
**PUBLIC SCHOOLS of
BROOKLINE**

Advisory Panel 4:
Public Health, Safety, & Logistics

Meeting Slides

July 9, 2021

Community Benchmarks - Status

Note: column interval changed to 2-week increments

Benchmark (each measured over prior 14 days)	Status 5/26/21	Status 6/9/21	Status 6/23/21	Status 7/7/21
Avg. daily new case count in Brookline = <10 per 100k people	2.2	0.9	0.4	0.6
Avg. daily new case count in Mass. = <10 per 100k people	6.1	2.4	1.2	1.0
Avg. test positivity rate in Brookline = <5.0%	0.35%	0.30%	0.10%	0.11%
Avg. test positivity rate in Massachusetts = <5.0%	1.03%	0.63%	0.39%	0.36%

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.

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

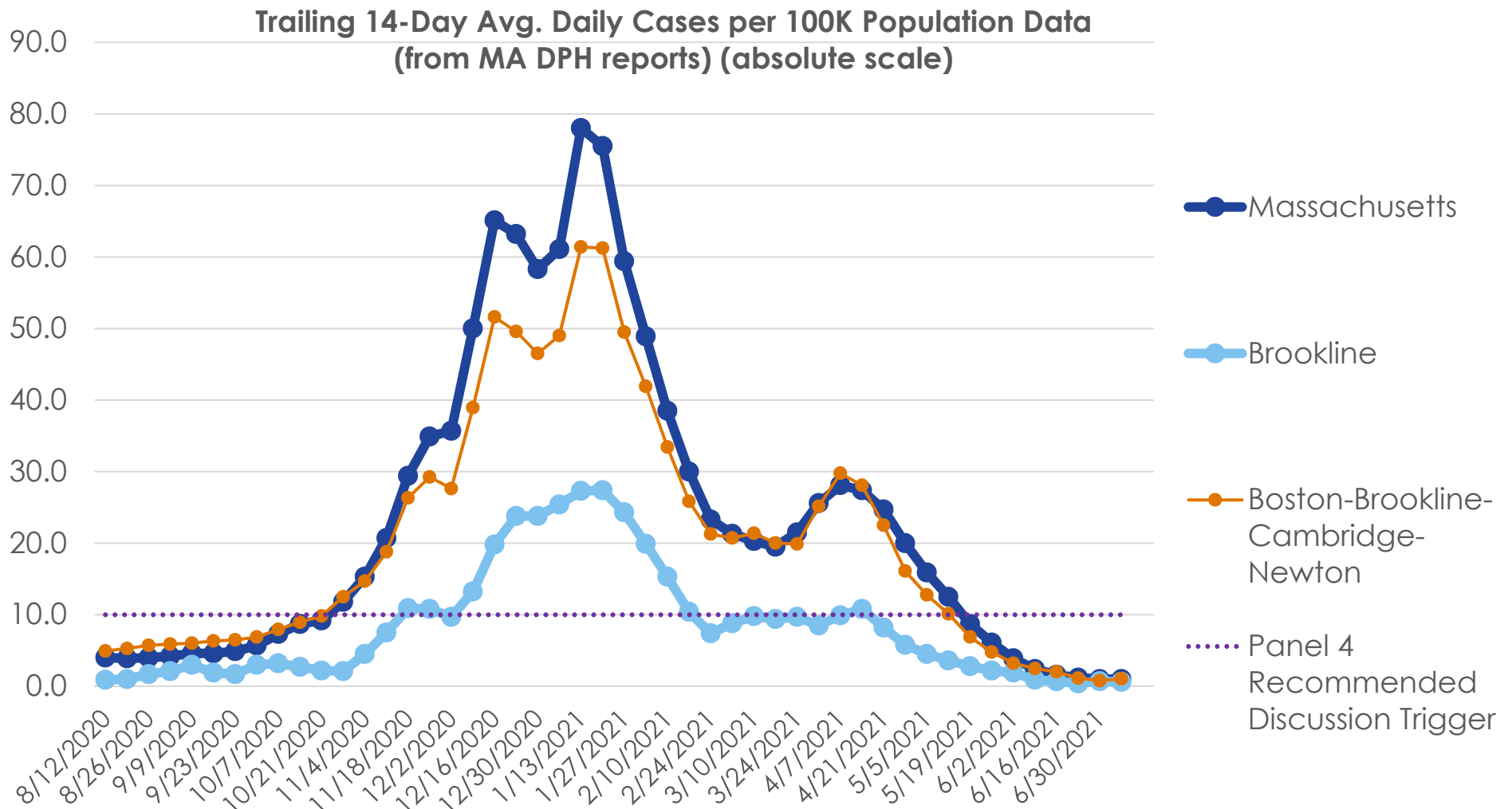
Group	Population		
	Under 10K	10K-50K	Over 50K
Grey	Less than or equal to 10 total cases	Less than or equal to 10 total cases	Less than or equal to 15 total cases
Green	Less than or equal to 15 total cases	<10 avg cases/100k AND >10 total cases	<10 avg cases/100k AND >15 total cases
Yellow	Less than 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 7/7/2021 (grey)

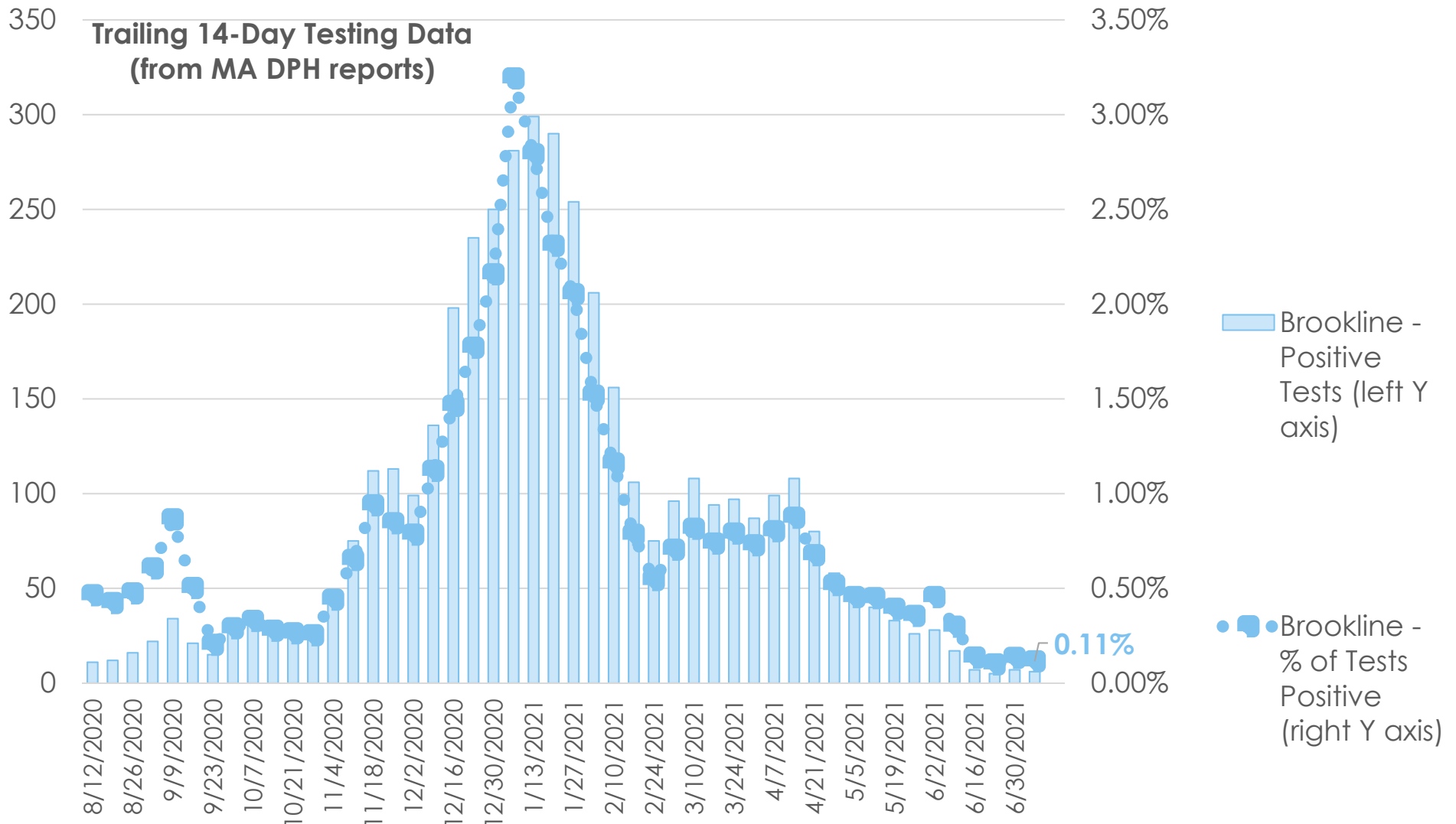
Brookline's population is ~60,000

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.

Trends: Avg. Daily New Cases per 100k

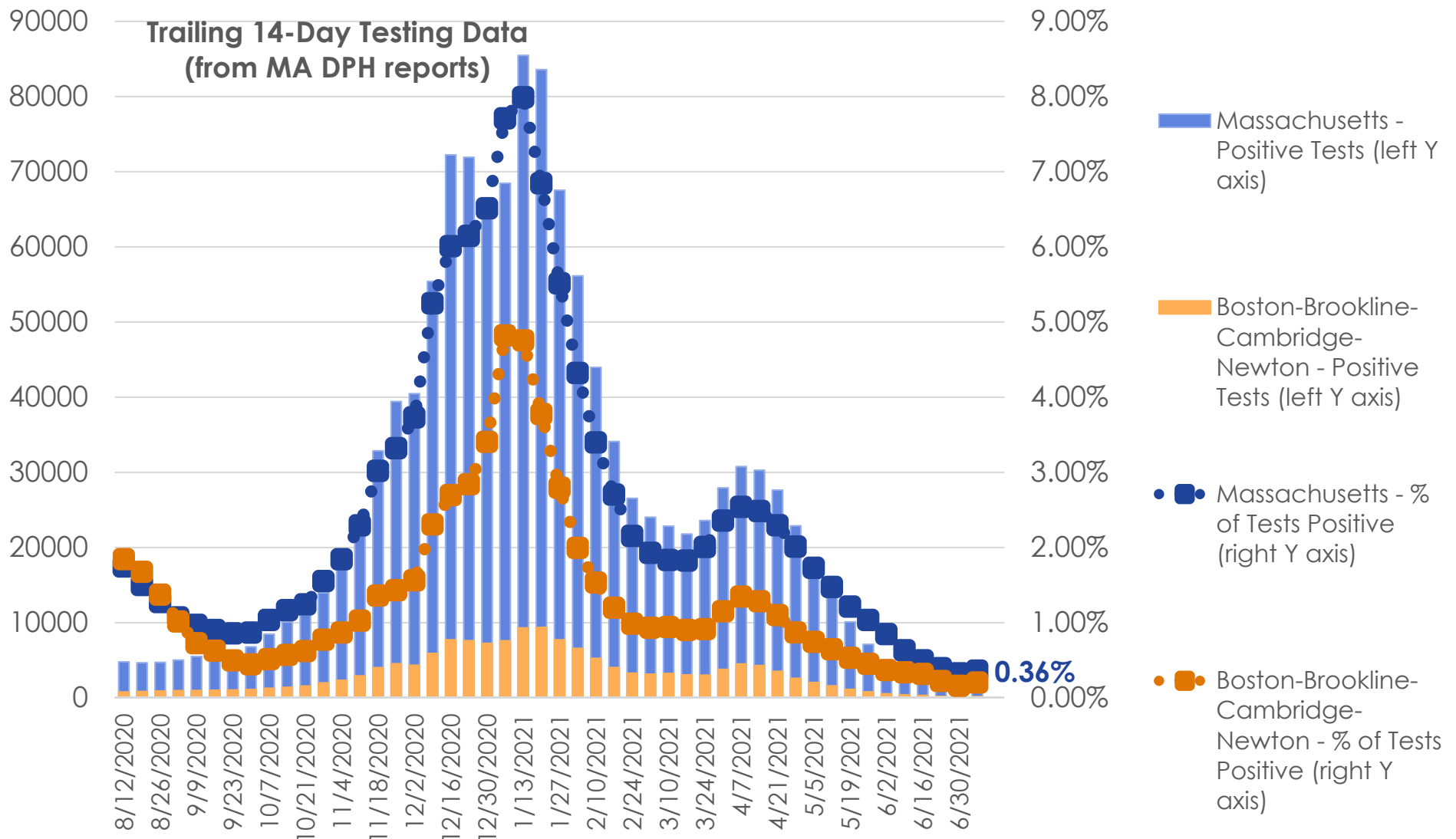


Trends: Test Positivity (Brookline)



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

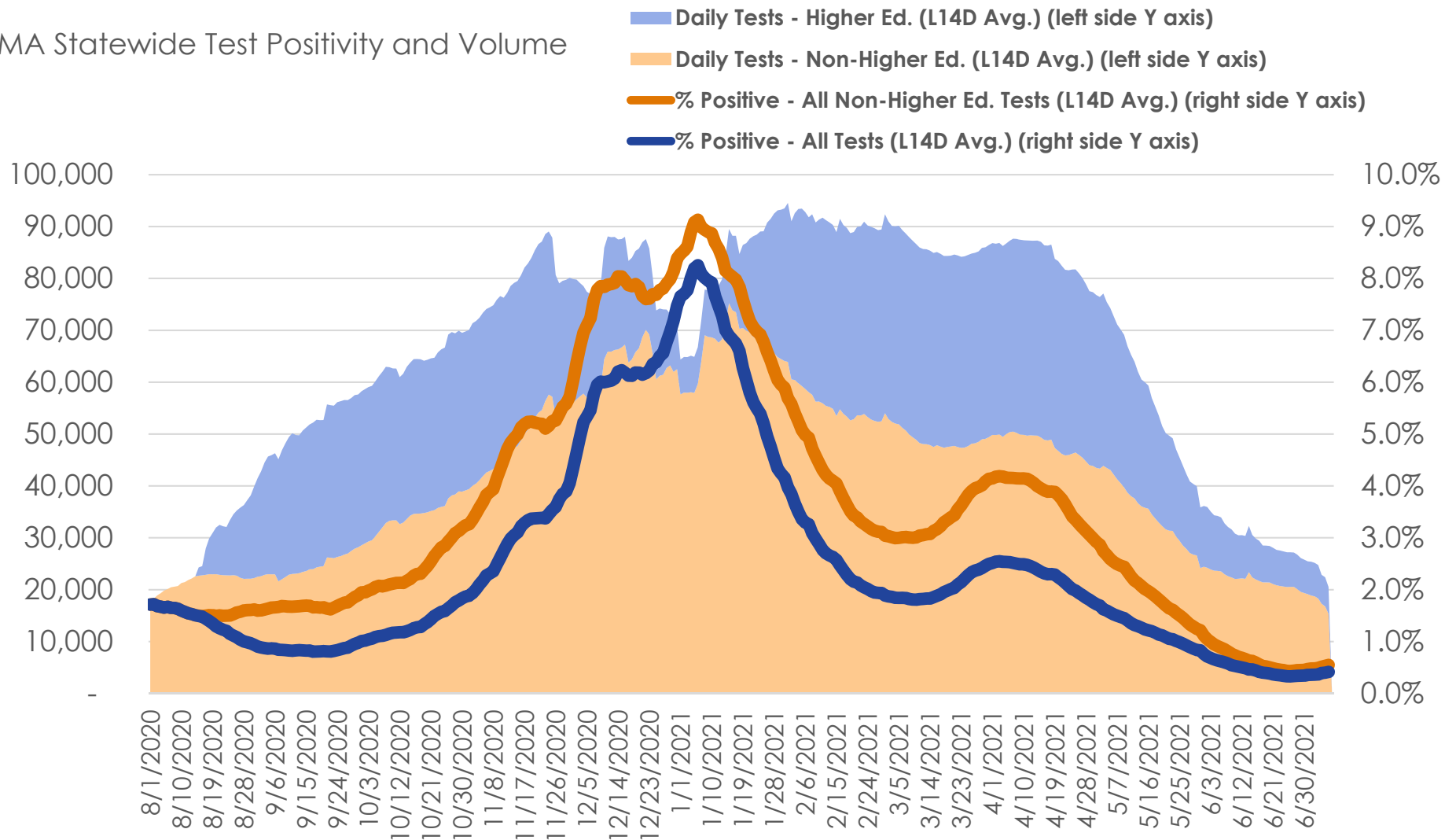
Trends: Test Positivity (Statewide)



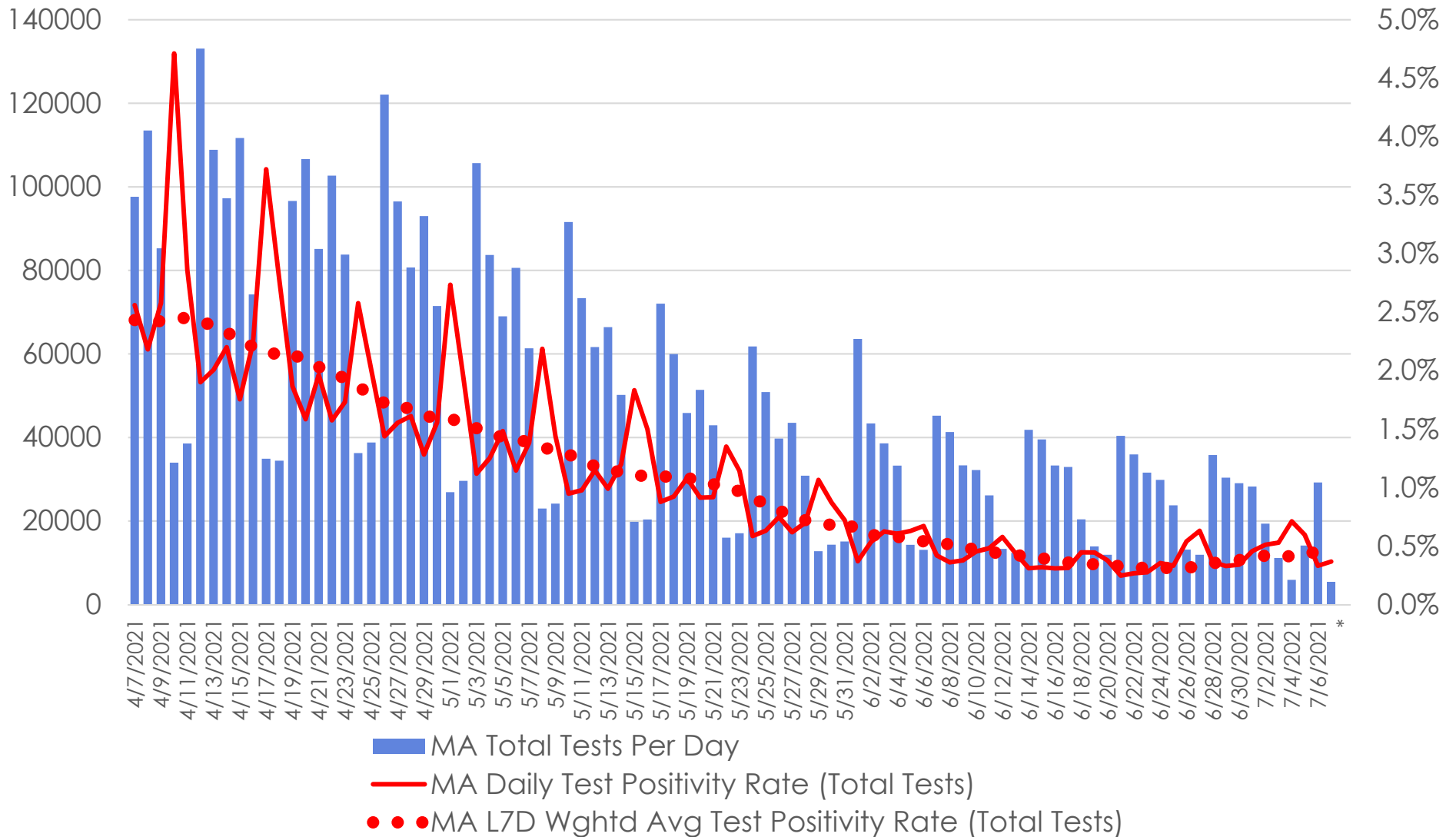
Data source: <https://www.mass.gov/info-details/covid-19-response-reporting>

Trends: Test Positivity and Testing Volume (Statewide)

MA Statewide Test Positivity and Volume

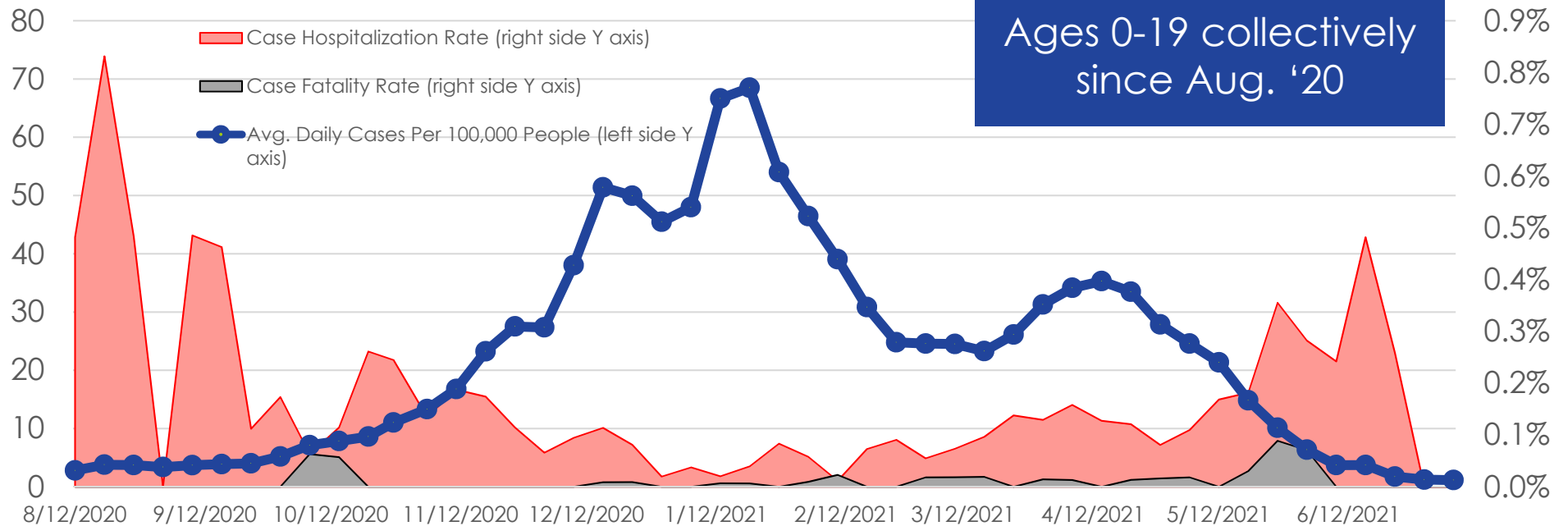


Trends: Daily Test Volumes and Positivity (Statewide)



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

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

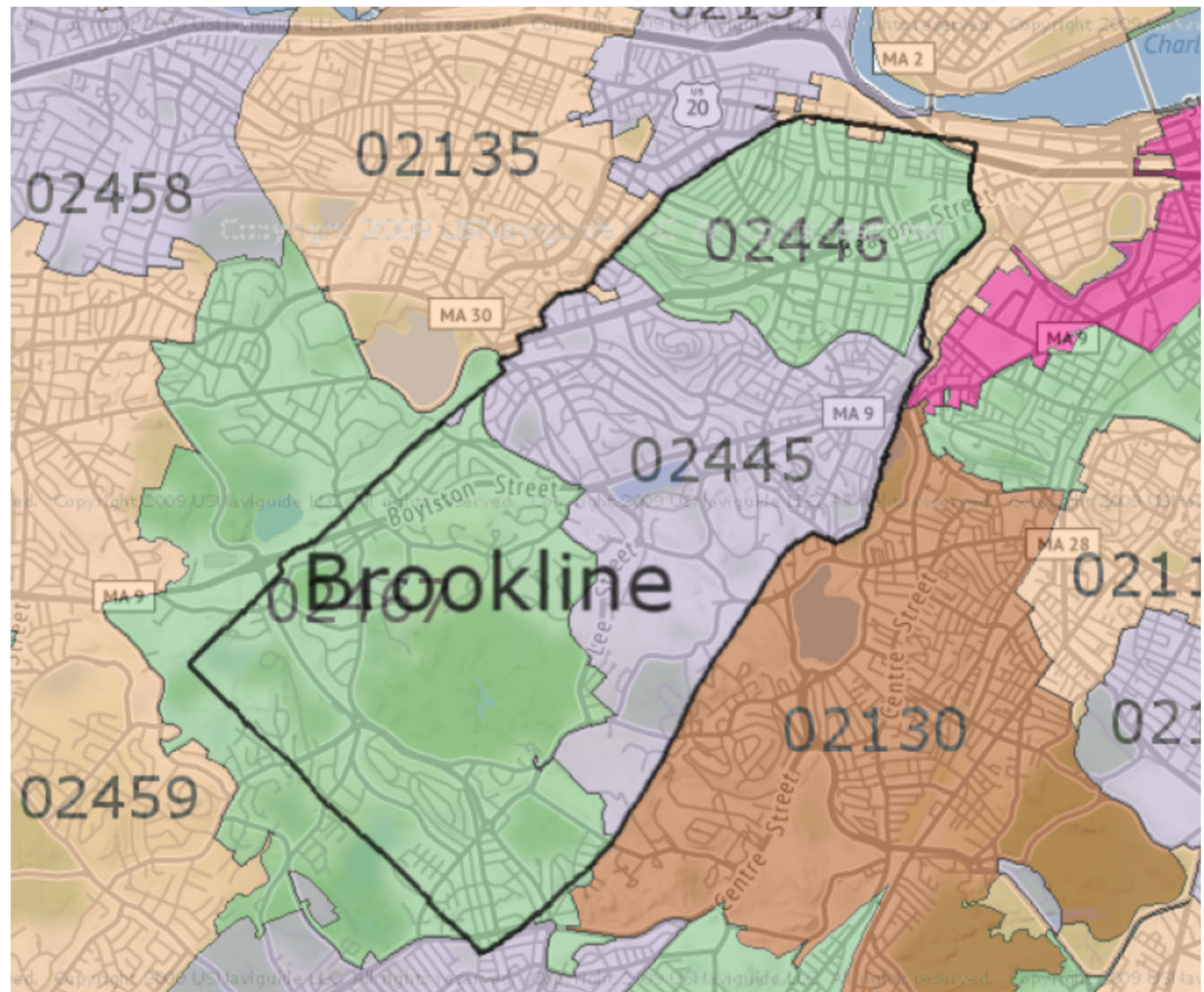


More specific, for period of 6/20 – 7/3/2021:	Avg. Daily Cases/100k	Case Hospitalization Rate (approx.)	Case Fatality Rate (approx.)
<5 yo (unvaxxed)	1.3	NR	No deaths
5-9 yo (unvaxxed)	1.0	NR	No deaths
10-14 yo (some vaxxed)	1.2	NR	No deaths
15-19 yo (largely vaxxed)	1.1	NR	No deaths
All ages (largely vaxxed)	1.2	NR	2.18%

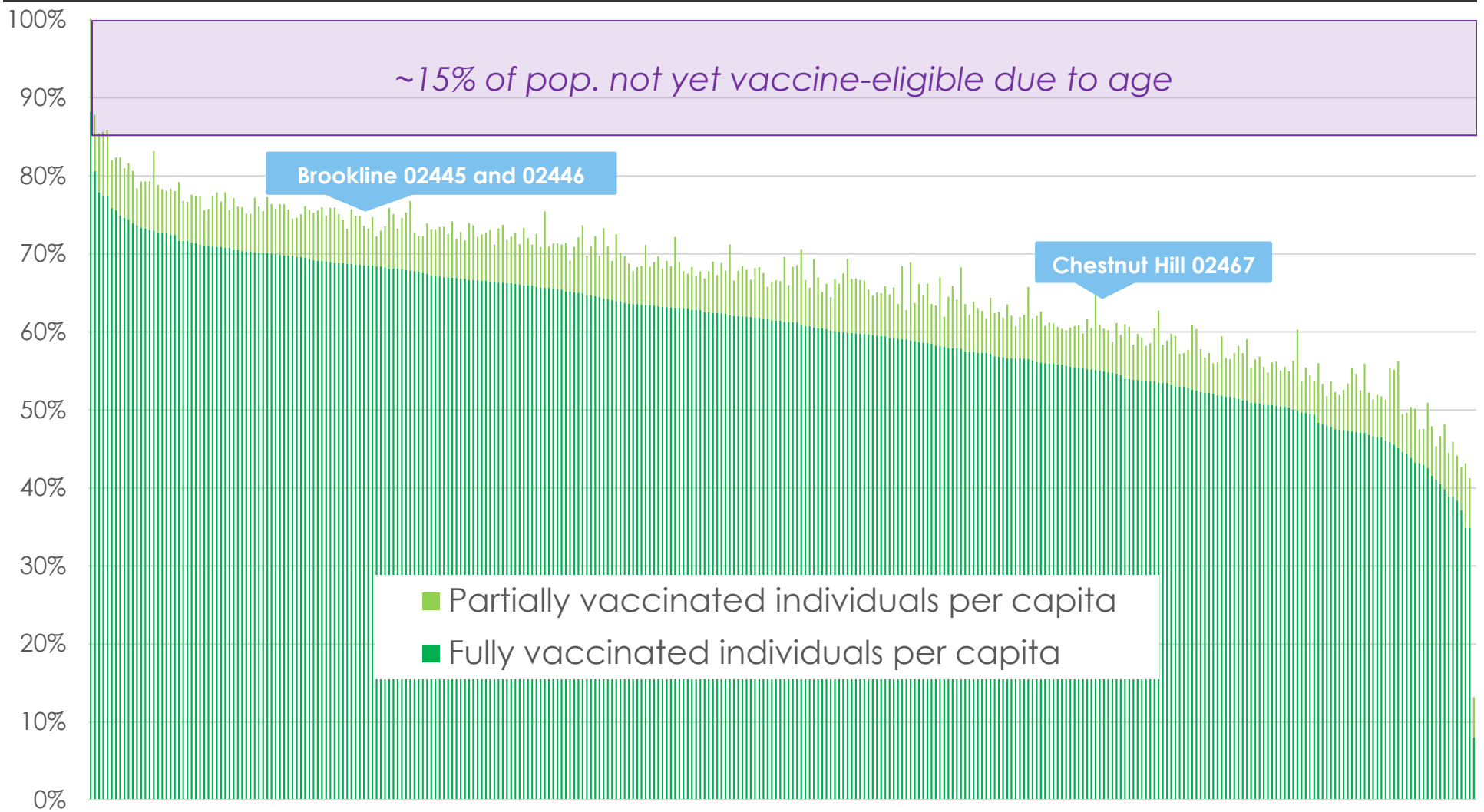
Data source: <https://www.mass.gov/info-details/covid-19-response-reporting>

Brookline Vaccination Data

- Brookline consists of zip codes 02445 and 02446 plus much but not all of 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



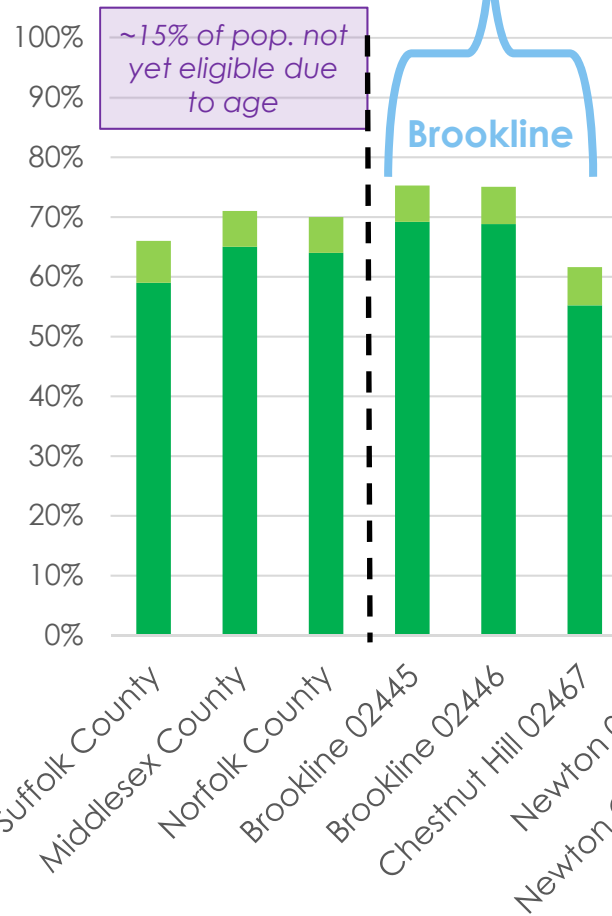
MA DPH Vaccination Rate Data By ZIP Code: 7/6/2021 (all ages; all MA ZIP codes with pop. \geq 5,000)



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

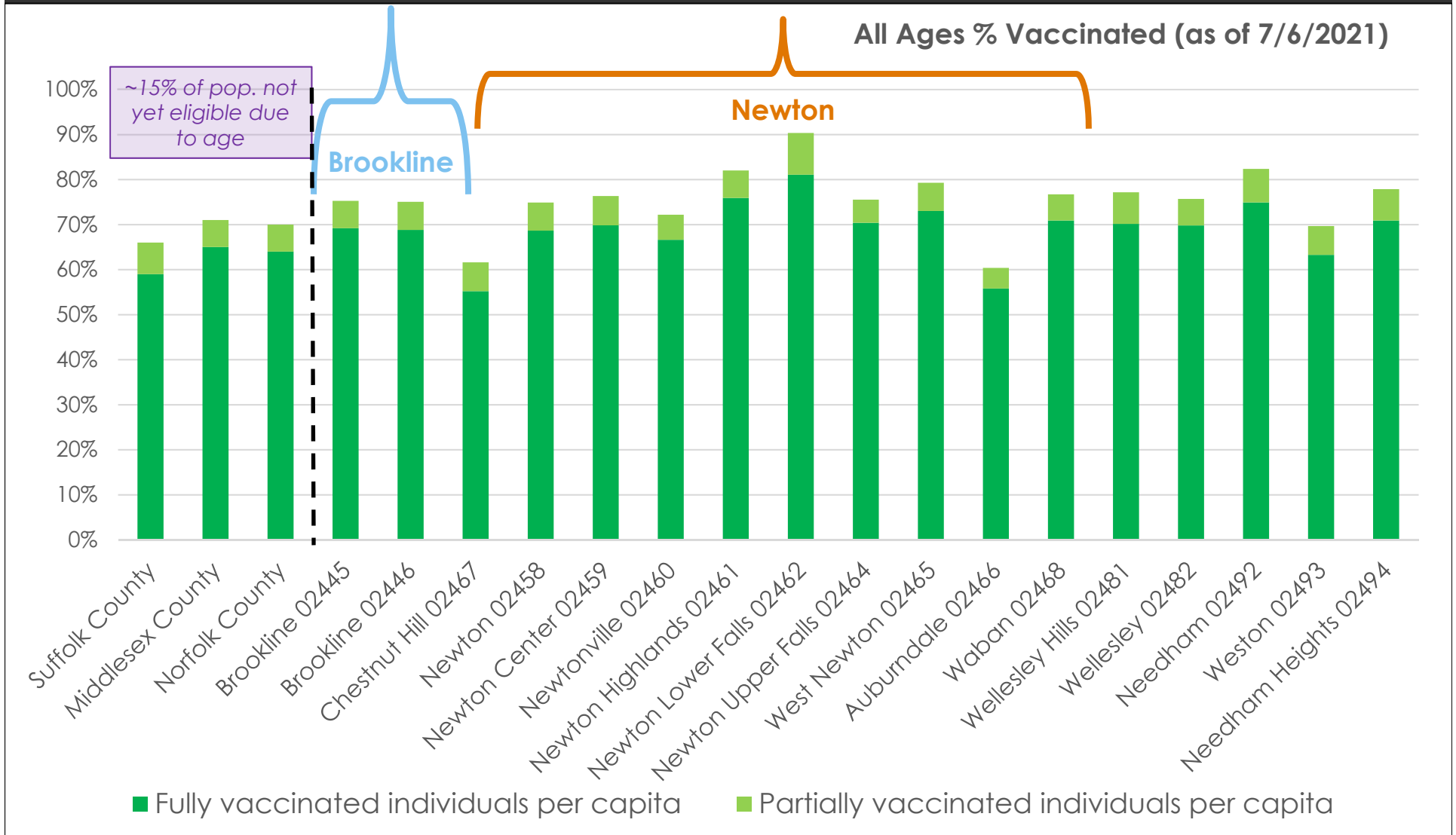
MA DPH Vaccination Rate Data By County and ZIP Code: 7/6/2021

All Ages % Vaccinated (as of 7/6/2021)



■ Fully vaccinated individuals per capita ■ Partially vaccinated individuals per capita

MA DPH Vaccination Rate Data By County and ZIP Code: 7/6/2021



MA DPH Vaccination Rate Data: 7/6/2021

	(fully + partially vaccinated individuals by age)	
ZIP	12-15 Years Old	16-19 Years Old
Brookline 02445	863 + 155	769 + 78
Brookline 02446	733 + 134	716 + 84
Chestnut Hill 02467	694 + 128	980 + 231
Est. Brookline Total	<i>~500 + 90 per age year/grade</i>	<i>~500 + 70 per age year/grade</i>

PSB's 2020-2021 COVID-19 Risk Mitigation Strategy

Starting Point: Which Transmission Pathways are We Trying to Control?

- Two major pathways:
 - **Larger (non-airborne) respiratory droplets at short range**
 - **Smaller (aerosol) respiratory droplets in shared, confined air spaces**
- Possible pathway but now thought to be much lower risk:
 - **Surface (fomite)-based transmission**
 - Most recent CDC Science Brief (4/5/2021) cites a <1/10,000 risk estimate for infection for each touch of a contaminated surface

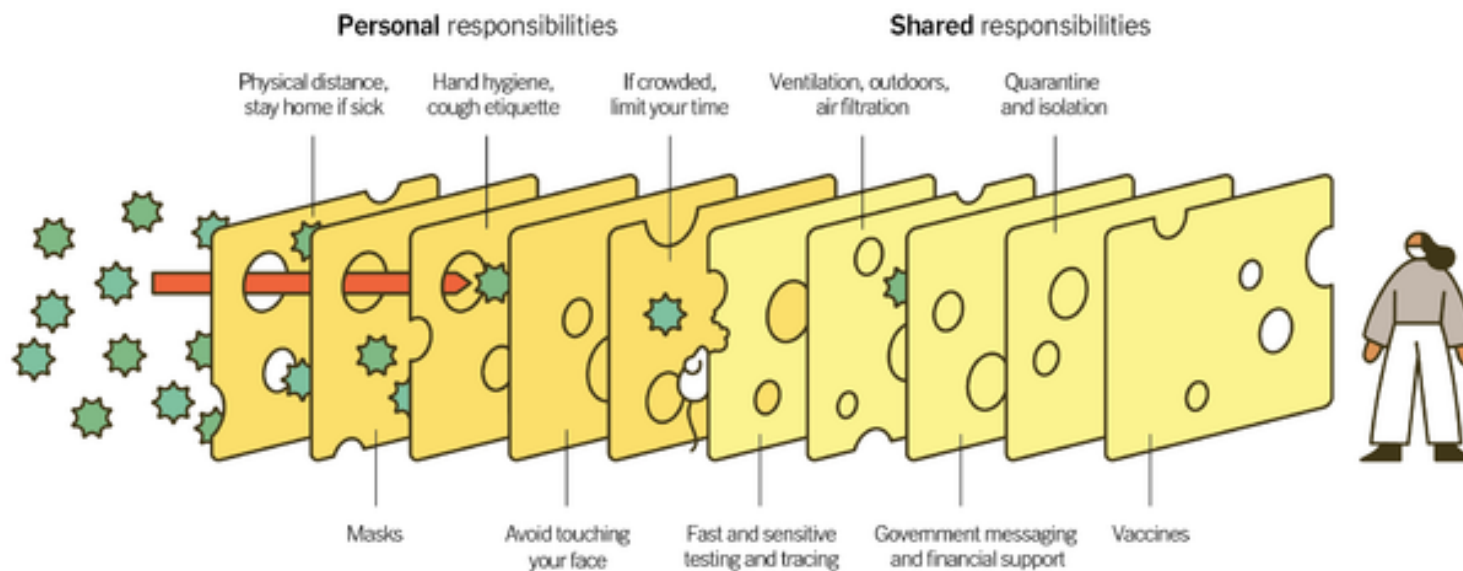
Source: <https://www.cdc.gov/coronavirus/2019-ncov/more/science-and-research/surface-transmission.html>

Multi-Layered Mitigation Strategies are Key

- Multiple layers of defense means that we are not reliant upon any of them to be implemented perfectly or 100% consistently (the “Swiss Cheese” model):

Multiple Layers Improve Success

The Swiss Cheese Respiratory Pandemic Defense recognizes that no single intervention is perfect at preventing the spread of the coronavirus. Each intervention (layer) has holes.



Source: Adapted from Ian M. Mackay (virologydownunder.com) and James T. Reason. Illustration by Rose Wong

Source: <https://www.nytimes.com/2020/12/05/health/coronavirus-swiss-cheese-infection-mackay.html>, illustration by Rose Wong, (adapted from Ian M. Mackay (virologydownunder.com) and James T. Reason) 17

PSB's Multi-Layered Mitigation Strategy

- 1. Daily symptom screening:** Repeated requests and instructions to staff and families with stay-home advice if any symptoms present
- 2. PPE:** Universal mask requirement except at designated mask breaks; face shields and eye protection made available to teachers and staff
- 3. Enhanced ventilation:** all multiple-occupant spaces getting at least 4-5 air changes per hour of outside/MERV-13+ filtered air; most even higher
- 4. Hand hygiene and respiratory etiquette,** including handwashing/sanitizer
- 5. Contact tracing, isolation, and quarantine** through Brookline Health Dept. and PSB school nursing joint efforts
- 6. Asymptomatic PCR testing:** pooled, with combination rapid antigen/PCR reflex
- 7. Physical distancing** between individuals in school buildings (originally 6' universally; then 3-6' when masked, with 6' during unmasked times)
- 8. Enhanced surface cleaning and disinfection** (relaxed late in year)

Summary of PSB's COVID-19 Experience to Date (through 7/7/2021)

- Sept. 2020 – June 2021:
 - **200,000+ staff member-days** in buildings
 - **580,000+ student-days** in buildings
- **305 known COVID-19 cases among PSB students and staff**
 - Contact tracing completed by local health dept. + school nursing team
 - Nearly all believed to be community-acquired (e.g., some individuals were in 100% remote cohorts)
 - **71 were present in buildings during likely contagious periods** (48 hours prior to symptom onset/COVID+ test)
- **Very few instances of suspected in-school transmission:**
 - ~4 likely or “can’t rule out” cases
 - Just ~2 of 385 (0.5%) of in-school close contacts tested positive or developed COVID-19-consistent symptoms

Public Schools of Brookline Case Counts: Trends Over Time

Data Last Updated: 6/18/21

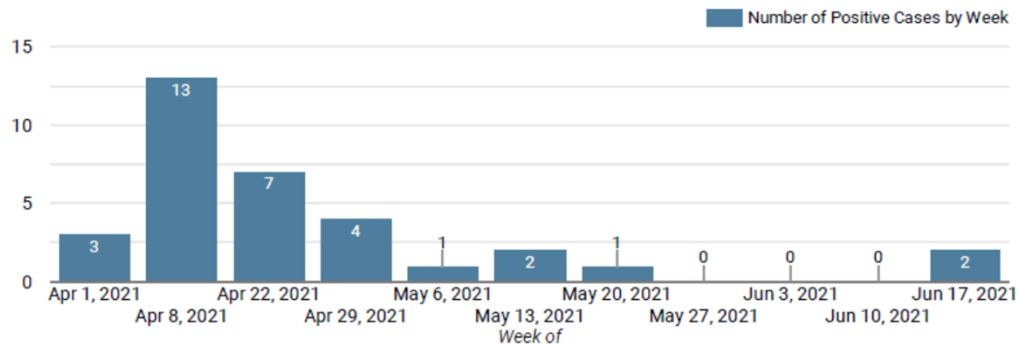


COVID-19 CASES: DISTRICT DASHBOARD

Dashboard outlines number of positive COVID-19 cases in the PSB school community by week and learning model. For the purpose of this dataset, weeks run **Friday to Thursday**.

Source: Public Schools of Brookline School Health Services Department

Number of Positive Cases, by Week*



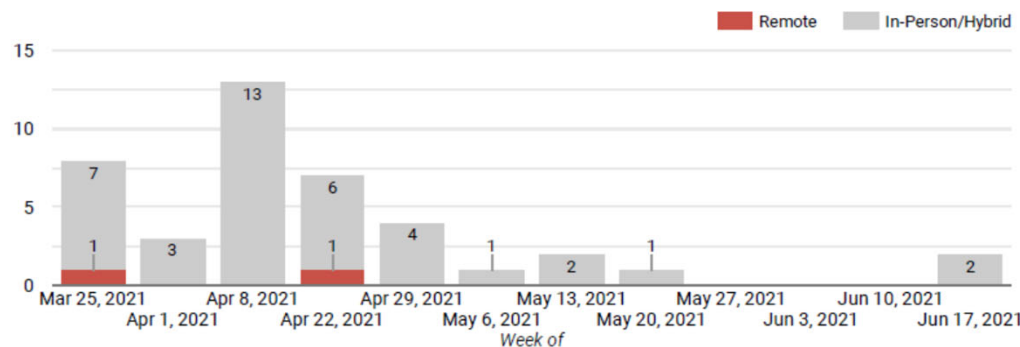
TOTAL PSB CASES TO DATE*: 305

Remote: 35
Hybrid/In-Person: 270

Total among school-based students and staff: 301

*Testing paused from 4.16 - 4.22 due to April Vacation.

Number of Positive Cases, by Week and Learning Model



TOTAL CLOSE CONTACTS: 385 connected to 71 cases**

Total positive cases with no close contacts** at school: 207

**Close contacts are defined as anyone who has been within 6 feet of an positive case for at least 15 minutes during the infectious period.

Public Schools of Brookline Case Counts: By School

Data Last Updated: 6/18/21



COVID-19 CASES: SCHOOL BY SCHOOL DASHBOARD

The table outlines the number of positive COVID-19 cases by week and the number of cumulative cases for the year at each school. For the purpose of this dataset, weeks run **Friday to Thursday**.
Source: Public Schools of Brookline School Health Services Department

Number of Positive Cases, by School & District Offices (Week of 6/10 - 6/17)

School/Building	Weekly Positive Cases	Cumulative Positive Cases	Close Contacts	Cases with Close Contacts
BEEP @ Beacon	0	3	-	-
BEEP @ Clark	0	2	-	-
BEEP @ Lynch	0	1	-	-
BEEP @ Putterham	0	3	-	-
Baker	0	39	-	-
Brookline High School	0	81	-	-
Driscoll	1	18	-	-
Florida Ruffin Ridley	0	26	-	-
Heath	0	12	-	-
Lawrence	0	26	-	-
Lincoln	0	26	-	-
Pierce	0	36	-	-
Remote Learning Academy K-8	0	12	-	-
Runkle	1	19	9	1
Total*	2	304	9	1

*1 staff case shared between schools during week of 1.28-2.4

School/Building	Weekly Positive Cases	Cumulative Positive Cases	Close Contacts	Cases with Close Contacts
District Office	0	4	-	-

Public Schools of Brookline Case Counts: Students (By Grade) and Staff

Data Last Updated: 6/18/21



COVID-19 CASES: GRADE LEVEL AND STAFF DASHBOARD

The table outlines the number of positive COVID-19 cases by week and the number of cumulative cases for the year at each school. For the purpose of this dataset, weeks run **Friday to Thursday**.
Source: Public Schools of Brookline School Health Services Department

Total Number of Positive Cases, by Grade Level and Staffing (Week of 6/10 - 6/17)

Grade Level	Weekly Positive Cases	Cumulative Positive Cases
BEEP/Pre-K	0	5
Kindergarten	0	23
1st Grade	0	20
2nd Grade	1	14
3rd Grade	0	12
4th Grade	0	11
5th Grade	0	14
6th Grade	0	15
7th Grade	0	13
8th Grade	0	24
9th Grade	0	13
10th - 12th Grade	0	49
Staff (School-Based)*	1	86
Staff (District Office)	0	4
Total	2	303

*1 staff case shared between schools during week of 1.28-2.4

Chart source: <https://sites.google.com/psbma.org/psb-reopening-hub/dashboard>

Public Schools of Brookline Case Counts: Asymptomatic Testing Program Results

Data Last Updated: 6/15/21



COVID-19 CASES: STAFF ASYMPTOMATIC TESTING

The table outlines the test results of our COVID-19 pooled testing program. For the purpose of this dataset, weeks run Friday to Thursday.

Source: Public Schools of Brookline School Health Services Department

Staff Asymptomatic Testing Program Results

On Friday, January 15, 2021, the Public Schools of Brookline launched the voluntary staff COVID-19 PCR testing program for all "student-facing staff". This program is strictly for asymptomatic staff. This program is piloted by the Broad Institute, with tests collected and brought to each school. The turn-around time for these test results is within 24 hours.

The asymptomatic testing was paused from February 5 through February 26 as the district expanded the program to include pooled testing with students with support from the Massachusetts Department of Elementary and Secondary Education (DESE). Pooled testing involves mixing several test samples together in a "pool" and then testing the pooled sample with a PCR test for detection of SARS-CoV-2. Staff were put into pools of 5. The first week of this program launched on Monday, March 1, 2021. Testing was paused for the week of April 19 due to April Vacation. Testing ended on Friday, June 11, 2021.

Week of ^	Tests Processed	Positive Results	TNP (Tests Not Processed)	Test Positivity %	Pools Submitted	Positive Pools	Pool Positivity %
2021-03-08	433	0	0	0%	88	0	0%
2021-03-15	450	0	0	0%	91	0	0%
2021-03-22	501	1	2	0.2%	92	1	1.09%
2021-03-29	520	0	0	0%	94	0	0%
2021-04-05	482	0	0	0%	87	0	0%
2021-04-12	495	0	0	0%	94	0	0%
2021-04-19	-	-	-	-	-	-	-
2021-04-26	504	0	0	0%	94	0	0%
2021-05-03	490	0	0	0%	89	0	0%
2021-05-10	475	0	0	0%	84	0	0%
2021-05-17	437	0	0	0%	69	0	0%
2021-05-24	444	0	0	0%	75	0	0%
2021-05-31	405	0	0	0%	68	0	0%
2021-06-07	342	0	0	0%	59	0	0%
Total	6,373	3	2	0.05%	1,165	3	0.26%

Public Schools of Brookline Case Counts: Asymptomatic Testing Program Results

Data Last Updated: 6/15/21



COVID-19 CASES: STUDENT ASYMPTOMATIC TESTING

The table outlines the test results of our COVID-19 pooled testing program. For the purpose of this dataset, weeks run Friday to Thursday.

Source: Public Schools of Brookline School Health Services Department

Student Asymptomatic Testing Program Results

In March 2021, the district expanded the asymptomatic testing program to include pooled testing with students with support from the Massachusetts Department of Elementary and Secondary Education (DESE). Pooled testing involves mixing several test samples together in a "pool" and then testing the pooled sample with a PCR test for detection of SARS-CoV-2. The first week of this program launched on Monday, March 8, 2021. Testing was paused for the week of April 19 due to April Vacation. Testing ended on Friday, June 11, 2021.

Week of	Tests Processed	Positive Results	Test Positivity %	Pools Submitted	Positive Pools	Pool Positivity %
2021-03-08	157	0	0%	19	0	0%
2021-03-15	395	1	0.25%	47	1	2.13%
2021-03-22	1,463	0	0%	161	0	0%
2021-03-29	1,474	0	0%	121	0	0%
2021-04-05	2,014	0	0%	214	0	0%
2021-04-12	2,180	2	0.09%	225	2	0.89%
2021-04-19	-	-	-	-	-	-
2021-04-26	2,256	0	0%	312	0	0%
2021-05-03	2,348	0	0%	234	0	0%
2021-05-10	2,271	0	0%	241	0	0%
2021-05-17	2,293	0	0%	181	0	0%
2021-05-24	2,233	0	0%	199	0	0%
2021-05-31	2,105	0	0%	193	0	0%
2021-06-07	1,973	0	0%	185	0	0%

Chart source: <https://sites.google.com/psbma.org/psb-reopening-hub/dashboard>

Public Schools of Brookline Case Counts: Asymptomatic Testing Program Results

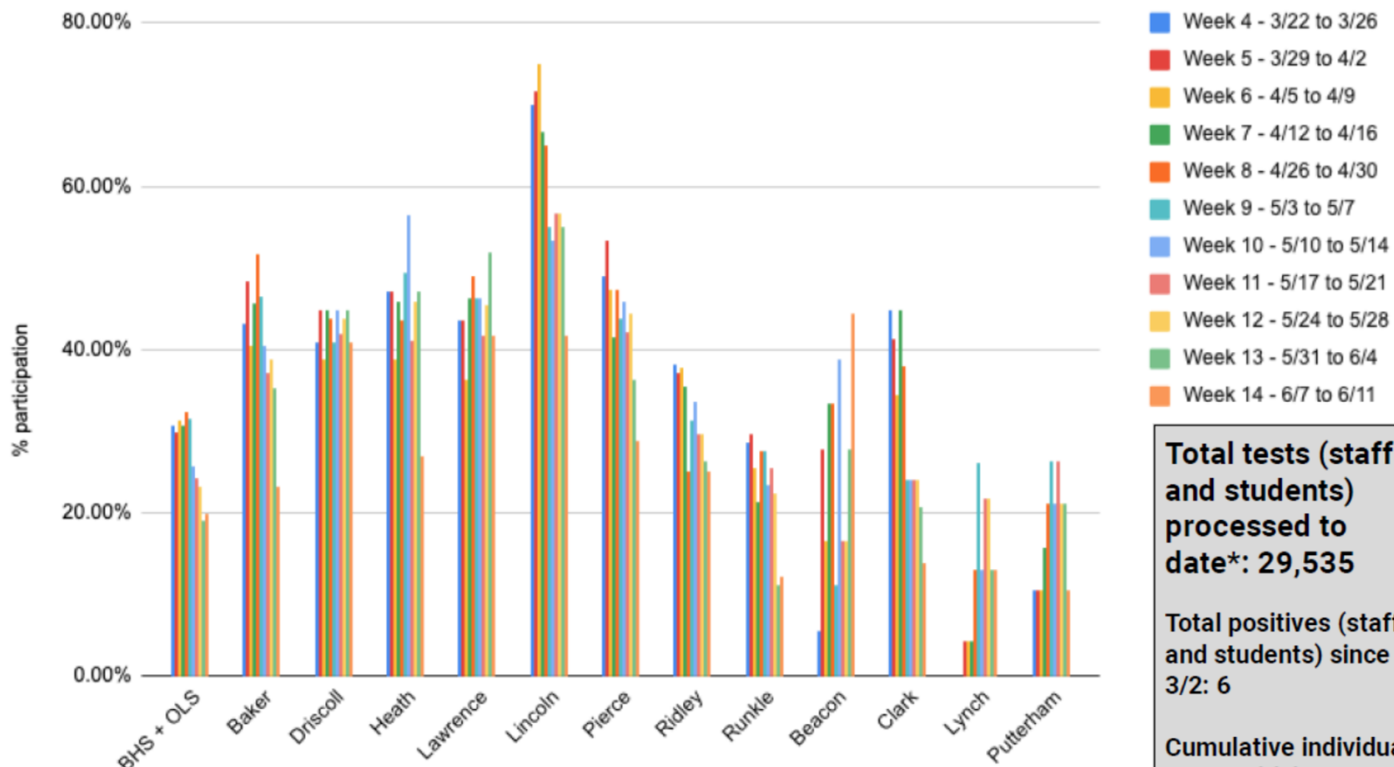
Data Last Updated: 6/15/21



COVID-19 TESTING: STAFF TESTING PARTICIPATION RATE

The table outlines the test results of our COVID-19 pooled testing program. For the purpose of this dataset, weeks run Friday to Thursday.
Source: Public Schools of Brookline School Health Services Department

Staff Participation Rate (%) for Pooled Testing



*Testing paused from 4.16 - 4.22 due to April Vacation.

Public Schools of Brookline Case Counts: Asymptomatic Testing Program Results

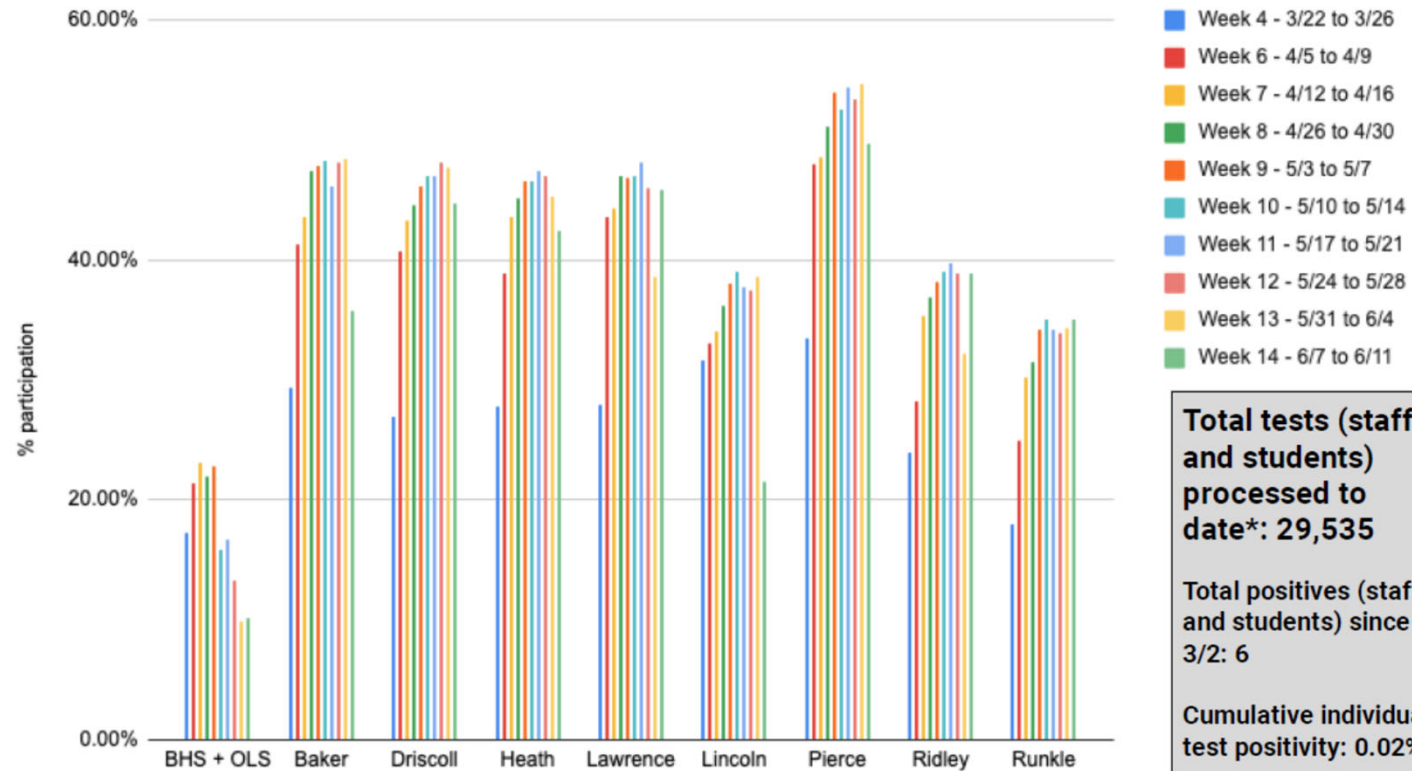
Data Last Updated: 6/15/21



COVID-19 TESTING: STUDENT TESTING PARTICIPATION RATE

The table outlines the test results of our COVID-19 pooled testing program. For the purpose of this dataset, weeks run Friday to Thursday.
Source: Public Schools of Brookline School Health Services Department

Student Participation Rate (%) for Pooled Testing

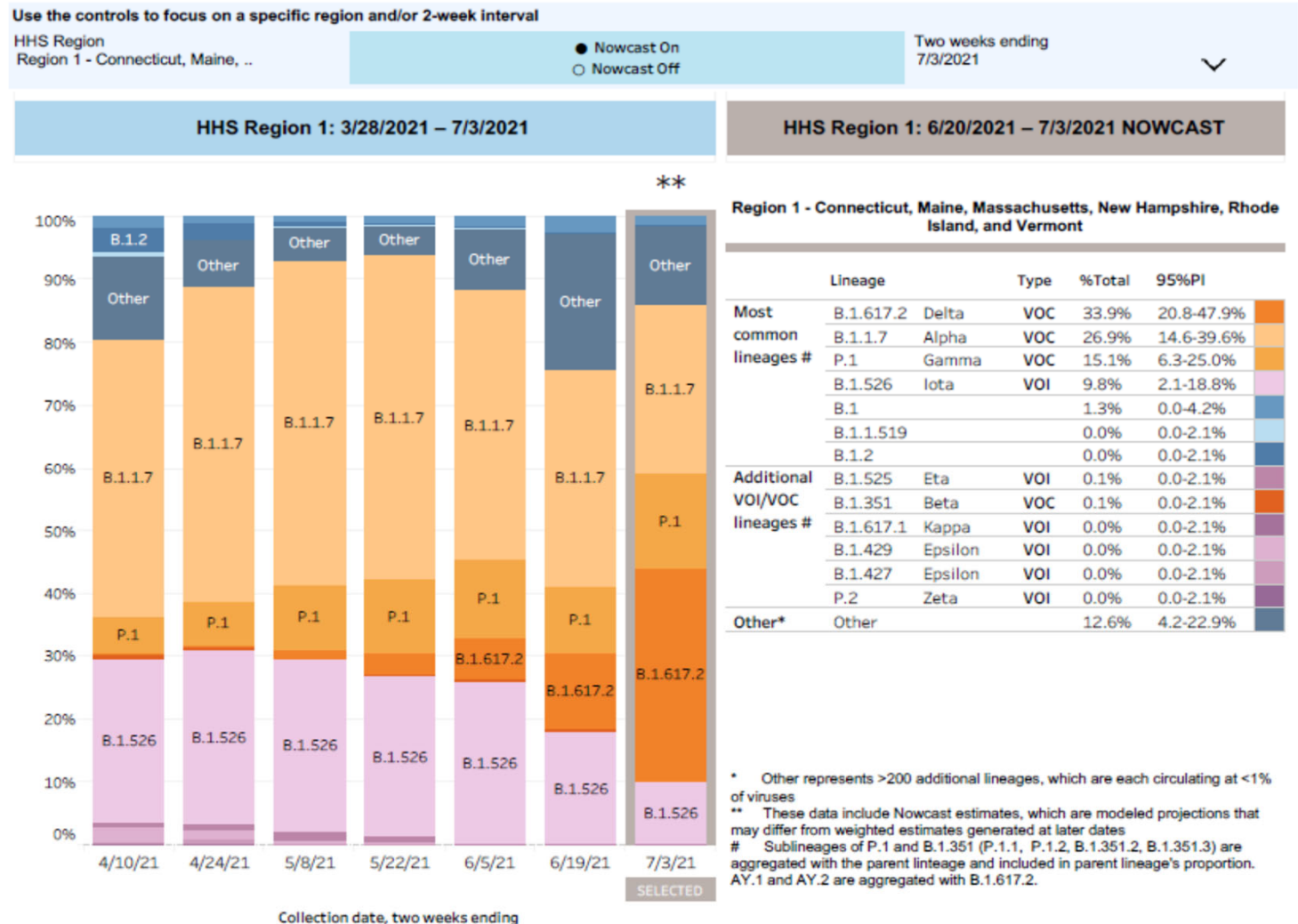


*Testing paused from 4.16 - 4.22 due to April Vacation.

COVID-19 Variants of Concern Update

Delta (B.1.617.2)

- Seems ~2x as transmissible as pre-Alpha US wild type
- Already predominant US strain
- “Potential reduction” in vax. efficacy, but 2-dose vaccines appear effective



Source: <https://covid.cdc.gov/covid-data-tracker/#variant-proportions>; <https://www.cdc.gov/coronavirus/2019-ncov/variants/variant-info.html>

CDC Guidance Updates – July 9, 2021

“Key Takeaways”

- Prioritize in-person learning
- Promote vaccination as leading prevention strategy
- Masks:
 - Indoors - all unvaccinated people (2+ yo) should wear
 - Outdoors - generally not needed, but consider in crowded, non-distanced settings when community transmission is elevated
- ≥ 3 ft physical distancing in classrooms where feasible
- All should stay home with symptoms
- Multi-layered mitigation strategy—especially where many students/staff are not fully vaccinated, community transmission is elevated, etc.

CDC Guidance Updates – July 9, 2021

Screening Testing Recommendations

	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

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 [🔗](#) .