

Minutes
Cambridge COVID-19 Expert Advisory Panel
2 pm, Tuesday May 10th, 2020

Jill, Claude, Sam, Lou Ann, Kirby, Bill, Kezi, Ramesh, Mariana

- **Viral Testing and Serology.**

- Serology

- Understanding the quality of serology test in use is important- is someone collecting data to compare viral RNA data to serology data on a per person basis?
 - There has been unauthorized serology testing in Cambridge at a restaurant in Inman that is getting shut down.
 - It should be part of a study in order to continue. Needs to be done in a coordinated fashion. Risk of bad information is too great. Too much that needs to be learned about sero-protection. Not FDA approved and only a research test. CHA only releasing the serology data as an aggregate – not to individuals. (Lou Ann, Bill)
 - Understanding the quality of serology test in use is important- is someone collecting data to compare viral RNA data to serology data on a per person basis? (Jill) Claude: Nursing home mobile outreach testing will have both nasopharyngeal and some serological data

- Nasopharyngeal testing

- Pressure to provide access to universal testing and better ways to access congregated communities for testing (Claude)
 - Very important to continue expanding access to nasopharyngeal testing to identify asymptomatic spreaders (Lou Ann).
 - Mobile outreach testing with local ambulance service is a complement to CHA three test tents (Somerville, Malden, East Cambridge)
 - Very important to have mobile testing and to bring it closer to communities most effected. Door to door/household testing by EMTs being done in NYC. Fear is another barrier. Opportunity to engage religious leaders as a way to build trust and acceptance around testing efforts, especially among immigrant community. (Kirby)
 - Starting a new mobile testing pilot in Cambridgeport neighborhood as this is a hot spot in addition to East Cambridge. Most densely populated neighborhood and has largest number of positives. Major importance of trust has also been raised by Chelsea colleagues, including fear among immigrant community related public charge. Largest African American church in city is in Port neighborhood and will be engaged about mobile testing. City coordinating with religious leaders (Claude, Sam)

- For individuals informed of positive test, viral testing of the remainder of the household and close contacts should be offered immediately. (Jill)
 - Mass DPH promoting idea that all contacts need to be tested. It's very important and the question is how to do it systematically. Data from CHA is showing that significant portion of positive tests are occurring in households. Need to figure out how to encourage people to get tested when someone from household has tested positive (Lou Ann)
- **City website publishing of home-care guidelines:** Working on document with assistance from other public health leadership members. There are a lot of protocols the city is trying to get out. Putting together something streamlined with a link to more detailed guidelines. Would like to have it posted and sent out on COVID emails (Sam)
 - Putting together data on household transmission in the CHA patient population and recommendations for testing households systematically and alternatives to home isolation (out of home quarantine for household members, especially bread winner). Submitting to academic journals (Lou Ann) Data limited by not knowing how many people live in each household and also how many in household and how many were actually tested.
 - Jill: Chinese paper showed that there was a second infection in the household in over 60% of households. Bill – as households get larger that increases.
 - Healthy equity advisory that the state has pulled together – intersectionality between race, intersectionality, and income with COVID. Drilling down onto 13 neighborhoods and making that available. (Claude).
 - NYC undertaking bigger mobilization for finding facilities where essential workers can avoid infection from within their family. Grocery store, postal workers, etc. Even sanitation workers – household trash as a risk source. They are provided masks/gloves by city (Sam)
 - Bill agrees sanitation workers important consideration. not aware of specific data about increased risk to trash collectors, although can be thought of as essential/frontline workers.
- Ramesh on the line – discussed finding a time to schedule Safe Paths/tracing apps into EAP meeting in the coming weeks
- **Golf course application to open in Cambridge.**
 - Age group may be high risk (older). Interesting to open this, but not to open athletic spaces typically used by less vulnerable populations. Asking people to stay grouped inside their cars together may be a red flag. Also need to take temperature of employees and players.
 - Should not encourage people to ride in cars together. Risk of transmission from socially distanced people outside is probably relatively low. At minimum need to include what Jill said, and also that we need to be clear

with message that 'reopening' is not a single event but a series of changes that can be reversed if needed (Bill)

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- **Presentation from Mariana Matus, CEO of Biobot**

- Testing for COVID RNA using qPCR from waste water treatment samples.
- Needed to show first that the assay was selective (not picking up other organisms). Since then, have begun using data as a way to add perspective to extent of outbreak.
- Want data to inform public health, but not replace surveys, antibody surveys, or patient testing. Part of larger system of data sources.
- Still not exactly sure which population the waste water is representing and how infectious they are. We know population is potentially infectious if still shedding virus. But do not know if they have shown symptoms, been asymptomatic, how contagious, etc. We know the virus is shed in stool for quite some time after infection, but not degree of infectiousness.
- Measuring in unbiased way – no selection process of needing to get to doctor, whether you qualify for test, etc.
- So far have been testing water at Deer Island which represents greater Boston area. Also testing Deer Island biobank – an archive going back to early January. Assembling time series from beginning of outbreak to now.
- They see positives start in early March, a day or two before first two cases in state, then exponential growth for 2-3 weeks, and then March 23, when shelter in place was instituted by governor, the level of virus dropped over weeks.
- Goal is to show that the data captures trends, despite the level of noise that does exist in the data. Could provide feedback to authorities if they do see rise in waste water after reopening.
- Also measuring genetic signature of another virus common in fecal matter for positive control.
- Designing random surveys to correlate this data to estimated actual infection rate in population. This is a technical challenge, but could be useful. Could indicate a large asymptomatic population, for example.
- Dynamic of shedding in individual people needs to be ascertained – larger at beginning?
- Do some people test negative in nasal swab and positive in stool? (Jill)
 - It's possible (Bill) but mainly because of the number of false negatives.
- Any other cities you are capturing data from? Louann
 - So far only Deer Island catchment which is Boston.
- If valuable, can sample from Cambridge if it adds to data. Some people are shedding more than others, but the bell curve of viremia may not matter as much if the value is trend data for local decision making. (Sam)
- Far more people contributing to their viral titer than the number being reported. Helpful to come up with thresholds with advice based on viral levels (Bill)
- Virus samples degraded over time. Are there fresher samples upstream?

- Expect to see a loss as virus makes its way to treatment plants.
- What is granularity in terms of hot spots? Building level? LTCF?
 - Neighborhood level (5000 people) so far. Depends on form of wastewater network and the population. Cambridge is dense so can cover all of it with 3 sampling sites. Boston chose more granular. It is possible to test one LTCF. Consent issues. Also some open questions about whether the turnaround time is fast enough for it to function as an early warning – maybe possible towards end of year.