



**ORDER OF THE PROVINCIAL HEALTH OFFICER**

(Pursuant to Sections 30, 31, 32, 39 (3), 53, 54, 56, 57, 67 (2) and 69 *Public Health Act*, S.B.C. 2008)

***HEALTH PROFESSIONALS***

***COVID-19 VACCINATION STATUS INFORMATION AND PREVENTIVE MEASURES  
–MARCH 7, 2022***

The *Public Health Act* is at:

<http://www.bclaws.ca/civix/content/complete/statreg/08028/?xsl=/templates/browse.xsl> (excerpts enclosed)

**TO: THE MINISTER OF HEALTH**

**TO: BRITISH COLUMBIA COLLEGE OF NURSES AND MIDWIVES  
COLLEGE OF CHIROPRACTORS OF BRITISH COLUMBIA  
COLLEGE OF DENTAL HYGIENISTS OF BRITISH COLUMBIA  
COLLEGE OF DENTAL TECHNICIANS OF BRITISH COLUMBIA  
COLLEGE OF DENTAL SURGEONS OF BRITISH COLUMBIA  
COLLEGE OF DENTURISTS OF BRITISH COLUMBIA  
COLLEGE OF DIETITIANS OF BRITISH COLUMBIA  
COLLEGE OF MASSAGE THERAPISTS OF BRITISH COLUMBIA  
COLLEGE OF NATUROPATHIC PHYSICIANS OF BRITISH COLUMBIA  
COLLEGE OF OCCUPATIONAL THERAPISTS OF BRITISH COLUMBIA  
COLLEGE OF OPTICIANS OF BRITISH COLUMBIA  
COLLEGE OF OPTOMETRISTS OF BRITISH COLUMBIA  
COLLEGE OF PHARMACISTS OF BRITISH COLUMBIA  
COLLEGE OF PHYSICAL THERAPISTS OF BRITISH COLUMBIA  
COLLEGE OF PHYSICIANS AND SURGEONS OF BRITISH COLUMBIA  
COLLEGE OF PSYCHOLOGISTS OF BRITISH COLUMBIA  
COLLEGE OF SPEECH AND HEARING HEALTH PROFESSIONALS OF BRITISH  
COLUMBIA  
COLLEGE OF TRADITIONAL CHINESE MEDICINE PRACTITIONERS AND  
ACUPUNCTURISTS OF BRITISH COLUMBIA**

**(THE “COLLEGES”)**

**TO: HEALTH PROFESSIONALS**

**PREAMBLE:**

In this document, “vaccinated”, “vaccination”, or “primary vaccine series” refers to a 2-dose mRNA series, 2-dose combination series (e.g. AZ & 1-dose mRNA), or one dose full series (e.g. J&J), all with no booster/3<sup>rd</sup> dose. A “full vaccination series” refers to a primary vaccine series plus a booster/3<sup>rd</sup> dose. Oddly enough, the BCCDC refers to fully vaccinated as “previous infection plus one vaccine dose, either before or after infection” yet this Public Health Order fails to recognize that distinction

([http://www.bccdc.ca/Health-Professionals-Site/Documents/COVID-treatment/ClinicalPracticeGuide\\_Therapeutics\\_MildModerateCOVID.pdf](http://www.bccdc.ca/Health-Professionals-Site/Documents/COVID-treatment/ClinicalPracticeGuide_Therapeutics_MildModerateCOVID.pdf); Page 4, Heading “Vaccination Status”)

This distinction is important because when this order compares the efficacy of vaccination to natural immunity, it quite cleverly chooses to use the full vaccination series cohort as the comparison.

Unfortunately, the logic of this comparison is nonsensical as there are no current mandates requiring a full vaccination series. Stating a full vaccination series is superior to natural immunity as justification for a primary vaccine series is illogical and misleading. This was likely intentional since even the BCCDC document linked above states previous infection alone is equivalent to a primary vaccine series in preventing hospitalization; note that the BCCDC designates both natural immunity and a primary vaccine series as “under vaccinated”. As such, this order needs to compare natural immunity to a full vaccination series in order to stay in accordance with the BCCDC; just remember which vaccination series this order is mandating and you’ll see why Dr. Henry chose a full vaccination series as the comparison to natural immunity.

If Public Health's concern is to theoretically reduce individual-to-individual healthcare setting transmission, one should heavily question why there are no mandates requiring a full vaccination series for all healthcare workers. Public Health cannot be selective in which immunity cohorts are deemed "underprotected" and failure to apply nondiscriminatory vaccination mandates is unjust. The purpose of reviewing this Public Health Order is to see if it is justifiable, irrefutably supported by evidence, fair, universal, equitable, unbiased, and nondiscriminatory.

**WHEREAS:**

- A. On March 17, 2020, I provided notice under section 52 (2) of the *Public Health Act* that the transmission of the infectious agent SARS-CoV-2, which has caused cases, clusters and outbreaks of a serious communicable disease known as COVID-19 among the population of the Province of British Columbia, constitutes a regional event, as defined in section 51 of the *Public Health Act*;
- B. A person infected with SARS-CoV-2 can infect other people with whom the infected person is in contact;
- C. Vaccination is safe, highly effective, and the single most important preventive measure a person can

take to protect themselves, their families, and other persons with whom they come into contact from infection, severe illness and possible death from COVID-19. In particular:

***“Vaccination is safe ...”***

“Safe” is a relative term and needs to be individually risk stratified (as with everything in medicine). The risk of myopericarditis, for example, is not the same for an 18 year old male (5 per 100,000) as it is for a 70 year old female (3 per 10,000,000).<sup>1</sup> This becomes important when discerning if vaccination is required and the potential harms of making it compulsory. For example, a CDC study cited later in this document, showed no statistical benefit to adding a primary vaccine series to someone with natural immunity to further reduce their risk of reinfection.<sup>13</sup> In addition, there was a study published in February 2022 which showed that after COVID-19 infection and subsequent primary vaccine series, the risk of hospitalization after the last dose of the primary series was 1/1000.<sup>2</sup> Mandating vaccination to those with natural immunity, for example, may cause more harm than benefit even if the risk of harm associated with vaccination is rare.

1. Oster ME, Shay DK, Su JR, et al. Myocarditis Cases Reported After mRNA-Based COVID-19 Vaccination in the US From December 2020 to August 2021. *JAMA*. 2022;327(4):331–340. doi:10.1001/jama.2021.24110  
<https://jamanetwork.com/journals/jama/fullarticle/2788346>
2. Li L, Zheng C, La J et al. Impact of Prior SARS-CoV-2 Infection on Incidence of Hospitalization and Adverse Events Following mRNA SARS-CoV-2 Vaccination: A Nationwide, Retrospective Cohort Study. *Vaccine*  
<https://www.sciencedirect.com/science/article/pii/S0264410X22000512>

***“Vaccination is ... highly effective ...”***

Vaccine effectiveness strongly depends on which clinical endpoint(s) one is referring to and the timelapse since completion of a primary vaccine series +/- booster. For example, there is United Kingdom (UK) data showing the vaccine effectiveness against Omicron specific mild infection >6 months after completion of a primary series is 0-10% and only 40-50% 4-6 months after completion of a full vaccination series; there is insufficient data >6 months after completion of a full vaccination series.<sup>3</sup> This data was reproducible in a study published by the New England Journal of Medicine.<sup>4</sup>

For these vaccines to have been approved by the FDA under Emergency Use Authorization (EUA), they had to achieve at least 50% efficacy against mild infection with a lower bound confidence interval >30%. Based on the UK data and other studies, these vaccines are currently not passing that approval standard as the vaccine effectiveness against Omicron specific mild infection 0-3 months after completion of a primary series is only 25-70%.<sup>3</sup> As such, the standard to determine efficacy of a primary series is being ignored.

Moreover, the protection against Omicron specific hospitalization >6 months after completion of a primary series is only 30-35%.<sup>3</sup> A follow-up 3<sup>rd</sup> dose/booster increases that protection to 50-75% 0-3 months and 40-50% 4-6 months after completion of a full vaccination series.<sup>3</sup> There is insufficient data to estimate protection against hospitalization >6 months after completion of a full vaccination series. A CDC study also replicated these hospitalizations showing the vaccine efficacy against Omicron specific hospitalization is 54% at >5 months after completion of a primary series and 78% >4 months after completion of a full vaccination series.<sup>5</sup>

Lastly, the protection against death >6 months after completion of a primary series is 40-70% and 85-99% 0-3 months after completion of a full vaccination series; there is insufficient data to estimate protection against death 4-6 months after completion of a full vaccination series.<sup>3</sup>

These data points clearly show vaccination can be “highly effective” depending on which clinical endpoint one is referring to. Vaccine mandates are being implemented to emphasize the benefit against Omicron specific mild, symptomatic infection. Unfortunately, there is no data to show the vaccines are still effective against mild, symptomatic infection by previous FDA standards.

3. UK COVID-19 Vaccine Surveillance Report: 3 March 2022 (Week 9)  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1058464/Vaccine-surveillance-report-week-9.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1058464/Vaccine-surveillance-report-week-9.pdf)
  4. Andrews N, Stowe J, et al. Covid-19 Vaccine Effectiveness against the Omicron (B.1.1.529) Variant. N Engl J Med. DOI: 10.1056/NEJMoa2119451  
<https://www.nejm.org/doi/full/10.1056/NEJMoa2119451>
  5. Ferdinands JM, Rao S, Dixon BE, et al. Waning 2-Dose and 3-Dose Effectiveness of mRNA Vaccines Against COVID-19–Associated Emergency Department and Urgent Care Encounters and Hospitalizations Among Adults During Periods of Delta and Omicron Variant Predominance — VISION Network, 10 States, August 2021–January 2022. MMWR Morb Mortal Wkly Rep 2022;71:255–263  
[https://www.cdc.gov/mmwr/volumes/71/wr/mm7107e2.htm?s\\_cid=mm7107e2\\_w](https://www.cdc.gov/mmwr/volumes/71/wr/mm7107e2.htm?s_cid=mm7107e2_w)
- (a) the vaccines available in British Columbia, in company with other protective and preventive measures, provide protection against infection and are highly effective in protecting against severe illness, hospitalization, intensive care unit (ICU) admission and death across all eligible age groups, with illness being mostly milder in vaccinated people who become infected than in unvaccinated people;

***“Provide protection against infection and are highly effective in protecting against severe illness, hospitalization, ICU admission, and death ...”***

Please read and analyze all of the studies referenced above for specific efficacies mentioned. “Highly

effective” depends on the time after completion of a primary or full vaccination series.<sup>3,4,5</sup>

- (b) most British Columbians who have received their primary course of vaccine (two doses) have strong and durable protection against severe illness from SARS-CoV-2 resulting from the extended interval between dose one and dose two that is being utilized in British Columbia; in addition, a vaccine is being offered which only requires one dose to be effective, and booster doses are being implemented in order to reinforce the protection afforded by vaccination; and

***“Most British Columbians who have received ... two doses have strong and durable protection against severe illness from SARS-CoV-2”***

Please read and analyze all of the studies referenced above for specific efficacies mentioned. “Strong and durable” depends on the time after completion of a primary vaccination series.<sup>3,4,5</sup>

- (c) a full course of vaccine provides more effective and durable protection against infection and severe illness than natural immunity from prior COVID-19 infection alone, or natural immunity in combination with a single-dose of vaccine;

***“A full course of vaccine provides more effective and durable protection against infection ... than natural immunity from prior COVID-19 infection alone”***

A study published in the New England Journal of Medicine in February 2022 looked at the protection of natural immunity against Omicron specific mild reinfection.<sup>6</sup> The median interval between re-infection and previous infection was 314 days, showing longer durability of protection compared to both a primary and full vaccination series.<sup>3,4,5</sup> The effectiveness of natural immunity in preventing Omicron specific mild reinfection was 64% 3-8 months post-infection, 47.2% 9-14 months post-infection, and 59.6% >15 months post-infection. This study shows the protection of natural immunity against Omicron specific mild reinfection is superior to both a primary and full vaccination series.<sup>3,4,5,6</sup>

***“A full course of vaccine provides more effective and durable protection against ... severe illness than natural immunity from prior COVID-19 infection alone”***

The same study in the New England Journal of Medicine also looked at the protection against of severe, critical, or fatal Omicron reinfection from natural immunity. The efficacy against these conglomerated endpoints was 87.8%.<sup>4</sup>

There is better protection than natural immunity against Omicron specific hospitalization is 0-3 months after completion of a full vaccination series (80-95%) but that becomes inferior to natural immunity 4-6 months after completion of a full vaccination series (75-85%).<sup>3</sup> The protection against Omicron specific death 0-3 months after completion of a full vaccination series is 85-99% with insufficient data beyond 4 months.<sup>3</sup>

The protection of natural immunity against Omicron specific hospitalization/severe infection and death compared to a primary and full vaccination series is superior and at the very least equal, respectively.<sup>3,4</sup>

6. Altarawneh HN, Chemaitelly H, Hasan MR, et al. Protection against the omicron variant from previous SARS-CoV-2 infection. N Engl J Med. DOI: 10.1056/NEJMc2200133  
<https://www.nejm.org/doi/full/10.1056/NEJMc2200133>

D. Vaccines, which prevent or reduce the risk of infection with SARS-CoV-2, have been and continue to be readily available in British Columbia and while substantial progress has been made in vaccinating the population of British Columbia 12 years of age and older, and children aged 5 to 11 years of age are now being vaccinated, a portion of the public remains unvaccinated and there are communities where vaccination rates are low;

***“Vaccines, which prevent or reduce the risk of infection with SARS-CoV-2 ...”***

Please read and analyze all of the studies referenced above for specific efficacies mentioned. “Prevent or reduce the risk of infection” depends on the time after completion of a primary or full vaccination series.<sup>3,4,5</sup>

E. Communities with low vaccination rates have experienced rapid spread of SARS-CoV-2, causing serious illness and increases in hospitalizations and ICU admissions, primarily in unvaccinated people. By contrast, communities with high vaccination rates have seen corresponding less serious illness and lower per capita hospitalization, ICU admission and death rates;

***“Communities with high vaccination rates have seen corresponding less serious illness and lower per capita hospitalization, ICU admission and death rates”***

The evidence to unanimously support this claim has not been made public. Specifically, community specific per capita hospitalization, ICU admission, and death rates with respect to the corresponding age-eligible vaccination percentage since the vaccine rollout to present (March 2022). Isolated clusters of outbreaks in communities with low vaccination uptake does not prove this point; the data would need to show a consistent pattern of high adverse events relative to a low age-eligible vaccination percentage.

F. Unvaccinated people are at greater risk than vaccinated people of being infected with SARS-CoV-2, and unvaccinated people who are infected, experience significantly higher rates of hospitalization, ICU-level care and invasive mechanical ventilation, complications and death when compared with vaccinated people. Unvaccinated people are also at higher risk of transmitting SARS-CoV-2 to other people, including vaccinated people;

***“Unvaccinated people are at greater risk than vaccinated people of being infected with SARS-CoV-2”***

Please read and analyze all of the studies referenced above for specific efficacies mentioned. “Greater risk” depends on the time after completion of a primary or full vaccination series.<sup>3,4,5</sup> Given the minimal

protection against Omicron specific mild infection >6 months after a primary vaccination series (with some preprint studies suggesting that protection is 0%)<sup>7,8</sup> vaccinated individuals have the same theoretical risk of SARS-CoV-2 infection as unvaccinated individuals.

7. Tseng HF, Ackerson B, Luo Y et al. Effectiveness of mRNA-1273 against SARS-CoV-2 omicron and delta variants (Preprint)

<https://www.medrxiv.org/content/10.1101/2022.01.07.22268919v1>

8. Buchan S, Chung H, Brown K et al. Effectiveness of COVID-19 vaccines against Omicron or Delta symptomatic infection and severe outcomes (Preprint)

<https://www.medrxiv.org/content/10.1101/2022.01.07.22268919v1>

***“Unvaccinated people are also at higher risk of transmitting SARS-CoV-2 to other people, including vaccinated people”***

Given the minimal protection against Omicron specific mild infection >6 months after a primary vaccination series (with some preprint studies suggesting that protection is 0%)<sup>7,8</sup> vaccinated individuals have the same theoretical risk of SARS-CoV-2 infection as unvaccinated individuals. Assuming vaccination reduces transmission (which later we will see it does not) beyond a certain time period after completion of a primary vaccine series the transmission potential to that of an unvaccinated individual is equivalent. If Public Health's concern is to theoretically reduce individual-to-individual healthcare setting transmission, why are there no mandates requiring a full vaccination series? The logic is not consistent.

To date there are no Omicron specific peer reviewed and published studies comparing vaccinated versus unvaccinated transmission (usually referred to as a ‘Secondary Attack Rate’). There is a preprint study from Denmark (which despite being a preprint is used as a citation by various scientific bodies) which shows that using Omicron specific data, unvaccinated individuals transmit COVID-19 at a statistically insignificant difference.<sup>9</sup> The unvaccinated cohort showed an odds ratio of 1.04 with the confidence interval crossing 1 (0.87 to 1.24). If an odds ratio confidence interval crosses 1 and lands near that value, there is questionable statistical significance between exposure and outcome. As such, this preprint showed there is a statistically insignificant difference between vaccinated versus unvaccinated transmission.

While the Delta variant has departed, a study published in The Lancet Infectious Diseases looked at the Delta specific secondary attack rate (SAR) between vaccinated and unvaccinated households and found no statistical significance between fully vaccinated and unvaccinated index cases.<sup>10</sup>

Despite the lack of Omicron specific peer reviewed and published studies about transmission, nothing answers this question more confidently and concretely than two publicly available letters to UBC President & Vice-Chancellor, Dr. Santa Ono from the Vancouver Coastal Health Chief Medical Health Officer, and UBC faculty and provincial COVID-19 experts Dr. David Patrick, Dr. Sarah (Sally) Otto, and Dr. Daniel

Coombs.<sup>11,12</sup> Some direct quotations from both letters include:

1. *"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"*
2. *"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"*
3. *"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."*
4. *"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."*
5. *"Current scientific evidence, including BC data, indicates that COVID-19 vaccination (2-doses) ... is not effective at preventing infection or transmission of the Omicron variant of the virus ... Therefore there is now no material difference in likelihood that a [person] who is vaccinated or unvaccinated may be infected and potentially infectious to others"*
6. *"It's time to ease some of the restrictions that are no longer useful in preventing the spread of COVID-19".*
7. *"We understand there are now also plans being developed to de-register students who have not declared their vaccination status ... We strongly advise against implementing such a program"*
8. *"We urge you not proceed with plans to de-register students who have not declared their vaccination status. Such measures may result in profound negative harms on their future health and wellbeing ... and career opportunities, and their mental health".*

These statements are starkly different than those in this Public Health Order:

1. *"Unvaccinated people are also at higher risk of transmitting SARS-CoV-2 to other people ... "*
2. *"Vaccinated persons who contract COVID-19 can transmit SARS-CoV-2 but ... they are less likely to transmit SARS-CoV-2, when compared to unvaccinated infected persons"*
3. *"Omicron variants means that higher vaccination rates than previously expected are now required to ... mitigate transmission"*
4. *"Unvaccinated people in close contact with other people promotes the transmission of SARS-CoV-2 to a greater extent than vaccinated people in the same situations"*
5. *"There are difficulties and risks in accommodating a person who is unvaccinated, since there is no other measure that is as effective as vaccination in reducing the risk of ... transmitting SARS-CoV-2."*

This Public Health Order has no references or citations to support the claim that vaccination reduces



transmission, nor have any other Public Health Orders had references or citations. These letters have statements which contradict every transmission claim made in this Public Health Order. Between the aforementioned evidence and these open letters, there is no evidence to support the notion that vaccination reduces the transmission of SARS-CoV-2. Given this, there should not be any vaccine mandates in an attempt to reduce transmission. There is only strong justification for strong coercion if the intervention proves to prevent harm to others; unless Dr. Henry provides transmission data which contradicts these studies and experts, there is currently no ethical grounds or justification for mandatory vaccination with hopes of reducing transmission.

9. Lyng SE, Mortensen LH, Denwood M et al. SARS-CoV-2 Omicron VOC Transmission in Danish Households (Preprint)  
<https://www.medrxiv.org/content/10.1101/2021.12.27.21268278v1.full.pdf>
10. Singanayagam A, Hakki SDunning J et al. Community transmission and viral load kinetics of the SARS-CoV-2 delta (B.1.617.2) variant in vaccinated and unvaccinated individuals in the UK: a prospective, longitudinal, cohort study, *The Lancet Infectious Diseases*.  
[https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(21\)00648-4/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(21)00648-4/fulltext)
11. <https://bm-covid-19-2020.sites.olt.ubc.ca/files/2022/02/2022-02-16-Letter-from-VCH.pdf>
12. <https://bm-covid-19-2020.sites.olt.ubc.ca/files/2022/02/2022-02-20-Letter-from-David-Patrick-Sally-Otto-Dan-Coombs.pdf>

G. People who are vaccinated can be infected with SARS-CoV-2, but experience less severity of illness than unvaccinated people, especially in younger populations. Vaccinated persons who contract COVID-19 can transmit SARS-CoV-2 but since they are generally contagious for shorter periods of time, and are less symptomatic, they are less likely to transmit SARS-CoV-2, when compared to unvaccinated infected persons;

***“Vaccinated persons who contract COVID-19 can transmit SARS-CoV-2 but ... are less likely to transmit SARS-CoV-2, when compared to unvaccinated infected persons”***

This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup>

H. The ongoing incidence of COVID-19 and serious health consequences that result has been exacerbated over time, first by the arrival of the highly transmissible Delta variant of SARS-CoV-2, which caused significantly more rapid transmission and increased severity of illness, particularly in younger unvaccinated people than earlier variants, and by the arrival of the even more transmissible Omicron variant, which has been responsible for a surge in infections, hospitalizations and deaths, and is now the dominant strain of SARS-CoV-2 circulating in the province;

I. Absent vaccination, British Columbia would be in a far more challenging situation than the fragile

balance our current immunization rates have provided, but the transmissibility of the Delta and Omicron variants means that higher vaccination rates than previously expected are now required to maintain this balance, mitigate transmission, reduce case numbers and serious outcomes, and most importantly, given the high case rates experienced with Omicron, reduce the burden on the healthcare system, particularly hospital and ICU admissions going forward;

***“But the transmissibility of the ... Omicron variant means that higher vaccination rates than previously expected are now required to maintain this balance, mitigate transmission”***

This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup>

- J. The emergence of the Omicron variant, which led to significant surges in infection and hospitalizations in British Columbia and in other jurisdictions worldwide, underlines the importance of vaccination in protecting the population and in removing the conditions which foster the development of variants which pose ever greater threats to public health;
- K. Further, vaccinated people who are infected with SARS-CoV-2, including the Omicron variant, have been shown to have high levels of protection against severe illness and to experience shorter infectious and symptomatic periods, and to recover from COVID-19 faster than similarly situated unvaccinated people, which, in turn, reduces the risk of transmission to their close contacts and co-workers and minimizes the disruption caused by absenteeism, all of which supports the continued provision of essential services in particular, and the orderly functioning of society as a whole.

***“Vaccinated people who are infected with SARS-CoV-2 ... [compared to] unvaccinated people ... reduces the risk of transmission to their close contacts and co-workers”***

This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup>

- L. Preserving the ability of the public health and health care systems to protect and care for the health needs of the population, including providing care for health needs other than COVID-19, is critical. High incidence of transmission and illness in one or more regions have spill-over effects on health care delivery across the province, including in critical care and surgical services. Our public health and health care systems are currently experiencing severe stress, and are stretched beyond capacity in their efforts to prevent and respond to illness resulting from the transmission of COVID-19 in the population;

Vaccination does not reduce transmission (see points above) but does have varying levels of individual protection against mild infection, hospitalization, ICU admission, and death.<sup>3</sup> Public Health should focus on maintaining up-to-date vaccination for our most clinically vulnerable populations, as they comprise the majority of hospitalizations and deaths in our province. A publicly available Freedom of Information document (HTH-2020-06866) showed that between September 1st, 2020 and December 8th, 2020 87% of deaths from COVID-19 had at least one of the following health conditions in the past 2 years: cancer,

chronic kidney disease, chronic neurological conditions, diabetes mellitus, heart conditions, hypertension, immunocompromised, liver disease, obesity, pregnancy, problems with spleen, respiratory diseases, rheumatoid & other inflammatory arthropathy, severe chest conditions, or transplant recipient/complication. Age and comorbidities have always been the main risk factors for COVID-19 complications, irrespective of variant. Public Health should focus on preventative medicine strategies since clearly there is a propensity for adverse outcomes amongst comorbid patients.

M. Both the public health and the health care systems are using disproportionate amounts of their resources in their efforts to prevent and respond to COVID-19 due to transmission of SARS-CoV-2 across the province, and to provide care for those who become ill with COVID-19, who can be quite ill, require high levels of care and be hospitalized for long periods of time, which situation is exacerbated by the care needs of unvaccinated people who comprise a substantial proportion of those who require hospitalization and ICU admission;

Public Health should focus their attention on preventative health strategies since those with comorbidities make up the majority of our COVID-19 hospitalizations.

N. While people who have contracted SARS-CoV-2 may develop some natural immunity for a period of time following infection, the strength and duration of that immunity varies depending on a multitude of factors, including which variant they were infected with and severity of infection. The risk of reinfection and hospitalization is significantly higher in people who remained unvaccinated after contracting SARS-CoV-2 than in those who are vaccinated post-infection. Vaccination, even after infection, remains an important measure to protect against reinfection by providing a stronger immune response that is known to be effective for a longer period of time than immunity arising from infection;

***“The risk of reinfection ... is significantly higher in people who remained unvaccinated after contracting SARS-CoV-2 than in those who are vaccinated post-infection”***

There was a study by the CDC that looked at the risk of Delta variant reinfection comparing a primary vaccine series to natural immunity and to a primary vaccine series plus natural immunity (hybrid immunity).<sup>13</sup> Those with a primary vaccine series showed a 4.5 to 6.2 fold lower risk of infection compared to a 14.7 to 29 fold lower risk of infection in those with natural immunity. Natural immunity followed by a primary vaccine series (hybrid immunity) showed a 19.8 to 32.5 fold lower risk of infection. The authors noted the risk of reinfection from hybrid immunity versus natural immunity was not statistically significant. As such, their study did not support a primary vaccine series after infection with intent to increase protection against mild infection.

13. León TM, Dorabawila V, Nelson L, et al. COVID-19 Cases and Hospitalizations by COVID-19 Vaccination Status and Previous COVID-19 Diagnosis — California and New York, May–November 2021. MMWR Morb Mortal Wkly Rep 2022;71:125–131. DOI: <http://dx.doi.org/10.15585/mmwr.mm7104e1>  
<https://www.cdc.gov/mmwr/volumes/71/wr/mm7104e1.htm#contribAff>

***“The risk of ... hospitalization is significantly higher in people who remained unvaccinated after contracting SARS-CoV-2 than in those who are vaccinated post-infection”***

The same study by the CDC also looked at the risk of Delta variant hospitalization comparing a primary vaccine series to natural immunity and to a primary vaccine series plus natural immunity (hybrid immunity).<sup>13</sup> Those with a primary vaccine series showed a 19.8 fold lower risk of hospitalization compared to a 55.3 fold lower risk of hospitalization in those with natural immunity. Natural immunity followed by a primary vaccine series (hybrid immunity) showed a 57.5 fold lower risk of hospitalization. The difference in risk of Delta specific reinfection causing hospitalization from hybrid immunity versus natural immunity was insignificant.

This is the largest study to date comparing a primary vaccine series to natural immunity and a primary vaccine series plus natural immunity (hybrid immunity). There are currently no peer-reviewed or CDC produced studies showing similar data with the Omicron variant. There is no evidence to support the notion that the risk of reinfection is significantly higher in people who remained unvaccinated after contracting SARS-CoV-2 than those who have hybrid immunity.

- O. People over 70 years of age, and people with chronic health conditions or compromised immune systems, are particularly vulnerable to severe illness, hospitalization, ICU admission, and death from COVID-19, even if they are vaccinated;

Public Health should focus their attention on preventative health measures since those with comorbidities make up the majority of our COVID-19 hospitalizations.

- P. Children under 12 are included among the members of the community who are more likely to be infected because children in the 5-11 age group have only recently become eligible for their second dose of vaccine and children under the age of 5 will remain unprotected from infection until a vaccine is available for them;

There is a preprint study through the New York State Department of Health and University at Albany School of Public Health showing the vaccine effectiveness against mild infection and hospitalization among children aged 5-11.<sup>14</sup> While it is a preprint, it is the first study showing real-world vaccine efficacy for this cohort and has been referenced by numerous scientific bodies. Unfortunately, the data showing efficacy against hospitalization is inconclusive since the confidence intervals for protection spanned negative to 0% and there were not enough hospitalizations to determine significance.

The vaccine effectiveness against mild infection in the 5-11 cohort was 57-68% 0-2 weeks after completion of a primary vaccine series but unfortunately deteriorated to 12% 7 weeks after completion of a primary vaccine series. There is no data on efficacy beyond 7 weeks or after completion of a full vaccine series. Evidence from this study shows the need to develop a better vaccine for this age cohort, rather than continue to promote a vaccination which fails shortly after administration. >7 weeks after completion of a primary vaccine series it is very likely that the risk of infection between a vaccinated and unvaccinated 5-11 year old is equal. Moreover, the statement that vaccination reduces transmission contradicts the comments in the aforementioned open letters.<sup>11,12</sup>

14. Dorabawila V, Hoefler D, Bauer U et al. Effectiveness of the BNT162b2 vaccine among children 5-11 and 12-17 years in New York after the Emergence of the Omicron variant (Preprint)  
<https://www.medrxiv.org/content/10.1101/2022.02.25.22271454v1.full.pdf>

Q. Adults and children who are either particularly vulnerable to infection with SARS-CoV-2, or too young to be immunized, depend upon the people with whom they come into contact to protect them from the risk of infection;

This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup>

R. Unvaccinated people in close contact with other people promotes the transmission of SARS-CoV-2 to a greater extent than vaccinated people in the same situations, which in turn increases the number of people who develop COVID-19 and become seriously ill;

This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup>

S. Programs that require proof of vaccination have been shown to increase vaccination uptake in populations, thereby reducing the public health risk of SARS-CoV-2 and the burden of COVID-19 illness on the public health system, health care system and society as a whole;

***“Programs that require proof of vaccination have been shown to [reduce] the burden of COVID-19 illness on the public health system, health care system and society as a whole”***

To date there has been no B.C. specific data produced to show the effectiveness of the vaccine passport since its implementation in reducing mild infections, hospitalizations, ICU admissions, and death. It was of course very effective in persuading individuals into completing a primary vaccine series.

T. There are difficulties and risks in accommodating a person who is unvaccinated, since there is no other measure that is as effective as vaccination in reducing the risk of contracting or transmitting SARS-Co-2, and the likelihood of experiencing severe illness, hospitalization, ICU admission and death if infected;

***“There are difficulties and risks in accommodating a person who is unvaccinated, since there is no other measure that is as effective as vaccination in reducing the risk of contracting or transmitting SARS-CoV-2”***

This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup>

U. I have considered and continue to consider based on the currently available generally accepted scientific evidence whether other measures, such as natural immunity, PCR testing or rapid antigen testing, are as effective as vaccination in reducing the risk of transmission SARS-CoV-2 and or the severity of illness if infected;

***“I have considered and continue to consider based on the currently available generally accepted scientific evidence whether other measures, such as natural immunity, PCR testing or rapid antigen testing, are as effective as vaccination in reducing the risk of transmission SARS-CoV-2 ...”***

This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup>

V. Routine COVID-19 testing of asymptomatic people is not recommended in British Columbia. Polymerase chain reaction (PCR) testing capacity is reserved for people who have symptoms of COVID-19 and are either at risk of more severe disease and currently eligible for treatment, or live or work in high-risk settings, such as health care workers. Rapid antigen testing requires higher virus levels in the sample to detect and report a positive result and, therefore, has a higher risk of providing a false negative result and is less accurate and reliable than PCR testing.

W. Rapid antigen testing is not a substitute for vaccination and is most useful when used for symptomatic people in specific settings in which additional layers of protection are needed to protect people at higher risk of serious outcomes of COVID-19, and then followed up with confirmatory PCR testing for positive tests, and when used in remote communities where obtaining results of PCR testing may be delayed;

X. There are clear, objective criteria for determining whether a person has a medical deferral to a COVID-19 vaccination, and very few people fall into this category;

The risk of reinfection for the hybrid immunity versus natural immunity group was NOT statistically significant.<sup>13</sup> As such, natural immunity should be considered as a medical deferral since there is no statistical benefit to natural immunity acquiring hybrid immunity with respect to reducing the risk of mild reinfection. At the very least, we should acknowledge the BCCDC definition of fully vaccinated as “previous infection plus one vaccine dose, either before or after infection”.

Y. Various options for establishing vaccine status, including in paper and online format, are readily available to members of the public;

Z. The Omicron variant has introduced uncertainty into the course of the pandemic, and the rapid rise in infection, hospitalization and ICU admission rates in British Columbia have led me to conclude

that measures continue to be needed to temper the extent of transmission, reduce severity of disease and continue to incentivize vaccination;

***“The Omicron variant has introduced uncertainty into the course of the pandemic and ... led me to conclude that measures continue to be needed to temper the extent of transmission”***

**This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup>**

AA. Pursuant to Article G of my October 14, 2021, *Hospital and Community (Health Care and Other Services) COVID-19 Vaccination Status and Preventative Measures* Order, I provided notice to health professionals who were not otherwise required to be vaccinated under those orders, that they would be required by me to be vaccinated on a date determined by me, in order to provide health care or services in the Province;

BB. Health professionals undertake an important role in providing services to the public both in the public health system, and community settings. Health professions covered by this order involve some degree of physical interaction between the health professional and the public;

CC. Health professionals pose a risk of transmission of virus to the public as they provide services to populations of the public who, due to age or underlying health status and despite vaccination status of the patient, are likely to be vulnerable to infection with COVID-19;

**This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup> Health professionals pose a risk of transmission regardless of vaccination status.**

DD. While some limited health care services may be provided remotely without direct encounter between the health professional and the patient, (for example, through telehealth or online methods), not all persons are able to access these methods of service delivery and these methods of service delivery are a barrier to access to health care services for persons with visual and hearing impairment, the elderly, persons with mental health challenges and persons who do not have ready access to technology;

EE. While some individual health professionals may choose to limit the manner of service delivery to telehealth and online methods, the colleges do not generally regulate the form of service delivery of health professionals and therefore health professionals may revert to seeing patients in person, at the choosing of the health professional;

FF. Therefore, it is not practical and not in the interest of the public that access to health care services be provided to patients wholly remotely by health professionals who choose not to be vaccinated when in person access to necessary health care services can be safely provided to patients if health professionals are vaccinated;

**“Health care services can be safely provided to patients if health professionals are vaccinated”**

This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup> Health professionals pose a risk of transmission regardless of vaccination status.

GG. Trust and confidence in health professionals is essential to the success of the services they provide and to the vulnerable patient’s and the public’s well-being. Anyone, but especially persons with heightened health risk of COVID-19 (due to advanced age, chronic health issues or compromised immune system) needs to have confidence that when they seek health care from a health professional they are going to be provided with health care in a manner that will best meet their health needs and not put their health at risk;

This statement contradicts the comments in the aforementioned open letters.<sup>11,12</sup> Health professionals pose a risk of transmission regardless of vaccination status.

HH. I recognize the societal effects, including the hardships, which the measures which I have and continue to put in place to protect the health of the population have on many aspects of life, and, with this in mind, continually engage in a process of reconsideration of these measures, based upon the information and evidence available to me, including infection rates, sources of transmission, the presence of clusters and outbreaks, the number of people in hospital and in intensive care, deaths, the emergence of and risks posed by virus variants of concern, vaccine availability, immunization rates, the vulnerability of particular populations and reports from the rest of Canada and other jurisdictions, with a view to balancing the interests of health professionals against the risk of harm to public health posed by the interaction between members of the public requiring health care and unvaccinated health professionals;

This whole paragraph contradicts the findings from a study published by worldwide Public Health and Infectious Disease experts titled *“The Unintended Consequences of COVID-19 Vaccine Policy: Why Mandates, Passports, and Segregated Lockdowns May Cause more Harm than Good”*.<sup>15</sup> This article was cited by the Vancouver Coastal Health Chief Medical Health Officer in her co-authored letter to UBC President & Vice-Chancellor Dr. Santa Ono regarding the harmful consequences of unnecessarily punitive measures for unvaccinated students, faculty, and staff.

15. Bardosh K, de Figueiredo A, Gur-Arie R et al. The Unintended Consequences of COVID-19 Vaccine Policy: Why Mandates, Passports, and Segregated Lockdowns May Cause more Harm than Good.

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4022798](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4022798)

II. I further recognize that constitutionally protected interests include the rights and freedoms guaranteed by the *Canadian Charter of Rights and Freedoms*, including specifically freedom of religion and conscience, freedom of thought, belief, opinion and expression, and the right not to be deprived of life, liberty or security of the person, other than in accordance with the principles of fundamental justice. However, these rights and freedoms are not absolute and are subject to such



reasonable limits prescribed by law as can be demonstrably justified in a free and democratic society, which includes proportionate, precautionary and evidence-based measures to prevent loss of life, serious illness and disruption of our health system and society;

**This whole paragraph contradicts the findings from the aforementioned study on vaccine policy.<sup>15</sup>**

JJ. When exercising my powers to protect the health of the public from the risks posed by COVID-19, I am aware of my obligation to choose measures that limit the *Charter* rights and freedoms of British Columbians less intrusively, and to balance these rights and interests in a way that is consistent with the protection of public health. I have concluded that the measures which I am putting in place in this Order are proportionate, rational and tailored to address the risk, and are consistent with principles of fundamental justices; the measures are neither arbitrary, overbroad, nor grossly disproportionate in light of the need to protect public health at this time. In my view, any limits on constitutionally protected rights and freedoms arising from this Order, are proportionate and reasonable in the interests of protecting public health, and there are no other reasonable alternatives that would provide the same level of protection for the population;

**This whole paragraph contradicts the findings from the aforementioned study on vaccine policy.<sup>15</sup>**

KK. In addition, I recognize privacy interests, informational privacy rights protected by the *Freedom of Information and Protection of Privacy Act* and the rights protected by the *Human Rights Code*, and have taken these into consideration when exercising my powers to protect the health interests of members of the public;

LL. I am also mindful that the volume of requests for reconsideration of my Orders, and the time and expertise which considering them entails, has become beyond my capacity and that of my office and team of medical health officers to manage, and is using resources which are better directed at assessing and responding to the protection of the public as a whole;

**\*\*The anonymous author will donate \$1,000 to a charity of Dr. Bonnie Henry's choice if she can contradict ALL of the points made within this rebuttal with references and citations. Her response must be made in a publicly available document and completed before March 31st, 2022.\*\***