



Minutes
Cambridge COVID-19 Expert Advisory Panel
1 pm, Thursday July 16th, 2020

Sammi Chung
Jill Crittenden
Louann Bruno-Murtha
Nancy Rihan-Porter
Chris Kreis
Bill Hanage
Claude Aix Jacob
Chris Kreis
Anna Kaplan
Sam Lipson
Kirby Erlandson

Contact vs. droplet vs. aerosol transmission + relevance to:

- Massachusetts lift of the ban on reusable bags
- Suggested need to close schools for 72 hours for deep cleaning
- indoor mask recommendation for aerosol protection
- Plastic bags:
 - Sam: State rescinded order banning reusable bags. There was greater concern about surface contact risk when these orders prohibiting reusable bags were initially instated.
 - Possible messaging could be: re-usable bags are acceptable for use if customer packs their own groceries
 - Jill: If fomite transmission was key, reports tied to eateries would have come out, similar to the reports we see when E. Coli outbreaks occur
 - Bill: Fomite transmission comparatively low compared to other avenues. Pair this with messaging that you should pack your own bags and avoid contact with others as much as possible. If you bring your own, fill it yourself.
 - Important messaging: Sanitize your own reusable bags at home

Airborne Transmission

- Bill: the proportion of transmission events that occur this way is not known. It can happen, but that doesn't mean it does always happen. Aerosol occurs via droplet nuclei, which is much smaller than a droplet, and it contains many fewer virus particles than a droplet because volume is scaled down in cubic not linear proportion.
- Jill: but can droplet evaporate to a smaller size and condense into larger concentration of particles? There is reason to think that evaporation is occurring in real time.
- Sam: issue is whether virus can survive long enough for desiccation of particle – for the most part large particle will land on surface or on the ground.
- Jill: Evaporation of droplet is the reason for humidification recommendations because droplet can convert to aerosol with evaporation of moisture from the droplet.



- Bill: ability to detect aerosol doesn't mean it transmits. Vast majority of evidence says most important things are close proximity and length of time spent in close proximity. The exception to this is super spreading which suggests aerosol may plausibly be occurring. Reasonable to suggest transmission is highest when someone is just starting to get symptoms. In events that large number of people were infected by a single person, aerosol transmission may plausibly play a role.

Closing Schools for cleaning

- Bill: if just 1 case in the school, then a 48 hour closure is likely enough. If there were many cases, then aerosol component more likely and you may want to close longer.

Indoor mask recommendation

- Concerning observation that in restaurants servers have to wear masks but customers are not wearing masks when server comes to table
- Louann: Recent MMWR report supporting mask efficacy– 2 hairdressers infected that had serviced 140 clients. More than half of the customers were tested and tested negative. Suggests transmission is primarily droplet and that masks work.
- Bill: We shouldn't expect most infections to transmit because R_0 is over dispersed. Peoples viral burden is different, and it's different at different times in course of infection. Some folks may be quite viremic right before showing symptoms. Continuing to observe distancing – not a substitute.
- Bill: proportion of population using the mask really impacts effectiveness.
- Jill: There are studies where masks didn't help, but no studies where masks caused more infection. Reviewed 12 studies showing either no harm or a benefit.

What should we consider going into next phase? What trigger points should be used?

- Bill: this is as good as its going to get in terms of cases
- Anna: over last few days there has been an increase in the number of active infections – positive PCR and some rapid tests through carewell. 5 day moving average trending up in the past 4 days. Increase compared to last few weeks. These cases have many more contacts than in May so contact tracing is more burdensome. Contacts are now symptomatic and seeking testing.
- Louann: not observing more cases at CHA yet. One question is lack of travel ban for HCWs. Encouraging staff to travel now to get a break, but possibility of introducing virus to MA through travel. HCWs are exempt from 14d quarantine
- Claude: In May and June Cambridge provided access to mobile testing and couldn't give the test away – now the demand is unprecedented with reopening – doubling appt slots but always full. Not seeing explosion in positivity rates, keeping up with demand.
- Anna: Through community testing 900 people and most all are negative – need to get it to people who need it most as the people seeking testing have higher positivity rate
- Kirby: We should use this recent rise in new infections to support push for closure of indoor restaurants and fitness centers. We know these are environments for super spreader events and quick action is key.

- Bill: exploring way to detect super spread event and aerosol transmission by measuring proportion of restaurant seating available and size of event. As restaurant becomes more sparsely populated, the number of people transmitted via droplet shrinks. If proportion infected remains the same regardless of restaurant size, it is consistent with non-droplet transmission.
- Claude: Went to hot zone of LTCFs for testing – saw steady decrease week over week. Now we're talking about going back. What's the best timeline?
- Kirby: report from NY analyzing nursing home outbreaks finding that overall case counts tracked closely with staff infection timeline suggesting staff were likely driving outbreak - supports rationale for regular ongoing staff surveillance testing even when there aren't known cases
- Sam: Cambridge can choose to delay any further Phase transition announced by the State. It feels like we didn't have time to do this last time because the State only announced on the Friday before a holiday weekend.
- When state makes announcement, they don't tell us ahead of time. In order to diverge from state guidelines, may choose to exempt city before state makes announcement.
- Claude: what is the threshold for scaling back?
- Somerville already delaying phase 3 "until at least July 20" so comparing positivity rates there and here could prove useful.
- Bill: Key message "Pandemic management, not reopening." You need to be prepared because its' coming we can be reasonably clear that things will be increasing again Trigger points should be based on multiple independent data sources – movement in wrong direction. Waiting for hospitalizations to rise is disturbing. Trigger depends on your goals - How many deaths are you OK with? Do you want to avoid surge? Do you want schools to remain open? Do you want to prevent SNF introduction? Answers to these questions will help determine trigger points.
- Closing indoor dining should be top of list for scaling back (Jill)
- General agreement from group that closure of restaurants and indoor gyms should be top of list
- Sam: Law dept viewing proposal
- Jill: Should increase outdoor permitting