1. **Please update us in regard to mix and match vaccines with Sputnik V vaccine. Thanks a lot!**
   Per CDC guidance ([https://www.cdc.gov/vaccines/covid-19/hcp/faq.html](https://www.cdc.gov/vaccines/covid-19/hcp/faq.html)): "COVID-19 vaccines are not interchangeable. The safety and efficacy of a mixed-product series have not been evaluated." With one caveat that the United States has not reviewed safety and efficacy data for Sputnik V vaccine. (Sarah Bennett)

2. **Was there a special event last week in New Zealand that led to the small rise in cases?**
   In New Zealand the number of cases is very low, compared with other countries. Just a few cases will result in a positive percent change. Our understanding is these are small clusters related to travel with limited local transmission. (Sarah Bennett)

3. **And any information from studies on the mix and match of COVID-19 vaccines in general appreciated!**
   Per CDC guidance ([https://www.cdc.gov/vaccines/covid-19/hcp/faq.html](https://www.cdc.gov/vaccines/covid-19/hcp/faq.html)): COVID-19 vaccines are not interchangeable. The safety and efficacy of a mixed-product series have not been evaluated. (Sarah Bennett)

4. **Plus, update on the vaccination of children with Pfizer/BioNTech gaining approval for age 12-15 now in Canada**
   I recommend attending the upcoming emergency ACIP meeting on May 12, virtual and open to the public: [https://www.cdc.gov/vaccines/acip/index.html](https://www.cdc.gov/vaccines/acip/index.html). On the agenda is a discussion of the Pfizer vaccine in children 12-15 years. (Sarah Bennett)

5. **It looked like Australia has not vaccinated their population. Is that true?**
   0.62% of people in Australia have received at least one dose of COVID-19 vaccine. [https://ourworldindata.org/covid-vaccinations?country=~AUS](https://ourworldindata.org/covid-vaccinations?country=~AUS) (Sarah Bennett)

6. **There are 4 subtypes of the Indian B.1617 - those sub-lineages have significantly different spike mutations - can you address the relative threat of the different sub-lineages?**
   There is still a lot of data to collect to understand more about their relative transmissibility, severity of the sub-lineages. The UK recently announced that the B.1.617.2 is a Variant of Concern but focused this decision more on the rise in cases in the UK and evidence of community transmission of this variant/sub-lineage. (Sarah Bennett)

7. **Are there any standardized Indian medical association guidelines to prevent polypharmacy and over utilization of resources? I've seen many over utilization algorithms that are circulating on social media**
   In addition, we would anticipate manufacturers of vaccines to make public announcements about any data suggesting their vaccines work against different variants (see media attention to Pfizer and Moderna and variants as an example). (Sarah Bennett)

8. **What percent of Chinese are vaccinated?**
9. Why are next to no Australians vaccinated?
   It's a good question. Not sure the challenges they are facing. Anecdotally I remember that shipments of vaccines manufactured in Europe were blocked early in their program. Not sure if that has had an impact on their program. (Sarah Bennett)

10. Did the last speaker say 1.9% of people in the region received vaccine? Thanks—didn’t quite catch that.
   1.97% of the population in Southeast Asia Region is estimated to be fully vaccinated. Our World in Data has a great Dashboard.

11. Could killed whole virus vaccines have more efficacy against VOCs as they contain whole virion antigens (theoretically)? Thank you!
    That is an excellent question. We don't know the answer yet. So far, the spike protein vaccines have had effectiveness against variants, but we need to track this carefully. (Pavitra Mohan)

12. Could killed whole virus vaccines have more efficacy against VOCs as they contain whole virion (killed) antigens (theoretically)? Thank you!
    Seems to be a lot due to excessive use of steroids and other medications such as Toci etc.

13. China’s data doesn’t show up as it is grayed out.
    Yes, they don’t report all the indicators, so for some of the figures it will not populate. But I can see daily numbers, total numbers if I scroll down the page. https://ourworldindata.org/covid-vaccinations?country=~CHN. (Sarah Bennett)

14. I have read of several cases of COVID-19 infections complicated by Mucormycosis in India - is there any particular reason for this devastating infection (Geographical susceptibility, different covid strains?)
    My conversations with many clinicians in India and my indirect experience with some patients who were suspected to have mucor, it occurs very rarely and most of the cases were not accurate diagnoses, at least based on my limited experience. We should be cautious but collect more data with strict diagnostic and epidemiologic data than presume that mucor is a common complication of covid-19 in India. we should also decrease unnecessary steroid use for mild-moderate disease. (Adarsh Bhimraj)

15. Are death rates higher in rural India than urban as there is poorer health care availability?
    We really don’t know. Because of poor health system there is also lesser data. From the rural hospitals that I interacted, there seem to be a high mortality. (Pavitra Mohan)

16. Beyond fighting for universal vaccination and support of releasing patents on vaccination to allow for generic production in other countries, what else would our Indian colleagues want their ID colleagues in the West do to support them?
    To help enforce the standards of care and prevent irrational practices on management of COVID. (Pavitra Mohan)

17. Is there information on reinfection in India?
    I’ve seen cases of possible reinfection in India reported several months ago but we need more recent information, including sequencing data.

18. Do you have data on re-infections, re-positives, and vaccine-breakthroughs in the spring Indian outbreak?
    Not really. (Pavitra Mohan)

19. Dr. Mohan, can you explain what “tribal” and “non-tribal” mean in this setting. Thanks.
Tribals are indigenous populations, more marginalized than other rural populations. (Pavitra Mohan)

20. Is there information on post-infectious syndromes from COVID-19 in the spring Indian outbreak of COVID-19 (children with MIS-C, adults with MIS-A, long covid, etc.)? Anecdotally they seem to be common in India as well, but not enough evidence on prevalence.

21. Friends and relatives in Ravapur and Rajkot who have received the AZ vaccine have also become infected with COVID. Is this tracked in some manner? Agree with comments regarding high rural incidence. So, it appears that AZ vaccine does help in preventing severity but not necessarily against infection. (Pavitra Mohan)

22. Based on epi data (or any other research), how well are the vaccines (Covaxin, Covishield, and Sputnik) available in India working against the variants there? So, Sputnik has just arrived. Other two seem to be protecting against the severity of infections, but not as much against the infection itself. (Pavitra Mohan)

23. Do the tribal and scheduled castes have less obesity and chronic co-morbidities? Yes, that is right, and that is the hypotheses that they may have less severity and death rates. (Pavitra Mohan)

24. Is there any mortality reports from vaccinated people due to COVID variants, confirmed by CDC? Thanks!! I don't know whether this data is available, but there is information on breakthrough cases in the US at: https://www.cdc.gov/vaccines/covid-19/health-departments/breakthrough-cases.html (Sarah Bennett)

25. What is a "tribal"? Indigenous populations that are more marginalized than other rural populations. (Pavitra Mohan)

26. What % of people 65-years and older are vaccinated in India? About 7-8% have received 1 dose. (Pavitra Mohan)

27. I am seeing several family members who have covid also have positive serology tests for typhoid. They do have nausea, some other GI symptoms. Do you think this is just baseline seropositivity or is there some possible cross reactivity between typhoid and covid antibodies? There seems to be cross reactivity between typhoid and covid, as we also see cross reactivity between typhoid and other infections such as TB. (Pavitra Mohan)

28. Why do you think Seychelles is having an outbreak, and is the outbreak tiny or large? For the last week, they've reported between 100-200 cases/day. There are several media articles that discuss some of the challenges.

29. Is there a way to support organizations providing home-based care for people with COVID? Thinking here of rural/peri-urban areas where access to hospitals is lower. Thank you. Several fund raisers on Ketto and Give India, fundraising platforms.

30. @Dwight Ferris- we need IDSA to lobby the Biden administration to insist that the current Indian administration 1) provide accurate data 2) Mobilize a coordinated National response 3) Ramp up (hugely) the availability of oxygen and access to healthcare providers/resources https://www.latimes.com/opinion/story/2021-05-08/india-covid-pandemic-deaths-narendra-modi Agree strongly.

31. Is Covid incidence increasing dramatically in Kerala also? Yes, but they managed it much better.
32. Could you shed some light on efficacy of the various vaccines including Astra Zeneca, Pfizer and Moderna on the B1.617 covid 19 strain?
I presented preliminary results on lab studies. We don't yet know about effectiveness of these vaccines against B.1.617. (Raj Ghandi)

33. Please quantify "younger people are getting sick" proportionally? Or you are seeing young people at health centers.
I think I did: could be because of overall larger numbers, or a higher proportion. (Pavitra Mohan)

34. Problem is AIIMS is providing not evidence-based protocol.
Fully agree! CMC guidelines are much more evidence based. (Pavitra Mohan)

35. If we are not sure of the efficacy of the Covid vaccines against the new variants, why is the US not more aggressive in tracking or quarantining return travelers from India. There was a recent Air India flight to Rome where 30 people 28 passengers and 2 crew members who tested positive on arrival to Rome. I am assuming they had negative tests to board the flight.

Resources Shared by the Panelists


Dr. Bennett’s slides:
- Confirmed COVID-19 Cases by Week of Report and WHO Region: https://covid19.who.int/
- People Vaccinated per 100 People by WHO Region: https://ourworldindata.org/covid-vaccinations
- Confirmed COVID-19 Cases by Week of Report, Southeast Asia Region: https://covid19.who.int/
- People Vaccinated per 100 People, Southeast Asia Region: https://ourworldindata.org/covid-vaccinations

Dr. Mohan’ slides:

Dr. Gandhi’s slides:
- Neutralization of variant under investigation B.1.617 with sera of BBV152 vaccines: https://www.biorxiv.org/content/10.1101/2021.04.23.441101v1.full
- SARS-CoV-2 variant B.1.617 is resistant to Bamlanivimab and evades 2 antibodies induced by infection and vaccination: https://www.biorxiv.org/content/10.1101/2021.05.04.442663v1.full.pdf
- GIS AID tracking of variants: [https://www.gisaid.org/hcov19-variants/](https://www.gisaid.org/hcov19-variants/)
- Outbreak info: [https://outbreak.info/](https://outbreak.info/)

Dr. Chin-Hong slides:

**Links and Resources Shared in the Chat**

2. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01052-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01052-7/fulltext)
5. [https://www.nytimes.com/2021/05/05/us/politics/biden-covid-vaccine-patents.html](https://www.nytimes.com/2021/05/05/us/politics/biden-covid-vaccine-patents.html)
6. To learn of a visionary physician IAS officer who established and planned, please listen to this report. fair warning, he speaks in English and Hindi: [https://youtu.be/Sa4vCG1oY6M](https://youtu.be/Sa4vCG1oY6M)
7. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00306-8/fulltext#seccestitle40](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00306-8/fulltext#seccestitle40)
8. [https://youtu.be/Sa4vCG1oY6M](https://youtu.be/Sa4vCG1oY6M)
10. India's COVID-19 emergency: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01052-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)01052-7/fulltext)
13. Learn about this physician IAS officer who established oxygen plants and care in tribal area: [https://youtu.be/Sa4vCG1oY6M](https://youtu.be/Sa4vCG1oY6M)
16. Sharing a link provided by Indiaspora.org. They have done a good job in listing credible entities engaged in COVID-19 response. This list includes NGOs providing COVID-19 relief: [https://www.indiaspora.org/ngos-providing-covid-19-relief-in-india/](https://www.indiaspora.org/ngos-providing-covid-19-relief-in-india/)
17. [https://www.indiacovidos.org/home-care](https://www.indiacovidos.org/home-care)
19. There are groups working on evidence-based methodology. Ex, one of the groups working on policy front: [http://nhsrcindia.org/sites/default/files/Preparedness%20for%20Crisis%20Response%20to%20the%20Second%20Wave%20of%20COVID%2019%20in%20India_Policy%20Brief_KMD_May%202021.pdf](http://nhsrcindia.org/sites/default/files/Preparedness%20for%20Crisis%20Response%20to%20the%20Second%20Wave%20of%20COVID%2019%20in%20India_Policy%20Brief_KMD_May%202021.pdf)