

Cambridge COVID-19 Expert Advisory Panel
Thursday, January 21, 2021

Meeting convened at 1:03 pm

ATTENDEES:

Panel Members

Bill Hanage
Jill Crittenden
Louann Bruno-Murtha
Kirby Erlandson

CPHD/City staff:

Claude Jacob
Sam Lipson
Anna Kaplan
Nancy Rihan-Porter
Sammi Chung
Dan Riviello

1) Clinical, case and wastewater data update

Clinical update

Hospitals are optimistic about the current trend. CHA hospitals (Cambridge and Everett) saw a decreased number of hospitalized patients over the past week. CHA hospitalization been closely following the state's hospitalization trendlines. Hospitals in Boston, Mt. Auburn, and other surrounding cities have also seen a slight decline in hospitalization. The capacity of ICU beds now fall a within more typical range. About 70%-80% of those beds used for COVID related cases. Hospitals still have other beds available for non-COVID patients.

Case Data update

New daily COVID cases in Cambridge at the present time are slightly higher than daily numbers seen in December, 2020 with some fluctuation. The latest census block analysis shows one particular census block in North Cambridge with 78 new cases over the past 3 weeks after seeing 91 cases between March, 2020 and December, 2020. There are several large residential buildings in this area, including subsidized, public and market-rate units. CPHD staff and C3 members have conducted several targeted outreach events and are in discussion with building management in one set of buildings about better adherence to indoor gathering and mask use restrictions. In many buildings appropriate signage has been posted in lobbies and hallways near the elevator indicating capacity limits, but elevator capacity continues to make proper distancing difficult.

Cambridge Community Corps (C3) has canvassed two buildings in the high-incident block to offer spot testing flu shots with dedicated pop-up testing and flu shots. C3 plans to distribute KN95 masks to residents in the next outreach event at that location in February. Masks have been distributed in a few denser housing sites, including Cambridge Housing Authority properties and long-term care facilities. We don't have any updated observations about mask use since masks were distributed, but will check with management. Several ideas to improve these conditions were discussed:

1. Identify a response team and actions (include DPW, ISD and C3 members as appropriate) to reduce transmissions in larger housing sites, focusing on recent clusters. This effort should include identification of common spaces that may pose higher exposure risks, better signage on masks.
2. Communicate importance of better masks for individuals working in frontline or high-risk jobs. Distribute masks directly to households in these buildings (coordinate with management)
3. Behaviors that increase transmission between households (e.g. kids and young adults from different households hanging out together indoors) should be part of the messaging in these higher risk residential settings.

Wastewater surveillance data update

The weekly wastewater data from the 4 Cambridge sewersheds is now live on the Cambridge COVID Data Center webpage as an interactive chart. This chart also shows regional MWRA wastewater data for the sake of comparison. Cambridge wastewater samples are only collected weekly, while the MWRA treatment plant is sampled daily. Cambridge wastewater has shown a recent decline over several weeks in all sewersheds, while MWRA regional wastewater data appears to be fluctuating quite a lot. In the last meeting, the EAP observed that the Cambridge wastewater data started to show a declining trend and we have indeed seen a reduced number of new cases and a decrease in hospitalization. There appears to be predictive value in the wastewater data, but the EAP and CPHD staff should take a closer look at these correlations when there is more time.

2) SARS-CoV-2 variants (recent detection in MA, long term impact)

Two individuals have now been confirmed in Massachusetts to have the B.1.1.7(UK) variant of the virus. It is becoming increasingly clear that this variant is about 50% more transmissible than the original SARS-CoV-2. If this eventually becomes the dominant variant it would raise the reproduction rate (R_t) (e.g. if previously at 1.0 about it would increase to about 1.5). This variant is still rare in Massachusetts, but it's reasonable to expect the situation will change soon and quickly. Another concern will be the impact on schools. There's no evidence currently that the new variant spreads disproportionately faster in children under the age of 10. They are roughly 50% less susceptible to infection than adults for any given exposure. But even so, the UK variant poses greater risk of transmission to everyone.

The South Africa (B.1.351) and Brazil variant (P1) are more concerning. So far there's less

epidemiologic evidence on the infectious risk, ability to cause reinfection, and ability to escape vaccine-derived immunity for these variants. New studies are being released (or pre-released) and our understanding is changing quickly. In summary:

- Some mutations in each of the variants have been shown to diminish neutralization of the virus, therefore, it's reasonable to believe they are **more likely to be capable of "immune escape"**.
- But that evidence doesn't show any association with the vaccine-induced response. The area around Manaus (deep in the Amazon) where the Brazil variant (P1) has been circulating already had seen an estimated 70% of the population exposed as of October (before emergence of new variant). Even so, the **recent surge with the P1 variant has caused more damage [serious infections and deaths] than the earlier surge**. Japan, South Korea, and Italy also reported P1 cases, and the fact that there is insufficient evidence on the variant is concerning.
- Though there's no clear evidence of "immune escape" from the vaccine in these variants, it's **safe to assume that vaccines will be less protective** (but not totally ineffective). Data does show that vaccine-induced immune response is stronger than the natural immune response, so there is reason to think that current vaccines will be somewhat effective. It's likely that these variants with their higher Rt-values would require a higher proportion of the population to become immune (maybe increasing from 60-65% to 75-80%) in order to reach herd immunity.
- About 30% of the Massachusetts population should already have natural or induced immunity at this point. If we assume that the length of the immunity is about 8-12 month, the **risk of reinfection will be the key question after the protection period has passed**.
- As infections by new variants occur around the world the situation will become **similar to last year before the first surge**. It will require more effort and effective approaches to control the virus. The medical and scientific communities are paying very close attention and the story will continue to evolve.

Recommendations:

1. Make people aware of that variants will become more common soon and will increase overall risk until we get transmission rates down and immunity rates up
2. Carefully review PPE guidance needed to disrupt transmission. Better masks are needed now even more than before
3. Emphasize in public guidance that the pandemic isn't over and even those who have received the vaccine need to continue all mitigation measures

3) Update on vaccine rollout to priority groups

- The situation has been challenging and the guidance on eligibility is continuously changing.
- Planning for these mobile vaccine clinics has been gone smoothly. CFD filling the vaccinator role and CPHD is overseeing the process and providing clinical and admin support.
- Recent vaccine clinics: Last week (1/11-1/15), the vaccine team (comprised of

CPHD and CFD staff) vaccinated 907 first responders for the first dose. Yesterday, the vaccine team went into the Salvation Army homeless shelter. This effort to vaccinate first responders has been dubbed *Operation Nightingale*

- Today the team was in the First Christ Church and Citywide Senior Center. About 70 people were vaccinated between these two sites. Vaccine hesitancy, even among shelter staff, is a significant challenge. The vaccine team expects to see a similar obstacle in other congregating housing sites. CPHD has been cooperating with the Cambridge Department of Human Service Programs to identify vaccine safety messages with this particular community in mind.
- Another challenge is to order and obtaining the correct amount of vaccine for each session and making sure that there's a **backup list** in order to avoid any loss of vaccine when there are leftover doses. In Israel people are told where and when to go to be on standby, in case there are extra or leftover doses. By preregistering these "standby" individuals (with contact information) they can be notified where and when to get their second doses.
- Planning for the second dose has already started. The team is using Cambridgeside Galleria Mall as a main vaccine clinic site. All pieces are ready, we are just waiting for State approval to start.
- The City is using the same collaborative approach that allowed activation of 4 testing sites with 7 day/week coverage back in April. The city has now completed 80,000 COVID tests since April and has administered three times more flu shots this fall than in a typical year. As a result, Cambridge is well ahead of most MA cities in the number of residents tested. Cambridge experience has been used as an example throughout the region and the state.

4) New ASTM Mask Rating System [Not discussed to do insufficient time]

Adjourn 2:04pm

Notes respectfully submitted by Sam Lipson on 1/24/21