



Dear President Ono,

February 20, 2022

You asked for input as to whether UBC should continue to proceed with deregistration or similar sanctions against students who have not complied with the requirement to be immunized or undergo COVID-19 testing. We offer a few thoughts from a scientific and public health perspective.

These measures, imposed in September 2021, helped to ensure that UBC had a very high immunization rate and that our faculty, staff and students would suffer a low burden of illness and reduced risk of transmission to others. Viral evolution since the time of those policy decisions now suggest a different approach may be needed.

At present, the primary variant in the province is Omicron. With the large number of mutational changes in Omicron, concentrated in the spike protein, the first stage of immune protection provided by vaccines (“neutralizing antibodies”) is much less effective. Vaccine effectiveness drops off rapidly since the last dose of a two-dose vaccine regimen, down to <20% by four months [1]. For this reason, the scientific evidence, with respect to Omicron, no longer supports using proof of vaccination (regardless of timing) as evidence that a person is a low risk of transmitting COVID-19 to others.

Fortunately, vaccinated people are still enjoying a high rate of protection against severe illness and hospitalization [1], largely because of the second stage of immune protection – cellular immunity – which recognizes a much broader set of viral targets. Furthermore, booster shots prime the immune response, raising antibody levels and offering substantial protection against infection with Omicron (60-80% [1]).

In light of these evolutionary changes and their impact on vaccine effectiveness, **we recommend that UBC shift its focus away from documenting vaccination status based on a two-dose regimen**, which in many cases was completed too long ago to provide substantive protection against infection and transmission. We recommend instead that emphasis be placed on communicating what has changed and why boosters are needed to help quell infection and transmission to others.

A variety of pieces of evidence indicate that the current wave of COVID-19 is subsiding in BC, including declining hospitalization rates and reported cases among those over 70 (an age group that has been more consistently tested) [2,3]. Nevertheless, continued attention to appropriate pandemic measures remains appropriate, and **UBC should be ready in case we are again challenged by future variants**.

At present, one risk is a shift in the prevalence of the BA.2 sub-lineage of Omicron, which is rising in frequency within the province (its current frequency is estimated at 15% [3]). Current evidence suggests, however, that immunity developed against BA.1 will be cross-protective against BA.2 [4,5], indicating that the high level of immunity in the province due to recent natural infections (as well as boosters) will lead to the decline in both sub-variants. We do not consider BA.2 to be a major risk for another Omicron surge, although this is not yet known with high certainty.

Over the longer term, a higher risk is posed by the continued evolution of SARS-CoV-2, considering the high number of cases globally and many independently evolving lineages facing altered selection pressures (particularly in immunosuppressed persistent infections and in animal reservoirs). Combined, the potential for future variants that avoid the first stage of immune protection against infection is high. As these independently evolving lineages represent a large sampling of SARS-CoV-2, past and present, these future waves may well be more severe than Omicron.

**In summary, there is no longer a strong scientific reason to differentially treat those who were fully vaccinated months ago and those who are unvaccinated, in terms of the risks that they pose for transmitting COVID to others.** Requiring either proof of vaccination or compulsory testing from the UBC community is currently unnecessary from a scientific point of view and likely reduces focus from what would be helpful. Appropriate measures at this time of continued, but falling transmission, include masking with high quality masks, ventilation, asking people to stay home if sick, and encouragement toward boosting for those eligible.

We do recommend that access to free masks and rapid antigen tests continue, and we commend UBC for its efforts to make these important safety measures accessible. We also recommend that UBC should develop a nimble pandemic preparedness program, enabling a rapid escalation of protective measures and research to fill gaps if and when needed.

From a public health policy perspective, sanctions should normally be of limited duration, respectful of human dignity and subject to review with changing circumstances. Dropping serious sanctions against unimmunized University people at a time when they no longer serve their original purpose is likely to increase a sense that the University's actions are proportional and trusted.

Sincerely,

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**REFERENCES:**

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