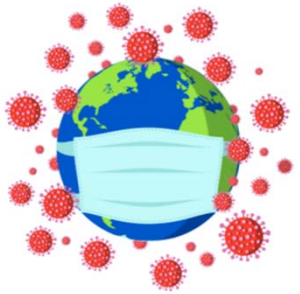
PUBLIC SCHOOLS of BROOKLINE

Advisory Panel 4:
Public Health, Safety, & Logistics

Week of September 20, 2020

Who We Are

- Public Health Professionals
- Scientists
- Infectious Disease Specialists
- Physicians and Nurses
- Brookline Parents



Who We Are

- **Elena Savoia, MD MPH,** Deputy Director, Emergency Preparedness Program, Harvard School of Public Health (co-chair)
- **Dave Gacioch,** Partner, McDermott Will & Emery LLP (co-chair)
- **Lan Dennie, RN, BS, CMAC,** Occupational Health Nurse, Fenway Health
- **Benjamin Linas, MD MPH,** Assoc. Prof., Infectious Diseases, BU/BMC
- **Nira Pollock, MD, PhD,** Associate Medical Director, Infectious Diseases Diagnostic Laboratory, Boston Children's Hospital
- **Boris Perlovsky,** Director, Innovation Strategy. Cambridge Innovation Ctr.
- **Serena Rajabiun, MPH PhD,** Asst. Prof. of Public Health, UMass Lowell
- **Vishakha Sabharwal, MD,** Pediatric Infectious Disease, BMC
- **Ben Sommers, MD PhD,** Prof. of Health Policy, Harvard School of Public Health; Prof. of Medicine, Harvard Medical School.
- **Lakshman Swamy, MD MBA,** Pulmonary/ Critical Care Physician, Medical Director at MassHealth Payment & Care Delivery Innovation
- **Jenny Tam, PhD,** Senior Staff Scientist, Wyss Institute, Harvard University

What We've Been Doing

- Weekly Meetings Fridays 3-4:30pm, open to public – please feel free to join
- Stakeholder Engagement & Outreach
  - Parents, Teachers, Staff
  - Brookline Public Health Advisory Board and Brookline Health Department
  - PSB and School Committee
- Expert Guests

Expert Presentations

Joseph Allen, PhD
Healthy Buildings & Ventilation
July 17 & August 21

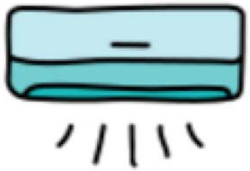
Sarita Chung, MD
Staff Safety - Lessons from Pediatrics
August 7

Sara Bleich, PhD
Nutrition and Health Equity
August 21

All sessions available online:
https://www.brookline.k12.ma.us/Page/2621

What We're Focusing On

- Evidence Review on COVID & Schools
- Testing Options and Strategies
- Community Reopening Benchmarks
- Lessons & Data from Summer Programs
- Enhanced Ventilation
- Multiple Layers of Risk Reduction



All documents available online:
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Keeping School Low-Risk for All

1. Minimize likelihood of infected people coming to school
   - Closely monitor community COVID-19 prevalence metrics
   - Daily symptom checks and quarantines
   - Contact tracing for any individuals who test positive
2. Multi-layered defense against in-school transmission
   - Universal masking and other PPE
   - Physical distancing – default 6-feet for now
   - Enhanced classroom ventilation
   - Focus on hand hygiene
   - Increased surface cleaning and disinfecting
   - Cohorting measures

Key point: multi-layered defense means we are <u>not</u> relying on perfect execution of any particular strategy

What public health steps are needed for schools to re-open and stay open?

Comprehensive set of critical health and safety requirements

Physical distancing

Well-ventilated indoor and outdoor space

Masks and/or face shields

Clear testing strategies and contact tracing

Improved hand hygiene and cleaning

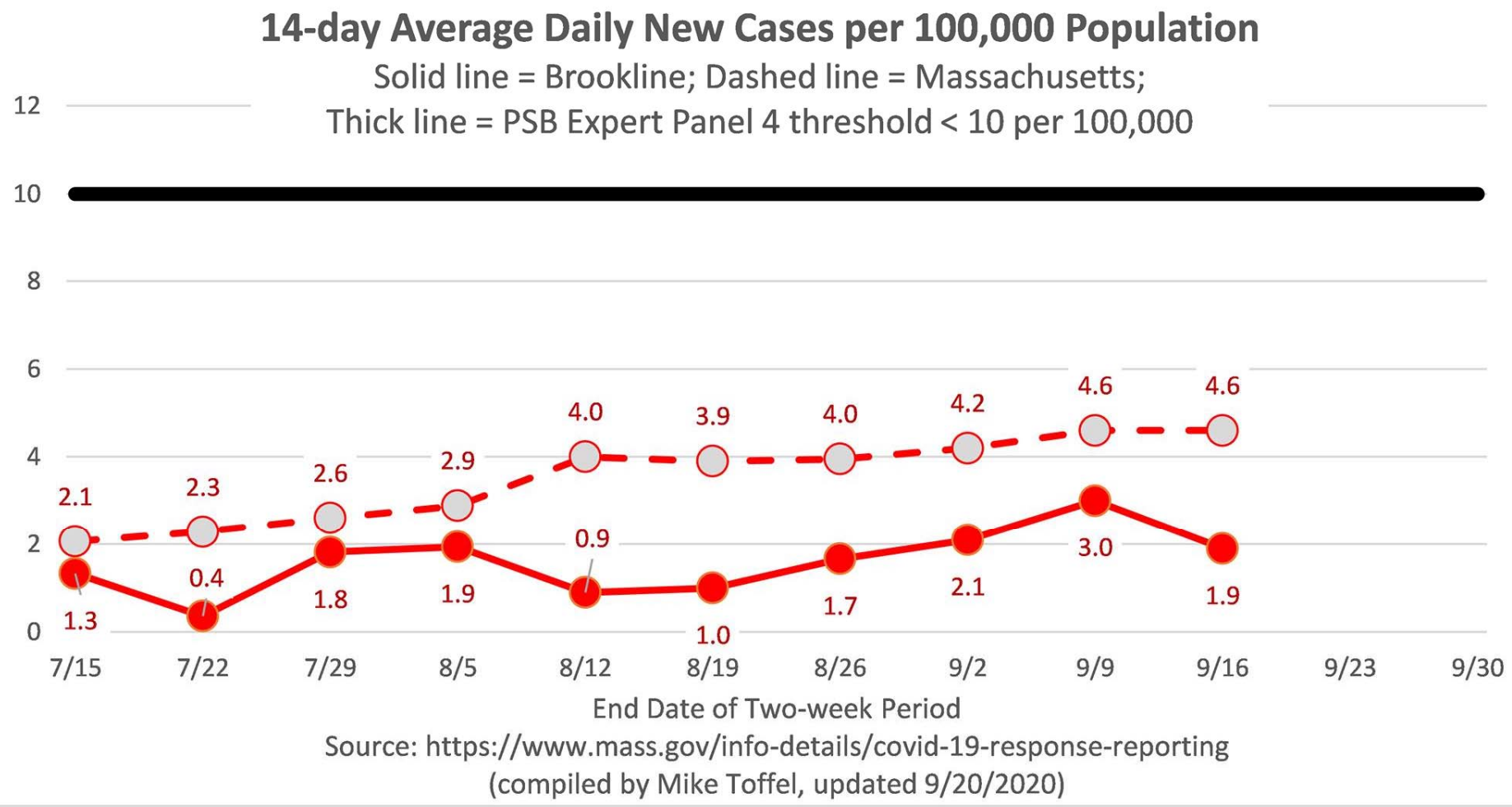
Community benchmarks for re-opening

Community Benchmarks

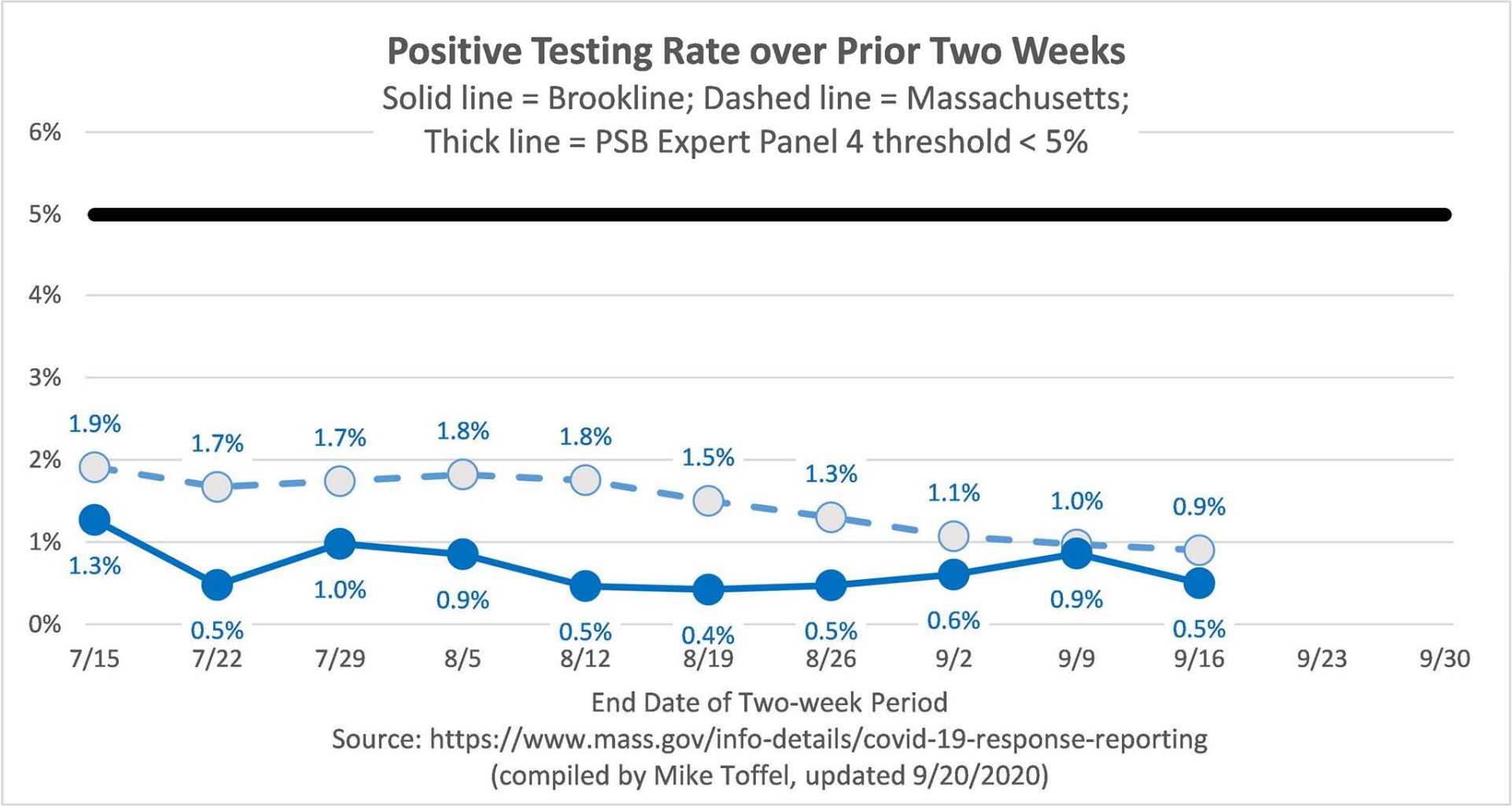
- ✓ *Positive test rates < 5% over prior 14 days in Brookline and in Massachusetts*
- ✓ *Daily new cases < 10 per 100,000 people over prior 14 days in Brookline and in Massachusetts*

- Consider pausing in-person school when any 2 metrics fail
- Based on combined recommendations from the World Health Organization, American Federation of Teachers, and Harvard Global Health Institute

Community Benchmarks - Status



Community Benchmarks - Status



Enhanced Ventilation Explained
"Air Cover"

- **GOAL:** use increased fresh air exchange and air filtration (MERV-13 or higher) as an **extra layer of defense** against virus transmission
- **TARGET:** at least 4 (initially) and 5 (ultimately) air changes per hour through A+B+C below
- **IMPLEMENTATION PLAN**:
  - **A:** Increase fresh air by opening windows/doors, using fans, opening HVAC system dampers, and measuring air flows
  - **B:** Increase filtration of recirculated air by using MERV-13 filters wherever we can—and measuring air flows
  - **C:** Add portable air cleaners with HEPA filters where needed to meet targets

Harms of Prolonged School Closure

Months of lost learning [1]

Widening gaps in educational achievement [2]

Threats to some children's safety [3]

Increasing burden of mental health [4]

No access to adequate food [5]

1. Tonness BV, The Boston Globe, May 23, 2020; 2. Goldstein D, NY Times, June 5, 2020; 3. Baron et al, Journal of Public Economics, 2020; 5. Bauer L, Brookings, July 9, 2020.

Rates of Infection in Children

Rates of infection (asymptomatic or otherwise) in population-based studies are significantly lower among kids than adults, even when schools have been open.

Iceland: Did not close schools

Infection rates increased with age, with children under 10 having half the infection rates compared to adults[1]

Italy: High incidence town

3.0% infection prevalence among adults, 1.2% among children 11-20, 0% among children 0-10 at start of lockdown

Gudbjartsson et al., New Eng J Med 2020. Lavezzo et al., Nature 2020.

School-based outbreaks and risks

Key takeaways

School-based transmission of known COVID cases is rare, with most published studies on contact tracing showing rates of secondary transmission below 1-2%

Risks of teacher/staff infection in countries that did not close schools are similar or lower than the population average

Full Evidence Review Updated Regularly at:
https://www.brookline.k12.ma.us/Page/2621

Thank you!