PUBLIC SCHOOLS of BROOKLINE

Advisory Panel 4:
Public Health, Safety, & Logistics

Metrics Review

Discussion of Increasing In-Person Time

February 5, 2021

Community Benchmarks - Status

Benchmark (each measured over prior 14 days)	Status 1/13/21	Status 1/20/21	Status 1/27/21	**Status 2/3/21**
Avg. daily new case count in Brookline = <10 per 100k people	27.3	27.4	24.3	**19.9**
Avg. daily new case count in Mass. = <10 per 100k people	78.0	75.5	59.4	**48.9**
Avg. test positivity rate in Brookline = <5.0%	2.79%	2.31%	2.05%	**1.52%**
Avg. test positivity rate in Massachusetts = <5.0%	7.99%	6.85%	5.51%	**4.32%**

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 is here as of 2/3/2021 (yellow zone)

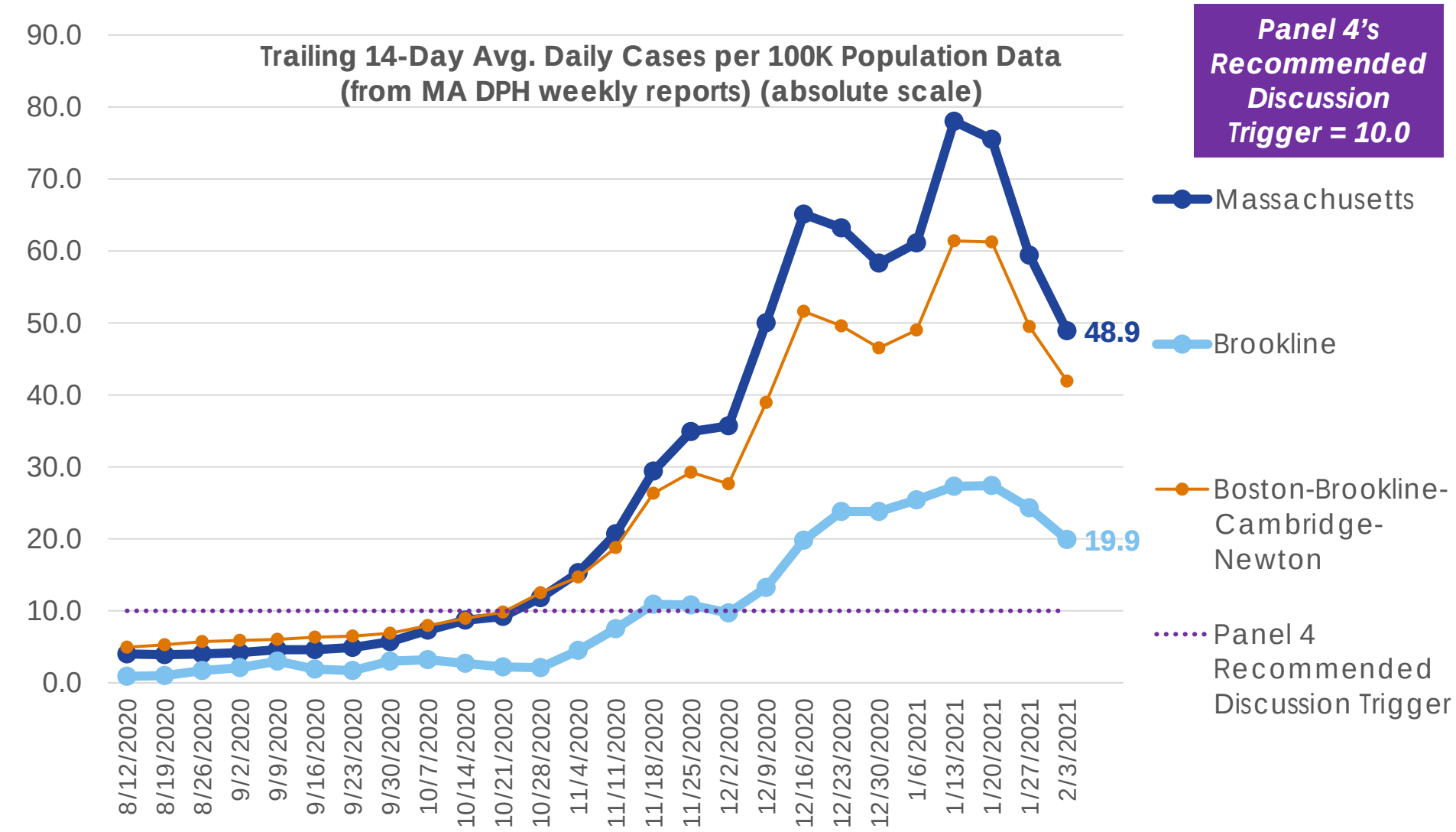
Brookline's population is ~60,000

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.

27

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

Community Benchmarks - Status



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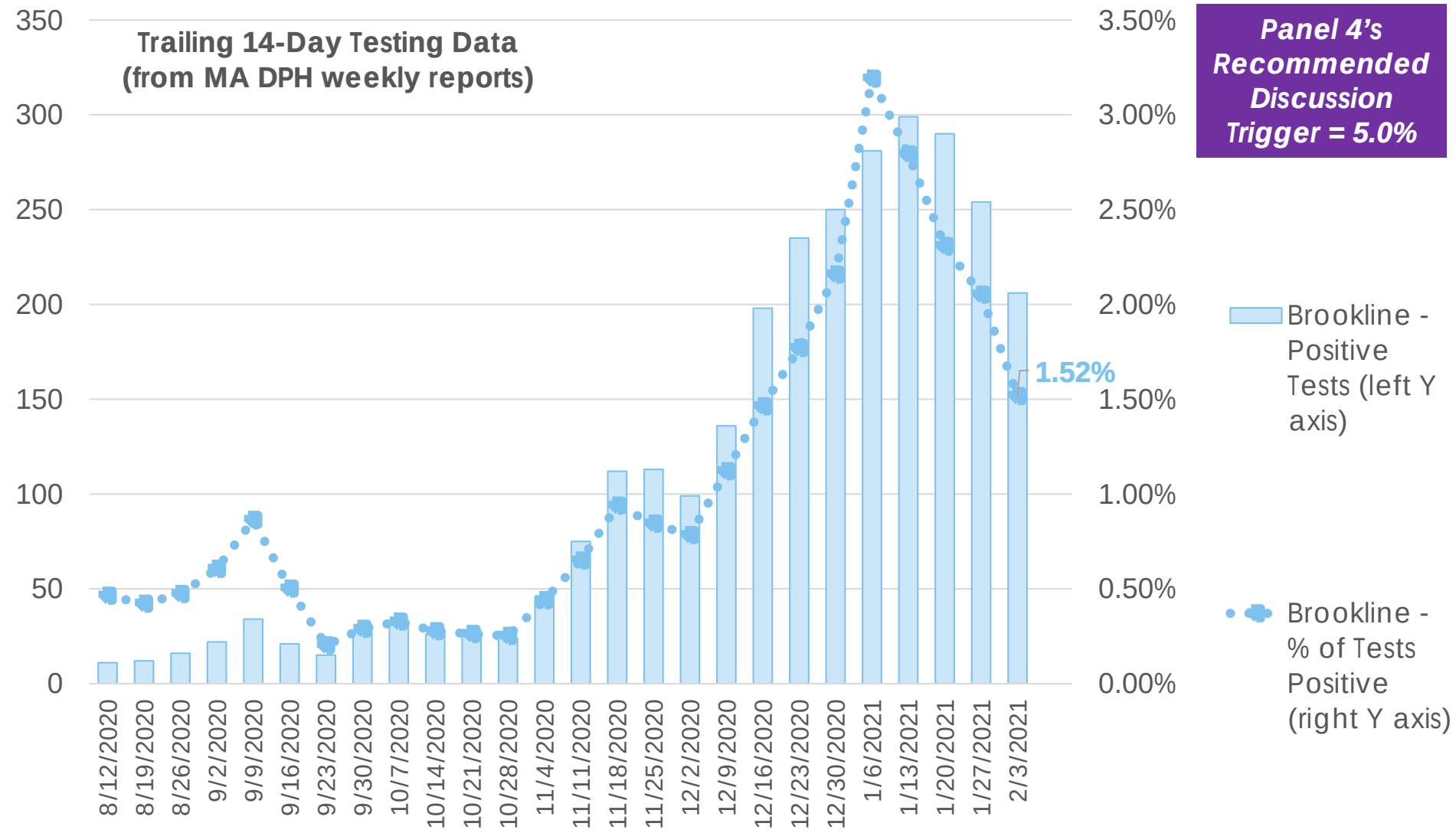

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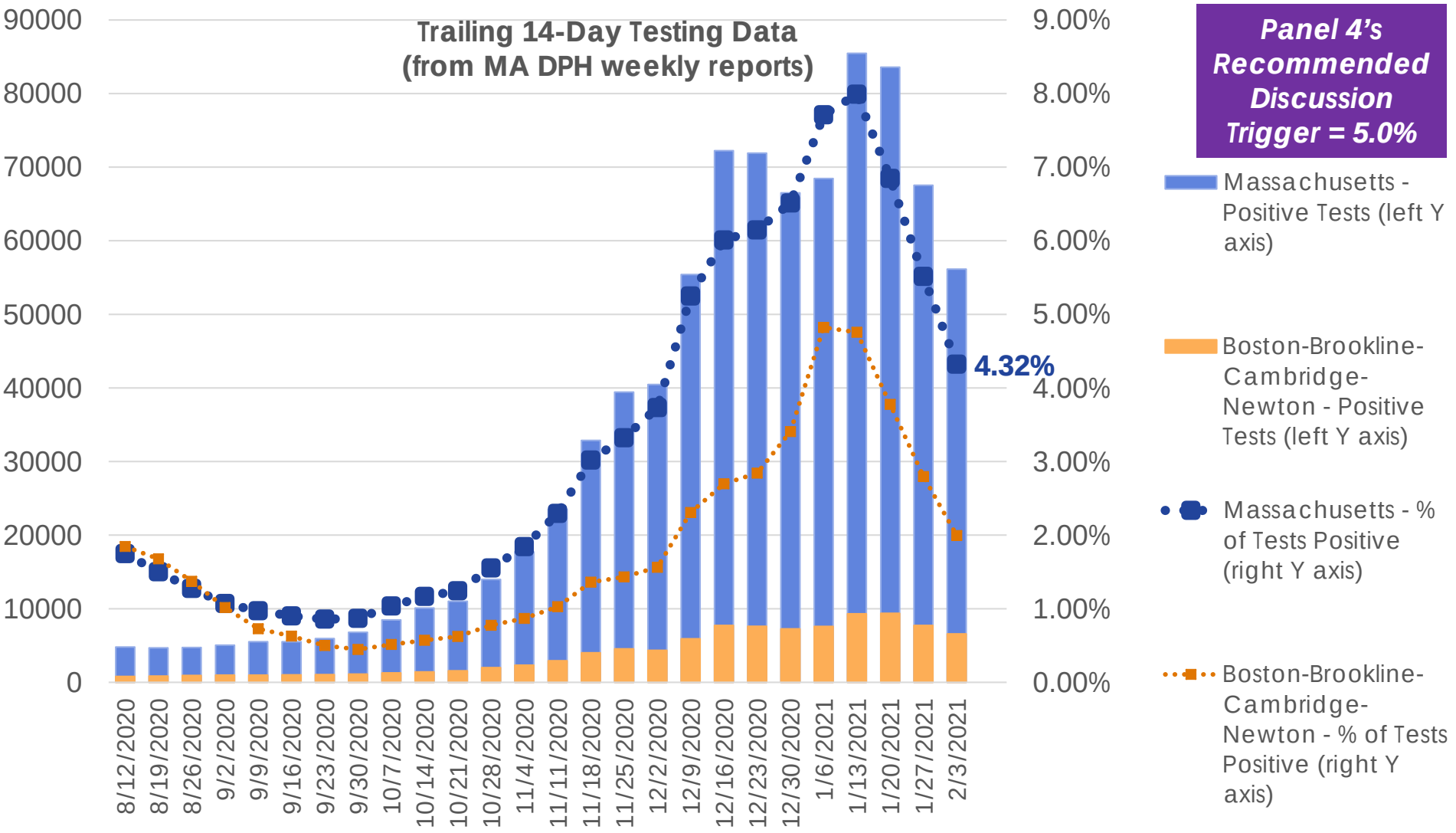
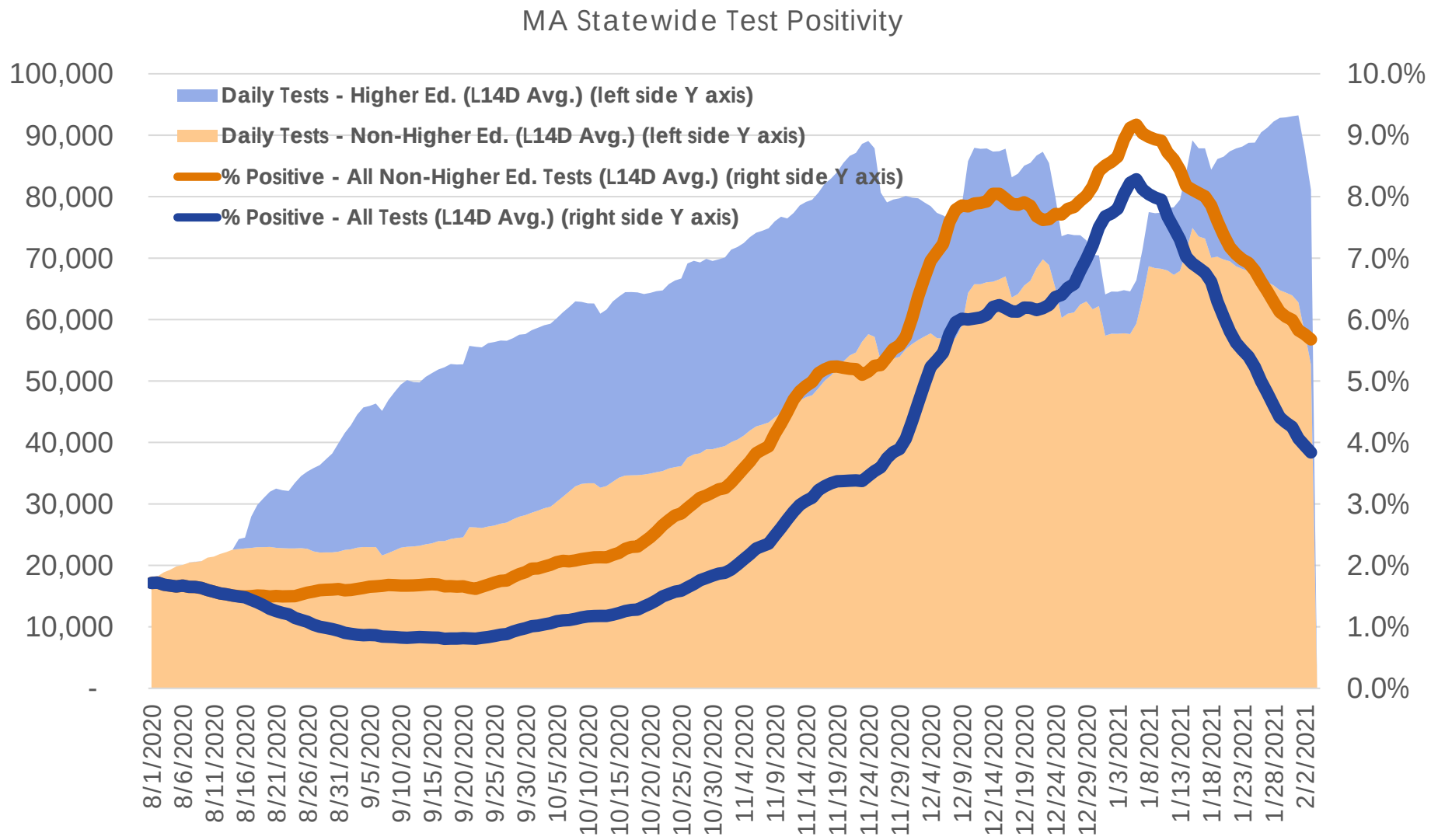


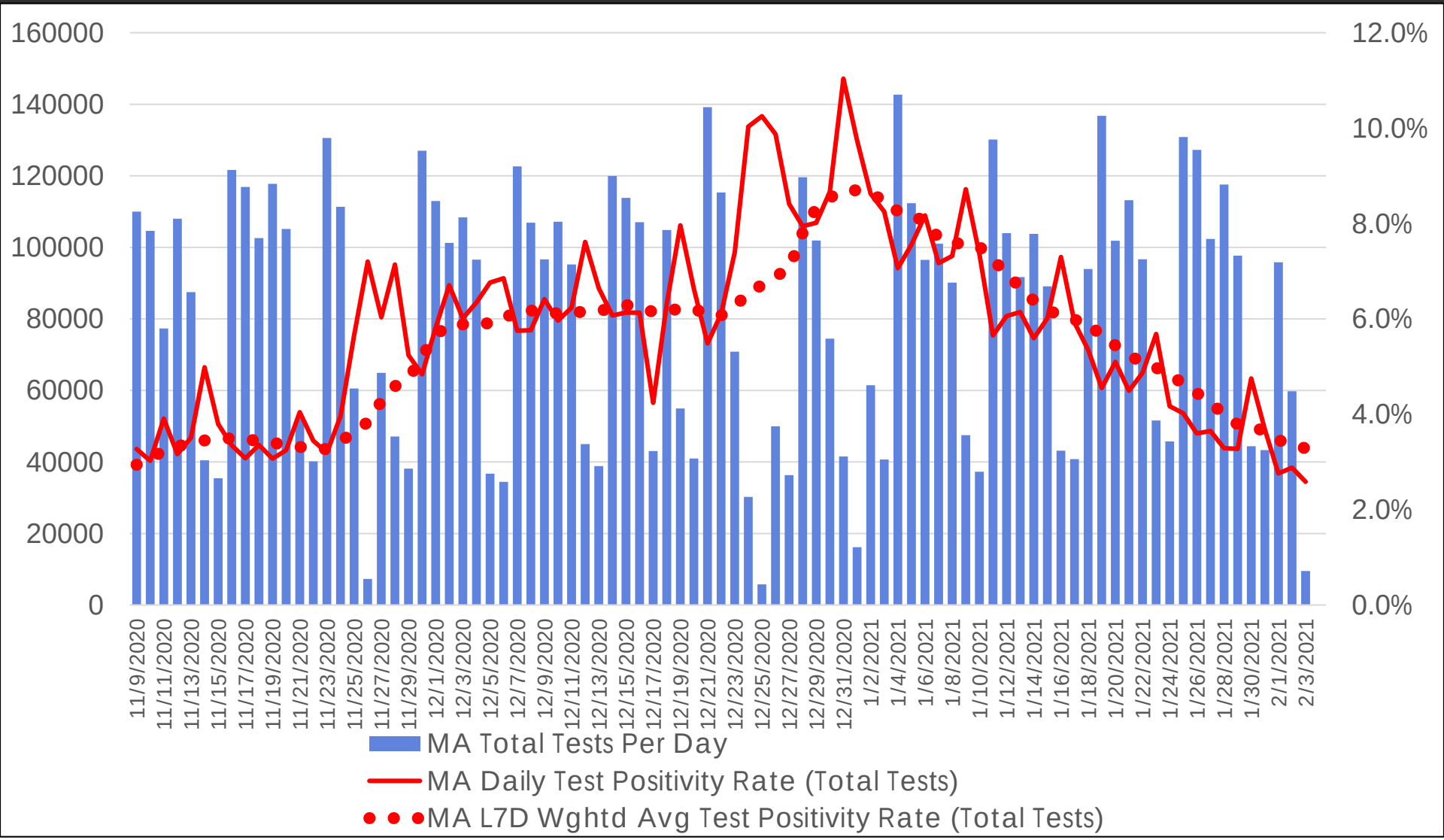
Data source: https://www.mass.gov/info-details/covid-19-response-reporting#covid-19-weekly-public-health-report-

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 2/3/2021)

Municipality	Avg. Daily Cases/100k L14D	% of Tests Positive L14D	Total Tests L14D / Muni. Population
Dedham	**91.0**	**7.6%**	**18%**
Boston	**48.5**	2.3%	**34%**
Milton	**48.0**	2.9%	26%
Needham	37.4	2.6%	24%
Watertown	33.9	2.6%	22%
Wellesley	33.4	**1.4%**	**35%**
Somerville	33.0	**1.6%**	**35%**
Cambridge	27.6	**1.1%**	**45%**
Newton	25.1	**1.2%**	**34%**
Belmont	**24.2**	2.4%	**17%**
Arlington	**22.6**	2.1%	**16%**
Brookline	**19.9**	**1.5%**	**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

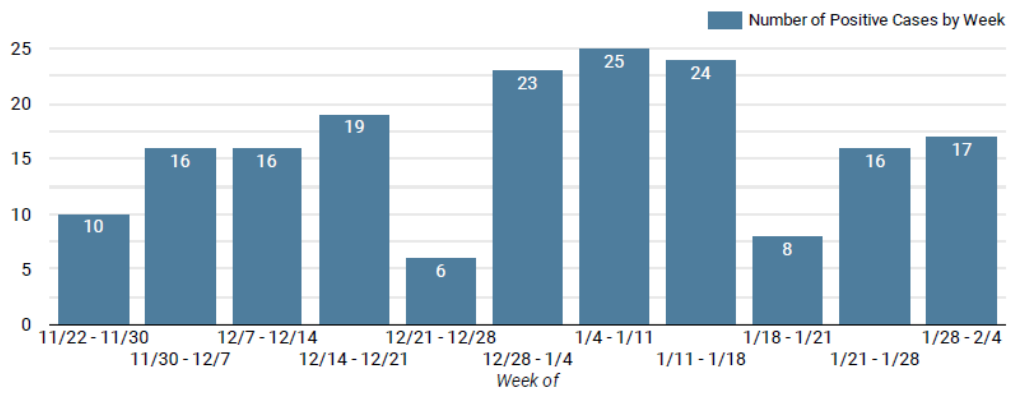
Data Last Updated: 2/5/21

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

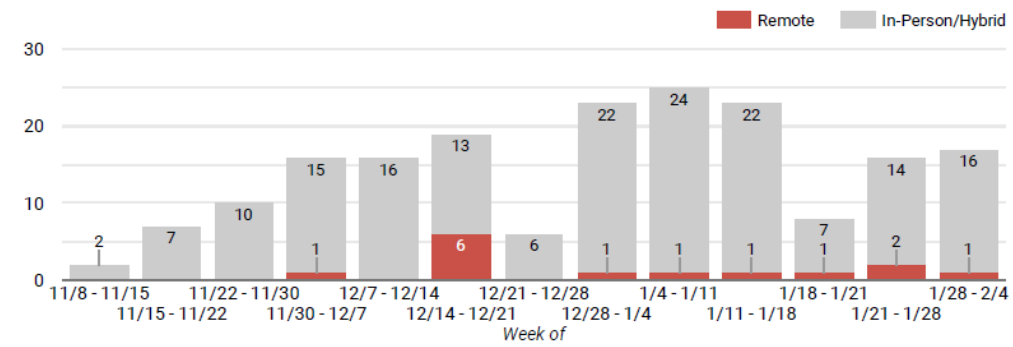


TOTAL PSB CASES TO DATE: 214

Remote: 25
Hybrid/In-Person: 189

Total among school-based students and staff: 210

Number of Positive Cases, by Week and Learning Model



TOTAL CLOSE CONTACTS*: 221 connected to 46 cases

Total positive cases with no close contacts* at school: 159

***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: 2/5/21

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 1/28 - 2/4)

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	2	32	-	-
Driscoll	3	15	-	-
Florida Ruffin Ridley	2	18	-	-
Heath*	1	10	2	1
Lawrence	1	16	4	1
Lincoln	2	21	3	1
Pierce*	2	20	5	1
Runkle	1	13	-	-
Remote Learning Academy K-8	1	10	-	-
Brookline High School	3	49	2	2
Total	17	210	16	6

1 staff case shared between Heath and Pierce

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: 2/5/21

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 1/28 - 2/4)

Grade Level	Weekly Positive Cases	Cumulative Positive Cases
BEEP/Pre-K	0	3
Kindergarten	2	17
1st Grade	1	17
2nd Grade	1	8
3rd Grade	0	9
4th Grade	0	7
5th Grade	0	10
6th Grade	2	7
7th Grade	0	11
8th Grade	2	17
9th Grade	0	6
10th - 12th Grade	1	31
Staff (School-Based)*	7	66
Staff (District Office)	0	4
Total	16	213

1 staff case shared between Heath and Pierce

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

Public Schools of Brookline Case Counts

Data Last Updated: 2/5/21

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

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)
1/11 - 1/15	175	1	174	5
1/18 - 1/22	571	1	570	15
1/25 - 1/29	612	0	612	11
Total	1,358	2	1,356	31

	1/11 – 1/15	1/18 – 1/22	1/25 – 1/29	Total
Test Positivity	**0.57%**	**0.18%**	**0.00%**	**0.15%**

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

Discussion of Increasing In-Person Time for Students – General Background

- We have high confidence that risk of transmission in school settings with mask requirements, enhanced ventilation, and other PSB-implemented control measures is low, based on:
  - National and global evidence as summarized in our evidence review (most recently updated 1/8/2021 - https://www.brookline.k12.ma.us/cms/lib/MA01907509/Centricity/Domain/62/Evidence%20Review%20-%20Reopening%20Schools%20COVID%201-5-21.pdf)
    - Notably – school-focused studies in WI and NC that we reviewed on 1/29/21, showing very low levels of in-school transmission despite high community incidence https://www.brookline.k12.ma.us/cms/lib/MA01907509/Centricity/Domain/62/School%20Reopening%20Experience%20Slides%202021.1.29.pdf
  - Strengthening expert consensus
  - PSB's own experience:
    - Approximately 1-2 suspected cases of in-school transmission in 70,000+ staff days and 130,000+ student days in buildings so far this year.
    - 1,358 educator/staff PCR tests conducted between 1/15 and 1/29/21 (near the height of the winter case surge) included just 2 positives—0.15% cumulative positivity.

Discussion of Increasing In-Person Time for Students – Distancing Background

- Strong evidence now that 6-foot desk distancing (as distinct from less distancing) is not an absolute requirement to keep risk low.
  - National and global evidence base suggests risk of secondary infection among close contacts (by definition within 6 feet) is low single digit percentages or even less if masks are worn and similar precautions are taken.
  - Out of 200+ in-school close contacts of cases in PSB this school year, just 1 positive (all others either tested negative or did not develop symptoms)
  - Literature focused on impact of various mitigation measures indicates that protective impact of distance is a gradient, not a bright line, and that other measures (particularly universal masking) have far larger protective impacts than difference between 3 and 6-foot distancing does.
- Lived experience of health care and other essential occupations that cannot operate at 6-foot distancing anecdotally confirms

Mitigation Impact of Distancing

The following graph from Chu, et al. in *The Lancet*, June 1, 2020 may be particularly helpful in understanding the nature of the relationship between distancing and infection risk mitigation:

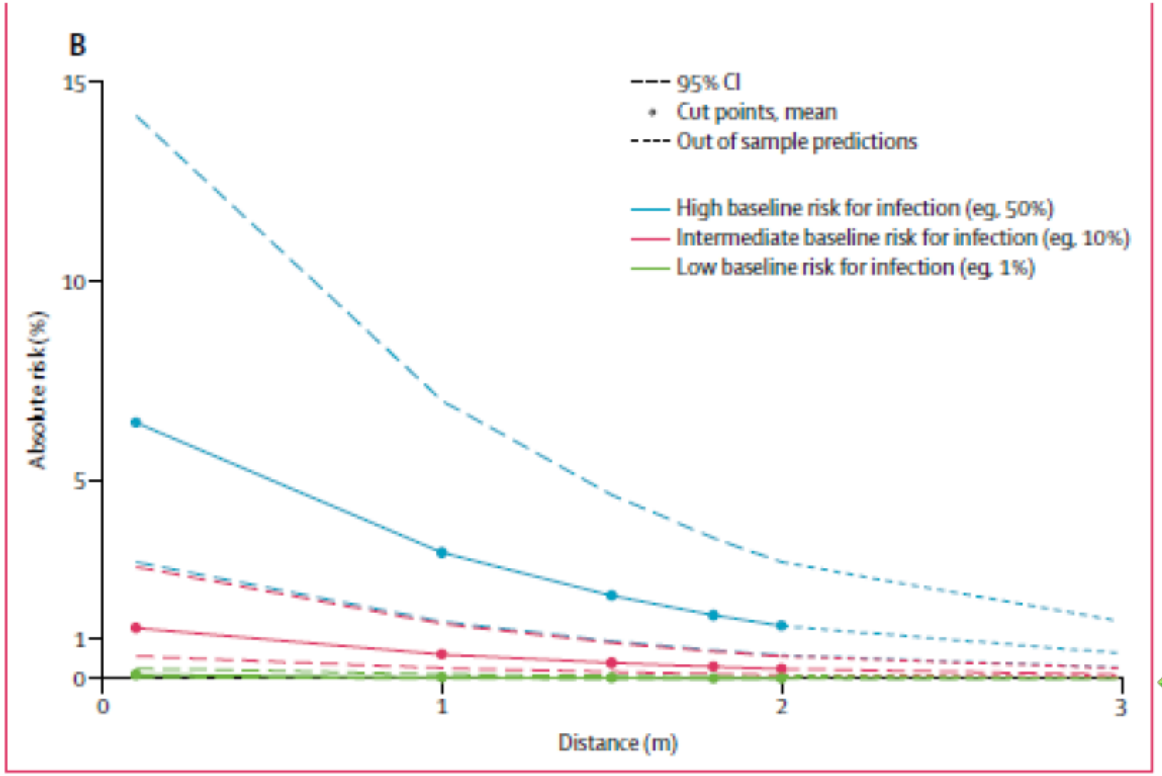


Figure 3: **Change in relative risk with increasing distance and absolute risk with increasing distance**
Meta-regression of change in relative risk with increasing distance from an infected individual (A). Absolute risk of transmission from an individual infected with SARS-CoV-2, SARS-CoV, or MERS-CoV with varying baseline risk and increasing distance (B). SARS-CoV-2=severe acute respiratory syndrome coronavirus 2. SARS-CoV=severe acute respiratory syndrome coronavirus. MERS-CoV=Middle East respiratory syndrome coronavirus.

PSB's environment is best represented by the green line in our view (low baseline risk of infection)—meaning the absolute risk difference between 3ft and 6ft distancing is insignificant.

Mitigation Impact of Distancing vs. Masks (unpublished Mayo Clinic data)

Mask use basically removed risk differential of distance.

Source: https://newsnetwork.mayoclinic.org/discussion/mayo-clinic-research-confirms-critical-role-of-masks-in-preventing-covid-19-infection/

Discussion of Increasing In-Person Time for Students – Distancing Guidance

- While most recommend 6-foot distancing when feasible, neither WHO, nor CDC, nor MA DPH/DESE says that 6-foot distancing is **necessary** to keep school settings safe as long as masks are worn.

WHO Guidance on Distancing for Schools

https://www.who.int/news-room/q-a-detail/coronavirus-disease-covid-19-schools

- *"**Hygiene and daily practices at the school and classroom level**: **Physical distancing of at least 1 metre [3.3-foot] between individuals including spacing of desks**, frequent hand and respiratory hygiene, age-appropriate mask use, ventilation and environmental cleaning measures should be in place to limit exposure."*

- Also:
  - *"Teacher and support staff should wear masks **when they cannot guarantee at least a 1-metre distance from others** or if there is widespread transmission in the area."*
    - https://www.who.int/docs/default-source/coronaviruse/risk-comms-updates/update39-covid-and-schools.pdf?sfvrsn=320db233_2

CDC Guidance on Distancing for Schools

https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html

- ***Modified layouts***
  - *Space seating/desks at least 6 feet apart **when feasible**.*
  - *Turn desks to face in the same direction (rather than facing each other), or have students sit on only one side of tables, spaced apart.*
  - *Modify learning stations and activities as applicable so there are fewer students per group, placed at least 6 feet apart **if possible**.*
  - *Create distance between children on school buses (e.g., seat children one child per row, skip rows) **when possible**.*

- ***Food service***
  - *…*
  - ***As feasible**, have children eat meals outdoors or in classrooms, while maintaining social distance (at least 6 feet apart) **as much as possible**, instead of in a communal dining hall or cafeteria.*
  - *…*
  - ***If communal dining halls or cafeterias will be used, ensure that children remain at least 6 feet apart in food service lines and at tables while eating.** Clean tables and chairs between each use.*

MA DPH/DESE Guidance on Distancing for Schools

https://www.doe.mass.edu/covid19/on-desktop.html (8/19/2020 Joint Memo)

- *Physical distancing is a critical tool in preventing the spread of COVID-19. The CDC and DPH recommend 6 feet of distance between individuals. The World Health Organization and the American Academy of Pediatrics recommend a minimum of 3 feet of distance.* ***DESE recommends that districts aim for 6 feet of distance where feasible. When 6 feet is not feasible, 3 feet is an acceptable minimum as long as staff and students wear masks covering the nose and mouth at all times.*** *If the 3 feet minimum is applied on the bus, all staff and students regardless of age must wear masks at all times. Please note that decisions to apply a 3-feet minimum will likely increase the number of close contacts associated with the occurrence of a case.*

- *CDC, Social Distancing, Quarantine, and Isolation. (2020, May 6). Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html*
- *DPH, COVID-19 Prevention and Treatment (2020). Retrieved from https://www.mass.gov/info-details/covid-19-prevention-and-treatment#social-distancing-*
- *WHO, Considerations for school-related public health measures in the context of COVID-19. (2020, May 10). Available at https://www.who.int/publications/i/item/considerations-for-school-related-public-health-measures-in-the-context-of-covid-19*
- *American Academy of Pediatrics (2020). COVID-19 Planning Considerations: Guidance for School Re-entry Retrieved from 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 Guidance on Distancing for Schools

https://www.doe.mass.edu/covid19/on-desktop.html (9/21/2020 FAQs)

- ***How should mask breaks be conducted?***
  It is recommended that students have at least two mask breaks per day (e.g. mealtime and recess). As it is recommended that students younger than second grade wear masks, it is important to note that they may need additional mask breaks during the day. Mask breaks should be held outdoors, if feasible. ***Students must be at least 6 feet apart during mask breaks.*** *Hand washing facilities or hand sanitizer must be available when entering and leaving this space. Students should remove masks as outlined above.*

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

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- ***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.*

American Acad. of Pediatrics Guidance for Schools

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/

- **"**In many school settings, 6 feet between students is not feasible without drastically limiting the number of students. Some countries have been able to successfully reopen schools after first controlling community-wide spread of SARS-CoV-2 while using 3 feet of distance between students without increases in community spread.[20] Physical distance between desks should follow current public health guidance, and desks should be placed at least 3 feet apart and ideally 6 feet apart. … **Schools should weigh the benefits of strict adherence to a 6-feet spacing rule between students with the potential downside if remote learning is the only alternative."**

- **Elementary Schools: "**Desks should be placed at least 3 feet apart, and ideally 6 feet apart. If this reduces the amount of time children are present in school, harm may outweigh potential benefits."

- **Secondary Schools: "**Desks should be placed 6 feet apart when feasible."

- "Given what is known about SARS-CoV-2 transmission dynamics, adults within schools should maintain a distance of 6 feet from other people as much as possible, particularly around other adult staff."

Discussion of Increasing In-Person Time for Students – Impacts of Distancing

- Increasing alarm among pediatricians, mental health professionals, and parents about isolation and other impacts of remote learning.
  - Panel 4 members have personally witnessed this in the pediatric emergency department context and have heard similar accounts from several local pediatricians.
  - We plan to focus more directly on the available evidence in our next meeting(s), including 2/12/2021 at 3pm jointly with PSB Expert Advisory Panel 2

Panel 4's Updated Recommendations to PSB

1. The available evidence on infection prevention, plus the increasing clarity and concern around negative impacts of remote schooling on children, indicates to us that it is **now time to increase in-person time offered to all students—returning to full in-person in a staged manner across grades** to allow for planning, logistics, and ongoing monitoring, **but not unreasonably delayed**.

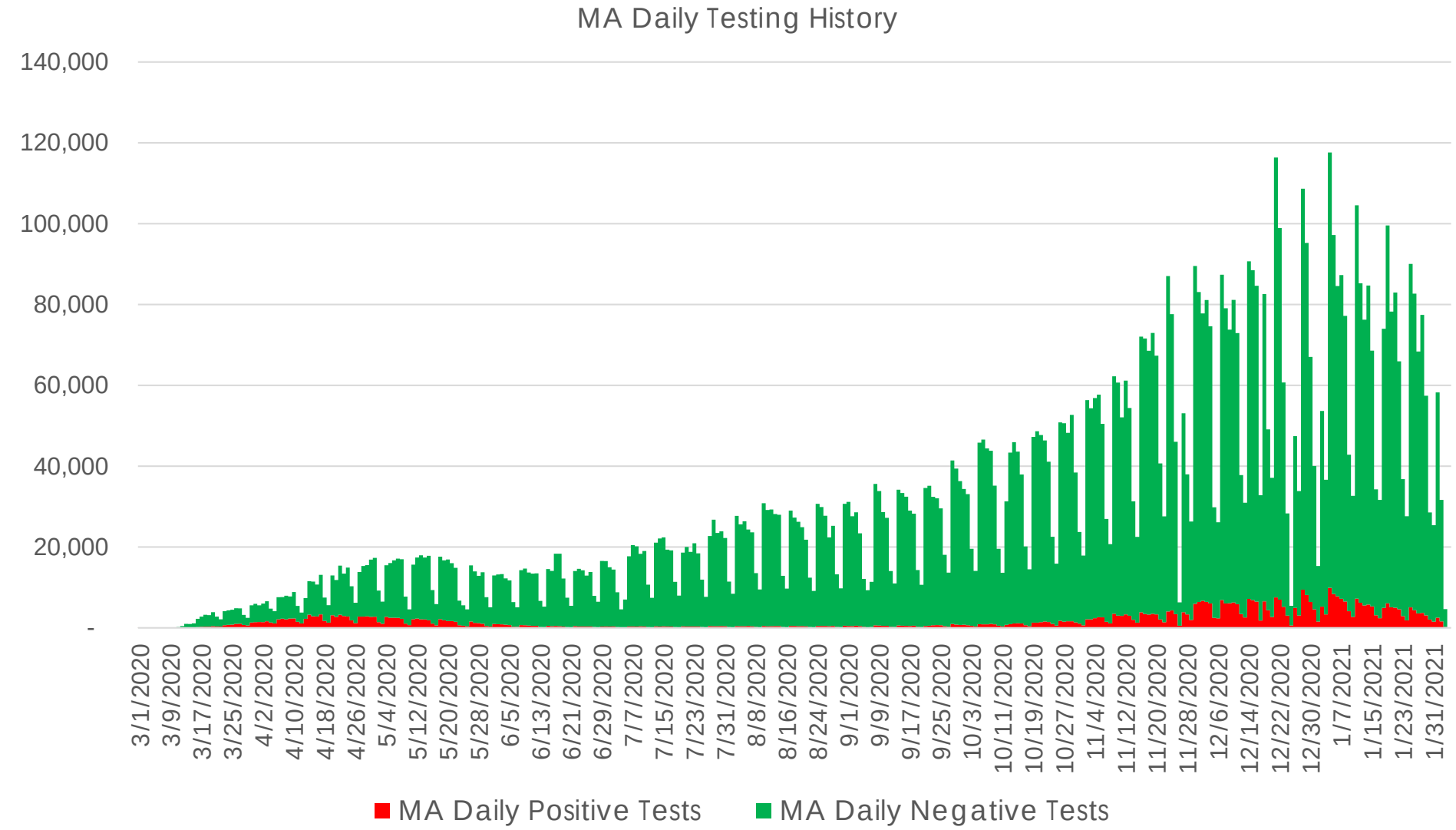
2. **During MASKED times indoors, 6-foot distancing indoors remains a goal where feasible, but is <u>not</u> a bright line and should <u>not</u> be a basis to limit in-person time for students.** Desk distance between students should be reduced to the extent needed to allow full in-person operations, **but not below 3 feet**. PSB should try to continue to give adults consistent 6-foot distancing from others as much as possible (especially from other adults, but also from students if feasible).

3. **During UNMASKED times, it is important to maintain 6-foot distancing or to fully compensate with a combination of existing enhanced ventilation measures and physical droplet barriers.** We strongly recommend that adults remain masked and use face shields while indoors in the presence of anyone who is unmasked.

4. **We will continue to monitor** for changes (including any impact of virus variants) and commit to alerting PSB immediately if we see any reason to pause/rollback.

Appendix – For Reference As Needed

Statewide Test Results



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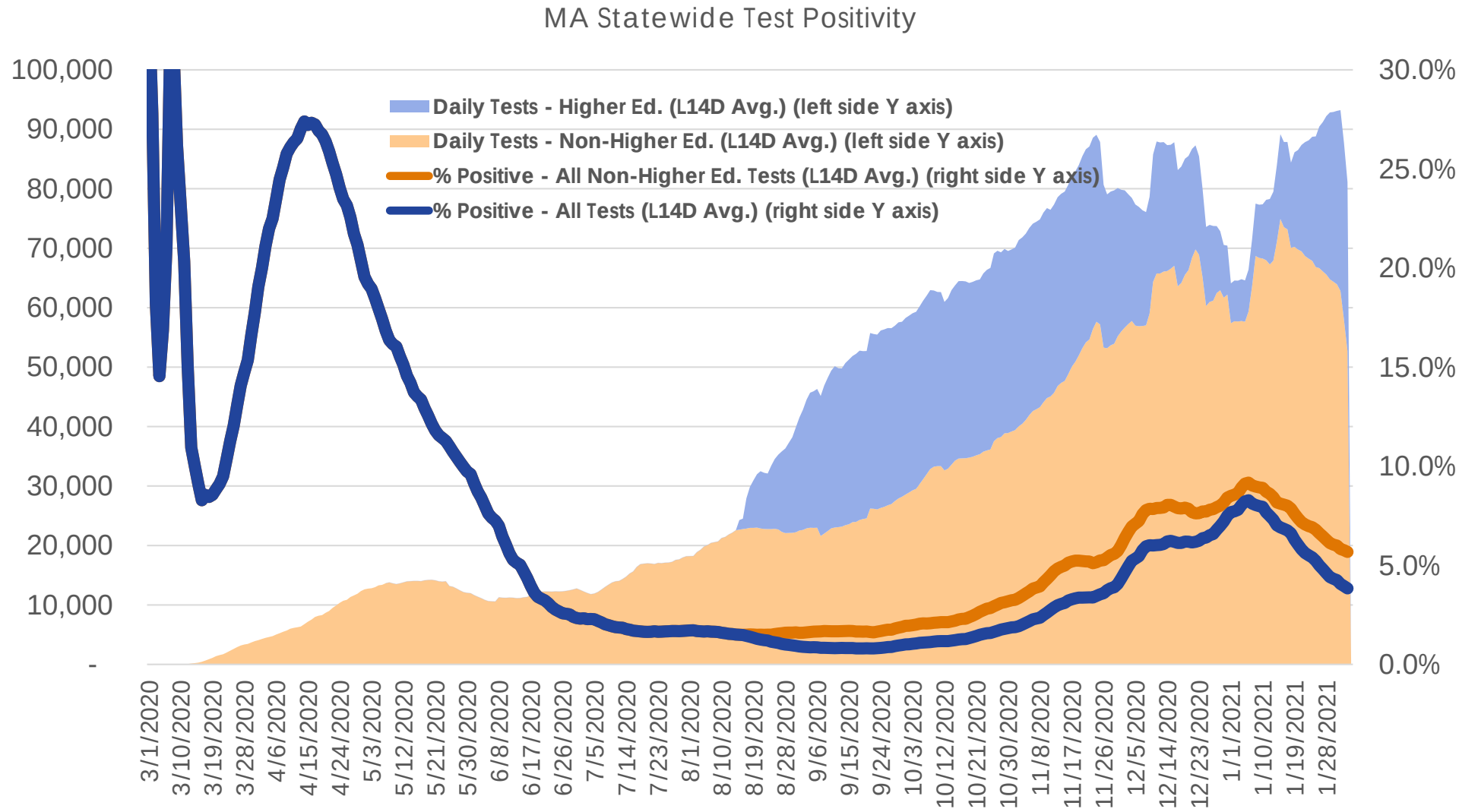

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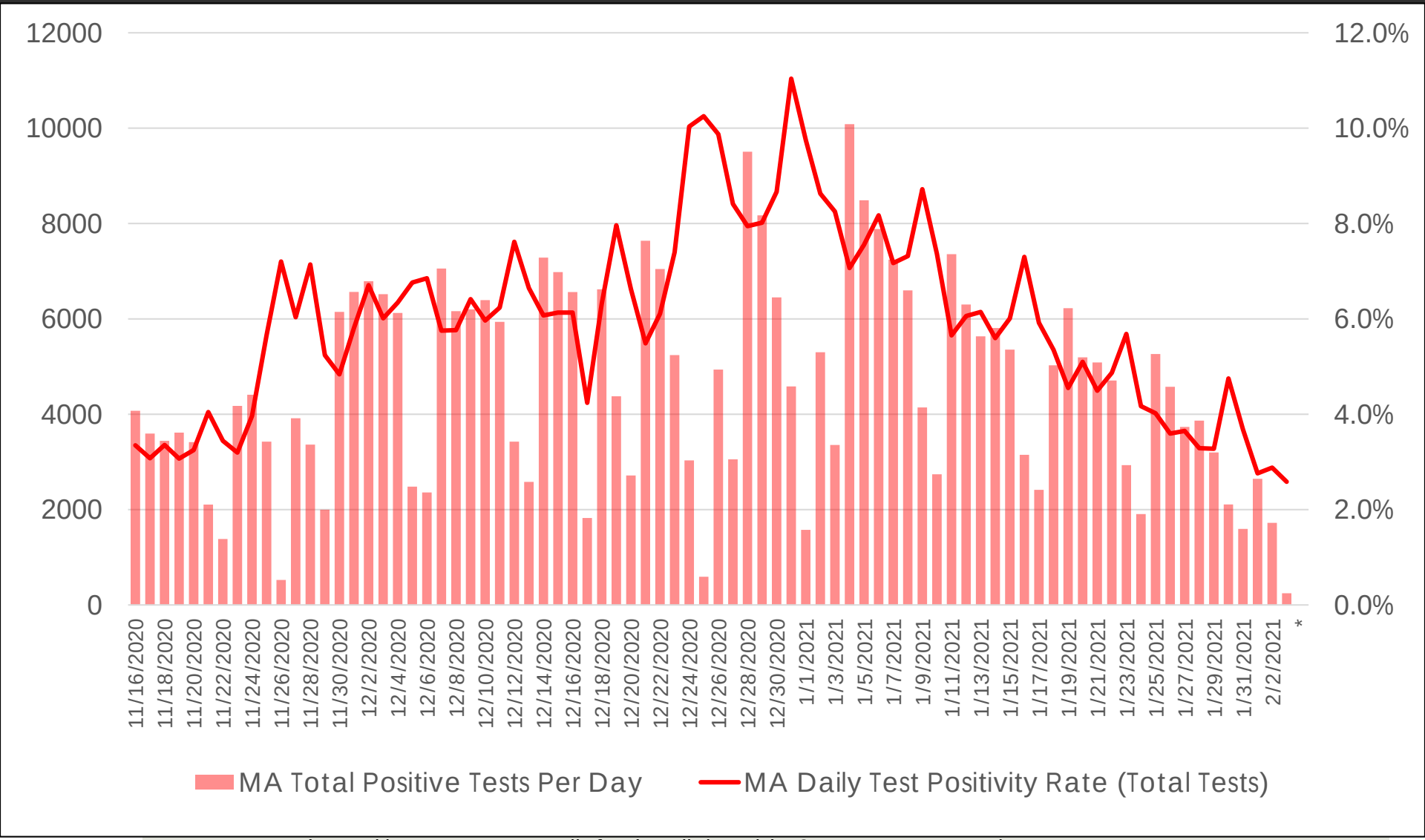

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