Race Metric Help

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To: Adam Casseday <adamcasseday@gmail.com>, Costi Sifri <csifri@virginia.edu>

Hi Adam,

I'm a complete jerk for taking so long to get back to you. It's been pretty difficult around here for a long time and I just found this stuck in my outbox. On top of all, vaccine roll out has been a monumental challenge. I'm happy to offer advice but I suspect you may have come to your own conclusions. That said, I'll send along what I drafted for you to look at -

In terms of the color codes of the dashboards, they're a significant challenging to say the least. I think your idea is generally good. For UVA, we used a collection of 'gating conditions' to help assess whether we had the appropriate readiness to open last fall. They included several large buckets of factors like operational readiness, intrastructure, healthcare readiness, community relations/preparations, and viral case metrics to open. We're approaching the same consideration for this semester. I think the viral case measures I'll describe can provide a global picture of the state of the pandemic and could have some application for you. There are other factors that I'll leave off – hospitalizations, ICU and hospital capacity, healthcare worker illness, etc that we consider and aren't applicable for you. I'll also highlight that, in my mind, the decision is informed by these collective metrics and don't depend on a single factor; however, as I'll describe below, they probably shouldn't be viewed as a single factor but as a collective overview. I'll also say that obviously all state and local restrictions on gatherings and events should be followed. In terms of timing, I think 4 weeks prior to the race makes sense.

Viral Case Measures:

1.   7-day moving average absolute rate (currently 77):
•   7-day moving average absolute rate positive COVID cases per 100K population: Agree <10 is Green, 10-20 Yellow, >20 Red
2.   7-day moving average rate trend over 14 days:
•   If 7-day moving average is elevated: 7-day moving average of positive COVID cases/100k - downward trending is Green, stable is Yellow, rising in Red
•   If 7-day moving average is not elevated: 7-day moving average of positive COVID cases/100k - downward trending is Green, stable is Green, rising in Yellow
3.   Viral test positivity absolute rate (currently 4.94% but has just dropped over last few days, significant county/county variation):
•   Absolute viral test positivity <=5% is Green, >5-10% is Yellow, >10% is Red
4.   Viral test positivity rate trend:
•   If viral test positive >5% elevated: Downward trending Green, stable Yellow, rising Red
•   If viral test positive <=5% elevated: Downward trending Green, stable Green, rising Yellow

So, these measures provide a general gestalt of viral activity, viral trends, and control of transmission in a community. It doesn't hang on a single measure (e.g. 10 cases/100k) but hopefully provides an overview over time. It's conceivable to me, for example, that cases and percent positive could start to drop and overall look encouraging even if the case rate and case positive rate are elevated. On the other hand, it's

also possible that viral measures may be within bounds but there's some concerning signs (eg rising trended data).

The other question I'd raise is whether this should be a full WV measure or a more regional measure. Our region in central VA has not seen the wild swings seen in other areas of the state. This is a gut decision and may depend on whether the intent is to measure viral dynamics in the local community vs the community (or entire state) from which the participants will come from. Not sure there's a best answer.

WV Dashboard:
Coronavirus Disease 2019 (COVID-19) (wv.gov)
CDC Dashboard (nice county level info I don't see on the WV State dashboard):
CDC COVID Data Tracker

I'm sure this is just one of many calculations you're using to try to assess whether to hold a race. I can't image how tough it is for you. Sorry again about forgetting to send this – I'm happy to help as best possible. I'm sure you're working with local health officials as well. Dr. Mark Cucuzzella also sounds like he has a very reasonable, intuitive sense of COVID-19 epidemiology when I listened to him on a podcast talking about COVID-19. I anticipate you know and perhaps already reached out to him.

Hope this helps. SO VERY Sorry about the tardiness here. My inbox is on life support.

Hope you're safe and doing well,

Costi

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