PUBLIC SCHOOLS of BROOKLINE

Advisory Panel 4:
Public Health, Safety, & Logistics

Metrics Review

Updated CDC Guidance

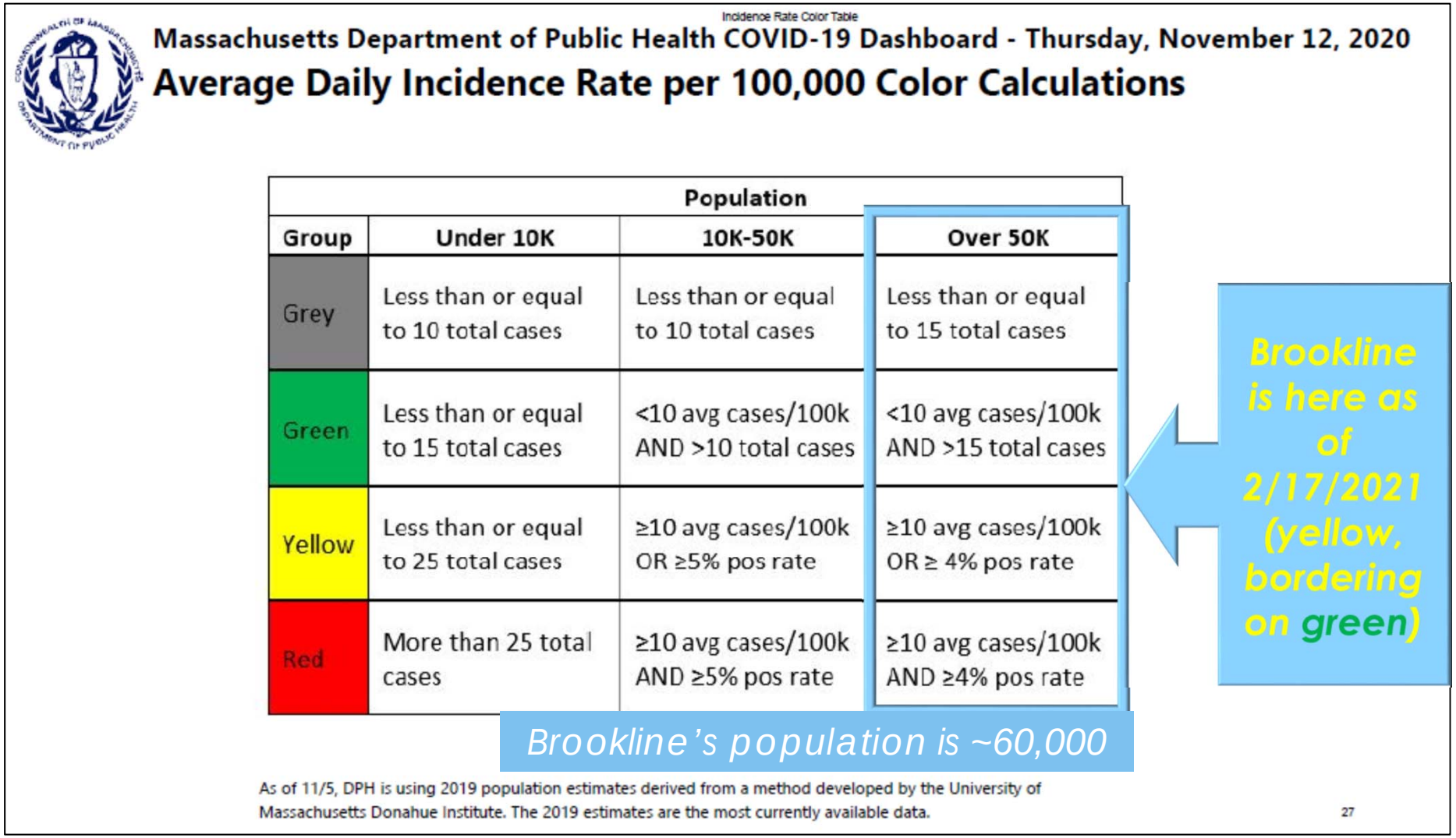
February 19, 2021

Community Benchmarks - Status

Benchmark (each measured over prior 14 days)	Status 1/27/21	Status 2/3/21	Status 2/10/21	**Status 2/17/21**
Avg. daily new case count in Brookline = <10 per 100k people	24.3	19.9	15.3	**10.4**
Avg. daily new case count in Mass. = <10 per 100k people	59.4	48.9	38.5	**30.0**
Avg. test positivity rate in Brookline = <5.0%	2.05%	1.52%	1.16%	**0.78%**
Avg. test positivity rate in Massachusetts = <5.0%	5.51%	4.32%	3.40%	**2.70%**

Data source: https://www.mass.gov/info-details/covid-19-response-reporting#covid-19-weekly-public-health-report-

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's population is ~60,000

Brookline is here as of 2/17/2021 (yellow, bordering on green)

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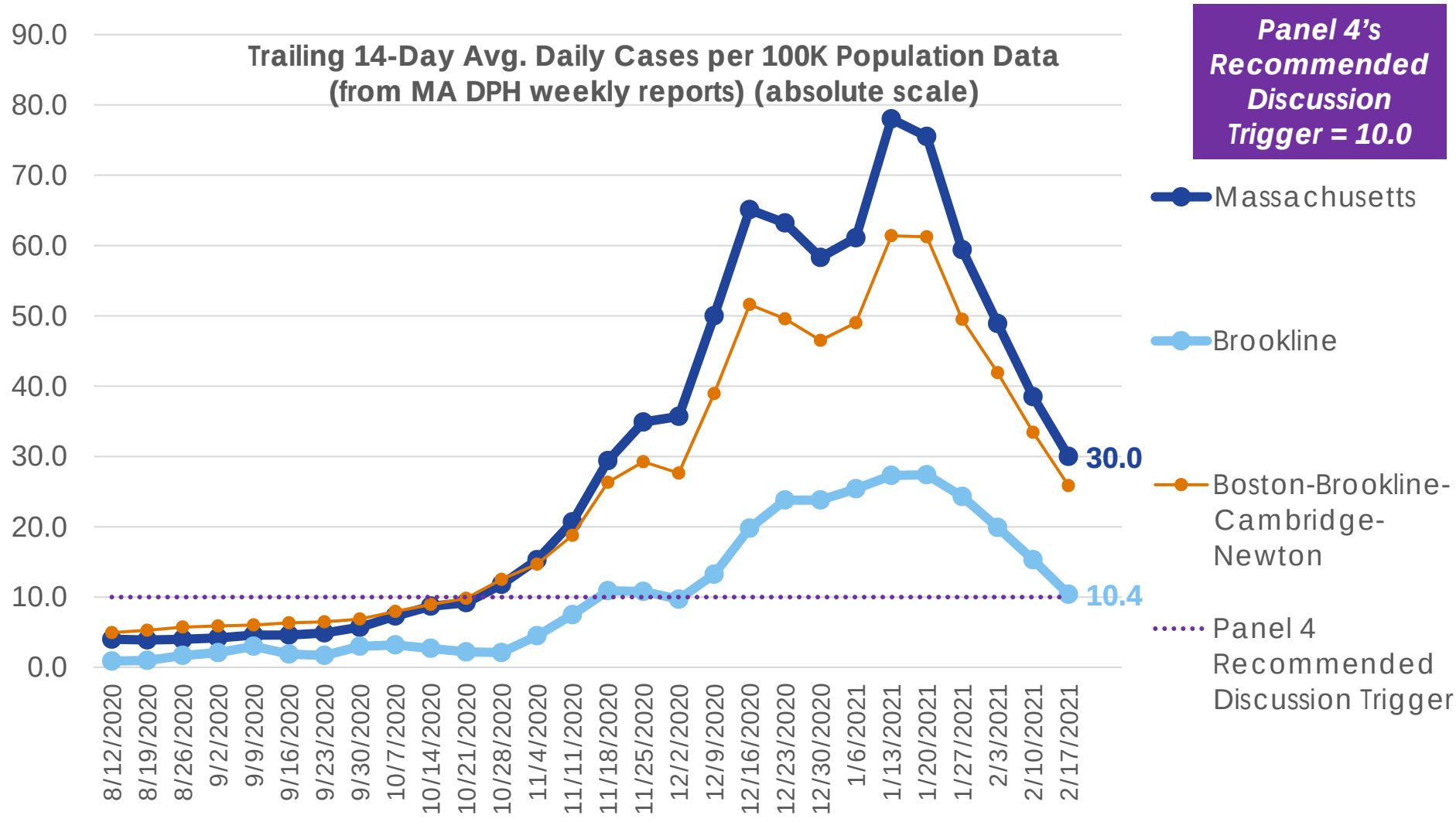
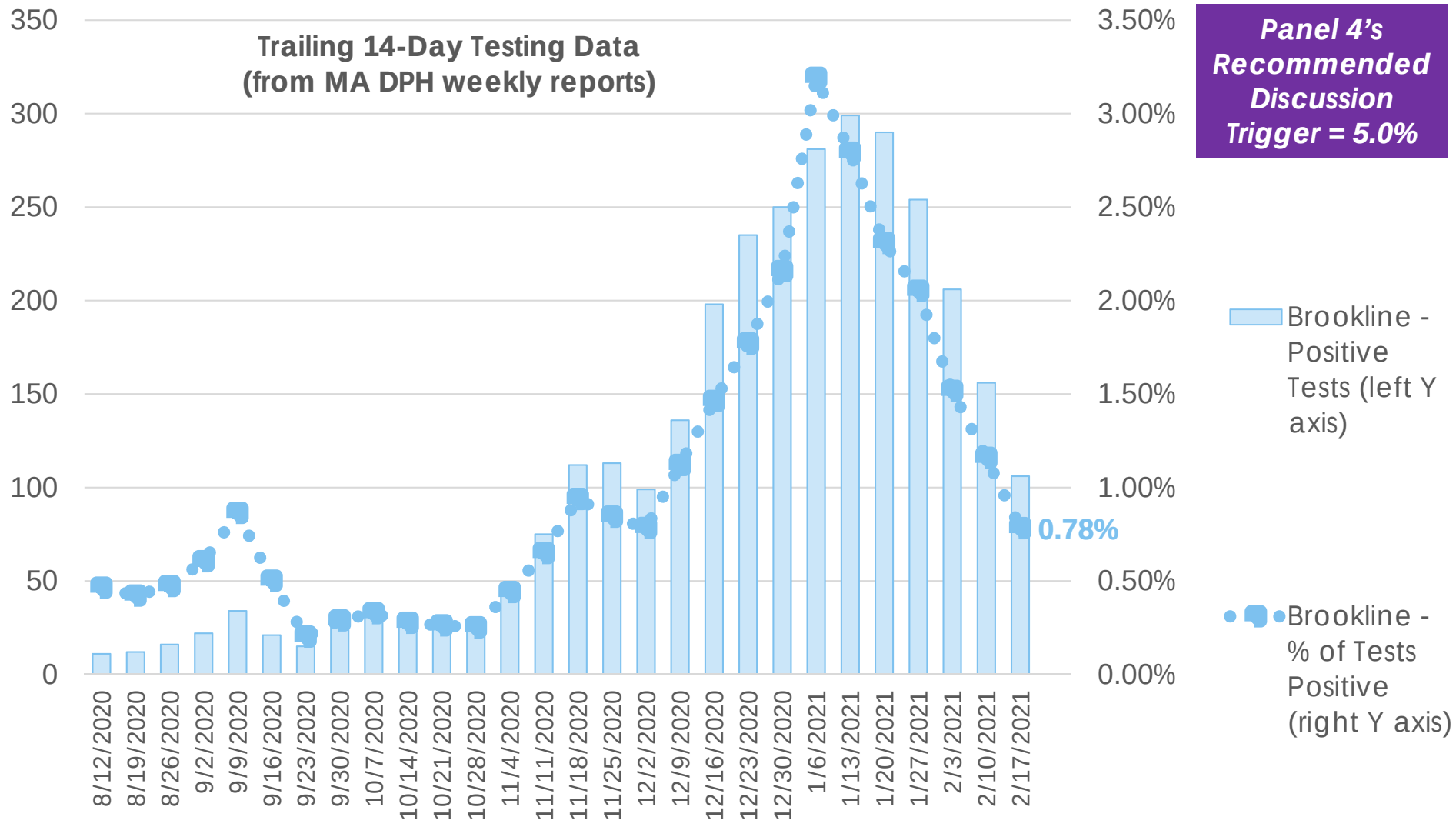
Chart source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: Avg. Daily New Cases per 100k



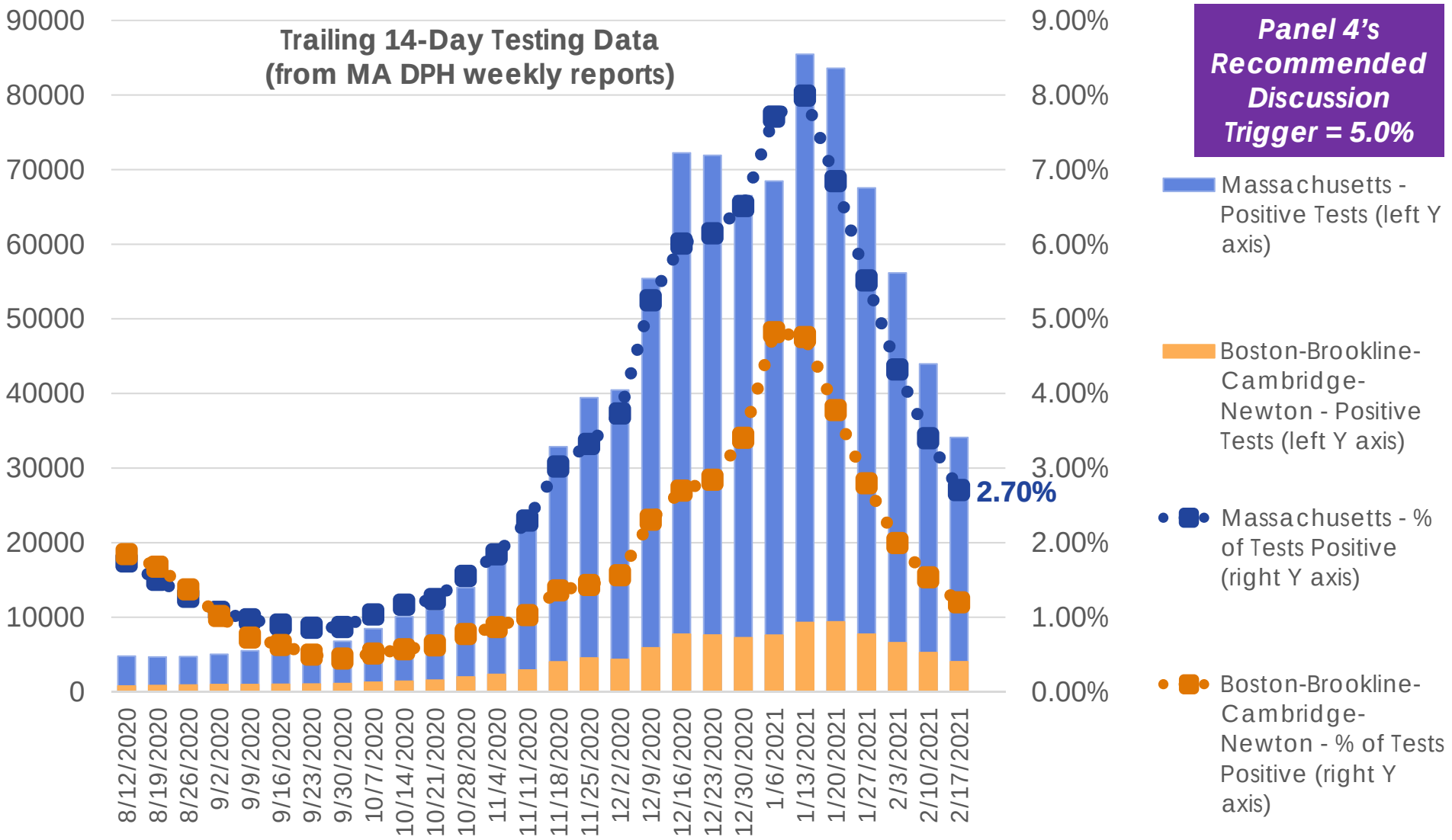
Data source: https://www.mass.gov/info-details/covid-19-response-reporting#covid-19-weekly-public-health-report-

Trends: Test Positivity (Brookline)



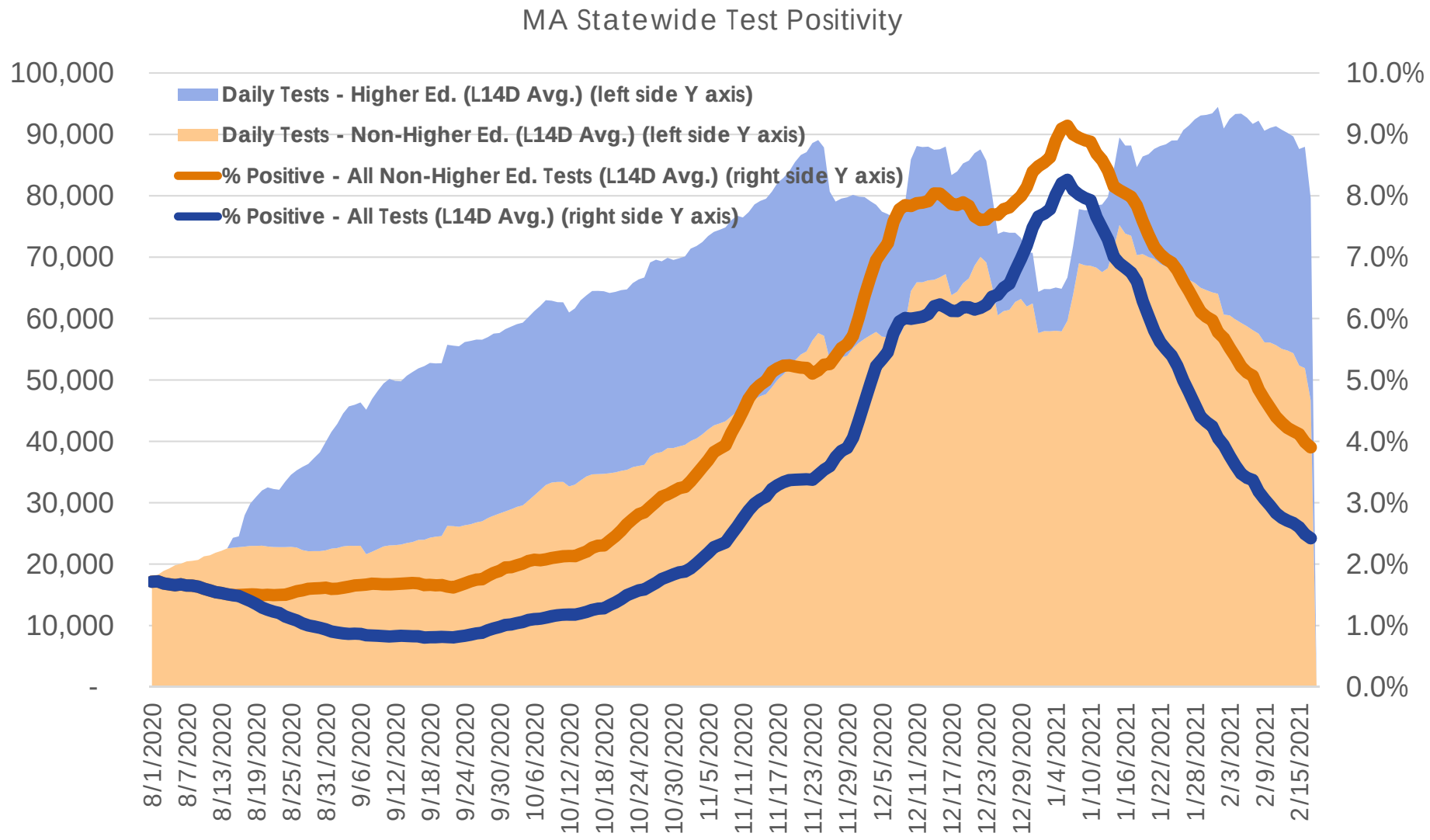
Data source: https://www.mass.gov/info-details/covid-19-response-reporting#covid-19-weekly-public-health-report-

Trends: Test Positivity (Statewide)



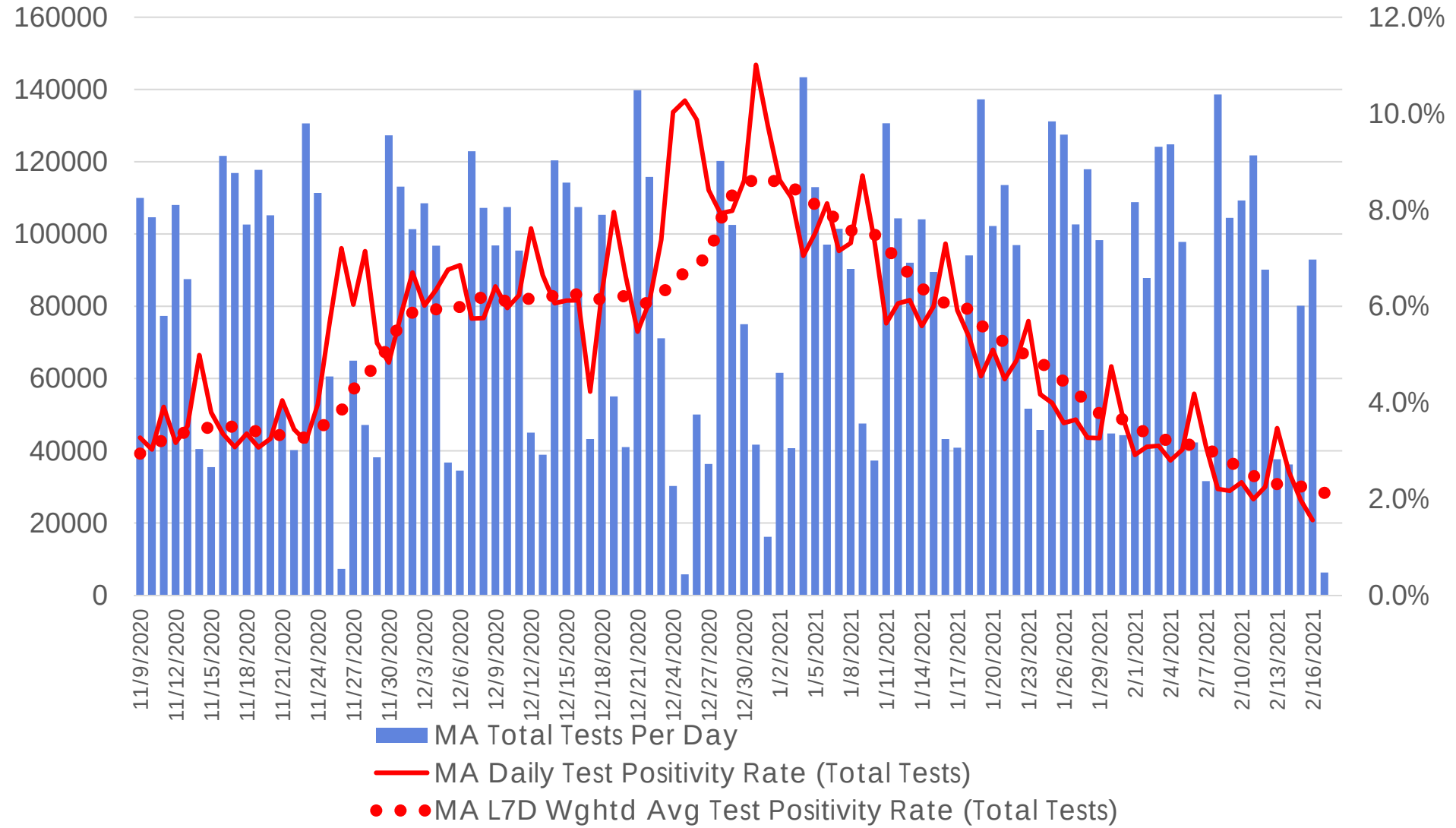
Data source: https://www.mass.gov/info-details/covid-19-response-reporting#covid-19-weekly-public-health-report-

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

Brookline in Regional Context
(as of 2/17/2021)

Municipality	Avg. Daily Cases/100k L14D	% of Tests Positive L14D	Total Tests L14D / Muni. Population
Dedham	**40.9**	**4.36%**	**15%**
Milton	**34.5**	**2.19%**	25%
Boston	**30.4**	1.45%	**34%**
Watertown	24.4	1.97%	20%
Somerville	23.1	**0.79%**	**47%**
Needham	22.7	1.56%	23%
Newton	16.2	**0.74%**	**36%**
Arlington	15.0	1.48%	**16%**
Cambridge	**14.5**	**0.53%**	**49%**
Belmont	**12.5**	1.43%	**15%**
Wellesley	**12.0**	**0.42%**	**42%**
Brookline	**10.4**	**0.78%**	21%

Data source: https://www.mass.gov/info-details/covid-19-response-reporting#covid-19-weekly-public-health-report-

Public Schools of Brookline Case Counts: Trends Over Time

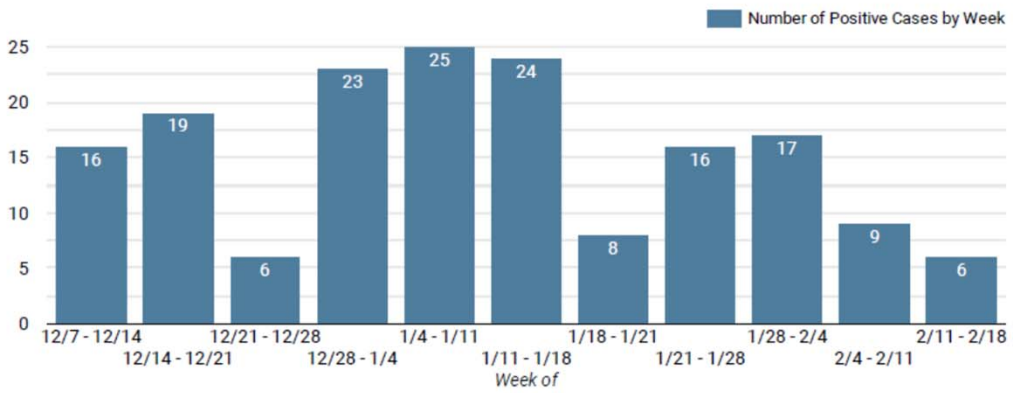
Data Last Updated: 2/19/21

PUBLIC SCHOOLS of BROOKLINE

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

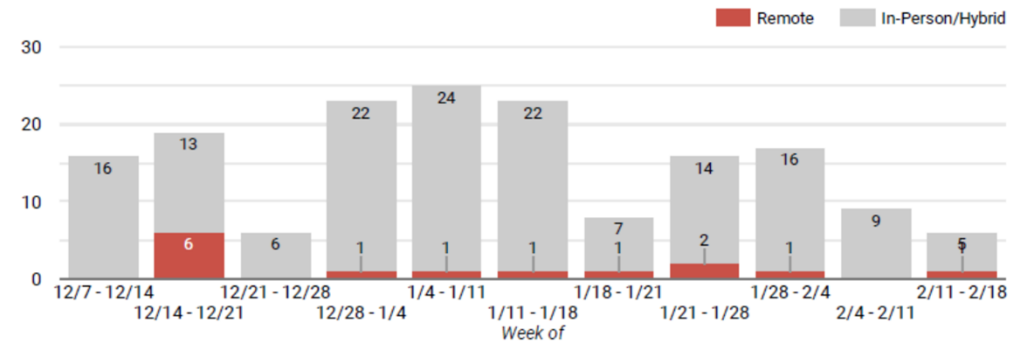


TOTAL PSB CASES TO DATE: 229

Remote: 26
Hybrid/In-Person: 203

Total among school-based students and staff: 225

Number of Positive Cases, by Week and Learning Model



TOTAL CLOSE CONTACTS*: 227 connected to 49 cases

Total positive cases with no close contacts* at school: 162

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.

Chart source: https://sites.google.com/psbma.org/psb-reopening-hub/dashboard?authuser=0

Public Schools of Brookline Case Counts: By School

Data Last Updated: 2/19/21

PUBLIC SCHOOLS of BROOKLINE

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 2/11 - 2/18)

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	1	-	-
Baker	0	35	-	-
Driscoll	0	16	-	-
Florida Ruffin Ridley	1	19	-	-
Heath	0	10	-	-
Lawrence	1	19	-	-
Lincoln	0	21	-	-
Pierce	0	21	-	-
Runkle	3	16	-	-
Remote Learning Academy K-8	0	10	-	-
Brookline High School	1	52	-	-
Total*	6	226	0	0

**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	-	-

Chart source: https://sites.google.com/psbma.org/psb-reopening-hub/dashboard?authuser=0

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

PUBLIC SCHOOLS of BROOKLINE

Data Last Updated: 2/19/21

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

Total Number of Positive Cases, by Grade Level and Staffing (Week of 2/11 - 2/18)

Grade Level	Weekly Positive Cases	Cumulative Positive Cases
BEEP/Pre-K	0	3
Kindergarten	0	18
1st Grade	0	18
2nd Grade	0	10
3rd Grade	0	9
4th Grade	2	10
5th Grade	0	10
6th Grade	1	8
7th Grade	0	11
8th Grade	0	17
9th Grade	0	6
10th - 12th Grade	1	32
Staff (School-Based)*	2	72
Staff (District Office)	0	4
Total	6	228

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?authuser=0

Public Schools of Brookline Case Counts: Asymptomatic Testing Program Results

PUBLIC SCHOOLS of BROOKLINE

Data Last Updated: 2/19/21

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

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.

Week of	Tests Processed	Positive Results	Negative Results	TNP (Tests Not Processed)	Positvity %
1/11 - 1/15	175	1	174	5	0.57%
1/18 - 1/22	571	1	570	15	0.18%
1/25 - 1/29	612	0	612	11	0%
2/2 - 2/4	447	1	446	10	0.22%
Total	1,805	3	1,802	41	0.17%

- **1,805 total tests processed over four weeks**
  - **3 positives and 1,802 negatives**
  - **= 0.17% cumulative avg. test positivity**

Chart source: https://sites.google.com/psbma.org/psb-reopening-hub/dashboard?authuser=0

CDC's New K-12 School Guidance: Key Themes

1. From CDC's Executive Summary: "It is critical for schools to open as safely and as soon as possible, and remain open, to achieve the benefits of in-person learning and key support services."

2. Multi-layered mitigation strategies keep in-school transmission risk low.

3. Community transmission levels are important. At low to moderate levels, schools generally should operate fully in-person (even if that requires <6' physical distancing).

4. Health equity should not be overlooked.

5. Educators and staff should be vaccinated as soon as supply allows, as an additional layer of mitigation.

Source: https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/K-12-Operational-Strategy-2021-2-12.pdf

CDC's New K-12 School Guidance: Community Transmission Levels

Table 1. CDC Indicators and Thresholds for Community Transmission of COVID-19[1]

Indicator	Low Transmission Blue	Moderate Transmission Yellow	Substantial Transmission Orange	High Transmission Red
Total new cases per 100,000 persons in the past 7 days[2]	0-9	10-49	50-99	≥100
Percentage of NAATs that are positive during the past 7 days[3]	<5.0%	5.0%-7.9%	8.0%-9.9%	≥10.0%

[1]If the two indicators suggest different levels, the actions corresponding to the higher threshold should be chosen. County-level data on total new cases in the past 7 days and test percent positivity are available on the County View tab in CDC's COVID Data Tracker.

[2]Total number of new cases per 100,000 persons within the last 7 days is calculated by adding the number of new cases in the county (or other community type) in the last 7 days divided by the population in the county (or other community type) and multiplying by 100,000.

[3]Percentage of positive diagnostic and screening NAATs during the last 7 days is calculated by dividing the number of positive tests in the county (or other administrative level) during the last 7 days by the total number of tests resulted over the last 7 days. Additional information can be found on the Calculating Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Laboratory Test Percent Positivity: CDC Methods and Considerations for Comparisons and Interpretation webpage.

Source: https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/K-12-Operational-Strategy-2021-2-12.pdf

CDC's New K-12 School Guidance: Community Transmission Levels (Brookline)

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	3 Weeks Ago	2 Weeks Ago	Prior Week	Most Recent
Approx. Brookline test positivity (per DPH weekly data)	**2.3%**	**2.1%**	**1.5%**	**1.2%**

Source: https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/K-12-Operational-Strategy-2021-2-12.pdf; https://www.mass.gov/info-details/covid-19-response-reporting

CDC's New K-12 School Guidance: Community Transmission Levels (Brookline)

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	3 Weeks Ago	2 Weeks Ago	Prior Week	Most Recent
Weekly Brookline case counts (per Dr. Jett @ 2/16/21 SB Mtg.)	100	81	68	39
Cases per 100,000 of population	***~165***	***~135***	***~115***	***~65***

- A comparison of MA DPH's weekly reports from last week and this week shows that Brookline's total case count rose by just **28 cases** from Feb 9th 11:59pm (1,798) to Feb 16th 11:59pm (1,826)—a **weekly rate of ~47 per 100k people (CDC's moderate/yellow zone)**

Sources: https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/K-12-Operational-Strategy-2021-2-12.pdf; https://www.mass.gov/info-details/covid-19-response-reporting

CDC's New K-12 School Guidance: Key Mitigation Strategies

- **Five key mitigation strategies:**
  - ***Universal and correct use of masks***
  - ***Physical distancing****
  - Handwashing and respiratory etiquette
  - Cleaning and maintaining healthy facilities
  - Contact tracing in combination with isolation and quarantine, in collaboration with the health department

- **Also helpful:**
  - Ventilation
  - Surveillance testing
  - Educator/staff vaccination when available

Source: https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/K-12-Operational-Strategy-2021-2-12.pdf

Table 2. Recommended Implementation of Mitigation Strategies and K-12 School Learning Modes by Level of Community Transmission for Schools That Do Not Implement Expanded Screening Testing

<table>
<tr><th>Low Transmission[1]
Blue</th><th>Moderate Transmission
Yellow</th><th>Substantial Transmission
Orange</th><th>High Transmission
Red</th></tr>
<tr><td colspan="4">All schools implement 5 key mitigation strategies: Universal and correct use of masks required; physical distancing; handwashing and respiratory etiquette; cleaning and maintaining healthy facilities; contact tracing in combination with isolation and quarantine.
Diagnostic testing[2]: Symptomatic students, teachers, and staff and close contacts referred for diagnostic testing</td></tr>
<tr><td colspan="2" rowspan="2">K-12 schools open for full in-person instruction
Physical distancing of 6 feet or more to the greatest extent possible[3]</td><td colspan="2">Elementary schools in hybrid learning mode or reduced attendance[4]
Physical distancing of 6 feet or more is required</td></tr>
<tr><td>Middle and high schools in hybrid learning mode or reduced attendance
Physical distancing of 6 feet or more is required</td><td>Middle and high schools in virtual only instruction unless they can strictly implement all mitigation strategies, and have few cases; schools that are already open for in-person instruction can remain open, but only if they strictly implement mitigation strategies and have few cases[5]</td></tr>
<tr><td>Sports and extracurricular activities occur; physical distancing of 6 feet or more to the greatest extent possible[6]</td><td>Sports and extracurricular activities occur with physical distancing of 6 feet or more required</td><td>Sports and extracurricular activities occur only if they can be held outdoors, with physical distancing of 6 feet or more</td><td>Sports and extracurricular activities are virtual only</td></tr>
</table>

Source: https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/K-12-Operational-Strategy-2021-2-12.pdf

Table 3. Recommended Implementation of Mitigation Strategies, Testing, and Safe K-12 School Learning Modes by Level of Community Transmission for Schools that Implement Expanded Screening Testing

Low Transmission[1] Blue	Moderate Transmission Yellow	Substantial Transmission Orange	High Transmission Red
All schools implement 5 key mitigation strategies: Universal and correct use of masks required; physical distancing; handwashing and respiratory etiquette; cleaning and maintaining healthy facilities; contact tracing in combination with isolation and quarantine. **Diagnostic testing[2]:** Symptomatic students, teachers, and staff and close contacts referred for diagnostic testing			
Screening Testing[3]			
Routine screening testing of teachers and staff offered once per week			
No screening testing for students	Routine screening testing of students offered once per week[4]		
School Status			
K-12 schools open for full in-person instruction Physical distancing of 6 feet or more to the greatest extent possible[5]		K-12 schools in hybrid learning mode or reduced attendance[6] Physical distancing of 6 feet or more is required	
Sports and extracurricular activities occur; physical distancing of 6 feet or more to the greatest extent possible[7]	Sports and extracurricular activities occur with physical distancing of 6 feet or more required	Sports and extracurricular activities occur only if they can be held outdoors, with physical distancing of 6 feet or more	Sports and extracurricular activities are virtual only

Source: https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/K-12-Operational-Strategy-2021-2-12.pdf

CDC's New K-12 School Guidance: CDC Director Dr. Rochelle Walensky on Distancing

From 2/12/2021 press conference announcing CDC's new guidance:

- *"With regard to transmission and six feet, you know, in these lower areas of transmission…low to moderate transmission, we are worried that people will not be able to get back to full in-person learning if we mandate six feet of physical distancing."*

- *"We believe that, at such low levels of transmission, that schools could be kept safe simply with universal masking and all the other three mitigation strategies while doing their best to limit interaction. So, we believe that, at those very low levels of transmission, that schools could be open for full, in-person learning while trying to do six feet distancing, recognizing that, in some situations, that might not be possible."*

Source: https://www.cdc.gov/media/releases/2021/t0212-cdc-update-covid-19.html

CDC's New K-12 School Guidance: A Sampling of Expert Reactions

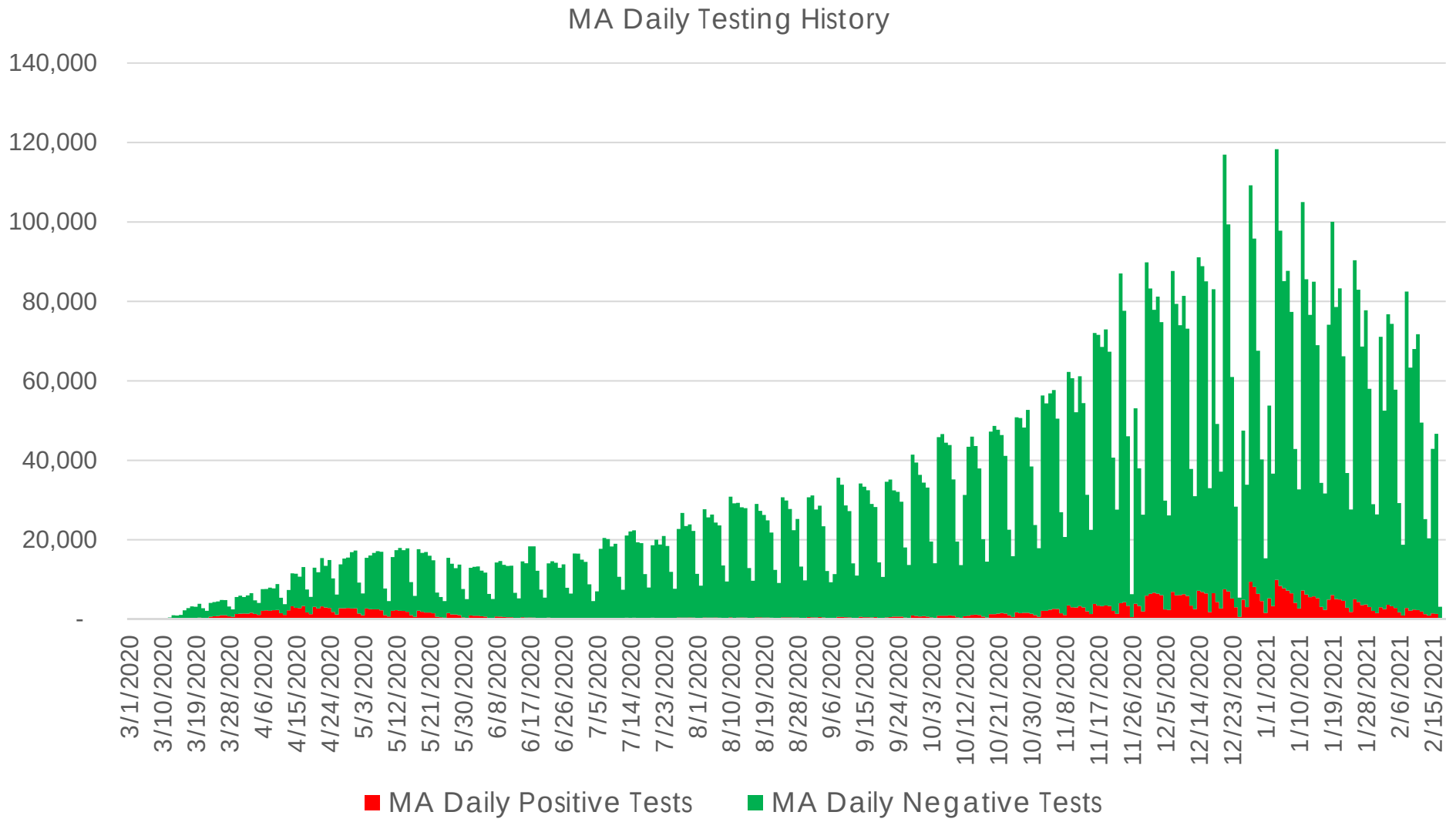
- Dr. Joe Allen at (Healthy Buildings Program Director at Harvard/ Chan School of Public Health) and Dr. Helen Jenkins (Associate Professor of Biostatistics at BU School of Public Health): *"[C]ommunity-spread metrics pose major problems. We're part of a group of faculty and researchers at Harvard, Boston University and Brown University that released a report in July using such metrics as indicators for when to open schools. We changed our position on this in light of overwhelming scientific evidence that transmission within schools can be kept low regardless of community spread, so long as good mitigation measures are in place. It's also clear that community spread is not an indicator of within-school transmission."*

- Dr. Jennifer Nuzzo, epidemiologist at the Johns Hopkins Bloomberg School of Public Health: *"A lot of communities have pursued hybrid approaches or, in some cases, just not opened, because they haven't been able to figure out that spacing issue. The whole attempt to bring kids back to school doesn't have to break down over that."*

Source: https://www.nytimes.com/2021/02/12/health/school-reopenings-cdc.html; https://www.washingtonpost.com/opinions/2021/02/12/cdc-report-schools-problems/

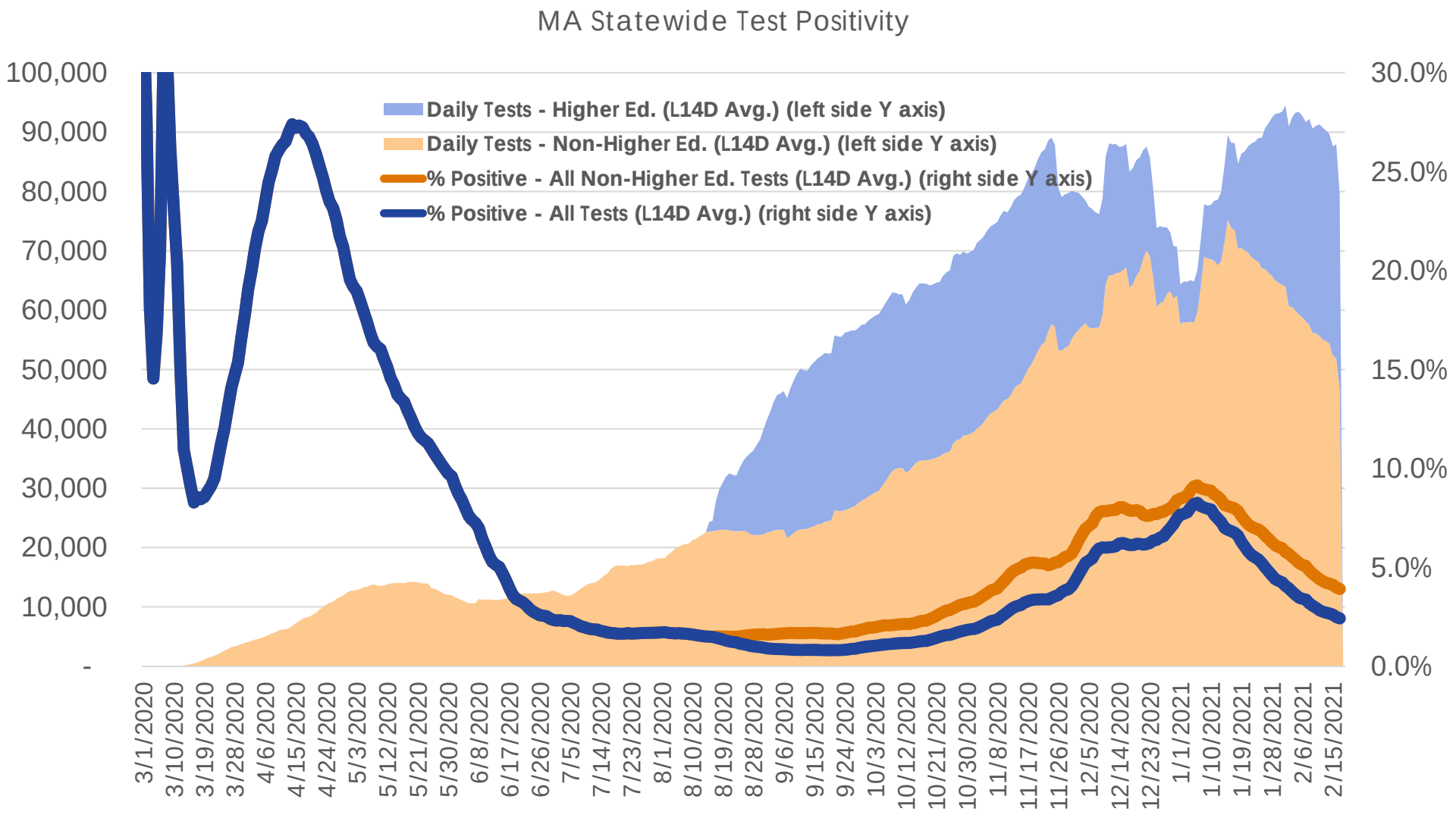
Appendix – For Reference As Needed

Statewide Test Results by Day



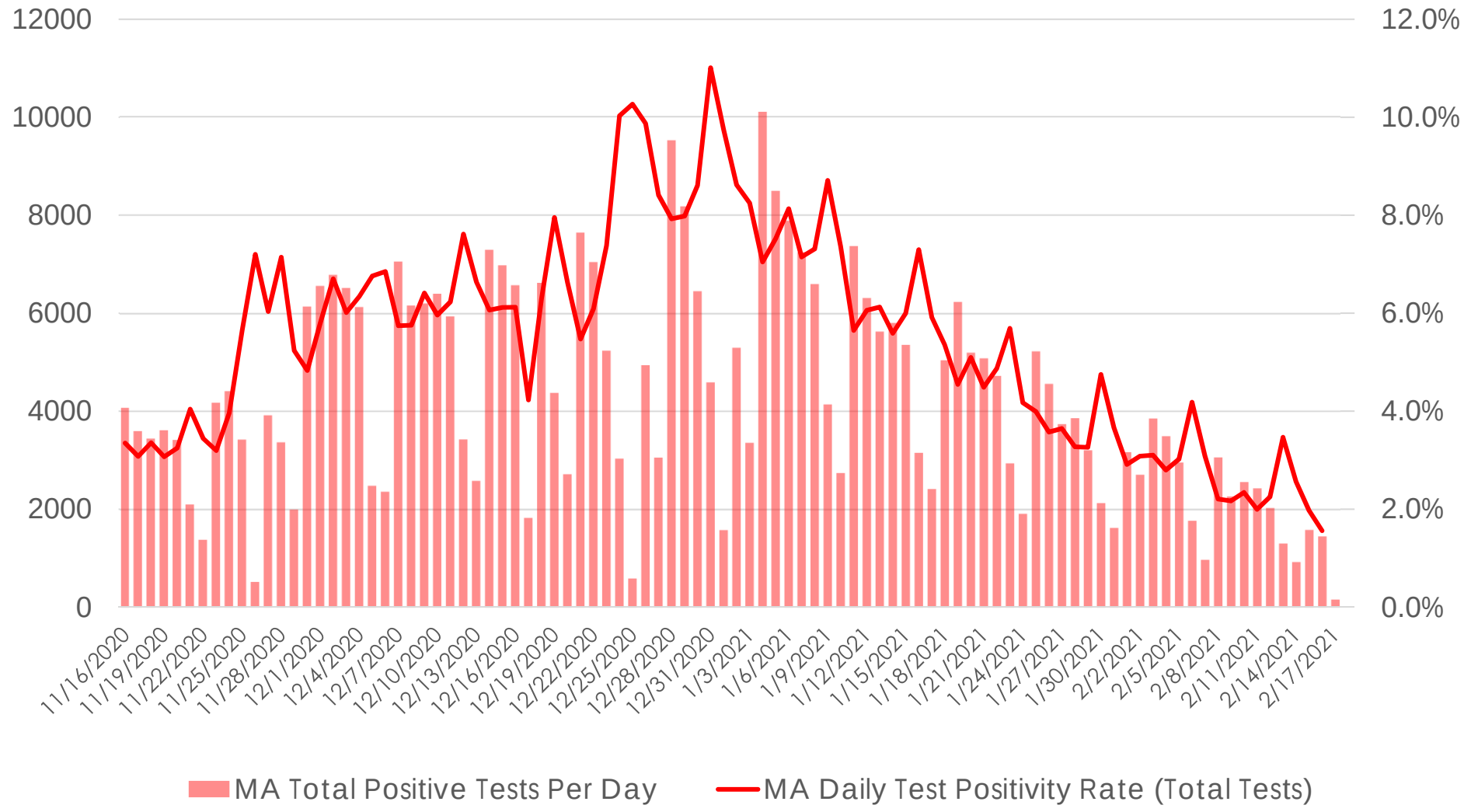
Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Trends: Test Positivity and Testing Volume (Statewide)



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

Trends: Daily Positive Test Counts and Positivity (Statewide)



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

Public Schools of Brookline Case Counts: Asymptomatic Testing Program Results

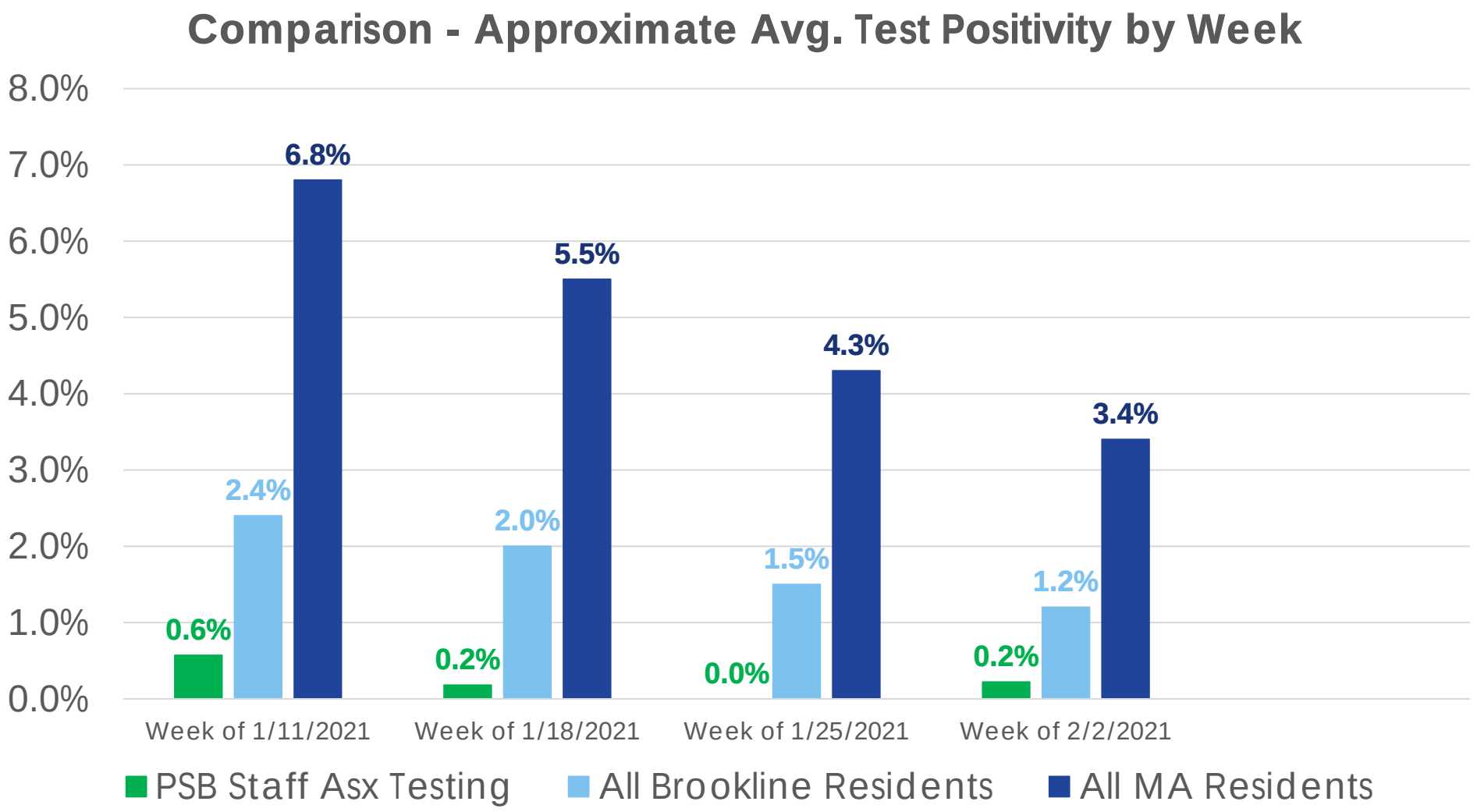


Chart source: https://sites.google.com/psbma.org/psb-reopening-hub/dashboard?authuser=0

MA DESE Guidance – In-Person/Remote

https://www.doe.mass.edu/covid19/on-desktop/interpreting-dph-metrics.html

- ***Districts are expected to prioritize in-person learning across all color-coded categories, unless there is suspected in-school transmission, in accordance with DESE's Guidance on Responding to COVID-19 Scenarios.*** *Transmission in schools is defined as spread of the virus between people during interactions in the school setting. While there have been positive COVID-19 cases of staff and students in schools, most of these infections have occurred outside of the school setting. If there is suspected in-school transmission, then the affected classrooms or schools should temporarily shift to remote learning, in accordance with DESE's Guidance on Responding to COVID-19 Scenarios. Classrooms and schools should reopen after appropriate mitigation strategies have been implemented, as determined in consultation with the local board of health, DPH, and DESE.*

MA DESE Guidance – In-Person/Remote

https://www.doe.mass.edu/covid19/on-desktop/interpreting-dph-metrics.html

- ***Districts and schools in communities designated gray, green, or yellow are expected to have students learning fully in-person, if feasible.*** *A hybrid model should be used only if there is no other way to meet health and safety requirements. Parents and caregivers will continue to have the option to choose a district's remote learning program for their children.*

- ***Schools in red communities should implement hybrid models, while maximizing in-person learning time for high-needs students.***

...

- ***Fully remote instructional models should be implemented only as a last resort*** *in classrooms, schools, or districts when there is suspected in-school transmission or a significant municipal outbreak, in accordance with DESE's Guidance on Responding to COVID-19 Scenarios. Classrooms and schools should reopen after appropriate mitigation strategies have been implemented, as determined in consultation with the local board of health, DPH, and DESE.*