PUBLIC SCHOOLS of BROOKLINE

Advisory Panel 4: Public Health, Safety, & Logistics

Meeting Slides

August 6, 2021

Community Benchmarks - Status

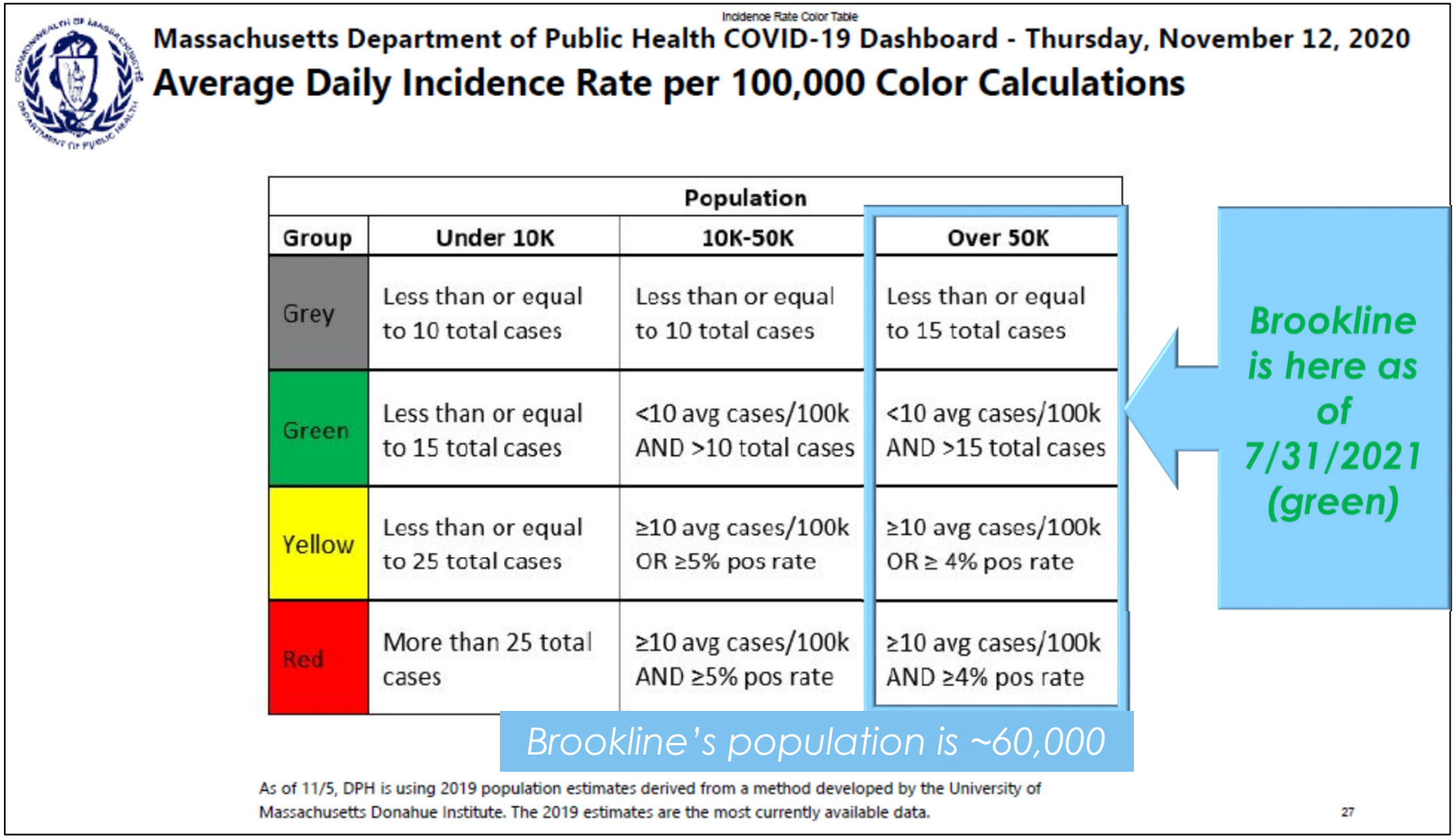
Note: column dates adjusted to track DPH data more precisely

Benchmark (each measured over prior 14 days)	Status 6/19/21	Status 7/3/21	Status 7/17/21	**Status 7/31/21**
Avg. daily new case count in Brookline = <10 per 100k people	0.4	0.6	2.6	**6.6**
Avg. daily new case count in Mass. = <10 per 100k people	1.2	1.0	2.6	**8.5**
Avg. test positivity rate in Brookline = <5.0%	0.10%	0.11%	0.60%	**1.10%**
Avg. test positivity rate in Massachusetts = <5.0%	0.39%	0.36%	0.88%	**2.11%**

Panel 4 selected these four community transmission benchmarks in August 2020 as triggers for focused evaluation and discussion of whether changes in operations are warranted, not as definitive indicators of in-school risk or thresholds for automatic action. Research and PSB-specific data since that time have convincingly shown that in-school transmission risk can be kept very low even at high levels of community case incidence.

Data source: https://www.mass.gov/info-details/covid-19-response-reporting

MA DPH Color Scale



Incidence Rate Color Table

Massachusetts Department of Public Health COVID-19 Dashboard - Thursday, November 12, 2020

Average Daily Incidence Rate per 100,000 Color Calculations

	Population		
Group	**Under 10K**	**10K-50K**	**Over 50K**
Grey	Less than or equal to 10 total cases	Less than or equal to 10 total cases	Less than or equal to 15 total cases
Green	Less than or equal to 15 total cases	<10 avg cases/100k AND >10 total cases	<10 avg cases/100k AND >15 total cases
Yellow	Less than or equal to 25 total cases	≥10 avg cases/100k OR ≥5% pos rate	≥10 avg cases/100k OR ≥ 4% pos rate
Red	More than 25 total cases	≥10 avg cases/100k AND ≥5% pos rate	≥10 avg cases/100k AND ≥4% pos rate

Brookline is here as of 7/31/2021 (green)

Brookline's population is ~60,000

As of 11/5, DPH is using 2019 population estimates derived from a method developed by the University of Massachusetts Donahue Institute. The 2019 estimates are the most currently available data.

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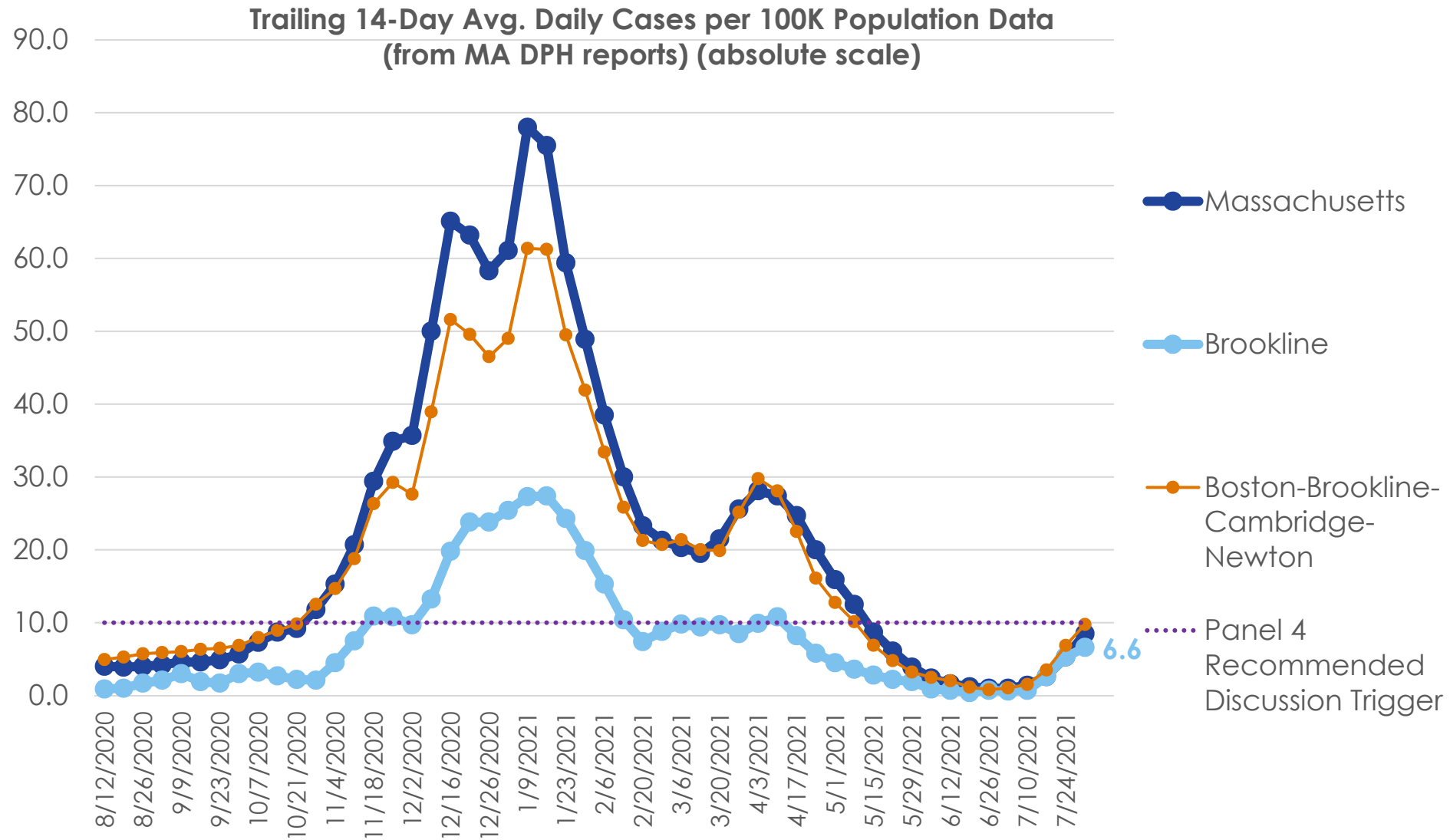
Chart and data source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: Avg. Daily New Cases per 100k



Data source: https://www.mass.gov/info-details/covid-19-response-reporting

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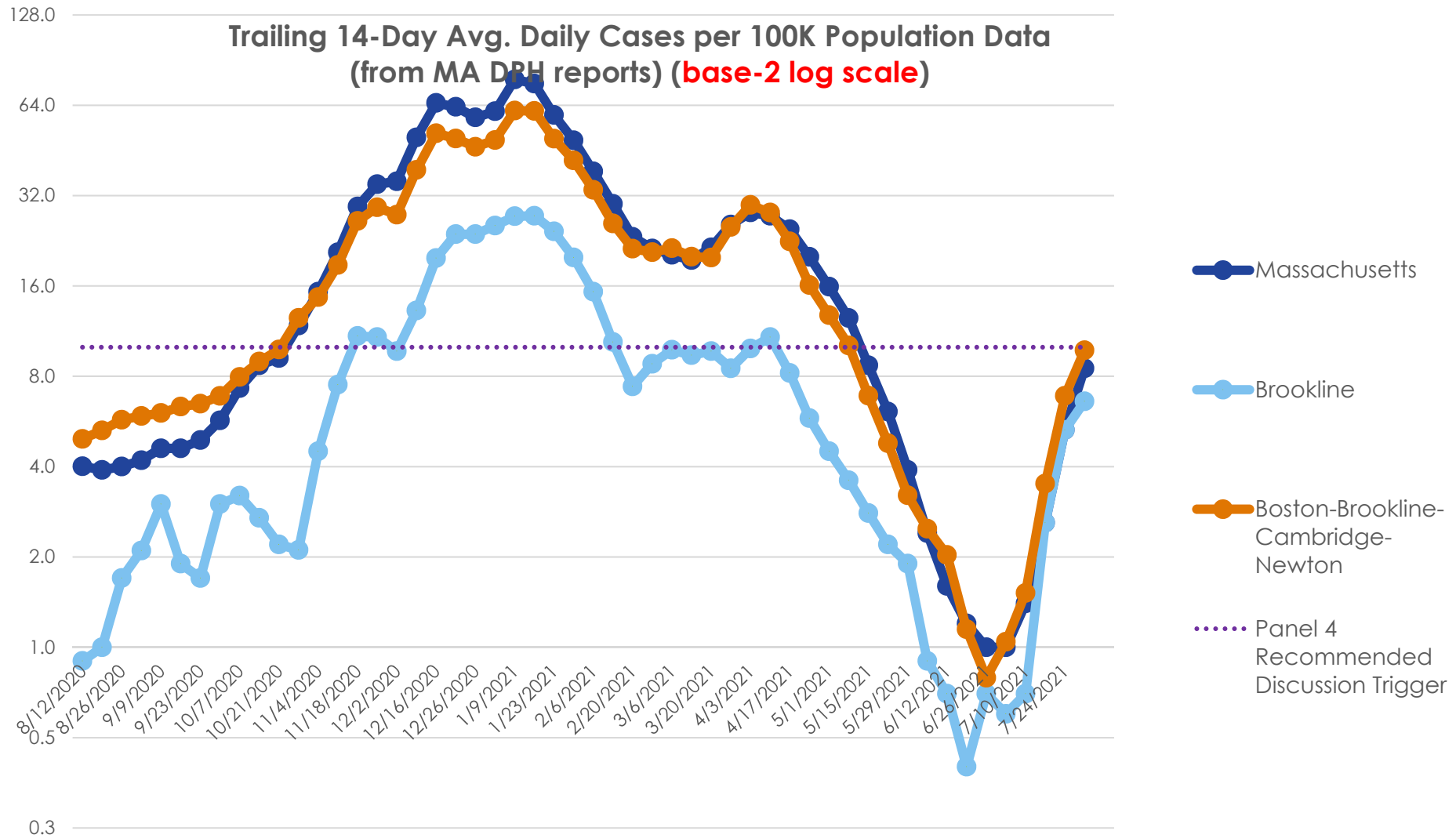
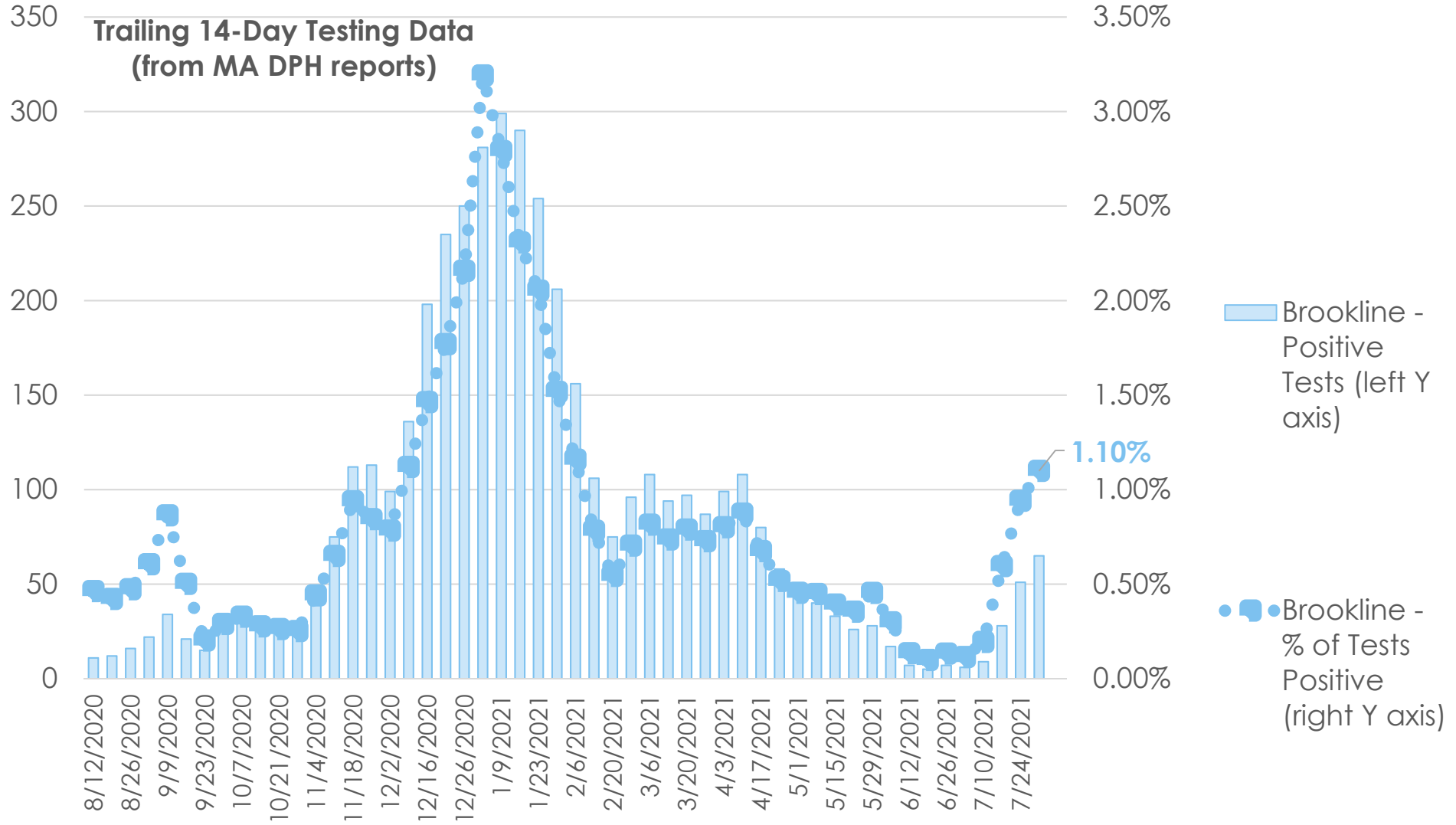


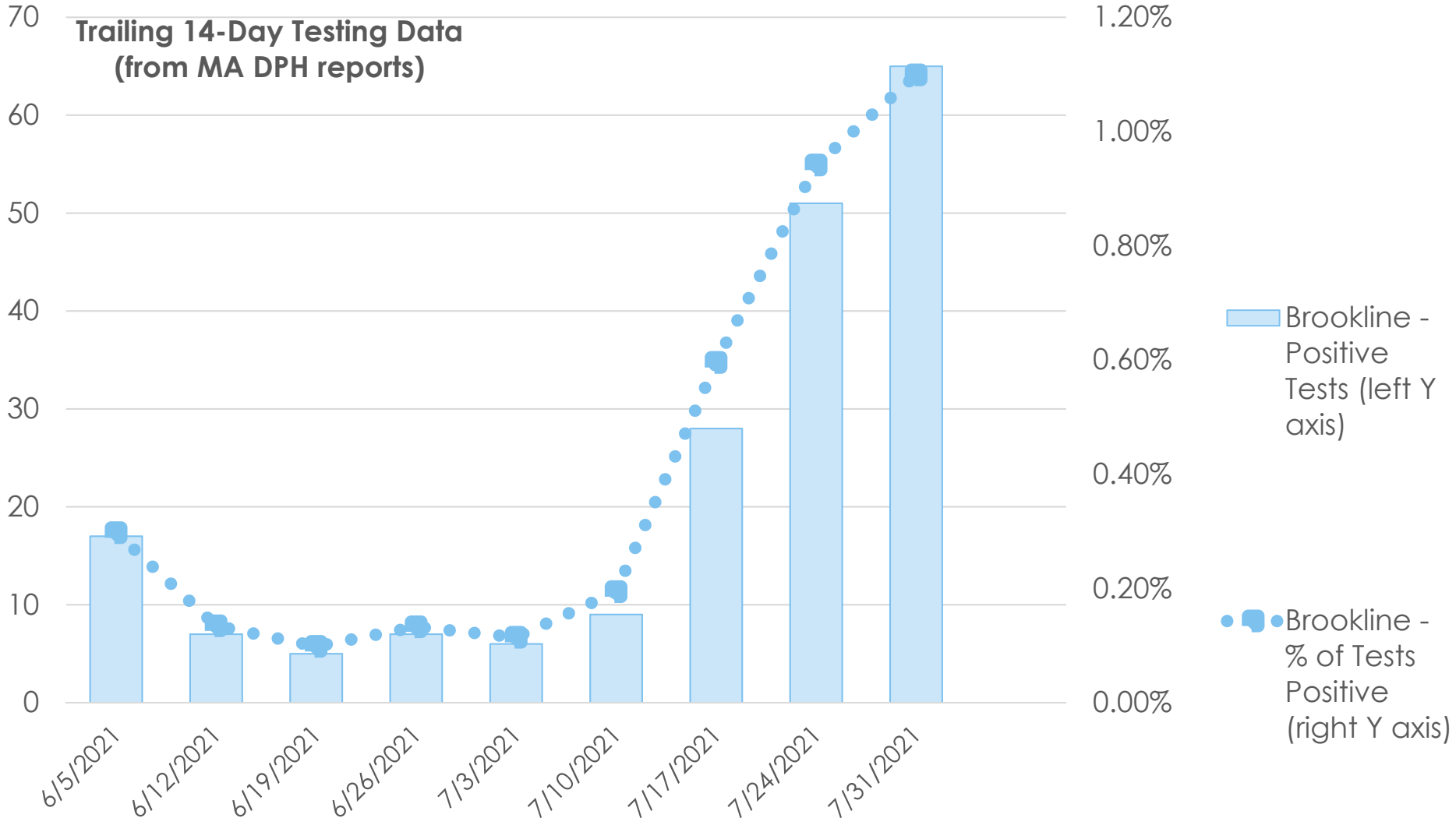
Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: Test Positivity (Brookline)



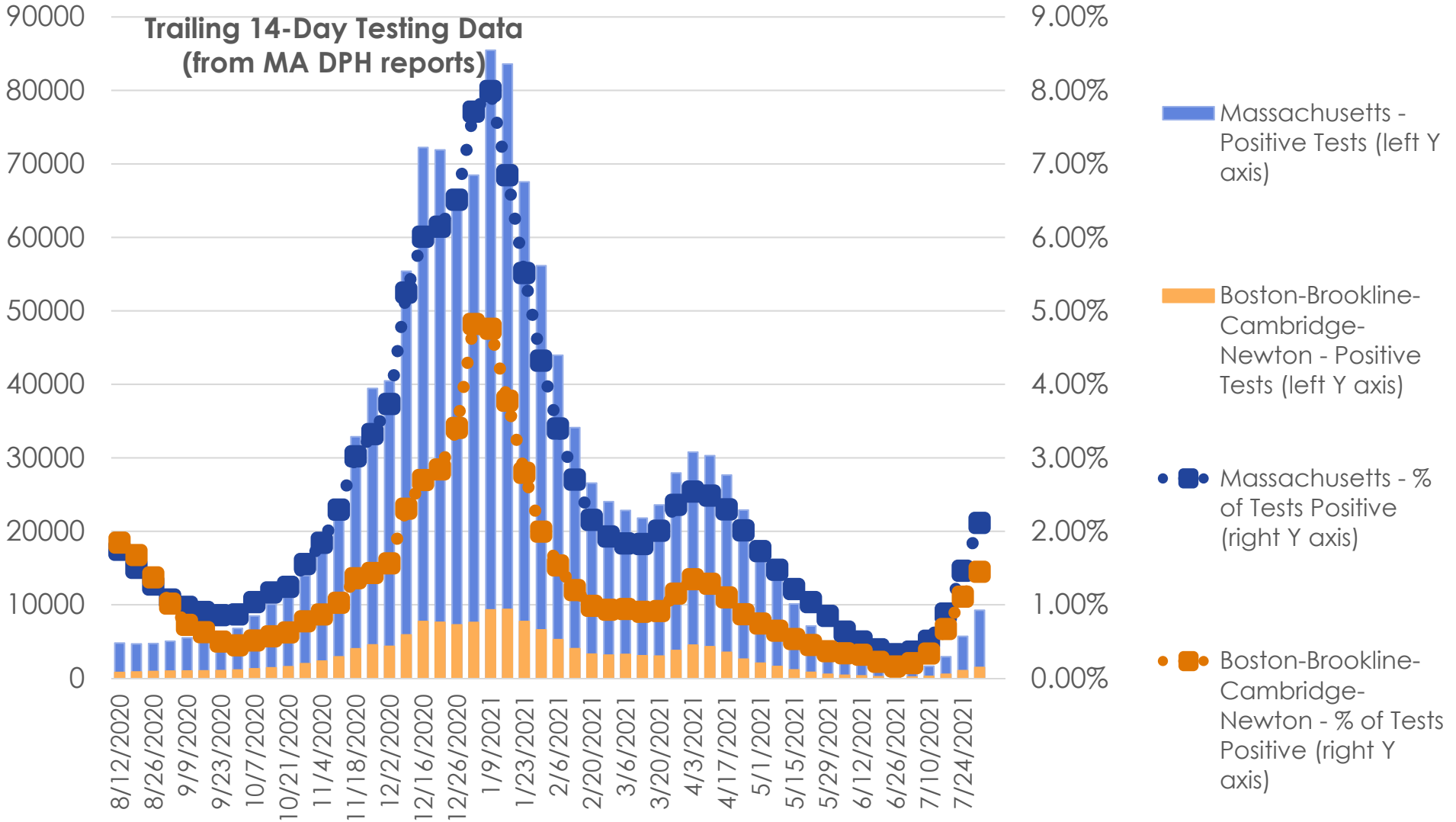
Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: Test Positivity (Brookline)



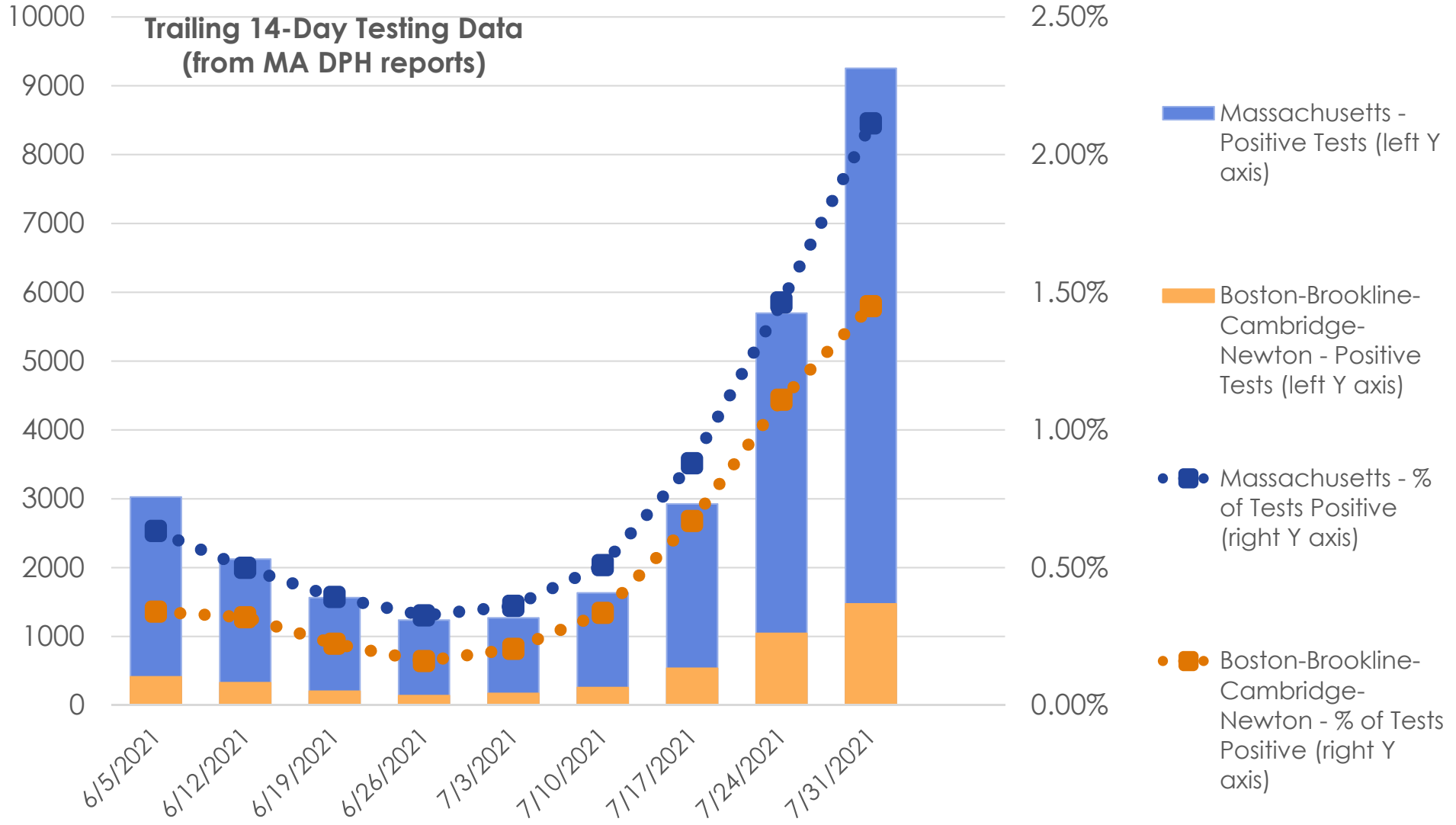
Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: Test Positivity (Statewide)



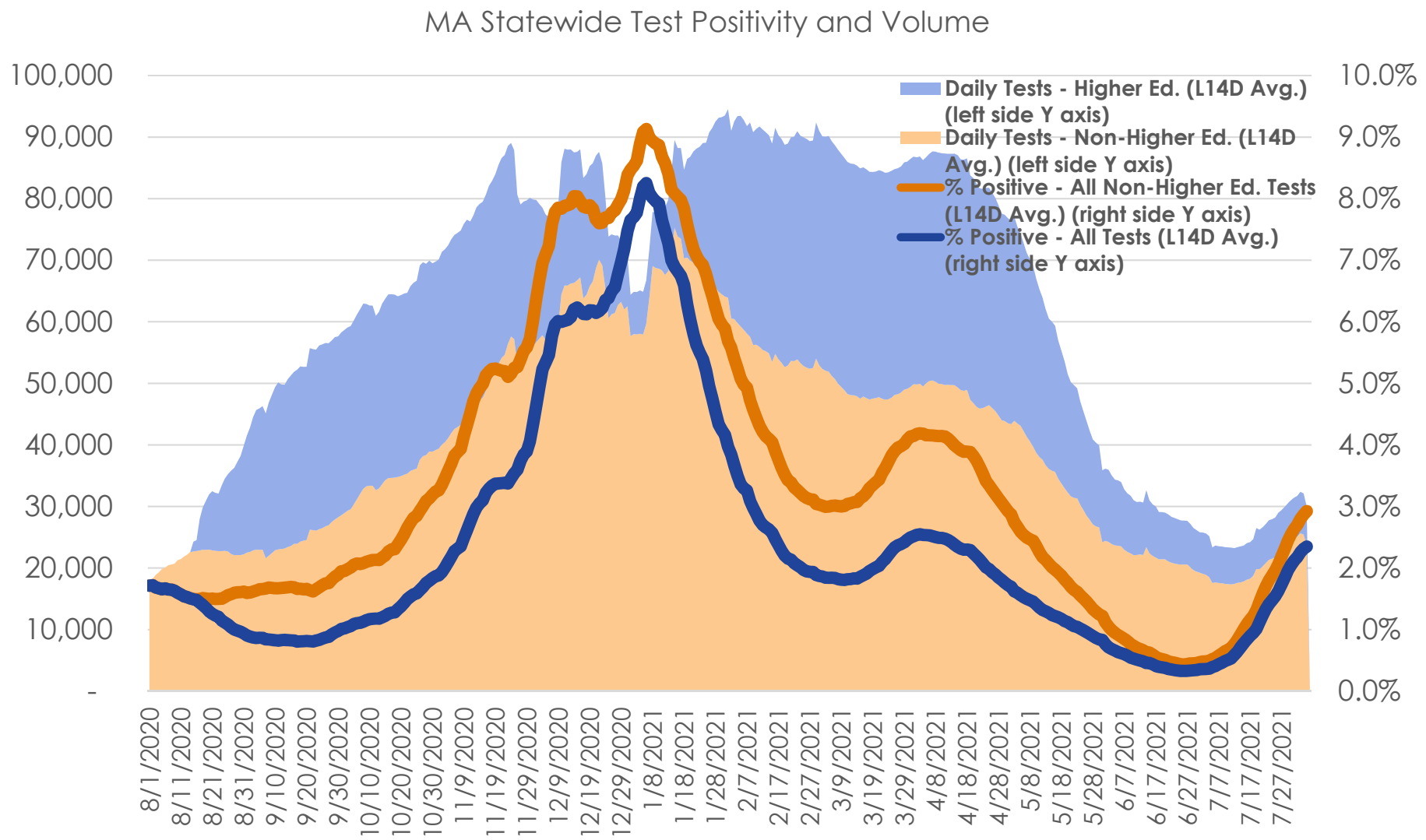
Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: Test Positivity (Statewide)



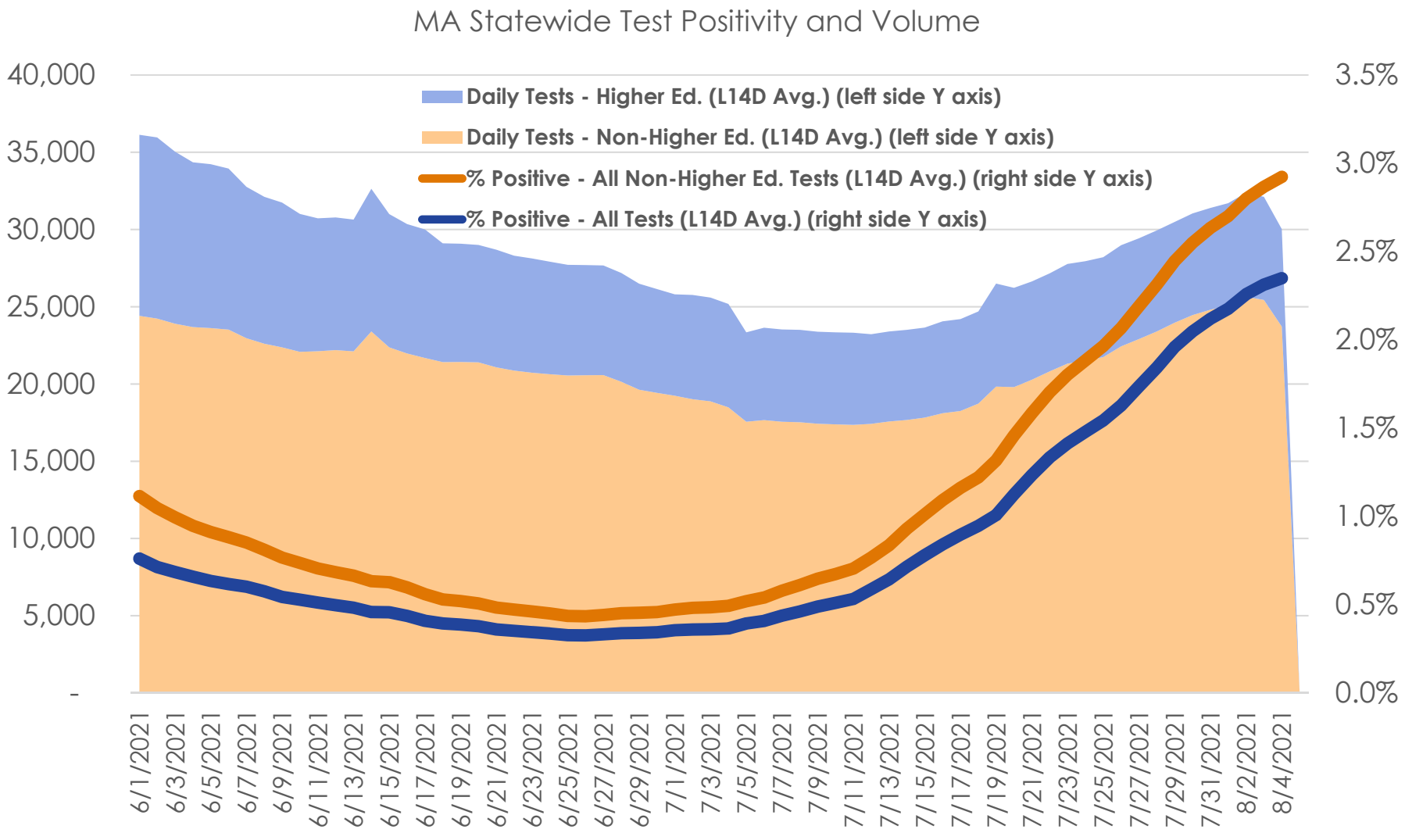
Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: Test Positivity and Testing Volume (Statewide)



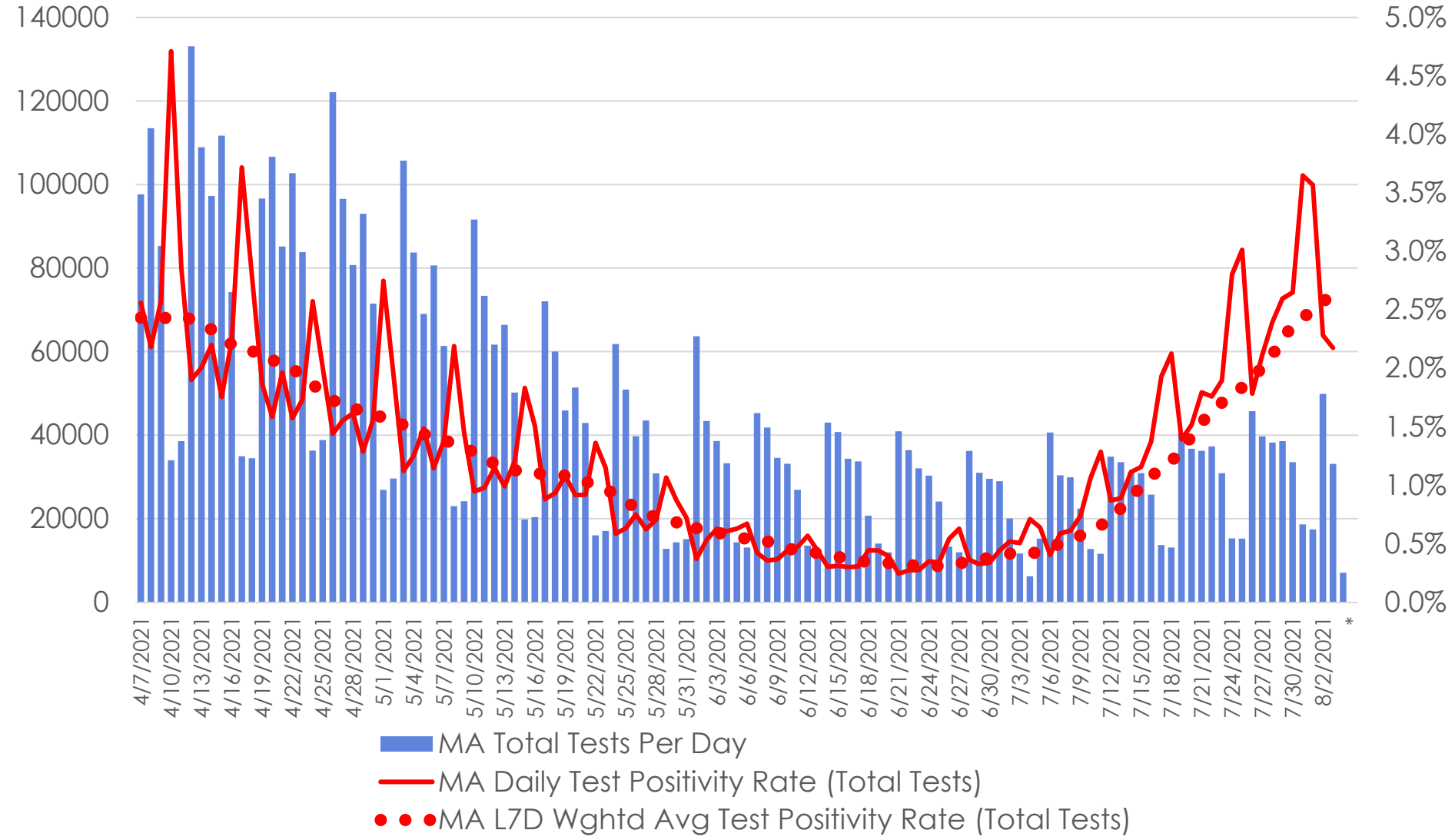
Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: Test Positivity and Testing Volume (Statewide)



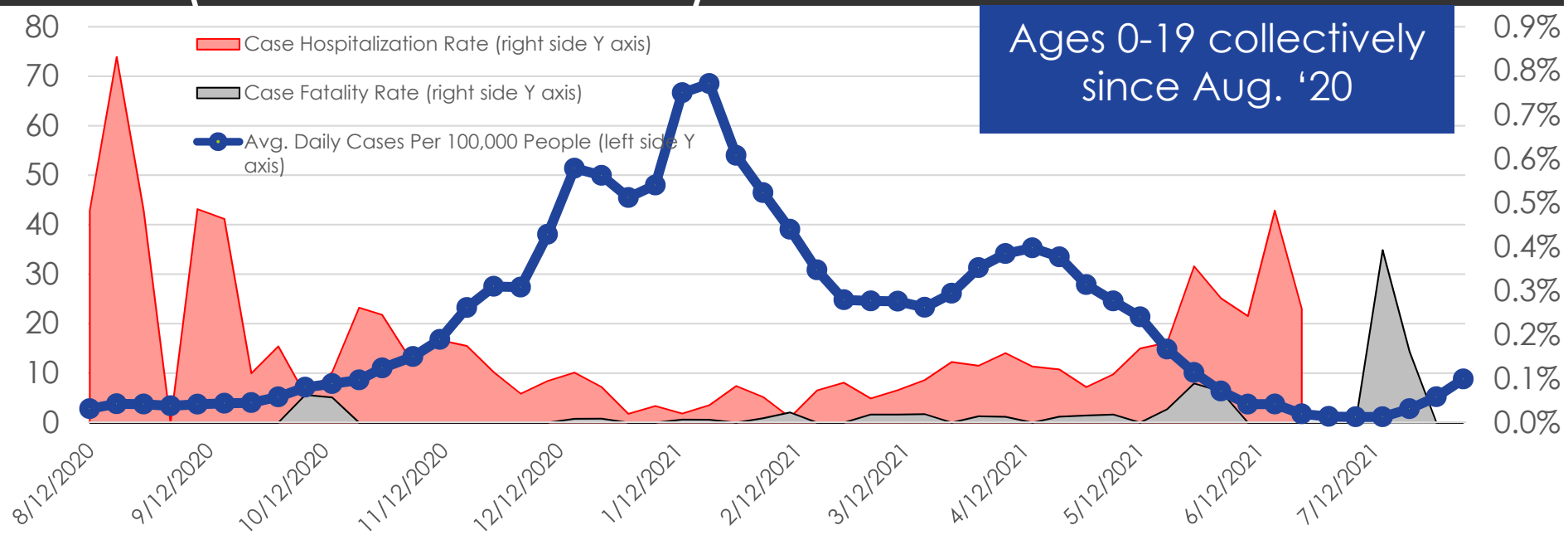
Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: Daily Test Volumes and Positivity (Statewide)



Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: 0-19 Year-Old Age Cohort (MA Statewide)

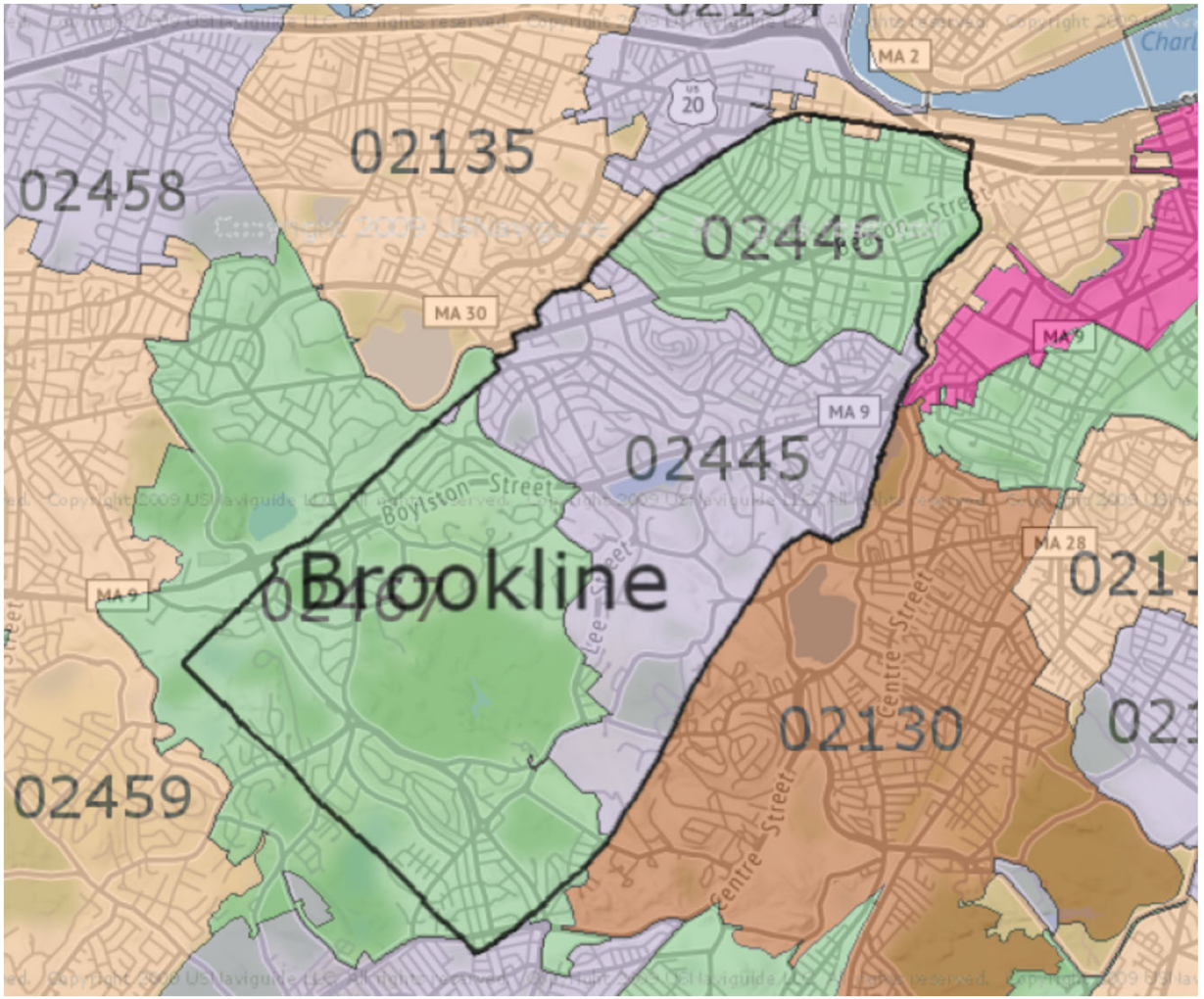


Total Cases (Avg. Daily per 100k Pop.)	6/20 – 7/3/2021	7/4 – 7/17/2021	7/18 – 7/31/2021
<5 yo ***(unvaxxed)***	66 (1.3)	122 (2.4)	370 (7.4)
5-9 yo ***(unvaxxed)***	53 (1.0)	133 (2.6)	502 (9.7)
10-14 yo ***(some vaxxed)***	66 (1.2)	185 (3.3)	521 (9.3)
15-19 yo ***(mostly vaxxed)***	70 (1.1)	179 (2.8)	563 (8.7)
All ages ***(mostly vaxxed)***	*1,194 (1.2)*	*3,010 (3.1)*	*9,192 (9.4)*

Data source: https://www.mass.gov/info-details/covid-19-response-reporting

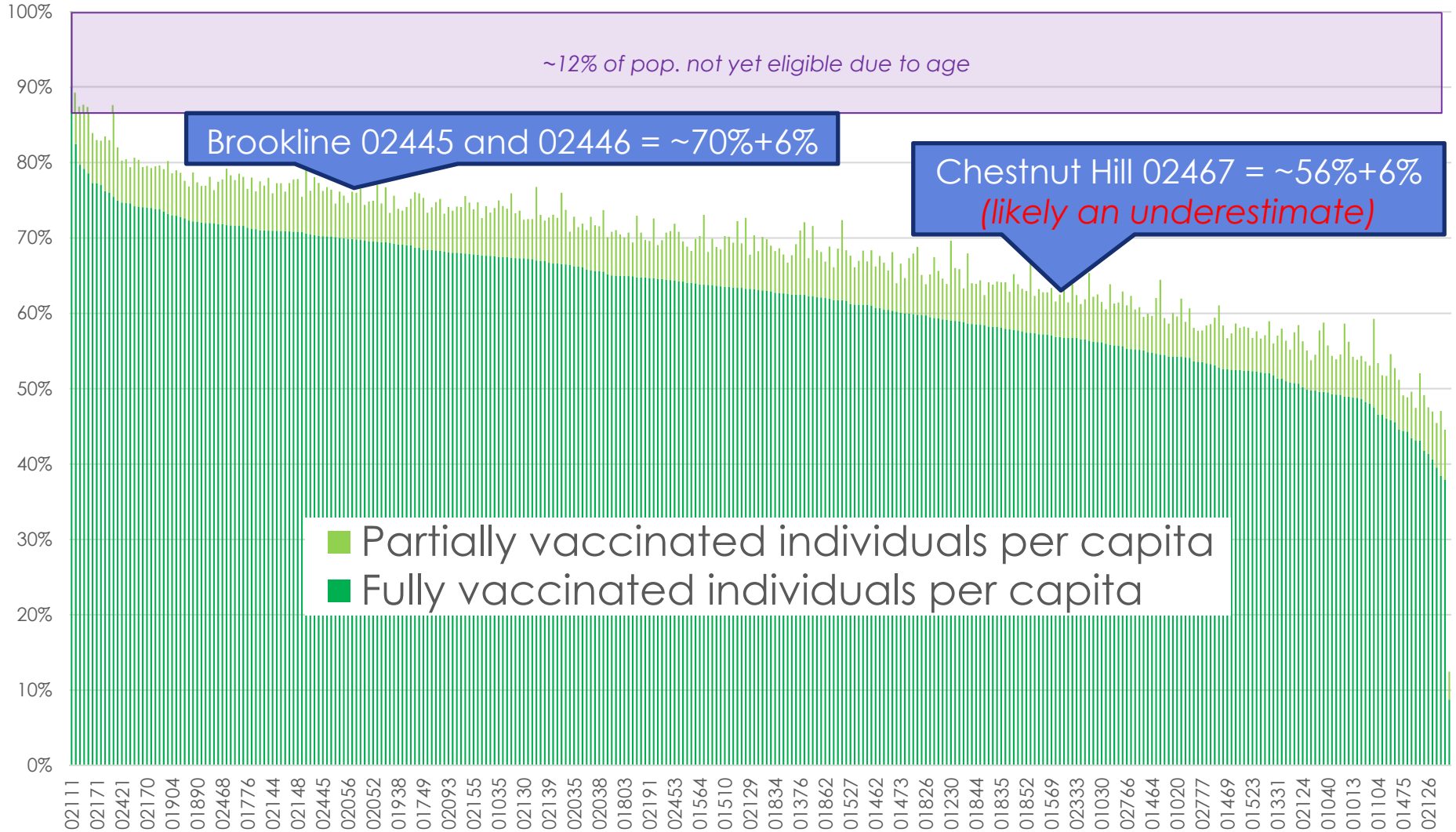
Brookline Vaccination Data

- Brookline consists of zip codes 02445 and 02446 plus <u>much but not all of</u> 02467 (shared with Newton and a bit with Boston)
- Very small portions of 02135 and 02139 also extend into Brookline
- DPH's "Brookline" vaccination data only counts 02445 and 02446 so rates not accurate



Map source: https://zipmap.net/Massachusetts/Norfolk_County/Brookline.htm

MA DPH Vaccination Rate Data By ZIP Code: 8/3/2021 (all ages; all MA ZIP codes with pop. ≥ 5,000)



Data sources: https://www.mass.gov/info-details/massachusetts-covid-19-vaccination-data-and-updates; https://www.massachusetts-demographics.com/zip_codes_by_population

PSB-Specific Vaccination Rates

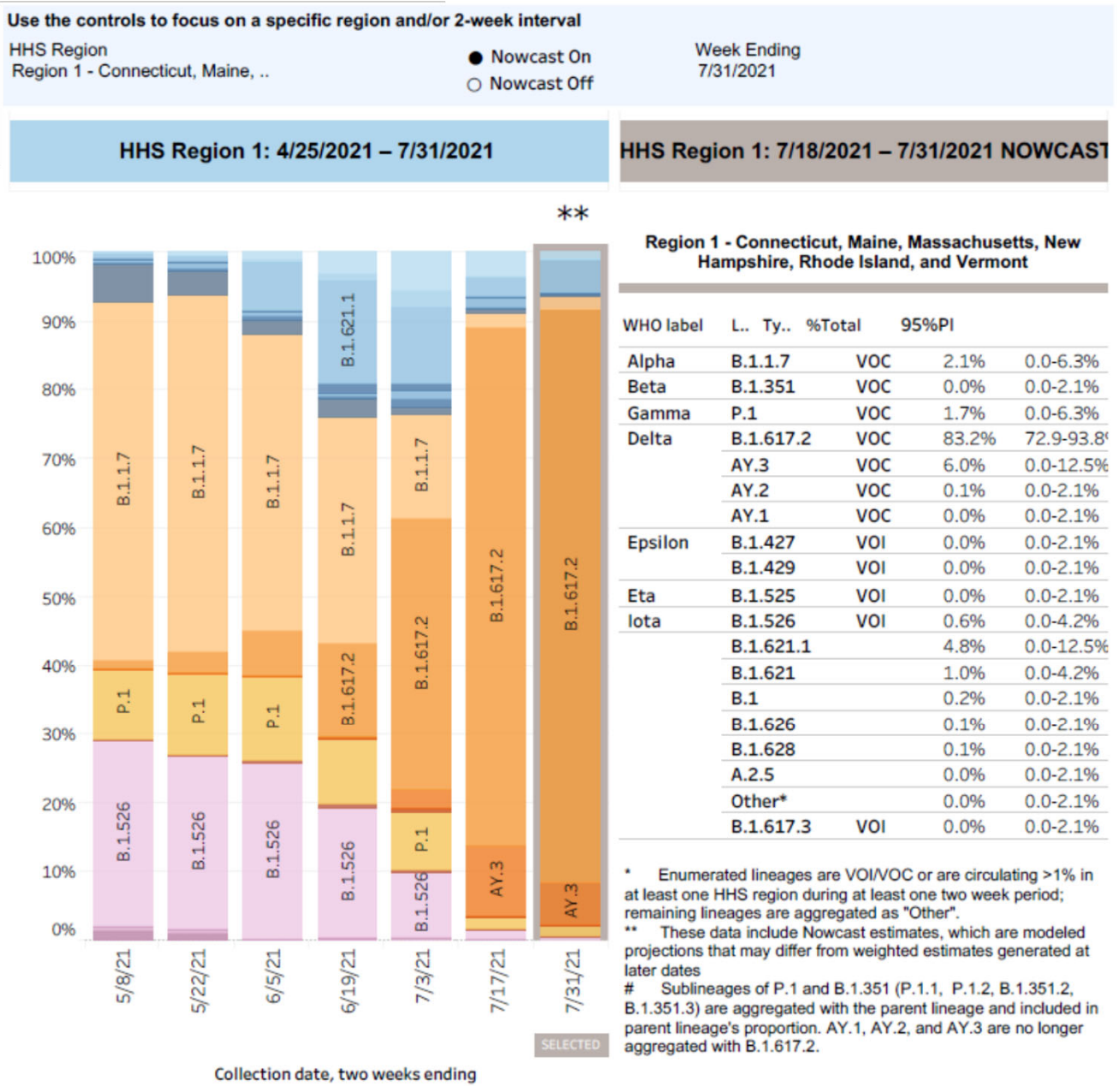
- Roughly 2,700 vaccinated students out of age-eligible population of roughly 3,000 – 3,500
- Implies **~80-90% vaccination rate** among age-eligible students (approximately grades 7-12), which is consistent with data available on Brookline residents as a whole

Data source: https://www.mass.gov/info-details/massachusetts-covid-19-vaccination-data-and-updates

Variants Update

Delta (B.1.617.2)

- Now almost universal variant in US and northeast
- More transmissible than other strains
- Not yet clear whether any increased virulence vs. other strains (evidence is mixed)
- 2-dose vaccines remain effective at reducing risk of infection/ transmission and highly protective against severe disease/death



Region 1 - Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

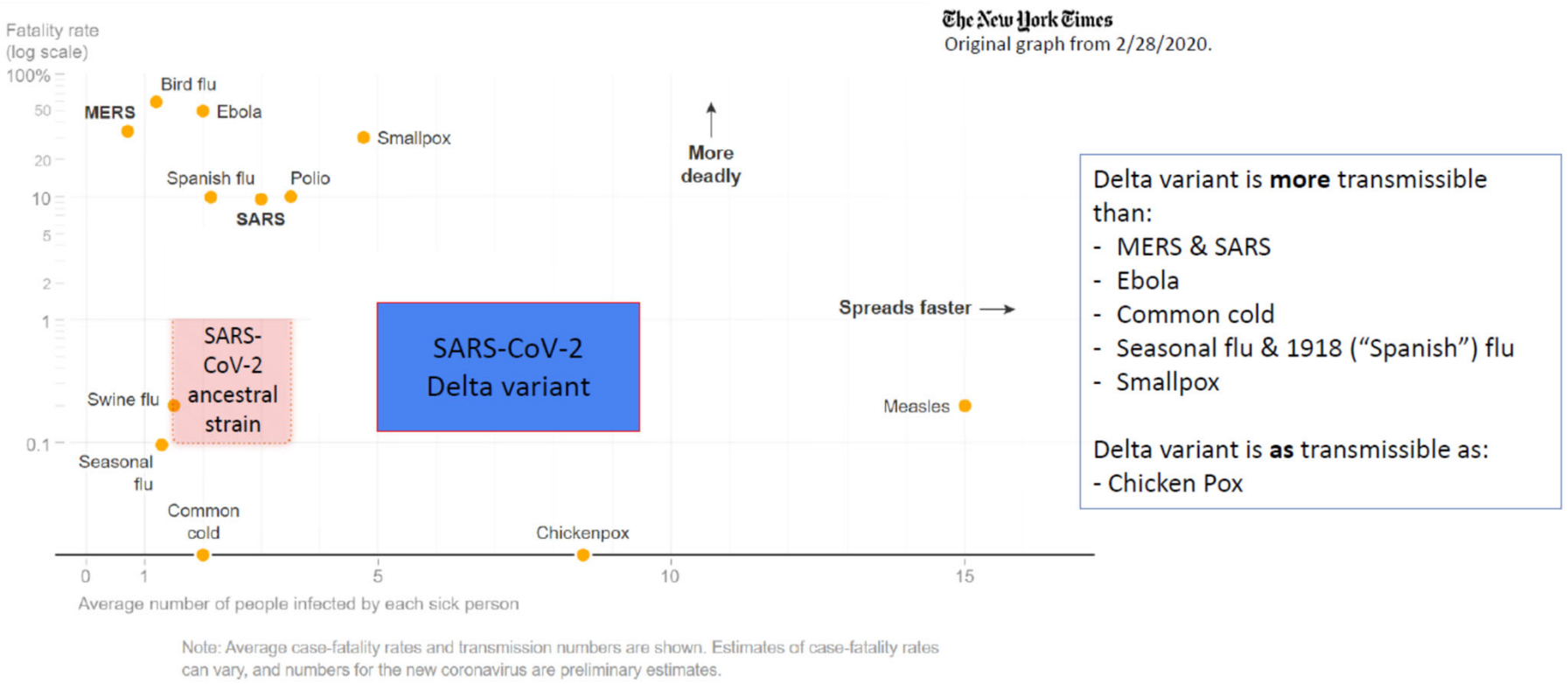
WHO label	L..	Ty..	%Total	95%PI
Alpha	B.1.1.7	VOC	2.1%	0.0-6.3%
Beta	B.1.351	VOC	0.0%	0.0-2.1%
Gamma	P.1	VOC	1.7%	0.0-6.3%
Delta	B.1.617.2	VOC	83.2%	72.9-93.8
	AY.3	VOC	6.0%	0.0-12.5%
	AY.2	VOC	0.1%	0.0-2.1%
	AY.1	VOC	0.0%	0.0-2.1%
Epsilon	B.1.427	VOI	0.0%	0.0-2.1%
	B.1.429	VOI	0.0%	0.0-2.1%
Eta	B.1.525	VOI	0.0%	0.0-2.1%
Iota	B.1.526	VOI	0.6%	0.0-4.2%
	B.1.621.1		4.8%	0.0-12.5%
	B.1.621		1.0%	0.0-4.2%
	B.1		0.2%	0.0-2.1%
	B.1.626		0.1%	0.0-2.1%
	B.1.628		0.1%	0.0-2.1%
	A.2.5		0.0%	0.0-2.1%
	Other*		0.0%	0.0-2.1%
	B.1.617.3	VOI	0.0%	0.0-2.1%

* Enumerated lineages are VOI/VOC or are circulating >1% in at least one HHS region during at least one two week period; remaining lineages are aggregated as "Other".
** These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates
# Sublineages of P.1 and B.1.351 (P.1.1, P.1.2, B.1.351.2, B.1.351.3) are aggregated with the parent lineage and included in parent lineage's proportion. AY.1, AY.2, and AY.3 are no longer aggregated with B.1.617.2.

Source: https://covid.cdc.gov/covid-data-tracker/#variant-proportions; https://www.cdc.gov/coronavirus/2019-ncov/variants/variant-info.html; https://www.nejm.org/doi/full/10.1056/NEJMoa2108891

From CDC's Internal Slides July 2021

Transmission of Delta variant vs. ancestral strain and other infectious diseases



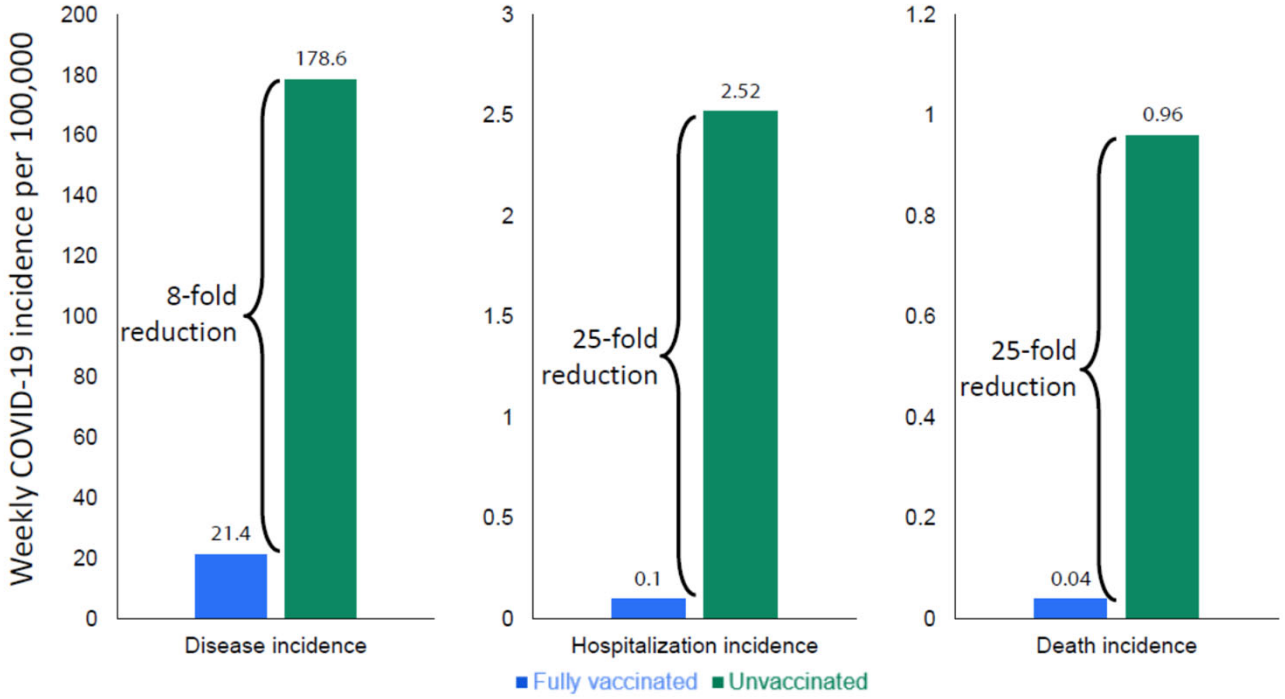
Delta variant is **more** transmissible than:
- MERS & SARS
- Ebola
- Common cold
- Seasonal flu & 1918 ("Spanish") flu
- Smallpox

Delta variant is **as** transmissible as:
- Chicken Pox

Source: https://context-cdn.washingtonpost.com/notes/prod/default/documents/8a726408-07bd-46bd-a945-3af0ae2f3c37/note/57c98604-3b54-44f0-8b44-b148d8f75165.#page=1

From CDC Internal Slides July 2021

Greater risk of disease, hospitalization and death among unvaccinated vs. vaccinated people: National estimates



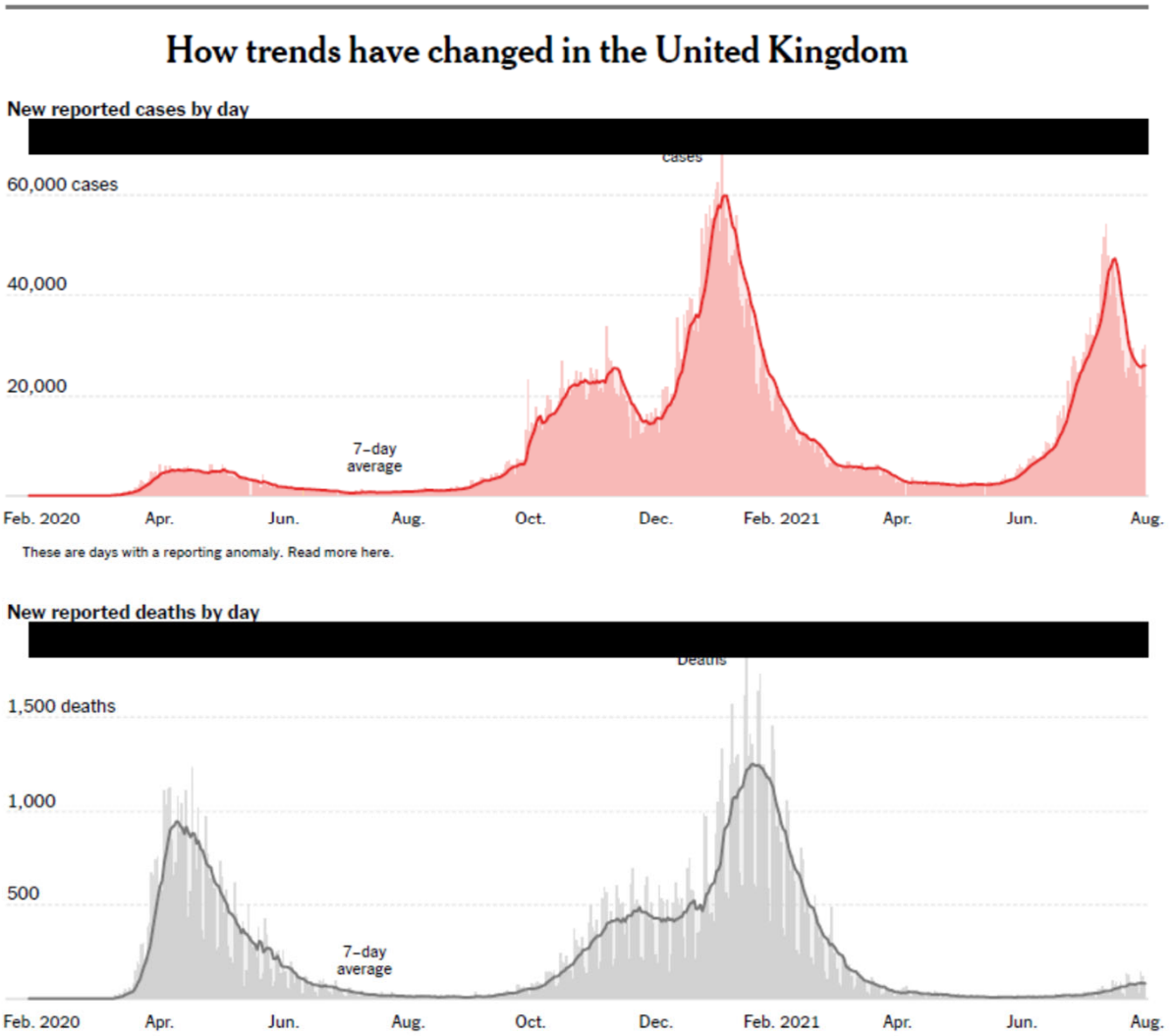
At current incidence, 35,000 symptomatic infections per week among 162 million vaccinated Americans

Data from COVID Tracker as of July 24, 2021. Average incidence 100 cases per 100,000 persons per week. Vaccine effectiveness against symptomatic illness = 88% (Lopez Bernal et al. NEJM 2021), where risk is [1 – VE] or 12%. Vaccine effectiveness hospitalization (or death) = 96% (Stowe et al. PHE preprint), where risk is [1 – VE] or 4%. Rate in unvaccinated = Community rate/((1-fully vaccinated coverage) + (1-VE)*fully vaccinated coverage). Rate in fully vaccinated=(1-VE)*Rate in unvaccinated. Fully vaccinated coverage proportions were from COVID Data Tracker as of July 24, 2021 (50% for US,).

Source: https://context-cdn.washingtonpost.com/notes/prod/default/documents/8a726408-07bd-46bd-a945-3af0ae2f3c37/note/57c98604-3b54-44f0-8b44-b148d8f75165.#page=1

UK's Delta Experience to Date: Summer Spike in Cases but Less Severe Disease

- 58% of residents fully vaccinated + 12% more with one dose
- Huge third wave of cases this summer
- So far, far lower fatality rate than in prior waves



Source: https://www.nytimes.com/interactive/2021/world/united-kingdom-covid-cases.html

Provincetown, MA July Outbreak

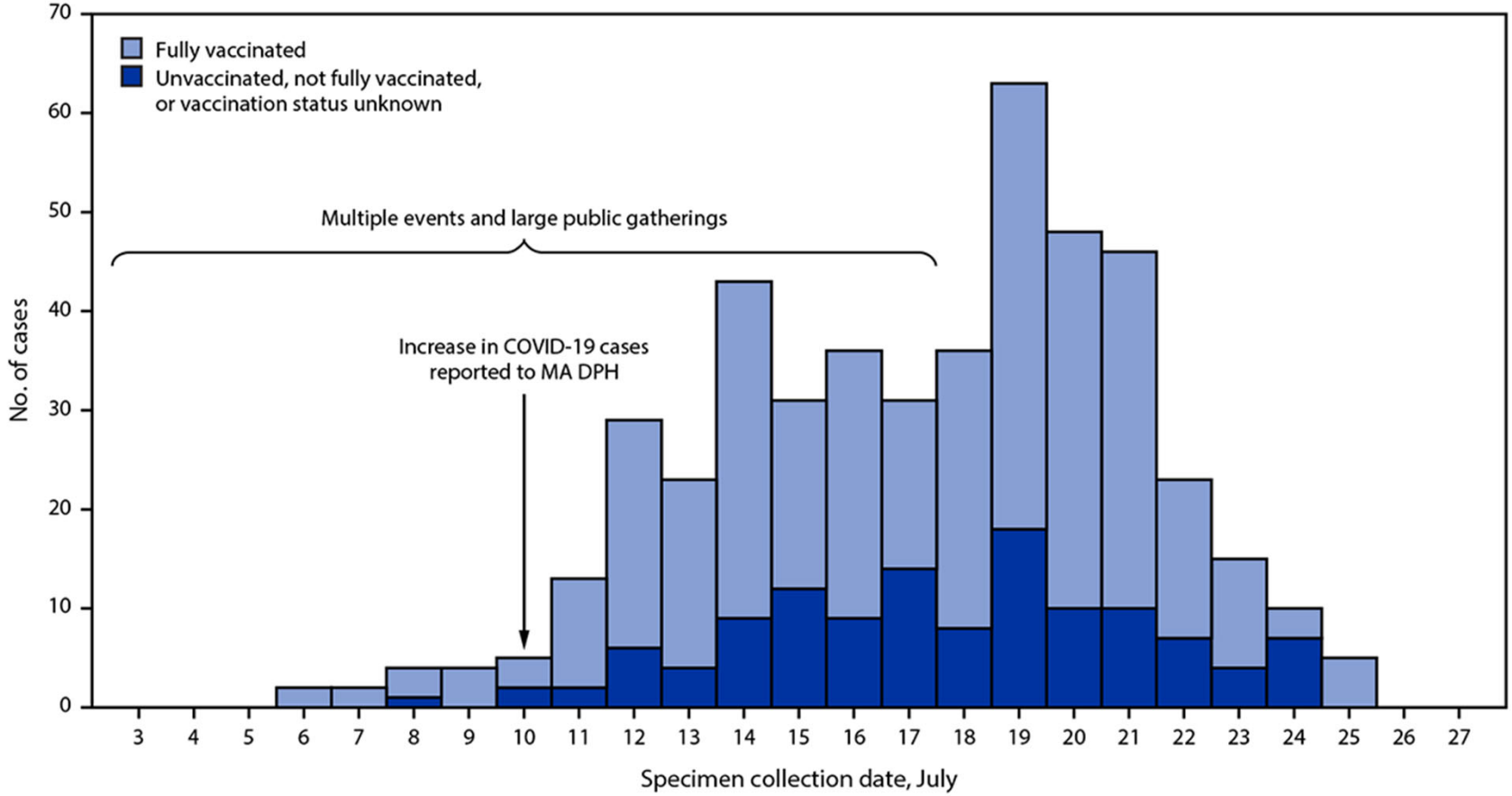
- 469 COVID-19 cases in MA residents through July 26th
  - 50% reported Barnstable County residence
  - 346 (74%) were in fully vaccinated individuals—mostly with 2-dose mRNA and some with J&J/Janssen
    - 274 were symptomatic
    - 4 hospitalized (2 with underlying medical conditions) → **~1% hospitalization rate**
  - Remainder not fully vaccinated
    - 1 hospitalized (multiple underlying medical conditions) → **~1% hospitalization rate**
  - 90% of sequenced cases were Delta variant
- Additional cases found in non-MA residents

- "Persons with COVID-19 reported attending densely packed indoor and outdoor events at venues that included bars, restaurants, guest houses, and rental homes."

Source: https://www.cdc.gov/mmwr/volumes/70/wr/mm7031e2.htm

Provincetown, MA July Outbreak

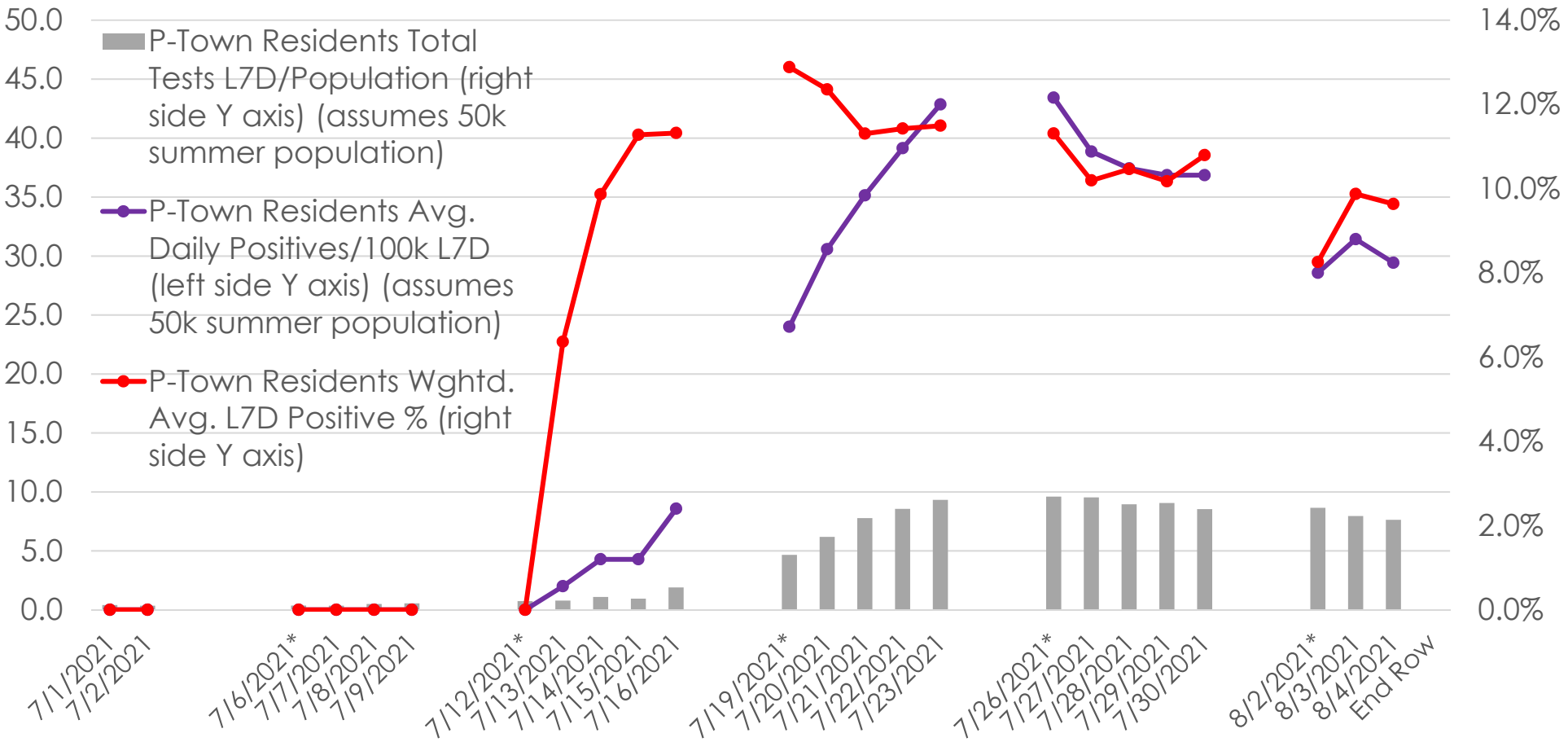
FIGURE 1. SARS-CoV-2 infections (N = 469) associated with large public gatherings, by date of specimen collection and vaccination status* — Barnstable County, Massachusetts, July 2021



Source: https://www.cdc.gov/mmwr/volumes/70/wr/mm7031e2.htm

Provincetown, MA July Outbreak

- Quick spike in cases, followed by slow down trend



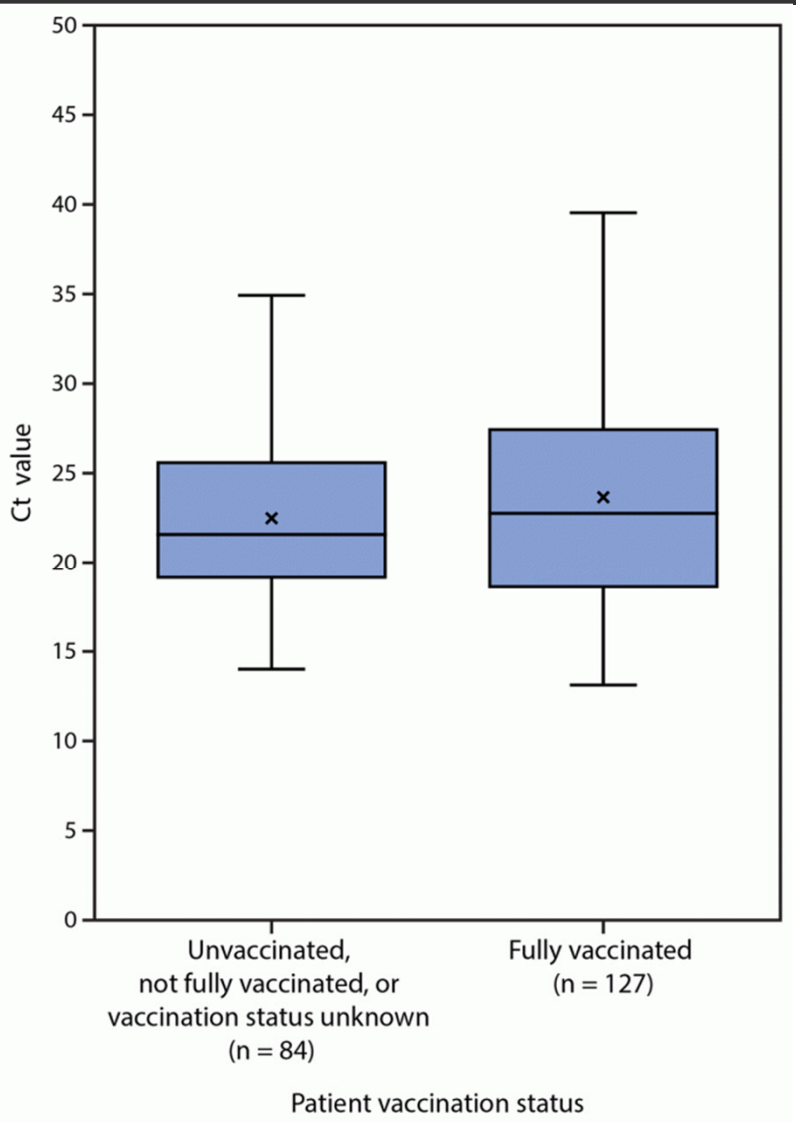
Source: Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Provincetown, MA July Outbreak

- Similar PCR threshold values for fully vaccinated group versus non-fully vaccinated group:

FIGURE 2. SARS-CoV-2 real-time reverse transcription–polymerase chain reaction cycle threshold values* for specimens from patients with infections associated with large public gatherings, by vaccination status† — Barnstable County, Massachusetts, July 2021§

§ Whiskers represent minimum and maximum observations; top of box represents the third quartile (Q3), bottom represents the first quartile (Q1), and box height represents the interquartile range. Midline is the median; "x" is the mean.



Source: https://www.cdc.gov/mmwr/volumes/70/wr/mm7031e2.htm

Update from Brookline Health Dept. August 4, 2021

- "Due to the increase in cases and out an abundance of caution, effective Monday, August 9, the town will require all members of the public to wear face coverings while inside public town buildings."

- "Town staff are also required to wear face coverings when interacting with members of the public. Staff will be required to wear a face mask when in common areas of town buildings, including elevators, hallways and shared office spaces."

Source: https://brooklinecovid19.com/2021/08/04/town-of-brookline-shares-updated-face-covering-guidance-for-inside-town-buildings/

CDC Guidance Updates – July 2021 "Key Takeaways"

- Prioritize in-person learning
- Promote vaccination as leading prevention strategy
- Masks:
  - ***Indoors – all people should wear, regardless of vaccination status***
  - Outdoors - generally not needed, but consider in crowded, non-distanced settings when community transmission is elevated
- ≥3 ft physical distancing in classrooms <u>where feasible</u>
- All should stay home with symptoms
- Multi-layered mitigation strategy—especially where many students/staff are not fully vaccinated, community transmission is elevated, etc.

Source: https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html

CDC Guidance Updates – July 9, 2021
Screening Testing Recommendations

Centers for Disease Control and Prevention

	Low Transmission[1] Blue	Moderate Transmission Yellow	Substantial Transmission Orange	High Transmission Red
Students	Do not need to screen students.	**Offer screening testing for students** who are not fully vaccinated at least once per week.		
Teachers and staff	**Offer screening testing for teachers and staff** who are not fully vaccinated at least once per week.			
High risk sports and activities	**Recommend screening testing for high-risk sports[2] and extracurricular activities[3]** at least once per week for participants who are not fully vaccinated.		**Recommend screening testing for high-risk sports and extracurricular activities** twice per week for participants who are not fully vaccinated.	**Cancel or hold high-risk sports and extracurricular activities virtually** to protect in-person learning, unless all participants are fully vaccinated.
Low- and intermediate-risk sports	Do not need to screen students participating in low- and intermediate-risk sports.[2]	**Recommend screening testing for low- and intermediate-risk sports** at least once per week for participants who are not fully vaccinated.		

Source: https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html

CDC Guidance Updates – July 9, 2021
Food Service Operations

Centers for Disease Control and Prevention

Food Service and School Meals

- Maximize physical distance as much as possible when moving through the food service line and while eating (especially indoors). Using additional spaces outside of the cafeteria for mealtime seating such as the gymnasium or outdoor seating can help facilitate distancing. Note: students, teachers, and staff who are fully vaccinated do not need to distance while eating.
- Given very low risk of transmission from surfaces and shared objects, there is no need to limit food service approaches to single use items and packaged meals.
- Clean frequently touched surfaces. Surfaces that come in contact with food should be washed, rinsed, and sanitized before and after meals.
- Promote hand washing before, after, and during shifts, before and after eating, after using the toilet, and after handling garbage, dirty dishes, or removing gloves.
- Improve ventilation in food preparation, service, and seating areas.
- U.S. Department of Agriculture has issued several Child Nutrition COVID-19 Waivers. Learn more here .

Source: https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html

Updated American Academy of Pediatrics Guidance

- Prioritize in-person learning: "Everything possible must be done to keep students in schools in-person."
- Promote vaccination as leading prevention strategy
- Universal masking "at school" for all students/staff above 2 years old, regardless of vaccination status
- Otherwise, maintain multi-layered mitigation strategy (pointing to CDC guidance on vaccination, universal mask use, ventilation, testing, quarantining, and cleaning and disinfecting)

Source: https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/

MA DESE/DPH Updated Joint Guidance July 30, 2021

- Prioritize in-person learning
- Maintain ventilation upgrades as feasible and continue hand hygiene practices and "stay home when sick" policies
- Masks
  - "strongly recommend" all K-6 students wear masks when indoors (with individual accommodations where needed)
  - not necessary outdoors and may be removed while eating indoors.
  - "strongly recommend" that unvaccinated staff, visitors and 7-12 students wear masks indoors
  - "DESE and DPH recommend that schools allow vaccinated students to remain unmasked"
  - Required in school health offices and on school buses

Source: https://www.doe.mass.edu/covid19/on-desktop/2021-0730fall-2021-covid19-guidance.pdf

MA DESE/DPH Updated Joint Guidance July 30, 2021

- "Districts and schools are highly encouraged to maintain or establish a robust plan for COVID-19 testing in schools, including both diagnostic testing and screening (pooled) testing for students and staff."
- Diagnostic testing (e.g. BinaxNOW rapid antigen test) = "an important tool for use in testing asymptomatic close contacts as part of updated quarantine guidance." Districts are "strongly encouraged" to sign up for statewide testing program to minimize the number of students required to quarantine outside of school."
- Contact tracing/quarantine protocol updates to come including new program:
  - "Under **test and stay**, asymptomatic close contacts will have the option to remain in school and be tested daily with BinaxNOW for at least 5 days. Vaccinated staff and students are exempt from quarantine."

Source: https://www.doe.mass.edu/covid19/on-desktop/2021-0730fall-2021-covid19-guidance.pdf

Panel 4 Recommendations
(current; subject to ongoing reassessment and revision)

- **Vaccination** - continue to promote as much as possible (continue to consider mandate as option but not recommended as of now)
- **Masks**
  - Outdoors: not required, but encouraged when (esp. unvaccinated) students/staff spend extended time in close quarters
  - Indoors: required for all, regardless of vaccination status (subject to individual accommodations as needed)
- **Ventilation** – continue enhanced ventilation strategy in place at year-end
- **Distancing** - In a fully-masked classroom, give educators freedom to organize seating as desired without regard to minimum distancing/direction of facing (group tables OK)

Panel 4 Recommendations
(current; subject to ongoing reassessment and revision)

- **Lunch/snack/mask breaks (i.e., any unmasked times)**
  - Outside as much as feasible
  - When indoors:
    - Vaccine-eligible grades (7-12): **no minimum distance required** (full cafeteria use OK)
    - Younger grades (PK-6): **3-foot minimum seat distancing** (we understand this limits cafeteria capacity)
  - Limit unmasked indoor time as reasonably possible to allow for healthy eating
- **Special situations**
  - Vocal/wind instrumental music – for further discussion

Panel 4 Recommendations
(current; subject to ongoing reassessment and revision)

- **Testing**
  - Not necessary to maintain safety; primary goal would remain reassurance
  - Highest priority = symptomatic individuals (with rapid antigen testing available)
  - More specifics to follow with updated DESE/DPH program guidance week of August 9th
- **Symptom screening/stay home when sick** – continue from year-end
  - Important that PSB have plan to facilitate learning/connection for students staying at home
- **Contact tracing/quarantine** – to be discussed further