PUBLIC SCHOOLS of BROOKLINE

Advisory Panel 4:
Public Health, Safety, & Logistics

Metrics Review

January 29, 2021

Community Benchmarks - Status

Benchmark (each measured over prior 14 days)	Status 1/6/21	Status 1/13/21	Status 1/20/21	**Status 1/27/21**
Avg. daily new case count in Brookline = <10 per 100k people	25.4	27.3	27.4	**24.3**
Avg. daily new case count in Mass. = <10 per 100k people	61.1	78.0	75.5	**59.4**
Avg. test positivity rate in Brookline = <5.0%	3.19%	2.79%	2.31%	**2.05%**
Avg. test positivity rate in Massachusetts = <5.0%	7.71%	7.99%	6.85%	**5.51%**

Because at least two of these four thresholds have been exceeded, Panel 4 has advised PSB to make further enhancements to anti-transmission measures:

www.brookline.k12.ma.us/cms/lib/MA01907509/Centricity/Domain/62/PSB%20Advisory%20Panel%204%20-%20Statement%20of%20Recommendations%20for%20Times%20of%20Elevated%20Community%20Spread_12.11.20.pdf

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 1/27/2021 (yellow zone)

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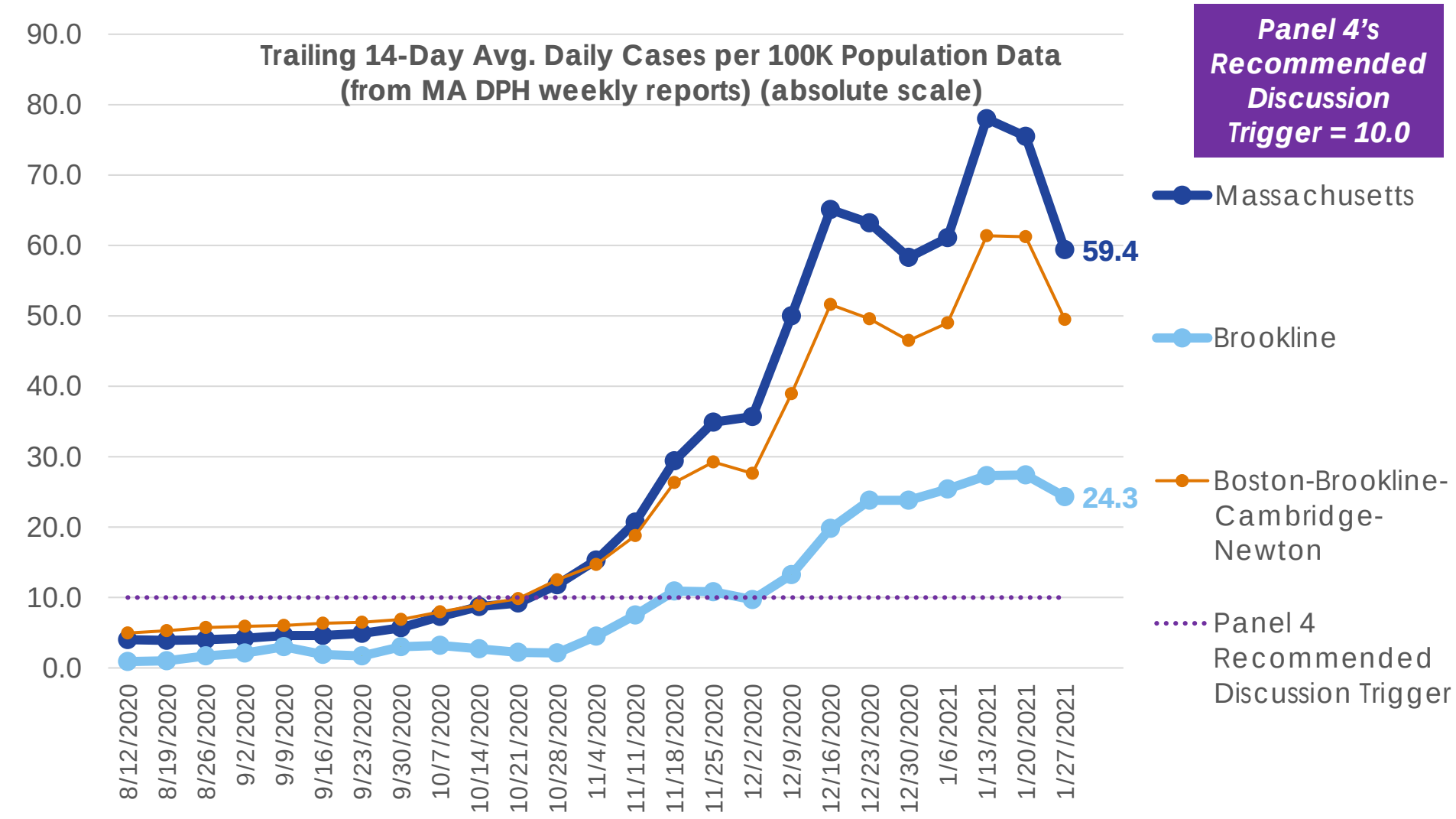
Chart source: https://www.mass.gov/info-details/covid-19-response-reporting

Community Benchmarks - Status



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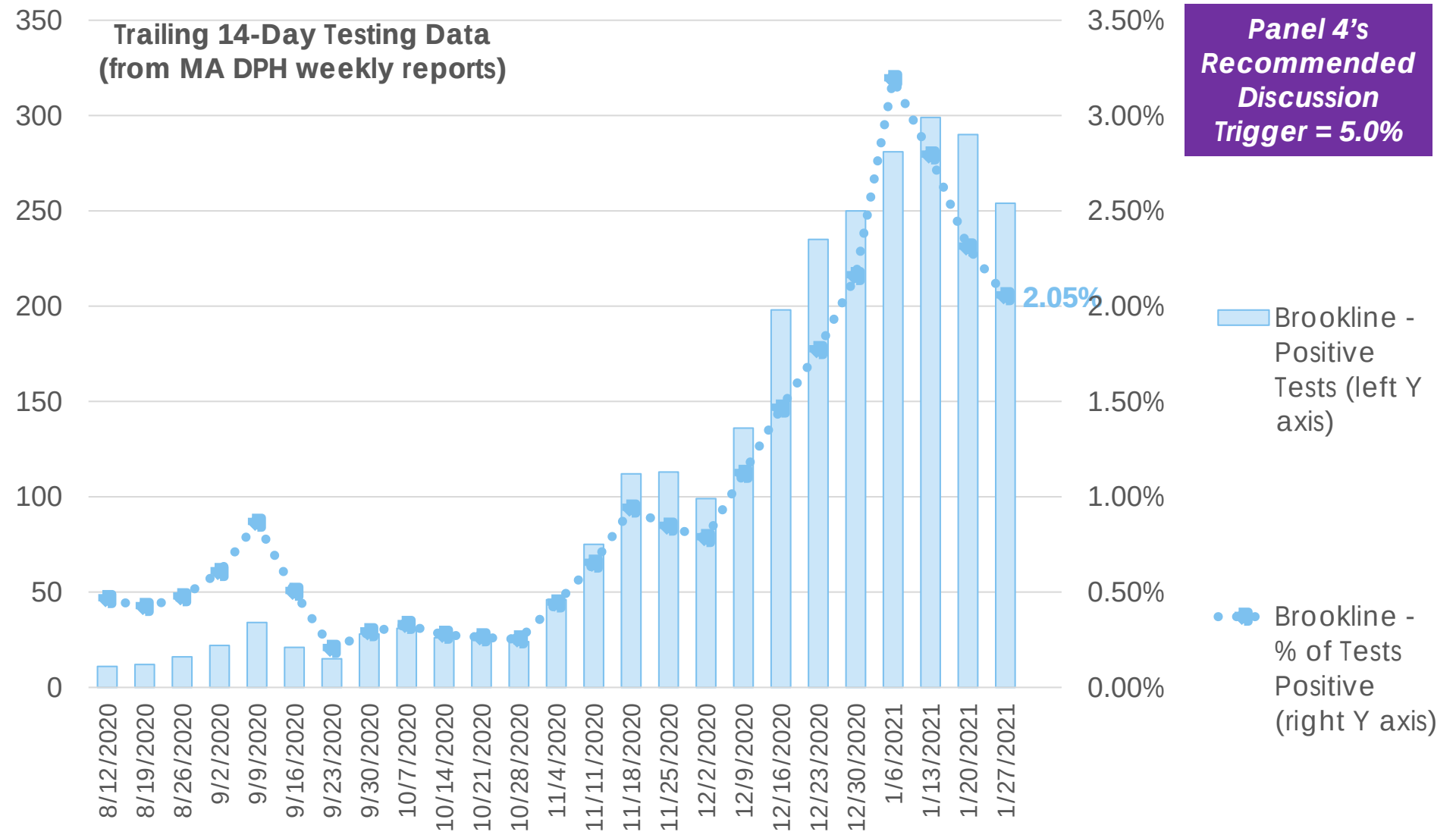
Community Benchmarks - Status



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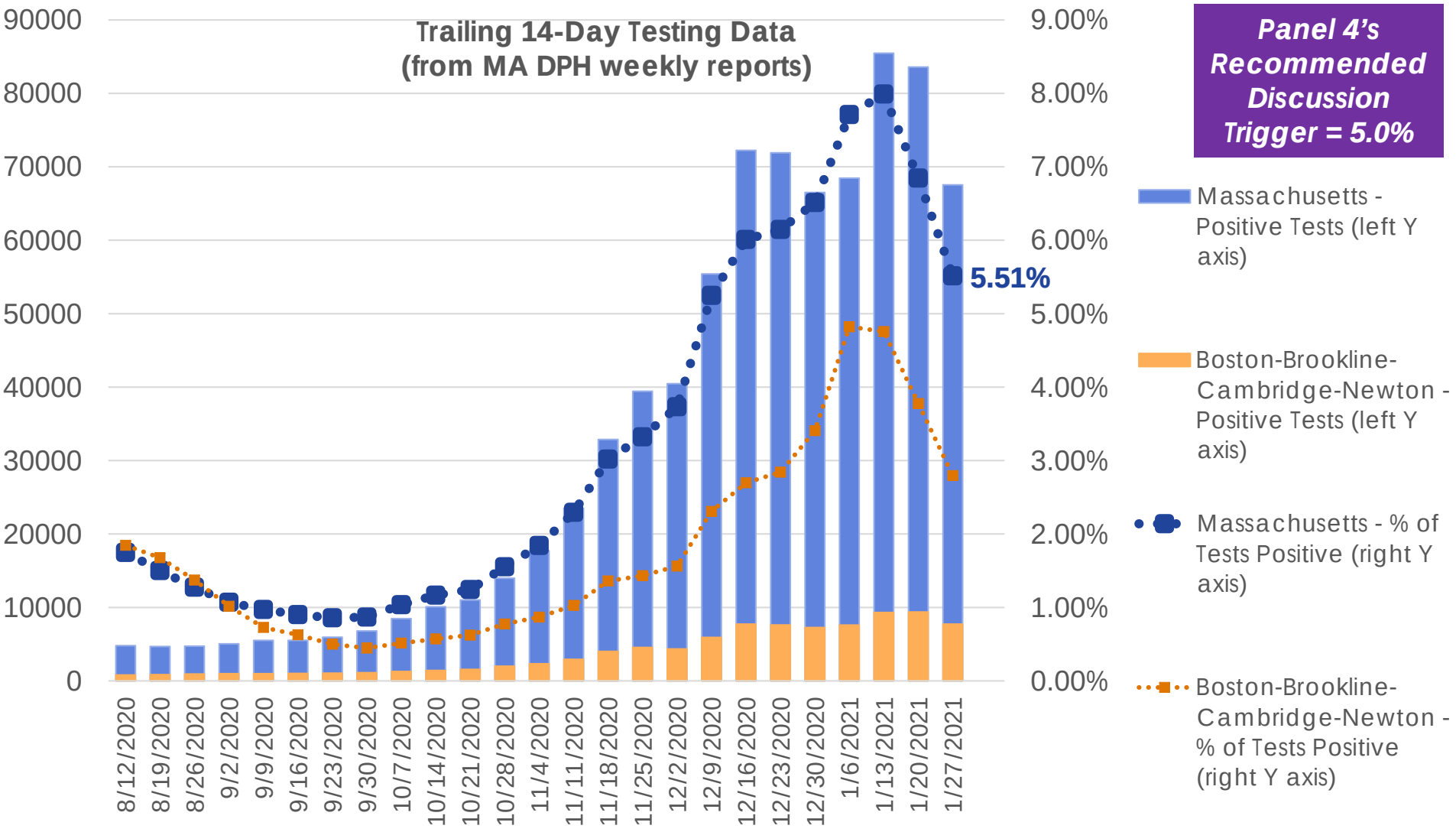
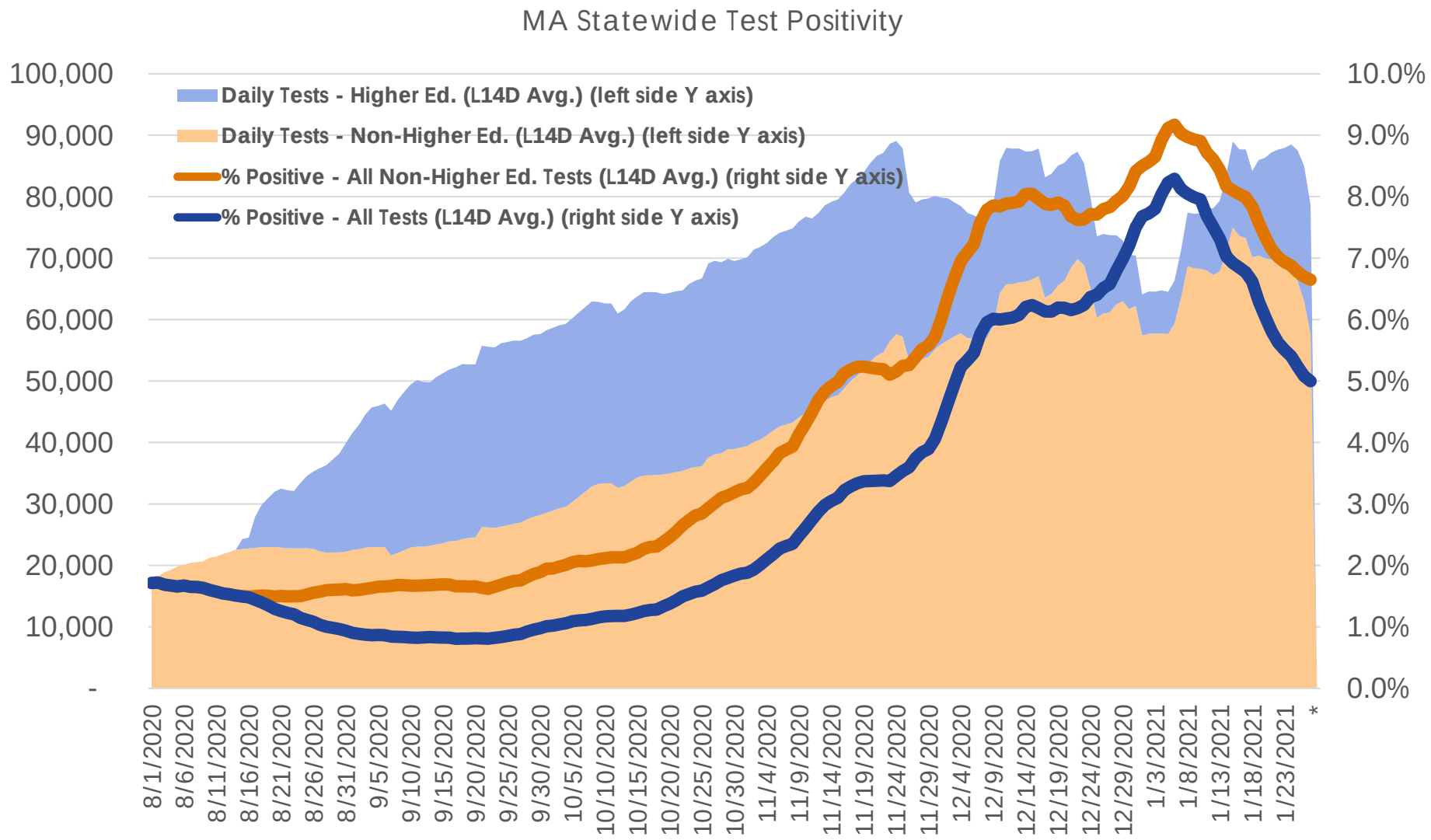
Community Benchmarks - Status



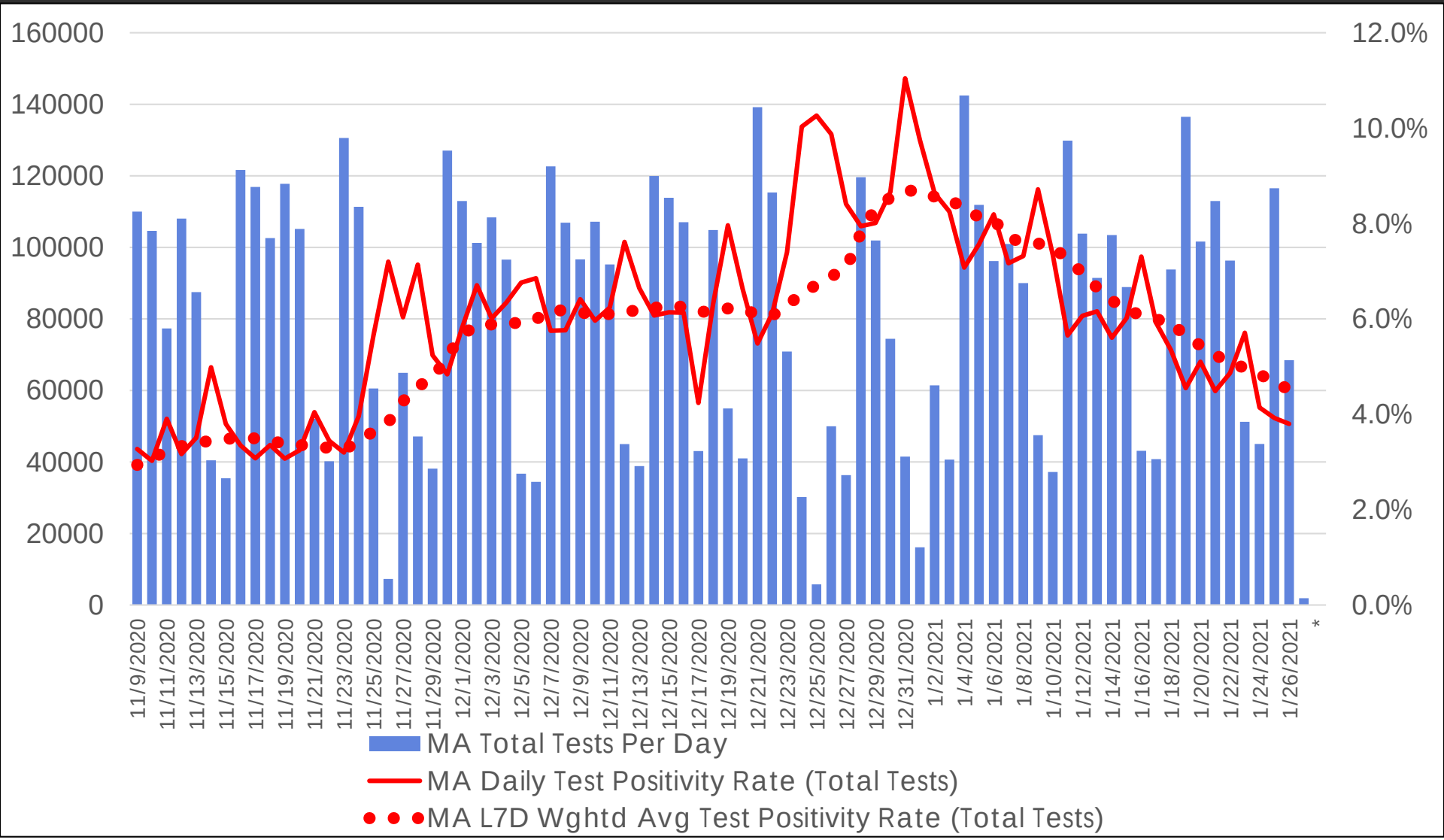
Data source: https://www.mass.gov/info-details/covid-19-response-reporting#covid-19-weekly-public-health-report-

Statewide Test Positivity



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

Statewide Daily Test Data



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

Brookline in Regional Context

(as of 1/27/2021)

Municipality	Avg. Daily Cases/100k L14D	% of Tests Positive L14D	Total Tests L14D / Muni. Population
Dedham	**73.5**	**6.7%**	**17%**
Milton	**62.6**	**3.8%**	**26%**
Boston	**57.2**	3.2%	**29%**
Watertown	**50.8**	**3.9%**	22%
Needham	**43.5**	3.1%	22%
Somerville	39.4	2.4%	**27%**
Belmont	32.3	3.0%	**18%**
Cambridge	32.3	**1.3%**	**41%**
Wellesley	31.5	**1.6%**	**31%**
Newton	30.1	2.3%	22%
Arlington	**26.2**	2.6%	**16%**
Brookline	**24.3**	**2.1%**	**19%**

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

Public Schools of Brookline Case Counts

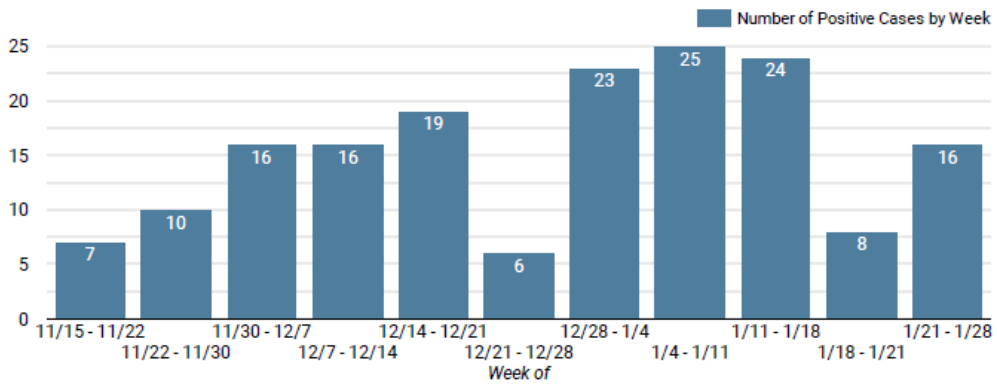
Data Last Updated: 1/29/21

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

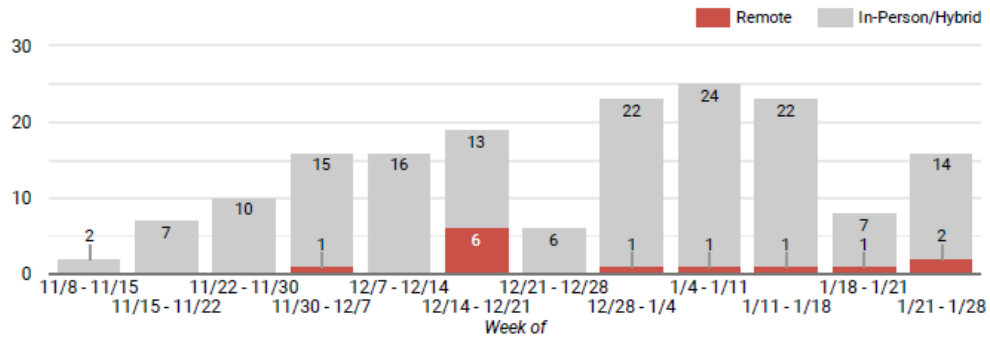


TOTAL PSB CASES TO DATE: 197

Remote: 24
Hybrid/In-Person: 173

Total among school-based students and staff: 193

Number of Positive Cases, by Week and Learning Model



TOTAL CLOSE CONTACTS*: 205 connected to 41 cases

Total positive cases with no close contacts* at school: 148

**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

Data Last Updated: 1/29/21

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 1/21 - 1/28)

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	3	30	2	1
Driscoll	1	12	-	-
Florida Ruffin Ridley	3	16	3	1
Heath	2	9	-	-
Lawrence	1	15	2	1
Lincoln	2	19	5	1
Pierce	0	18	-	-
Runkle	0	12	-	-
Remote Learning Academy K-8	0	9	-	-
Brookline High School	4	46	-	-
Total	16	193	12	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

Data Last Updated: 1/29/21

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

Total Number of Positive Cases, by Grade Level and Staffing (Week of 1/21 - 1/28)

Grade Level	Weekly Positive Cases	Cumulative Positive Cases
BEEP/Pre-K	0	3
Kindergarten	1	15
1st Grade	2	16
2nd Grade	0	7
3rd Grade	1	9
4th Grade	0	7
5th Grade	1	10
6th Grade	2	5
7th Grade	1	11
8th Grade	3	15
9th Grade	1	6
10th - 12th Grade	3	30
Staff (School-Based)	1	59
Staff (District Office)	0	4
Total	16	197

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

Public Schools of Brookline Case Counts

PUBLIC SCHOOLS of BROOKLINE

Data Last Updated: 1/29/21

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)
1/15 - 1/21	175	1	174	5
1/21 - 1/28	571	1	570	15
Total	746	2	744	20

	1/15 – 1/21	1/21 – 1/28	Total
Test Positivity	**0.57%**	**0.18%**	**0.27%**

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

CDC Guidance on Isolation Length (Positive Cases)

Discontinuing Home Isolation for Persons with COVID-19:

Accumulating evidence supports ending isolation and precautions for persons with COVID-19 using a symptom-based strategy. Specifically, researchers have reported that people with mild to moderate COVID-19 remain infectious no longer than 10 days after their symptoms began, and those with more severe illness or those who are severely immunocompromised remain infectious no longer than 20 days after their symptoms began. Therefore, CDC has updated the recommendations for discontinuing home isolation as follows:

Persons with COVID-19 who have symptoms and were directed to care for themselves at home may discontinue isolation under the following conditions:

- At least 10 days* have passed since symptom onset **and**
- At least 24 hours have passed since resolution of fever without the use of fever-reducing medications **and**
- Other symptoms have improved.

*A limited number of persons with severe illness may produce replication-competent virus beyond 10 days, that may warrant extending duration of isolation for up to 20 days after symptom onset. Consider consultation with infection control experts. See Discontinuation of Transmission-Based Precautions and Disposition of Patients with COVID-19 in Healthcare Settings (Interim Guidance).

Persons infected with SARS-CoV-2 who never develop COVID-19 symptoms may discontinue isolation and other precautions 10 days after the date of their first positive RT-PCR test for SARS-CoV-2 RNA.

CDC Centers for Disease Control and Prevention

Source: https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-in-home-patients.html

CDC Guidance on Quarantine Length (Close Contacts)

Options to Reduce Quarantine for Contacts of Persons with SARS-CoV-2 Infection Using Symptom Monitoring and Diagnostic Testing

Updated Dec. 2, 2020 Print

Centers for Disease Control and Prevention

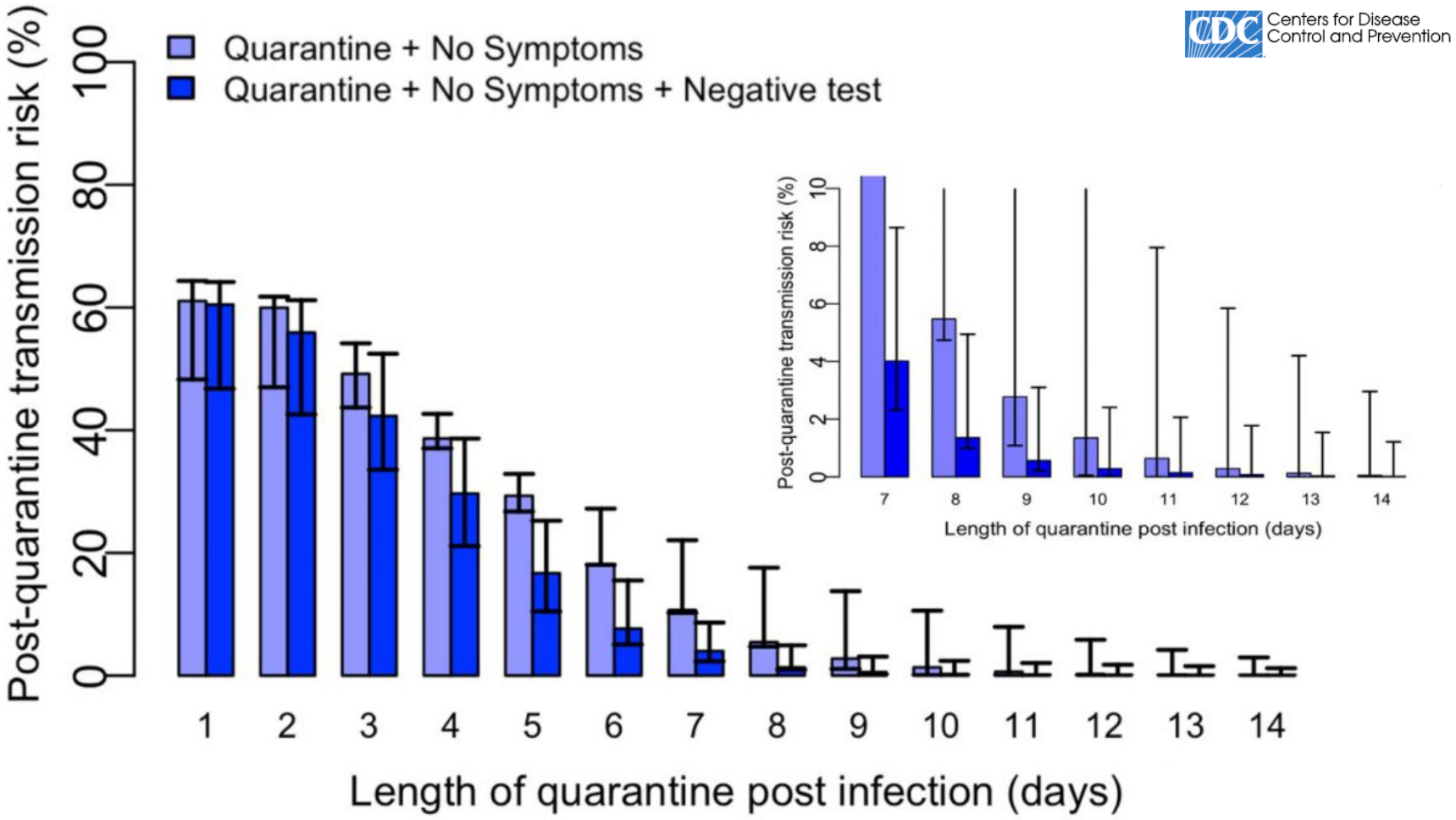
Local public health authorities determine and establish the quarantine options for their jurisdictions. CDC currently recommends a quarantine period of 14 days. However, based on local circumstances and resources, the following options to shorten quarantine are acceptable alternatives.

- Quarantine can end after Day 10 without testing and if no symptoms have been reported during daily monitoring.
  - With this strategy, residual post-quarantine transmission risk is estimated to be about 1% with an upper limit of about 10%.
- *When diagnostic testing resources are sufficient and available (see bullet 3, below),* then quarantine can end after Day 7 if a diagnostic specimen tests negative and if no symptoms were reported during daily monitoring. The specimen may be collected and tested within 48 hours before the time of planned quarantine discontinuation (e.g., in anticipation of testing delays), but quarantine cannot be discontinued earlier than after Day 7.
  - With this strategy, the residual post-quarantine transmission risk is estimated to be about 5% with an upper limit of about 12%.

In both cases, additional criteria (e.g., continued symptom monitoring and masking through Day 14) must be met and are outlined in the full text.

Source: https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-options-to-reduce-quarantine.html

CDC Guidance on Quarantine Length (Close Contacts)



Source: https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-options-to-reduce-quarantine.html

CDC Guidance on Quarantine Length (Close Contacts)

Centers for Disease Control and Prevention

Planned day after which quarantine is completed and can be discontinued	Residual post-quarantine transmission risk (%) with and without diagnostic testing of a specimen within 48 hours before time of planned discontinuation of quarantine					
	No testing		RT-PCR testing		Antigen testing	
	Median	Range	Median	Range	Median	Range
7	10.7	10.3-22.1	4.0	2.3-8.6	5.5	3.1-11.9
10	1.4	0.1-10.6	0.3	0.0-2.4	1.1	0.1-9.5
14	0.1	0.0-3.0	0.0	0.0-1.2	0.1	0.0-2.9

Source: https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-options-to-reduce-quarantine.html

MA DPH Guidance on Quarantine Length

Mass.gov

COVID-19 isolation and quarantine information

Isolating and quarantining are related but distinct approaches to limiting COVID-19's spread. In short: Isolate if you're sick, quarantine if you have been exposed.

You must isolate if you are symptomatic or have tested positive for COVID-19. This means you must be alone, without direct contact with anyone else, until you can no longer spread the virus. This typically lasts about 10 days.

You must quarantine if you were exposed to someone with COVID-19 but haven't shown symptoms or had a positive COVID-19 test. It's best if you can quarantine for 14 days. However, if 10 days after your exposure you have no symptoms, you can end quarantine. You can end your quarantine after 7 days if you get tested and are negative for the virus.

Source: https://www.mass.gov/info-details/covid-19-isolation-and-quarantine-information

MA DESE Guidance on Quarantine Length

Policy of when a close contact may return to school: All close contacts should be tested but must self-quarantine, consistent with the guidance outlined below. The local board of health, in consultation with the school's COVID-19 response person, are best suited to advise on which quarantine option applies to a specific case. In accordance with the federal Center for Disease Control, close contacts must quarantine for the time period listed below:

At least 7 days, provided that all of the following are satisfied:

- They are tested (either polymerase chain reaction (PCR) or antigen test) on day 5 or later from their last exposure to the positive individual and receive a negative test result
- They have not experienced any symptoms up to this point
- They conduct active monitoring for symptoms through day 14, and self-isolate if new symptoms develop

While most exposed close contacts do not contract COVID-19, this quarantine option may not identify 5% of those who still have the potential to transmit infection after quarantine ends. In other words, 95% of individuals who could still transmit infection after quarantine ends would be identified with this strategy.

Sourcehttps://www.doe.mass.edu/covid19/on-desktop/protocols/

MA DESE Guidance on Quarantine Length, ctd.

At least 10 days, provided that all of the following are satisfied:

- They have not experienced any symptoms up to this point
- They conduct active monitoring for symptoms through day 14 and self-isolate if new symptoms develop
- No test is necessary under this option for the purposes of exiting quarantine

While most exposed close contacts do not contract COVID-19, this quarantine option may not identify 1% of those who still have the potential to transmit infection after quarantine ends. In other words, 99% of individuals who could still transmit infection after quarantine ends would be identified with this strategy.

Sourcehttps://www.doe.mass.edu/covid19/on-desktop/protocols/

MA DESE Guidance on Quarantine Length, ctd.

At least 14 days after the last exposure to the person who tested positive, if:

- They have experienced any symptoms during the quarantine period, even if they have a negative COVID-19 test; or
- They are unable to conduct active monitoring of symptoms

This option provides the maximal risk reduction.

Sourcehttps://www.doe.mass.edu/covid19/on-desktop/protocols/

MA DESE Guidance on Quarantine Length, ctd.

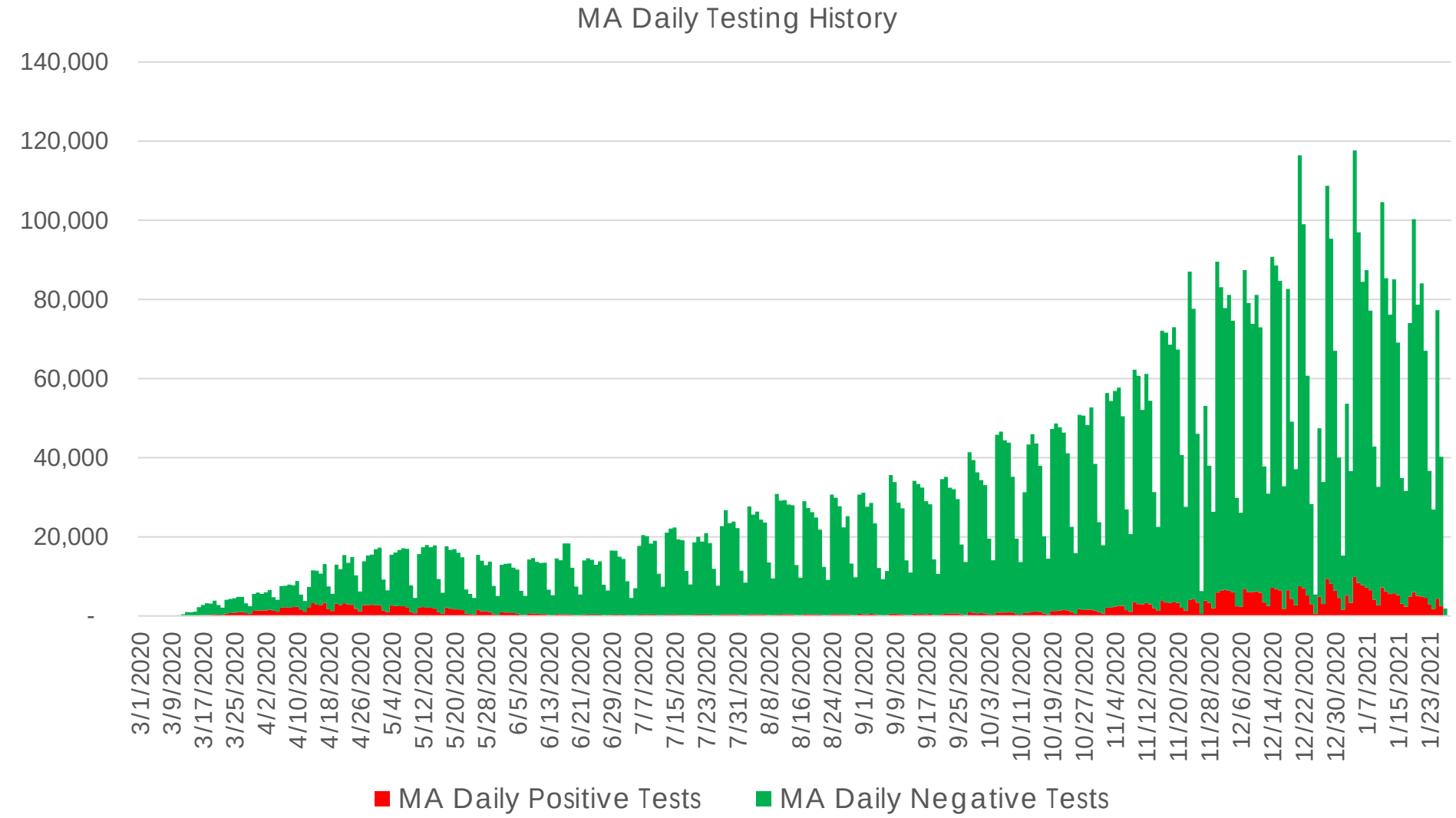
When individuals exit quarantine, masking and other safety measures remain critical. It may be best for individuals who are not be able to adhere to masking and distancing to exit quarantine after 10 or 14 days. Active monitoring requires individuals to actively monitor their symptoms and take temperature once daily. If even mild symptoms develop or the individual has a temperature of 100.0 F, they must immediately self-isolate, and contact the public health authority overseeing their quarantine, and be tested.

https://www.mass.gov/guidance/information-and-guidance-for-persons-in-quarantine-due-to-covid-19
https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-options-to-reduce-quarantine.html

Sourcehttps://www.doe.mass.edu/covid19/on-desktop/protocols/

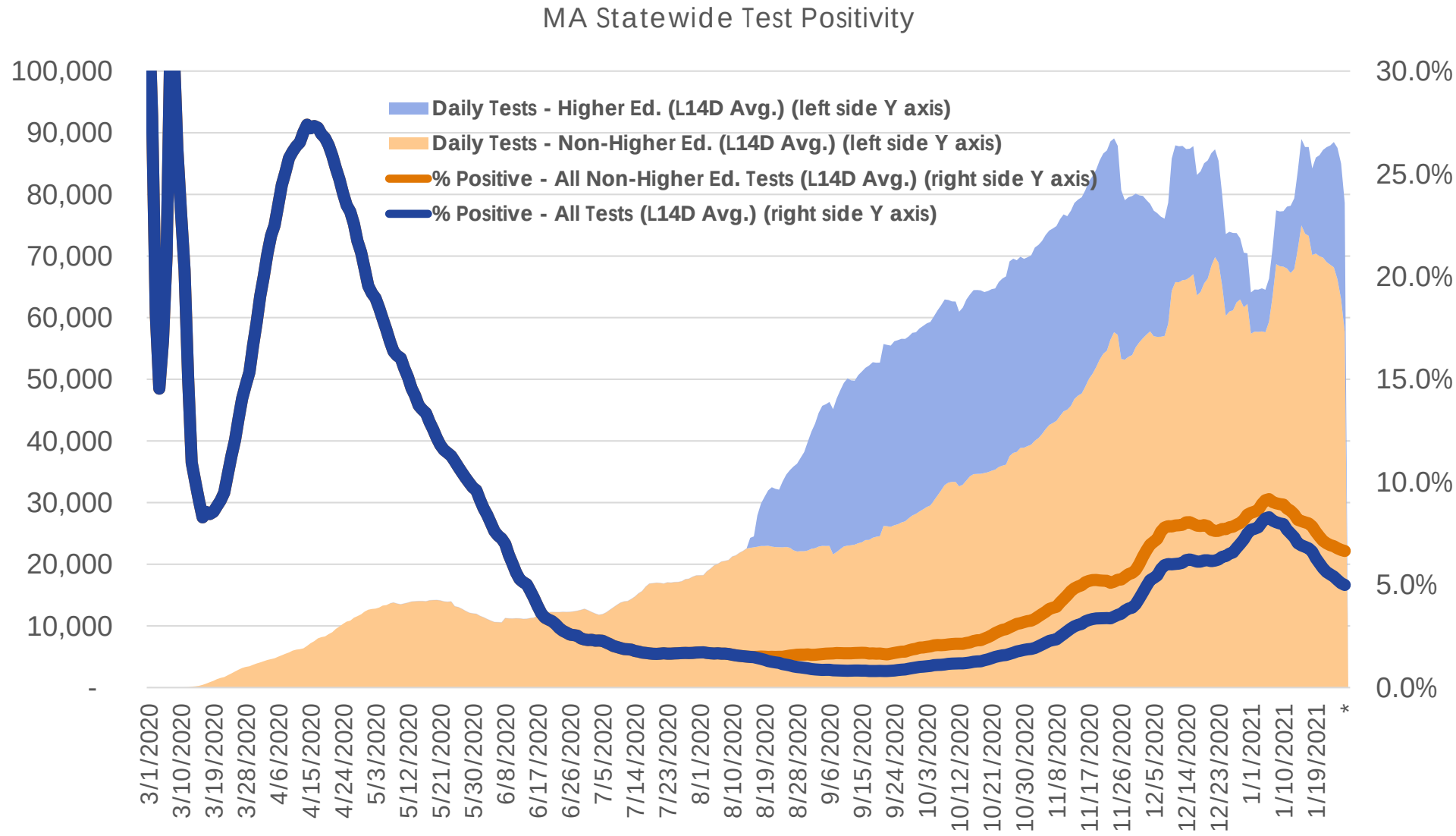
Appendix – For Reference As Needed

Statewide Test Results



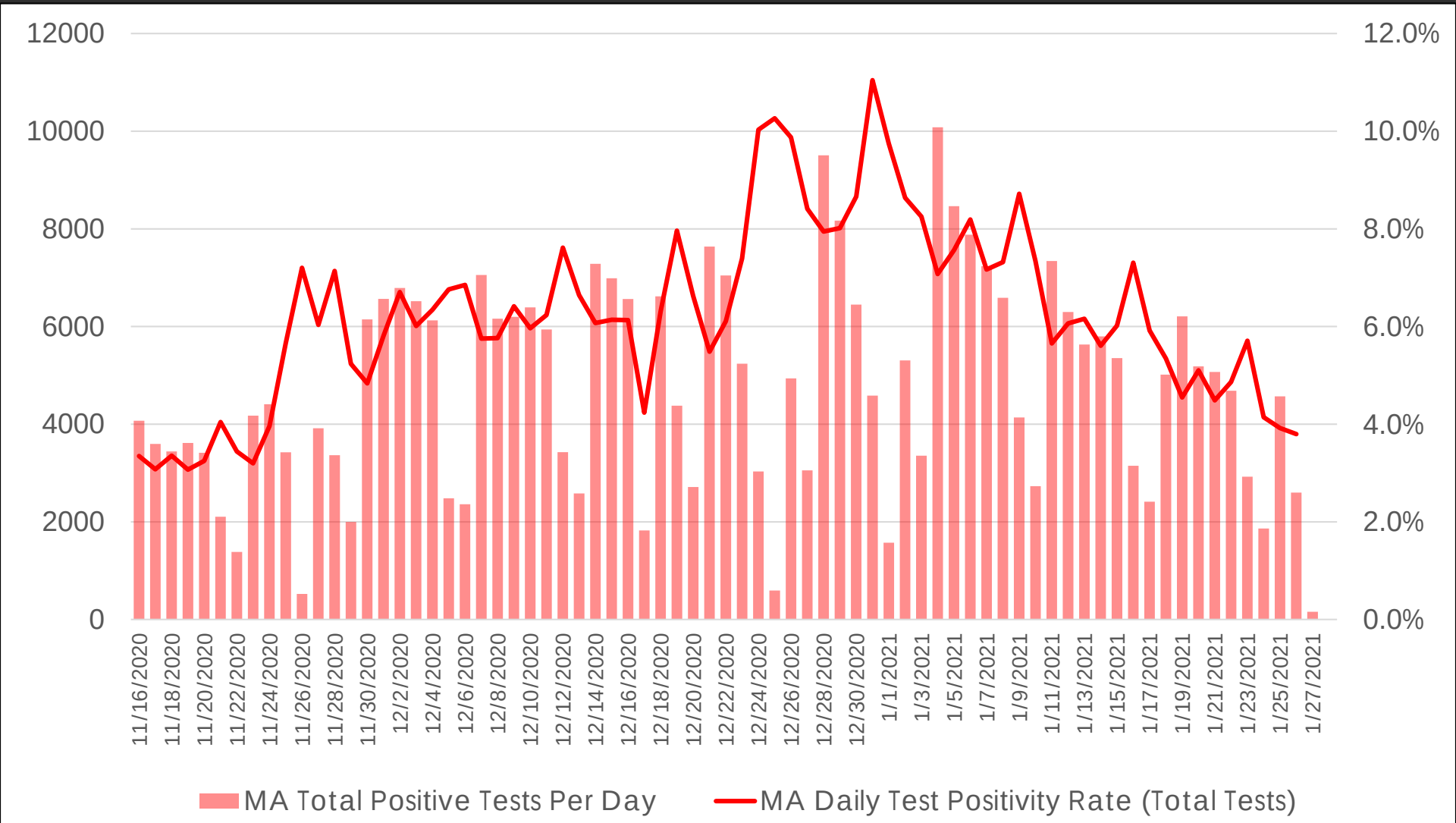
Data source: https://www.mass.gov/info-details/covid-19-response-reporting

Statewide Test Positivity



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

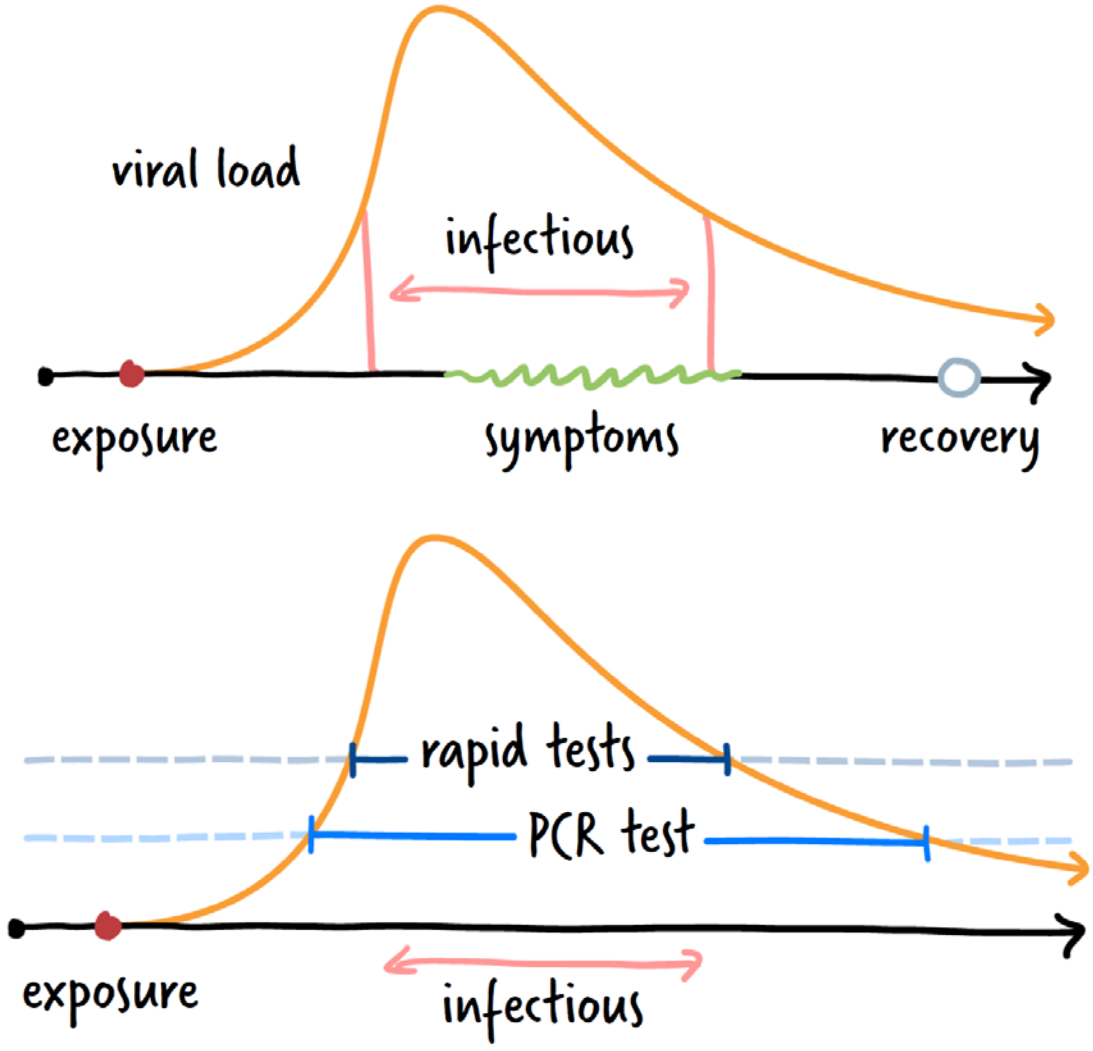
Statewide Daily Test Data



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

SARS-CoV-2 Infection Timeline

- Two main types of cases:
  - (Pre-)Symptomatic
  - Asymptomatic
- Timeline of a case:



Sources: https://www.nytimes.com/interactive/2020/10/02/science/charting-a-coronavirus-infection.html

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.*