Tracking COVID-19 for Safer Schools[1]

Key Findings from the 2022-2023 School Year

1 BACKGROUND

- This report presents data collected during the 2022-2023 school year among staff recruited from the Vancouver, Richmond, and Delta school districts.
- The purpose of this study was to understand the risk of re-infection with SARS-CoV-2, if a previous infection offers protection against subsequent COVID-19 infections, and the health impact of COVID-19 infections among school staff.

2 PARTICIPATION

- **1153** staff completed questionnaires.
- **998** staff had blood samples collected.

Blood samples were collected between January and May 2023.

3 MAIN FINDINGS

- Three quarters of participating staff have had a COVID-19 infection as of Jan-May 2023.
- A previous infection during or before the first Omicron wave in Spring 2022 protected against re-infection (i.e., decreased the rate by ~65%) compared to uninfected staff.
- About one third of participating staff reported new onset of chronic health symptoms after COVID-19.
- Mental health may be improving since the peak of the pandemic.

4 ANTIBODY RESULTS

74% of staff

had antibodies showing evidence of a past COVID-19 infection;

This compares to 76.4% among a community comparison group (i.e., blood donors of the same age, sex, collection month and postal code area of residency)

The blood test measured antibodies against the N-protein of the virus. N-proteins are nucleocapsid proteins that are found only in the SARS-CoV-2 virus and not found in current COVID-19 vaccines.

While the N-protein antibody test tells us whether a person has had a COVID-19 infection, it is unable to identify two positive infections. During this phase, we developed a **NEW TEST** that can determine whether someone has had more than one infection (i.e., a re-infection).

48% of staff

who provided a blood test in 2022 showed evidence of infection between the winter of 2022 and 2023, of which

7.3% were re-infections

More results on the next page!

[1]This study was funded by the Government of Canada's COVID-19 Immunity Task Force.

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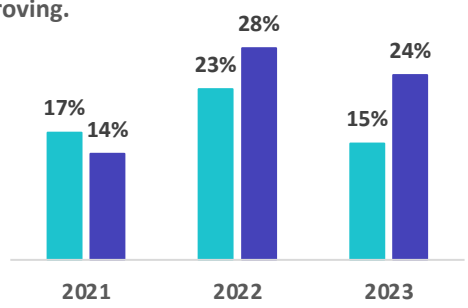
The following results are based on data collected from the self-reported questionnaire:

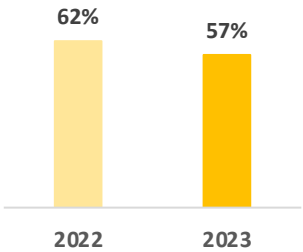
5 MENTAL HEALTH IMPACTS

- The percentage of staff who reported **high anxiety** and **poor/fair mental health** peaked during the pandemic and may be improving.

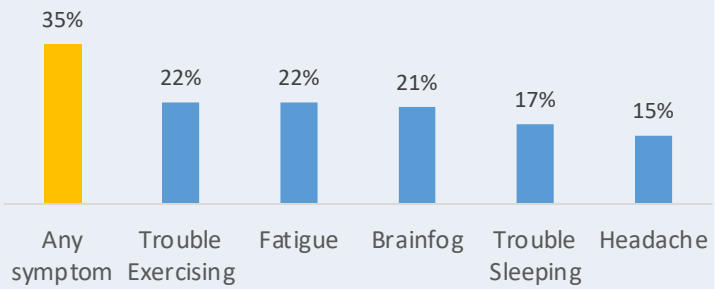


**comparisons are among staff who responded to the questionnaire at all time points.*

- The percentage of staff who reported feeling **burnt out** at least once per week has decreased slightly since the peak of the pandemic.



6 POST-COVID SYMPTOMS



- About one third of school staff reported new onset of **chronic symptoms after a COVID-19 infection**.
- Interestingly, 20% of those who NEVER had a COVID-19 infection also reported new onset of chronic symptoms, suggesting a proportion of these symptoms may be related to the pandemic or other causes rather than the virus itself – this requires further study.
- The **five most reported symptoms** were trouble exercising, fatigue, brain fog, trouble sleeping and headache.

7 REFLECTIONS – WE ASKED YOU...

"What challenges do you see moving forward?"

- *"Replacing ill and absent workers – shortage of teachers on call"*
- *"COVID learning gap for students, particularly with social-emotional growth"*
- *"Lots of absences amongst students leading to them having to catch up a lot"*
- *"Rebuilding community and relationships within and outside the school"*

"What are some opportunities related to this experience?"

- *"Better technology available to aid in teaching"*
- *"It has changed society's view on sick days (staying home when you are sick vs. pushing yourself to go to work)"*
- *"Learning new ways to work online and connect with students and their families"*
- *"Better hand hygiene practices among staff and students"*

Thank you again to all district staff who participated in this research!

Check out the peer-reviewed publications based on the data collected as part of this study:

1) SARS-CoV-2 cross-sectional seroprevalence study among public school staff in Metro Vancouver after the first Omicron wave in British Columbia, Canada (*BMJ Open*): http://dx.doi.org/10.1136/bmjopen-2022-071228; **2)** SARS-CoV-2 seroprevalence among Vancouver public school staff in British Columbia, Canada: A cross-sectional study (*BMJ Open):* http://dx.doi.org/10.1136/bmjopen-2021-057846; **3)** COVID-19 vaccine perceptions and acceptance among public school staff of the greater Vancouver Metropolitan Area, British Columbia, Canada (*Frontiers In Public Health):* https://doi.org/10.3389/fpubh.2022.832444; **4)** British Columbia school staff during the second year of COVID-19: Anxiety symptoms, psychological distress, and mental health (*Journal of Affective Disorders Reports):* https://doi.org/10.1016/j.jadr.2022.100335

For more information please visit: https://www.bcchr.ca/COVIDatschools or contact Drs. Pascal Lavoie or Louise Mâsse at: abcovid@bcchr.ca

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