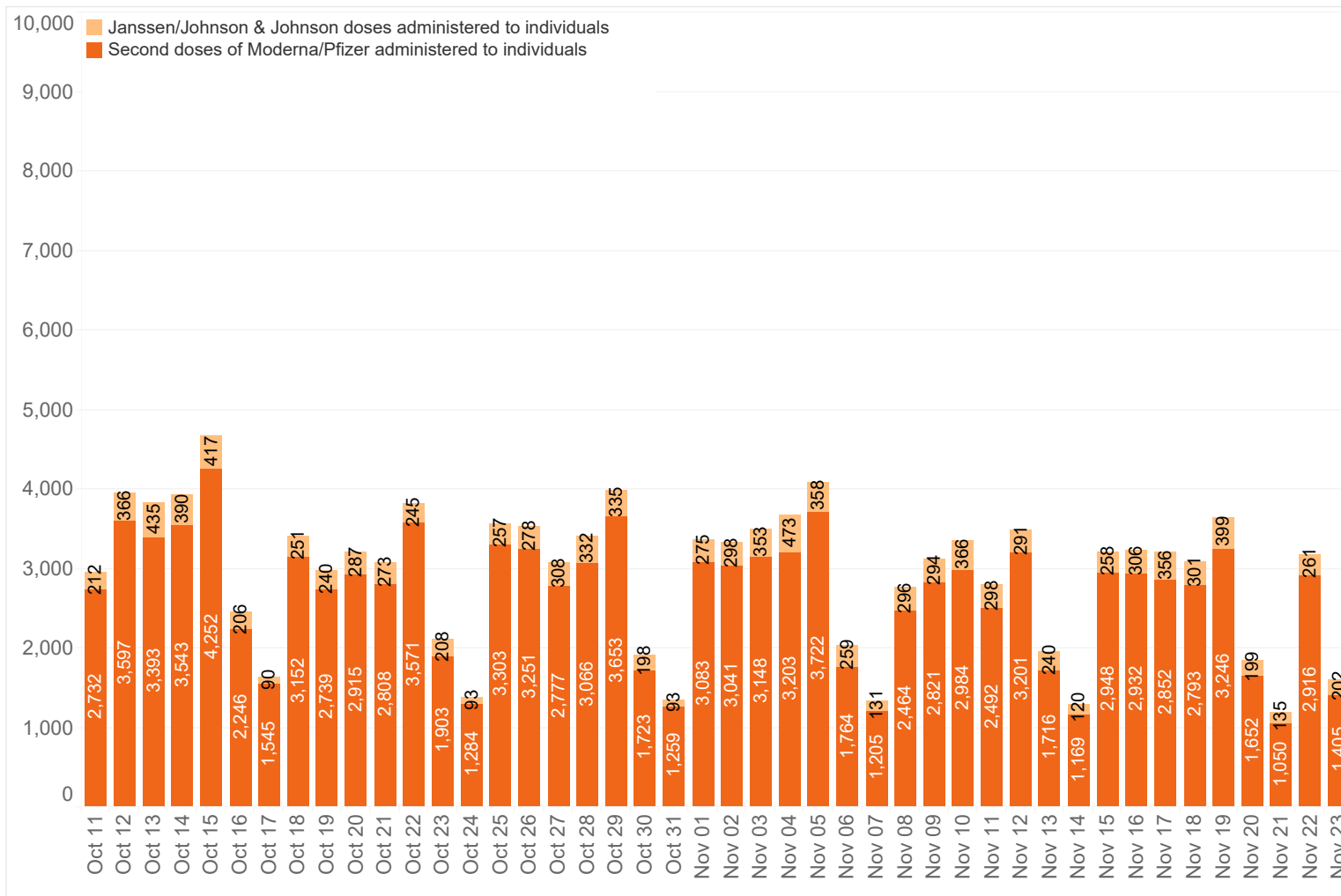


Note: Data from MIIS (see "definitions"). Data reflect doses administered (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. Primary series includes the 1st and 2nd doses of a 2-dose vaccine and the 1st and only dose of a 1-dose vaccine. Booster doses include additional Pfizer and Moderna doses administered to immunocompromised individuals and those given as boosters for individuals in recommended subpopulations (see "definitions"). Dates reflect the date doses were administered.

Total Individuals Fully Vaccinated

Data as of November 23, 2021

Individuals fully vaccinated and reported in the last 45 days



Vaccine summary

17,767

Individuals becoming fully vaccinated and reported in the last 7 days

4,837,266

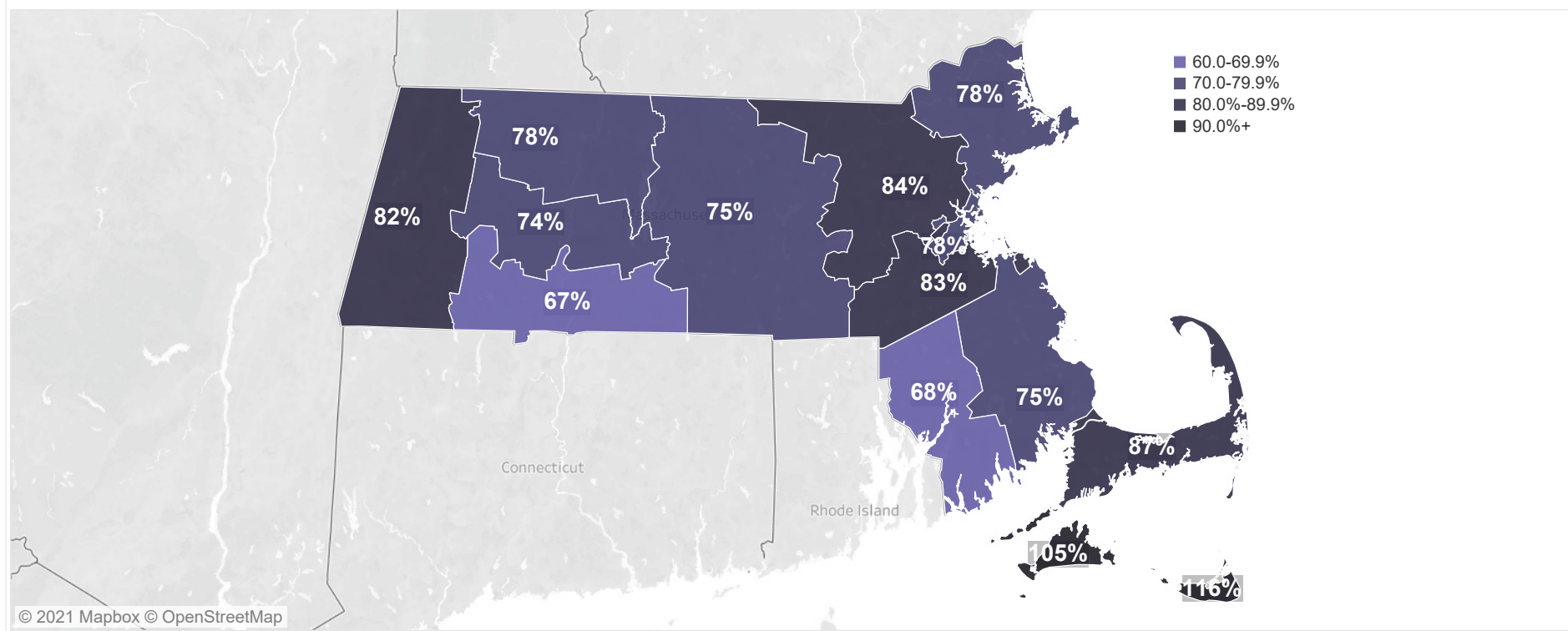
Total individuals fully vaccinated and reported

NOTE: Data from MIIS (see "definitions"). Data reflect individuals fully vaccinated (see "definitions"), including with Janssen/Johnson & Johnson beginning on 3/5/21; this is measured as the total number of 2nd doses of Moderna and Pfizer administered and reported plus the total number of Janssen/Johnson & Johnson doses administered and reported. Some individuals may receive a first or second dose of Moderna or Pfizer from a non-reporting provider and would not be included as fully vaccinated. Dates reflect the date doses were administered.

Cumulative Percentage of Individuals with at Least One Dose Administered by County of Resident Address

Data as of November 23, 2021

Percentage of Individuals with at Least One Dose Administered

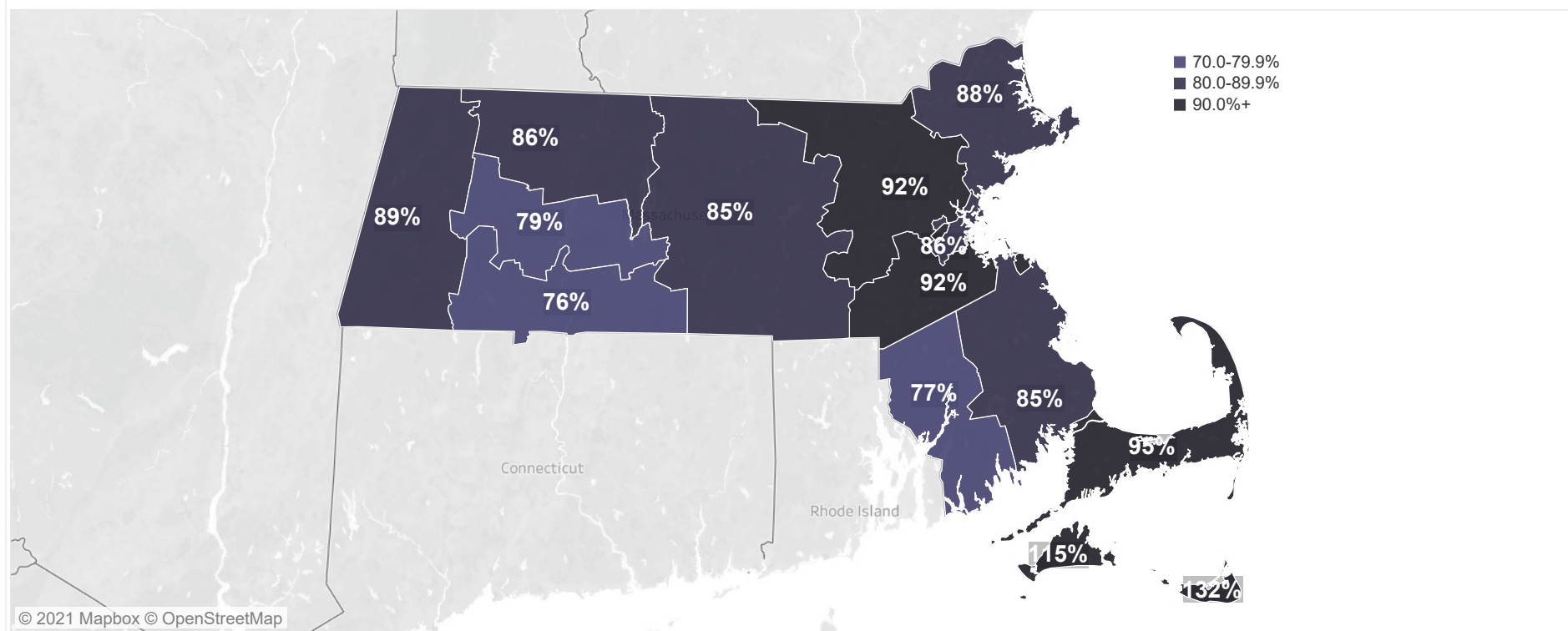


NOTE: Data from MIIS (see "definitions"). Data reflect doses administered and reported (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. An individual is counted as having at least 1 dose if they have received one or more doses of vaccine. This is measured as the total number of 1st doses of Moderna and Pfizer vaccine administered and reported, plus the total number of Janssen/Johnson & Johnson doses administered and reported. Doses without address records are not included in this view. These proportions use Donahue population estimates from 2019. Colors may be reindexed as data evolve.

Cumulative Percentage of Individuals (12+) with at Least One Dose Administered by County of Resident Address

Data as of November 23, 2021

Percentage of Individuals (12+) with at Least One Dose Administered

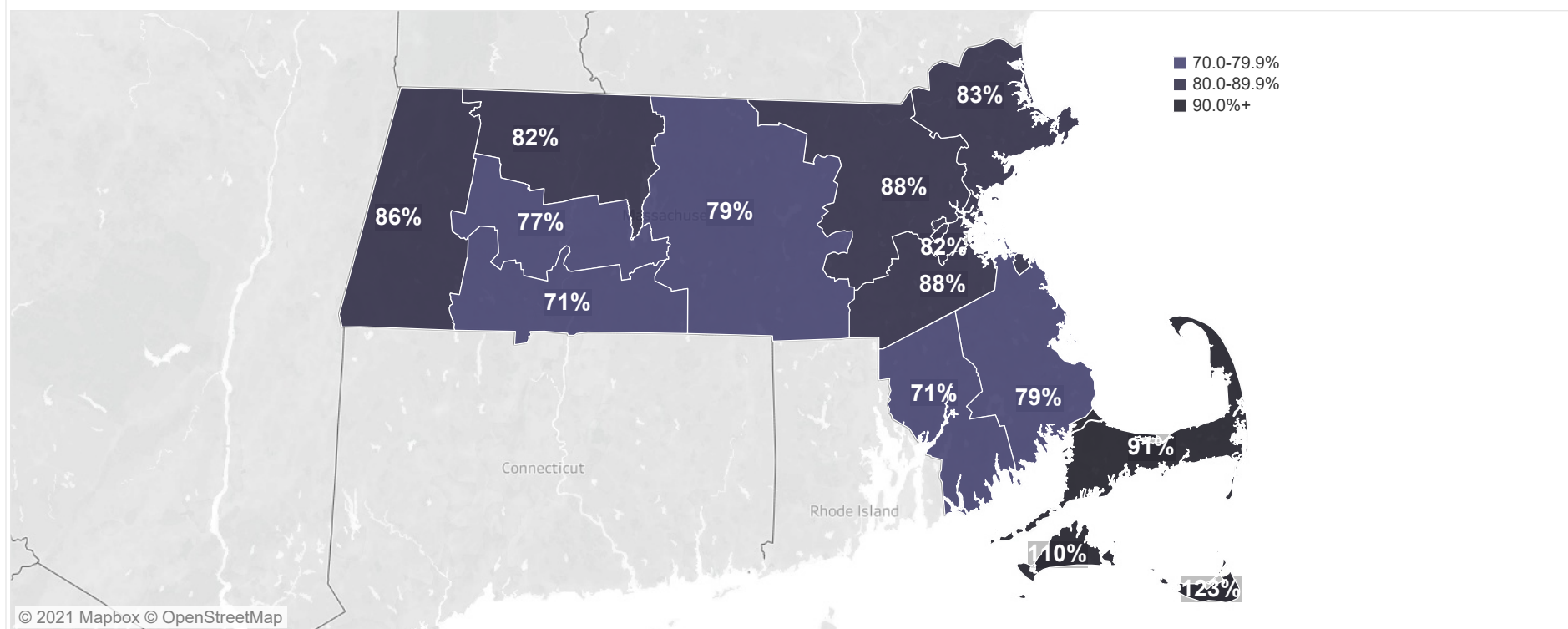


NOTE: Data from MHS (see "definitions"). Data reflect doses administered and reported (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. An individual is counted as having at least 1 dose if they have received one or more doses of vaccine. This is measured as the total number of 1st doses of Moderna and Pfizer vaccine administered and reported, plus the total number of Janssen/Johnson & Johnson doses administered and reported. Doses without address records are not included in this view. These proportions use Donahue population estimates from 2019. Colors may be reindexed as data evolve.

Cumulative Percentage of Eligible Individuals (5+) with at Least One Dose Administered by County of Resident Address

Data as of November 23, 2021

Percentage of Eligible Individuals (5+) with at Least One Dose Administered

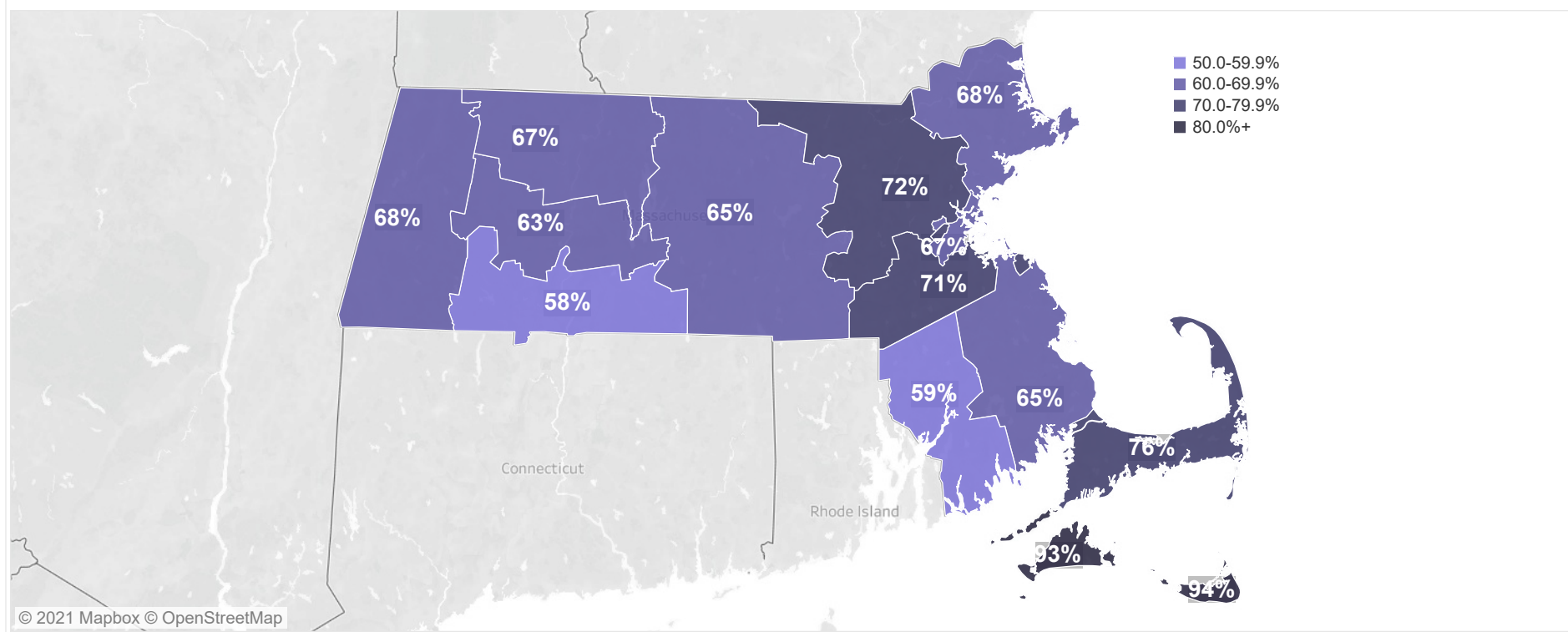


NOTE: Data from MIIS (see "definitions"). Data reflect doses administered and reported (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. An individual is counted as having at least 1 dose if they have received one or more doses of vaccine. This is measured as the total number of 1st doses of Moderna and Pfizer vaccine administered and reported, plus the total number of Janssen/Johnson & Johnson doses administered and reported. Doses without address records are not included in this view. These proportions use Donahue population estimates from 2019. Colors may be reindexed as data evolve.

Cumulative Percentage of Individuals who are Fully Vaccinated by County of Resident Address

Data as of November 23, 2021

Percentage of Individuals Fully Vaccinated

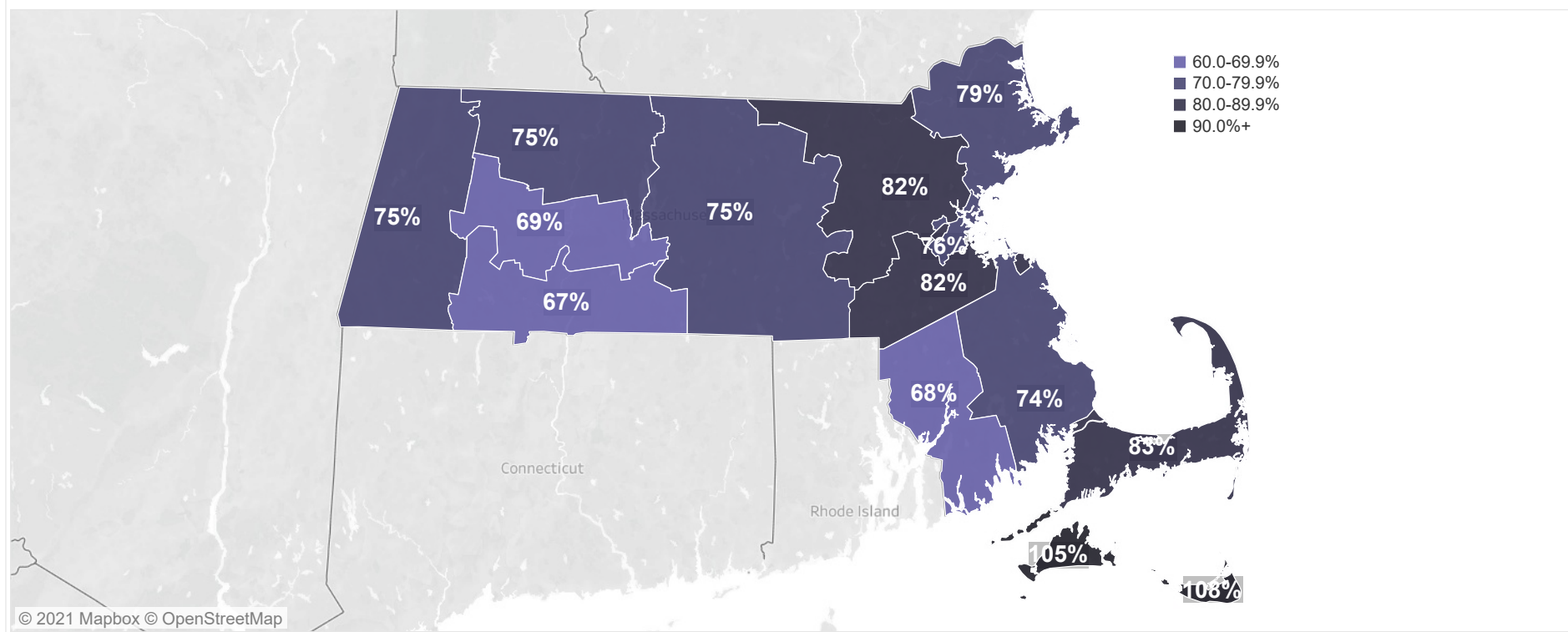


NOTE: Data from MIIS (see "definitions"). Data reflect doses administered and reported (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. An individual is counted as fully vaccinated if they have received the 2nd dose of Moderna or Pfizer or have received a dose of Janssen/Johnson & Johnson vaccine. Doses without address records are not included in this view. Some individuals may receive a first or second dose of Moderna or Pfizer from a non-reporting provider and would not be included as fully vaccinated. These proportions use Donahue population estimates from 2019. Colors may be reindexed as data evolve.

Cumulative Percentage of Individuals (12+) who are Fully Vaccinated by County of Resident Address

Data as of November 23, 2021

Percentage of Individuals (12+) Fully Vaccinated

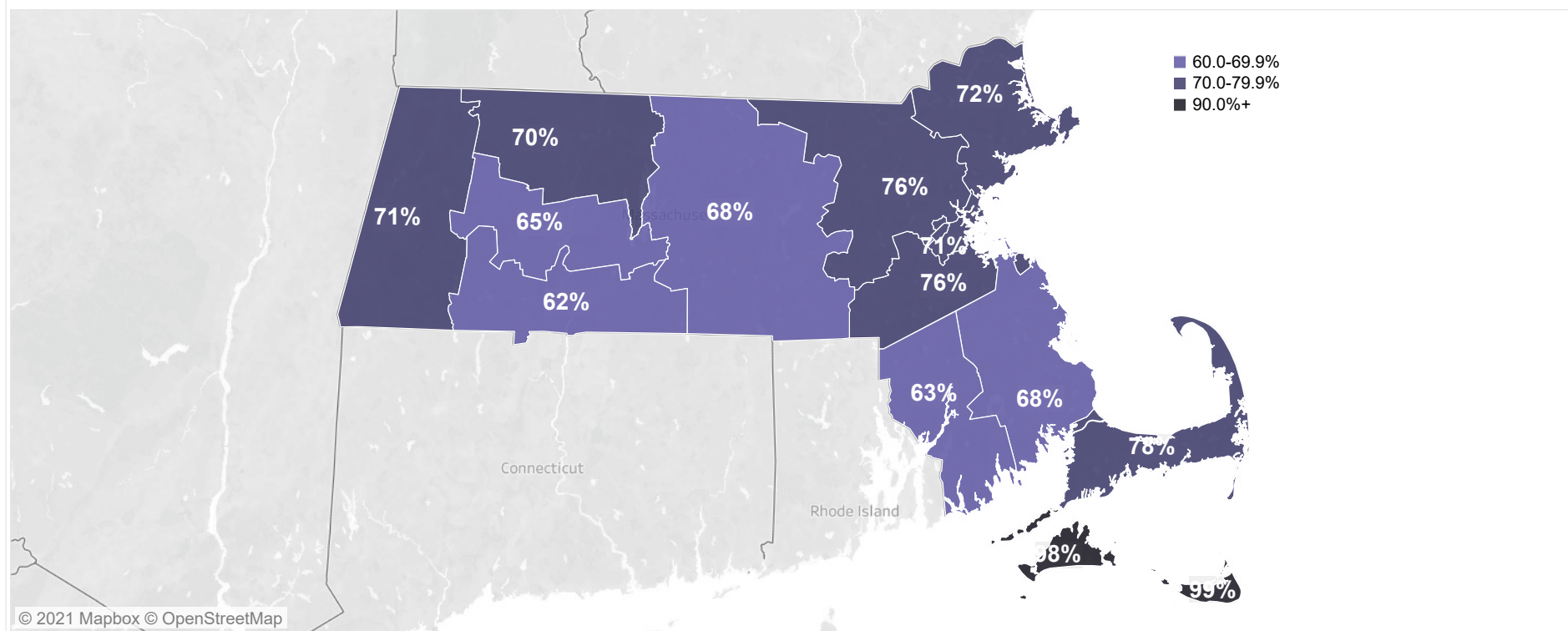


NOTE: Data from MIIS (see "definitions"). Data reflect doses administered and reported (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. An individual is counted as fully vaccinated if they have received the 2nd dose of Moderna or Pfizer or have received a dose of Janssen/Johnson & Johnson vaccine. Doses without address records are not included in this view. Some individuals may receive a first or second dose of Moderna or Pfizer from a non-reporting provider and would not be included as fully vaccinated. These proportions use Donahue population estimates from 2019. Colors may be reindexed as data evolve.

Cumulative Percentage of Eligible Individuals (5+) who are Fully Vaccinated by County of Resident Address

Data as of November 23, 2021

Percentage of Eligible Individuals (5+) Fully Vaccinated



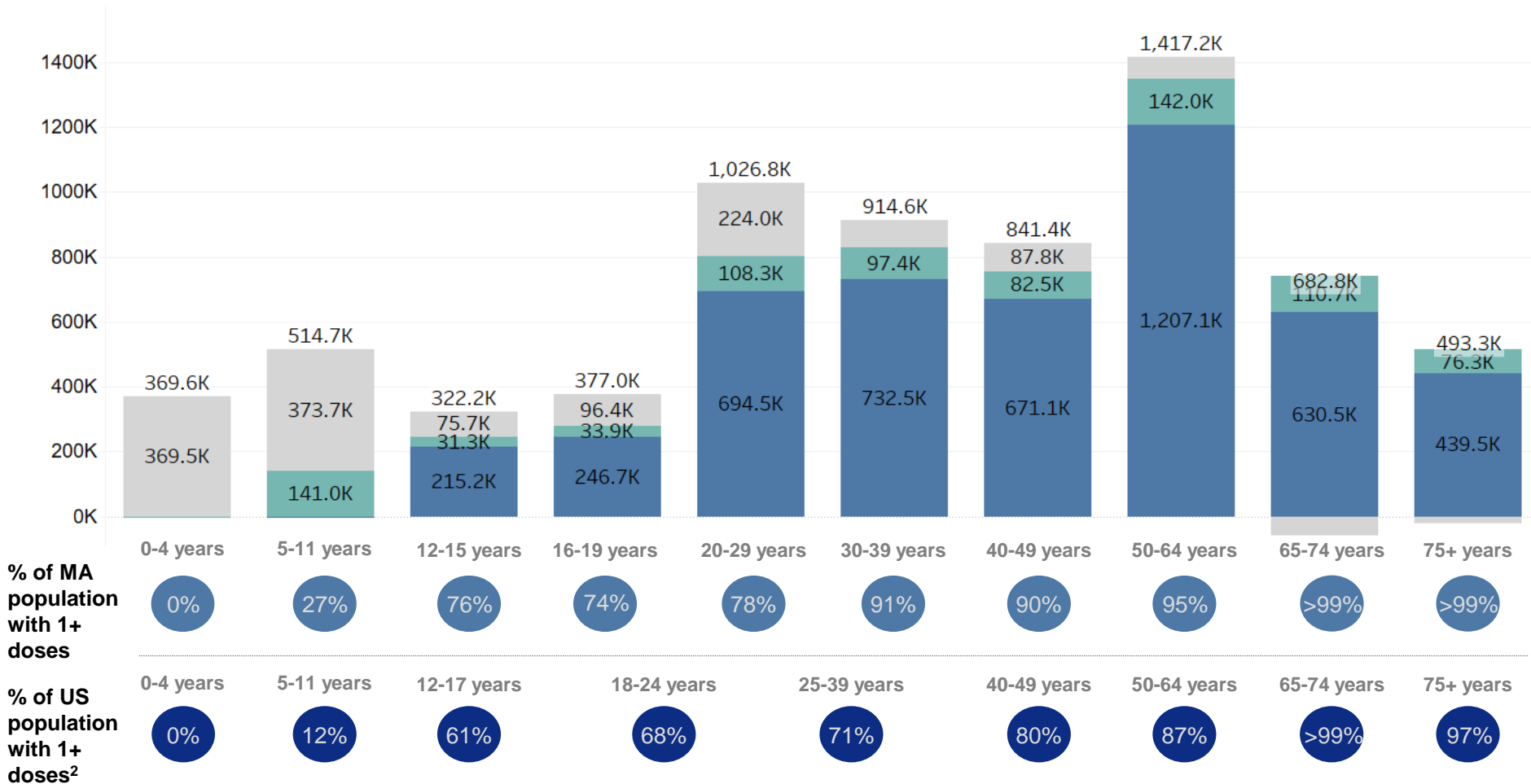
NOTE: Data from MIIS (see "definitions"). Data reflect doses administered and reported (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. An individual is counted as fully vaccinated if they have received the 2nd dose of Moderna or Pfizer or have received a dose of Janssen/Johnson & Johnson vaccine. Doses without address records are not included in this view. Some individuals may receive a first or second dose of Moderna or Pfizer from a non-reporting provider and would not be included as fully vaccinated. These proportions use Donahue population estimates from 2019. Colors may be reindexed as data evolve.

In MA, 81% of the MA population has received at least one dose, compared to 70% of national population

Data as of Nov 23rd

■ Individuals who are fully vaccinated¹ ■ Unvaccinated population
■ Individuals who are partially vaccinated¹

Vaccination status of individuals by age group (cumulative)



1. Individuals who are partially vaccinated are those that received the first dose but not the second dose of a two-dose vaccine. Individuals who are fully vaccinated are those that have received both doses of a two-dose vaccine or one-dose of a single-dose vaccine.

2. On 11/2/21, Pfizer vaccine was recommended for individuals aged 5-11. National population estimates from CDC do not include Texas.

Source: MIIS; CDC; UMass Donahue Institute 2019 Population Estimates, IPUMS USA

Confidential, Draft and Pre-Decisional

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

Data as of Nov 23rd

XX Doses as % of people in race/ethnicity group (XX) Estimate of total population in county by race/ethnicity

* Vaccination figures suppressed where less than 30 persons are included for privacy

	AI/AN	Asian	Black	Hispanic	Multi	NH/PI	White	Unknown/ Other	Total ¹
Barnstable	26% (1,223)	77% (2,945)	75% (6,692)	>95% (6,985)	77% (3,665)	>95% (83)	81% (194,309)	+7%	87% (215,903)
Berkshire	62% (196)	85% (1,915)	65% (4,045)	68% (6,390)	56% (2,660)	*	79% (110,766)	+5%	82% (126,001)
Bristol	46% (1,238)	66% (13,598)	60% (28,693)	61% (49,097)	68% (10,888)	65% (292)	64% (467,989)	+4%	68% (571,794)
Dukes	57% (193)	>95% (164)	>95% (708)	>95% (604)	73% (426)	*	89% (15,135)	+13%	>95% (17,234)
Essex	50% (895)	72% (29,557)	77% (27,801)	50% (176,127)	>95% (10,774)	>95% (200)	79% (551,761)	+6%	78% (797,116)
Franklin	31% (218)	88% (1,109)	75% (869)	54% (2,867)	50% (1,244)	18% (82)	73% (64,400)	+6%	78% (70,788)
Hampden	64% (646)	68% (12,057)	54% (36,512)	45% (123,550)	64% (7,918)	>95% (150)	67% (290,647)	+6%	67% (471,479)
Hampshire	52% (235)	58% (9,260)	50% (4,756)	55% (9,450)	58% (3,257)	72% (64)	72% (136,631)	+5%	74% (163,654)

Individuals with at least one dose as % of population is calculated as cumulative first doses of Moderna and Pfizer administered and reported plus the cumulative doses of Janssen/Johnson & Johnson doses administered, divided by the population in the county and the race/ethnicity category

NOTE: Data from MIIS (see "definitions"). Data reflect doses administered (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. An individual is counted as having at least 1 dose if they have received one or more doses. This is measured as the total number of 1st doses of Moderna and Pfizer administered and reported, plus the total number of Janssen/Johnson & Johnson doses administered and reported. Doses without address records are not included in this view. County population totals include suppressed values as indicated with a "***". Data are rounded such that back calculations of suppressed data are not possible. "Unknown/other" is shown as a % of the row population (county or state). These proportions use Donahue population estimates from 2019. Note about Totals: The difference in the MA 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; the discrepancy is due to unknown races and small, compounded rounding.

Individuals with at least one dose administered by county and race/ethnicity (2 of 2)

Data as of Nov 23rd

XX Doses as % of people in race/ethnicity group (XX) Estimate of total population in county by race/ethnicity

* Vaccination figures suppressed where less than 30 persons are included for privacy

	AI/AN	Asian	Black	Hispanic	Multi	NH/PI	White	Unknown/ Other	Total ¹
Middlesex	70% (1,814)	74% (211,552)	68% (86,011)	75% (135,790)	>95% (33,658)	>95% (417)	78% (1,161,204)	+6%	84% (1,630,447)
Nantucket	*	>95% (189)	91% (1,127)	>95% (1,664)	73% (156)	*	>95% (8,153)	+15%	>95% (11,305)
Norfolk	64% (827)	76% (84,533)	68% (52,616)	69% (35,455)	>95% (13,134)	>95% (223)	78% (528,859)	+4%	83% (715,648)
Plymouth	30% (1,176)	67% (7,940)	60% (57,222)	64% (21,519)	>95% (9,037)	36% (444)	71% (429,229)	+4%	75% (526,566)
Suffolk	47% (1,575)	88% (73,683)	62% (161,847)	66% (188,201)	>95% (16,736)	>95% (450)	72% (360,015)	+7%	78% (802,506)
Worcester	52% (1,395)	74% (44,356)	65% (40,327)	73% (101,395)	>95% (14,455)	>95% (254)	70% (636,423)	+1%	75% (838,605)
Unspecified (as % of MA)	4% (11,644)	3% (492,858)	2% (509,228)	2% (859,095)	2% (128,005)	7% (2,695)	3% (4,955,521)	+4%	3% (6,959,046)
MA	53% (11,644)	79% (492,858)	66% (509,228)	64% (859,095)	>95% (128,005)	>95% (2,695)	77% (4,955,521)	+6%	81% (6,959,046)

Individuals with at least one dose as % of population is calculated as cumulative first doses of Moderna and Pfizer administered and reported plus the cumulative doses of Janssen/Johnson & Johnson doses administered, divided by the population in the county and the race/ethnicity category

NOTE: Data from MIIS (see "definitions"). Data reflect doses administered (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. An individual is counted as having at least 1 dose if they have received one or more doses. This is measured as the total number of 1st doses of Moderna and Pfizer administered and reported, plus the total number of Janssen/Johnson & Johnson doses administered and reported. Doses without address records are not included in this view. County population totals include suppressed values as indicated with a "***". Data are rounded such that back calculations of suppressed data are not possible. "Unknown/other" is shown as a % of the row population (county or state). These proportions use Donahue population estimates from 2019. Note about Totals: The difference in the MA 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; the discrepancy is due to unknown races and small, compounded rounding.

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

Data as of Nov 23rd

XX Doses as % of people in age group

(XX) Estimate of total population in county by age

* Vaccination figures suppressed where less than 30 persons are included for privacy

	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
Barnstable	20% (11,719)	73% (7,842)	83% (8,238)	75% (22,041)	93% (18,884)	91% (19,841)	92% (31,497)	>95% (20,219)	>95% (20,609)	>95% (18,355)	>95% (28,931)	87% (216,629)
Berkshire	35% (7,745)	78% (5,066)	73% (6,279)	66% (16,052)	86% (13,519)	87% (13,286)	89% (18,629)	>95% (10,402)	>95% (9,277)	>95% (7,756)	>95% (12,797)	82% (126,398)
Bristol	13% (44,126)	57% (27,987)	62% (29,773)	58% (76,372)	71% (69,793)	73% (72,112)	82% (83,136)	90% (38,700)	>95% (31,682)	>95% (25,411)	95% (41,795)	68% (571,424)
Dukes	*	>95% (676)	>95% (540)	>95% (1,881)	>95% (2,046)	>95% (1,963)	>95% (2,533)	>95% (1,355)	>95% (1,445)	>95% (1,275)	>95% (1,523)	>95% (17,404)
Essex	25% (62,627)	75% (39,721)	76% (42,559)	71% (103,878)	89% (95,156)	86% (97,303)	91% (114,966)	>95% (55,838)	>95% (45,647)	>95% (35,821)	>95% (58,157)	78% (796,916)
Franklin	22% (4,646)	73% (2,751)	92% (2,652)	68% (8,235)	75% (9,067)	81% (8,092)	86% (10,146)	90% (6,140)	>95% (5,806)	>95% (4,523)	>95% (5,721)	78% (71,169)
Hampden	13% (38,330)	58% (24,070)	57% (26,842)	55% (68,048)	72% (57,332)	76% (54,201)	83% (63,075)	90% (31,669)	>95% (26,269)	>95% (20,658)	>95% (34,490)	67% (470,869)
Hampshire	43% (8,881)	80% (5,997)	39% (16,285)	47% (35,323)	87% (16,583)	91% (15,758)	92% (19,890)	>95% (10,719)	>95% (9,910)	>95% (7,793)	>95% (11,138)	74% (163,997)

Individuals with at least one dose as % of population is calculated as cumulative first doses of Moderna and Pfizer administered and reported plus the cumulative doses of Janssen/Johnson & Johnson doses administered, divided by the population in the county and the race/ethnicity category

NOTE: Data from MIIS (see "definitions"). Data reflect doses administered (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. An individual is counted as having at least 1 dose if they have received one or more doses. This is measured as the total number of 1st doses of Moderna and Pfizer administered and reported, plus the total number of Janssen/Johnson & Johnson doses administered and reported. Doses without address records are not included in this view. County population totals include suppressed values as indicated with a "***". Data are rounded such that back calculations of suppressed data are not possible. These proportions use Donahue population estimates from 2019. Note about Totals: The difference in the MA 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; the discrepancy is due to unknown races and small, compounded rounding. As of 5/20/21, the 0-19 years population category was split into 12-15 and 16-19 years to more closely reflect the population eligible for vaccines (12+). On 11/2/21, the 5-11 years column was added to reflect updated vaccination recommendations. Total column shows a small number of doses with ages incorrectly marked as 0-4 years.

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

Data as of Nov 23rd

XX Doses as % of people in age group

(XX) Estimate of total population in county by age

* Vaccination figures suppressed where less than 30 persons are included for privacy

	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	41% (120,101)	87% (74,993)	79% (84,821)	79% (247,341)	95% (228,861)	93% (206,487)	94% (219,945)	>95% (101,566)	>95% (82,038)	>95% (64,445)	>95% (109,008)	84% (1,626,553)
Nantucket	*	>95% (507)	>95% (457)	>95% (1,457)	>95% (1,739)	>95% (1,664)	>95% (1,584)	>95% (745)	>95% (582)	>95% (427)	>95% (632)	>95% (11,416)
Norfolk	37% (55,447)	83% (35,684)	84% (36,855)	79% (93,001)	93% (90,383)	89% (91,207)	95% (102,359)	>95% (47,671)	>95% (38,641)	>95% (30,539)	>95% (53,991)	83% (715,271)
Plymouth	18% (41,750)	66% (27,127)	74% (27,779)	66% (63,664)	80% (59,068)	80% (64,425)	88% (79,368)	94% (38,113)	>95% (32,078)	>95% (26,054)	>95% (39,590)	75% (527,689)
Suffolk	20% (50,415)	77% (27,674)	59% (47,605)	83% (173,854)	85% (146,530)	90% (90,569)	92% (87,620)	93% (40,214)	>95% (32,247)	>95% (24,741)	95% (40,745)	77% (809,594)
Worcester	21% (66,929)	71% (42,123)	72% (46,356)	67% (115,683)	81% (105,657)	83% (104,481)	88% (121,736)	95% (57,326)	>95% (44,661)	>95% (34,115)	>95% (54,742)	75% (839,053)
Unspecified (as % of MA)	0% (514,732)	2% (322,219)	3% (377,043)	6% (1,026,829)	5% (914,617)	3% (841,388)	3% (956,483)	3% (460,677)	3% (380,893)	3% (301,913)	3% (493,260)	3% (6,964,383)
MA	27% (514,732)	76% (322,219)	74% (377,043)	78% (1,026,829)	91% (914,617)	90% (841,388)	94% (956,483)	>95% (460,677)	>95% (380,893)	>95% (301,913)	>95% (493,260)	81% (6,964,383)

Individuals with at least one dose as % of population is calculated as cumulative first doses of Moderna and Pfizer administered and reported plus the cumulative doses of Janssen/Johnson & Johnson doses administered, divided by the population in the county and the race/ethnicity category

NOTE: Data from MIIS (see "definitions"). Data reflect doses administered (see "definitions"), including Janssen/Johnson & Johnson beginning on 3/5/21. An individual is counted as having at least 1 dose if they have received one or more doses. This is measured as the total number of 1st doses of Moderna and Pfizer administered and reported, plus the total number of Janssen/Johnson & Johnson doses administered and reported. Doses without address records are not included in this view. County population totals include suppressed values as indicated with a "***". Data are rounded such that back calculations of suppressed data are not possible. These proportions use Donahue population estimates from 2019. Note about Totals: The difference in the MA 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; the discrepancy is due to unknown races and small, compounded rounding. As of 5/20/21, the 0-19 years population category was split into 12-15 and 16-19 years to more closely reflect the population eligible for vaccines (12+). On 11/2/21, the 5-11 years column was added to reflect updated vaccination recommendations. Total column shows a small number of doses with ages incorrectly marked as 0-4 years.

Critical definitions

Please note: the following terms and definition apply to COVID-19 only. Updated 11/5/2021.

Doses administered: Doses of vaccine that have been given to people by providers. All doses, including the 1st and 2nd doses of a 2-dose vaccine and the 1st and only dose of a 1-dose vaccine, 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.

Doses shipped: Doses of vaccine that have been shipped to providers. All doses, including the 1st and 2nd doses of a 2-dose vaccine and the 1st and only dose of a 1-dose vaccine, are included in this measurement. Data include doses shipped to 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 CHCs receiving vaccine from HRSA. Some doses are shipped as part of a separate federal distribution system and would not be included here.

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. This is measured as the total number of 2nd doses of Moderna and Pfizer administered and reported plus the total number of Janssen/Johnson & Johnson doses administered and reported.

Individuals with at least 1 dose: An individual is counted as having at least 1 dose if they have received one or more doses of vaccine. This is measured as the total number of 1st doses of Moderna and Pfizer vaccine administered and reported, plus the total number of Janssen/Johnson & Johnson doses administered and reported.

Booster doses administered: Data on booster doses administered reflect the additional (third) dose of mRNA vaccine (Pfizer or Moderna) recommended on 8/13/21 for severely immunocompromised individuals to complete their primary series. 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 6 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 2 months after receiving initial Johnson & Johnson vaccine. MIIS does not include data on health states or occupations of individuals.

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.

Tiberius: Tiberius is a federal data platform which integrates data on COVID-19 vaccine including vaccine allocation and shipment data for pharmacies in the Federal Pharmacy Partnership Program and the jurisdictional transfer program for retail pharmacies as well as shipments through HRSA for CHCs.