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# TARRANT WATCH VIRAL

July 2021 Update

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## TARRANT News & Updates

Thank you for being part of our team trying to understand the waves of respiratory infection in an even more unpredictable time than usual.

### Staff changes

We start by saying farewell to some of our team, and hello to new members. Yvonne, Sara, and Samiha will be missed, but they go on to develop their medical careers. Aunshu and Ofodile will take up their roles, while Zoltan provides continuity.

Yvonne Efegoma who has worked with us for two years, and completed her MSc degree, left in May to start her residency in Community Medicine in Edmonton. Samiha Mohsen, who also completed her MSc, will leave us to attend medical school in Toronto. Sara Orenstein will be leaving us in August, to commence medical school in Limerick, in Ireland. Congratulations to all three for taking the next step in achieving their dreams.

Aunshu Goyal completed her medical training from the Royal College of Surgeons in Ireland and is working towards obtaining residency in Family Medicine in Alberta. She has over five years of clinical research experience in oncology, infectious diseases, and chronic diseases, and looks forward to contributing her expertise to the TARRANT team.

Ofodile Joe-Uzuegbu is an international medical graduate who recently joined the team and is working towards obtaining medical licensure and pursuing a master's degree in Precision Health.

symptoms section in requisition form. It is vital that we can view all the data on the requisition forms.

Over the next few weeks, we will be contacting sentinels to confirm your continued involvement and to receive any feedback about the TARRANT program. If you have any questions or concerns, please feel free to email us at [tarrant@ucalgary.ca](mailto:tarrant@ucalgary.ca).

### COVID-19 VE study addition

Our project is pivoting to focus on the important questions of the day. How much COVID is circulating, of what types? How well do the vaccines work for COVID? Against which variants, and how well it works by age. As a result of your contributions, we have some preliminary data but we need larger sample sizes to reach useful conclusions. So keep swabbing!

Since the recent addition of the COVID-19 vaccine effectiveness component to the TARRANT study in June 2021, we have received samples from 89 participants between 8 June 2021 to 15 June 2021. Of the 89 samples, none were positive for COVID however, interestingly we found that 55 tested positive for rhinovirus/enterovirus. The majority of these positive cases were from the collaborating assessment centres in Edmonton (53%) and Red Deer (35%), with the remaining positive cases from Grande Prairie and Fort McMurray. Demographically, positive cases from the received samples were distributed across all age groups (see Table 1).

Table 1: Positive rhinovirus/enterovirus cases

Age group	# of positive	Total #	% positive
<10	13	15	86.7%
10 to 19	7	9	77.8%
20 to 29	9	14	64.3%
30 to 39	8	12	66.7%
40 to 49	10	16	62.5%
>50	8	19	42.1%

Already some other respiratory viruses are circulating, and likely more will do so as interactions become more common and travel becomes more frequent. We still want to understand influenza, which will likely resurge at some point, though during this current Southern Hemisphere winter, there is little circulating, as there was in the north during our last winter. So we will be collecting data about both types of infection.

*Baraniuk, C. (2021 June 30). How long does COVID-19 immunity last? BMJ.*

A definitive answer as to how long COVID-19 immunity will last cannot be provided at this time because scientists are still continuing to learn more about COVID-19.

One study has shown the presence of antibodies up to five to seven months in those who recovered from COVID-19. All those who have received vaccinations have also shown presence of antibodies - up to 6 months after second dose of Moderna or 3 months after single dose of AstraZeneca. Another study has shown the presence of memory T and B cells even though antibodies level had dropped, which may indicate possibility of long-term protection.

Individuals who have had COVID-19 are recommended to also get vaccination as evidence shows that vaccination helps to make the immunity stronger and increased presence of antibodies.

Some studies are being done to understand the difference in immunity between first and second doses of the vaccine. Latest evidence has shown that the current vaccines are sufficient to protect against existing SARS-CoV-2 and potential variants. There is debate regarding whether boosters will be needed, and when.

## Potential COVID-19 endgame

*Kofman, A., Kantor, R., and Adashi, E. (2021 July 8). Potential COVID-19 endgame scenarios. JAMA*

The future for the COVID-19 epidemic is unclear. Various scenarios could occur, dubbed: eradication, elimination, cohabitation, and conflagration.

To achieve eradication needs herd immunity via vaccination or exposure from previous infection. This is a difficult goal to achieve, but not impossible, as it depends on how long vaccine can be effective, how it holds up against variants, and whether reinfection can be prevented.

A more realistic goal is elimination as variants can be tackled by administering booster vaccines. Examples of places where elimination is close to happening is Israel (due to high vaccination rates), New Zealand, Vietnam, and Brunei.

State of cohabitation exists in geographical areas amongst unvaccinated individuals or in vaccine breakthrough situations. Although breakthrough infections are rare, it may be a result of limited vaccine efficacy, immunocompromised, issues with vaccine supply, and variants. Examples of places currently in this state include United Kingdom, United States, and China.

infection can arise due to incomplete immunity, limited vaccine efficacy, and new variants. India, parts of Southeast Asia, and South America are currently in this state.

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## Influenza Updates

### Alberta Update:

From August 23rd, 2020, until May 29, 2021, there have been 0 lab confirmed influenza cases in Alberta. During this same time period, 1,651,105 people have received an Influenza Immunization dose in the province.

Source: [AHS \(Alberta Respiratory Virus surveillance\)](#)

### Canada Update (as of June 19, 2021):

Despite continued monitoring for influenza across Canada, influenza activity has remained extremely low for this time in the reporting season. To date this season, 73 influenza detections have been reported where as in the past six seasons.

Thirty-one of the influenza detections reported to date this season are known to be associated with recent live attenuated influenza vaccine (LAIV) receipt and do not represent community circulation of seasonal influenza viruses.

Overall, the percentage of laboratory tests positive for influenza remains at exceptionally low levels, despite the elevated levels of testing seen this month. Testing for influenza and other respiratory viruses has been influenced by the current COVID-19 pandemic. Changes in laboratory testing practices may affect the comparability of data to previous weeks or previous seasons.

Source: [FluWatch and PHAC](#)

### WHO Influenza Update (as of 05 July 2021, based on data up to 20 June 2021):

Influenza activity continues to be absent or remain below inter-seasonal levels in most countries in the temperate zones of the northern and southern hemispheres, the Caribbean, Southern and Central American countries despite a high increase in testing. Hygiene and physical distancing measures implemented to reduce SARS-CoV-2 transmission are likely to have played a role in reducing influenza virus transmission.

146,816 specimens. 766 specimens were positive for influenza viruses, of which 84 (11%) were typed as Influenza A and 682 (89%) as Influenza B. Of the sub-typed Influenza A viruses, 48 (85.7%) were influenza A (H1N1) pdm09 and 8 (14.3%) were influenza A (H3N2). Of the type B viruses for which lineage was determined, all 624 (100%) were ascribed to the B-Victoria lineage.

Source: [World Health Organisation](#)



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