Combatting Vaccine Hesitancy Among Ethnocultural Minority Communities in Canada: Five Lessons from the COVID-19 Pandemic

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I. Introduction

The COVID-19 pandemic has been described by scholars and epidemiologists as a "syndemic pandemic", as the impacts of the virus have interacted with the social determinants of health to aggravate existing inequities in health outcomes (Horton 2020). It has frequently been suggested that the pandemic has had a disproportionate effect on marginalized populations such as racialized minority groups, since members of these groups are more likely to have clinical risk factors that increase the severity and fatality of COVID infections. This is supported by Statistics Canada data collected between March 2020 and July 2020, which found that mortality rates were higher in neighbourhoods with a larger proportion of visible minority residents (Subedi et al 2020). In fact, these rates were twice as high in neighbourhoods where more than 25% of residents belonged to a visible minority group, compared with neighbourhoods with less than 1% of residents identifying as a visible minority (Subedi et al 2020).

But despite these heightened rates of disease, members of these same populations are less likely to accept the COVID-19 vaccine than their white counterparts. Statistics Canada data from September 2020 to April 2021 found that only 74.8% of the visible minority population was very or somewhat willing to receive a COVID-19 vaccine, compared with 77.7% of Canadians who do not belong to a visible minority group (StatCan 2021). Furthermore, only 56.4% of Black Canadians were willing to receive the vaccine, and only 71.9% of Indigenous peoples in Canada were willing to receive it (compared with 77.1% of the non-Indigenous population) (StatCan 2021).

I propose that public health agencies can learn from the ongoing COVID-19 pandemic to improve rates of vaccine acceptance among ethnocultural minority populations in Canada by addressing upstream issues such as systemic mistrust, as well as downstream solutions such as community-based vaccine outreach campaigns. With this in mind, this conceptual paper will analyze these upstream and downstream factors; explore the benefits and drawbacks of

existing approaches to vaccine education; identify gaps that necessitate further research; and present five key principles for public health agencies and policymakers to consider when designing approaches to combatting vaccine hesitancy among racialized populations in Canada.

II. Scope of this Essay and Important Definitions

In 2014, the World Health Organization's SAGE Working Group on Vaccine Hesitancy defined vaccine hesitancy as follows: "Vaccine hesitancy refers to delay in acceptance or refusal of vaccines despite availability of vaccine services. Vaccine hesitancy is complex and context specific, varying across time, place and vaccines. It is influenced by factors such as complacency, convenience and confidence" (SAGE 2014).

For the purposes of this essay, it is crucial to differentiate between vaccine *acceptance* and vaccine *uptake*. Vaccine *acceptance* refers to the willingness to be vaccinated (contrasted with vaccine hesitancy), while vaccine *uptake* refers to the actual receipt of the vaccine. Vaccine acceptance does not necessarily entail vaccine uptake, nor is the inverse true. Someone who does not trust the vaccine may still receive it (for example, if the vaccine is compulsory), and someone who trusts the vaccine may not be able to receive it for reasons such as structural barriers to access. This essay will briefly discuss systemic barriers to vaccine access among certain minority populations as a *predictor* of vaccine hesitancy, but it will *not* be addressing barriers that prevent vaccine-confident individuals from receiving a vaccine. That being said, it must be recognized that the latter issue is also of the utmost importance, and certainly must be researched and rectified in pursuit of health equity in Canada.

It is also important to discuss the relationship between vaccine hesitancy and "anti-vax" sentiments. Vaccine hesitancy is widely accepted to exist on a spectrum. On one end, there are those who reject vaccination entirely and appear completely unwilling to engage with any

medical information about the safety and efficacy of vaccines — a group that is frequently termed “anti-vaxxers” by the media and general public. On the other side of the vaccine hesitancy spectrum, however, there are those who are generally in favour of vaccination, but have some questions or uncertainties that prevent them from receiving vaccines as recommended by public health guidance. An example of the latter group would be a parent who is unsure whether it is advisable for their child to receive an HPV vaccination as a pre-teen as recommended, and therefore delays the vaccination until the child is in their late teens. Not only will this essay address the specific characteristics and challenges of Canadians on either side of the vaccine hesitancy spectrum, but it will also argue that the current trend of categorizing all vaccine-hesitant individuals as “anti-vax” does far more harm to public health efforts than good.

Another issue related to immunization promotion which will not be addressed in this essay is vaccine mandates. Mandatory vaccination campaigns have been instituted in the past, particularly in the context of school vaccinations, and have recently been explored at the institutional and regional levels as an option to improve COVID-19 vaccination rates. While the ethics and efficacy of vaccine mandates are a complex and critical issue which demands further analysis, this essay will solely focus on the *voluntary* decision to receive or not receive a vaccine. Even if COVID-19 vaccine mandates are instituted on a large scale in the coming months, a deeper understanding of the determinants of vaccine hesitancy among minority populations and potential approaches to combatting these attitudes will certainly prove useful in informing efforts to increase uptake of other vaccines — and more broadly, for improving relationships between minority populations and Canadian healthcare systems.

III. Issues With the Current View of Vaccine Hesitancy

Betsch et al (2018) developed the "5C psychological antecedents of vaccination", which assesses five psychological factors that contribute to vaccine hesitancy. These factors were defined as follows:

I. **Confidence** ("trust in (i) the effectiveness and safety of vaccines, (ii) the system that delivers them, including the reliability and competence of the health services and health professionals, and (iii) the motivations of policy-makers who decide on the need of vaccines")

II. **Complacency** ("exists where perceived risks of vaccine-preventable diseases are low and vaccination is not deemed a necessary preventive action")

III. **Calculation** ("individuals' engagement in extensive information searching … related to perceived vaccination and disease risks")

IV. **Constraints (or convenience)** ("physical availability, affordability and willingness-to-pay, geographical accessibility, ability to understand … and appeal of immunization service")

V. **Collective responsibility** ("the willingness to protect others by one's own vaccination by means of herd immunity")

Currently, much of the conversation around vaccine hesitancy seems to focus on the factors of "complacency", "calculation", and "collective responsibility". After all, the rhetoric around "anti-vaxxers" frequently paints those who are hesitant or resistant to vaccination broadly as selfish and uninformed. However, while some of these individuals and groups may indeed be influenced by high levels of complacency, low levels of calculation, or low levels of collective responsibility, it is not enough to simply assume that all (or even most) vaccine-hesitant individuals fit this description. Goldenberg (2021) suggested that the popular image of people who are vaccine-hesitant in the Global North — that is, people who are white,

affluent, and privileged enough to be unaffected by the diseases that must be prevented by immunization — is actually an incomplete picture, emerging from a lack of adequate research into determinants of vaccine hesitancy among racialized communities. In these communities, as I will further explain, it is not simply a lack of information, nor a lack of concern for the welfare of others, that influences the decision to refuse the vaccine — rather, it is a lack of trust, often driven by historical and present-day systemic abuse and barriers to access. In other words, hesitancy in these populations is most related to the 5C factors of "confidence" and "constraints", and these two factors are deeply interrelated.

IV. Considering The Upstream-Downstream Metaphor

In pursuit of an improved approach to vaccine hesitancy that addresses "confidence" and "constraints", the two oft-forgotten elements of the 5C model, potential courses of action can be categorized into "upstream" and "downstream" solutions. The upstream-downstream metaphor of public health was first popularized by an article by John B. McKinlay in the 1970s, which utilized the following story:

> *"There I am standing by the shore of a swiftly flowing river and I hear the cry of a drowning man. So I jump into the river, put my arms around him, pull him to shore and apply artificial respiration. Just when he begins to breathe, there is another cry for help. So I jump into the river, reach him, pull him to shore, apply artificial respiration, and then just as he begins to breathe, another cry for help. So back in the river again, reaching, pulling, applying, breathing and then another yell. Again and again, without end, goes the sequence. You know, I am so busy jumping in, pulling them to shore, applying artificial respiration, that I have no time to see who the hell is upstream pushing them all in."* (McMahon 2020)

Although the upstream-downstream metaphor has been ubiquitous in public health for several decades, it has become particularly relevant in the context of the COVID-19 pandemic for two key reasons; namely, the necessity of rapid action to address outbreaks as they arise, and the limitations of resources and personnel in hospitals and emergency care facilities. The metaphor also holds true for efforts to reduce the spread of COVID-19 through large-scale vaccination. Downstream, we may observe the heightened rates of COVID-19 transmission among racialized communities and the spread of misinformation and conspiracy theories among these populations. We can (and should) delegate money, time, and resources toward addressing these issues in the here and now. However, without addressing upstream causes of these issues such as systemic racism and legacies of trauma within the Canadian healthcare system, we will be doomed to constantly “pull each person to shore" rather than addressing the forces that keep pushing them into the river. With this in mind, a strong and effective approach to combatting vaccine hesitancy among minority ethnocultural groups will require a combination of upstream and downstream approaches.

V. Upstream Approaches to Combatting Vaccine Hesitancy

As previously mentioned, getting to the roots of vaccine hesitancy is a critical first step to increasing vaccine acceptance and uptake.

Recognizing Systemic Mistrust as a Cause of Vaccine Hesitancy

Philosophers such as Dr. Maya Goldenberg have proposed that vaccine hesitancy does not stem solely from misunderstanding, but rather, from mistrust. That is to say, individuals who are hesitant to receive the vaccine likely have these sentiments not because they are uneducated in the science supporting vaccination, but rather, because they believe that the institutions delivering the vaccine to them cannot be trusted (Goldenberg 2016). Thus, it

logically follows that COVID-19 vaccine hesitancy would be prevalent in populations with a poor historical relationship with governments and public health systems, since they are more likely to consider these institutions to be untrustworthy.

In the United States, much attention has been given to the prevalence of vaccine hesitancy among Black Americans, a phenomenon which has been largely attributed to the lasting impacts of the Tuskegee syphilis study and other historically unethical and abusive health studies on Black people (Peteet et al 2021). One survey conducted in November 2020 suggested that only 14% of Black Americans trust that a vaccine will be safe, and 18% believed that it would be effective in protecting them from COVID-19 (Wan 2020). Moreover, a recent analysis of tweets from Twitter profiles based in Canada noted "the legacy of harm caused by health care institutions" toward BIPOC and LGBTQ+ communities as a key theme among vaccine-related tweets, with multiple references to the Tuskegee study (Griffith et al 2021).

North of the border, similar sentiments appear to be present. Statistics Canada recently found that Black Canadians are also disproportionately hesitant to receive the COVID-19 vaccine compared to the general population, as well as other ethnocultural minority groups in Canada (Statistics Canada). One quantitative study recently corroborated this, as it found that participants who identified as Black showed less intent to receive a COVID vaccine compared to participants from other ethnocultural backgrounds (Ogilvie et al 2021). Currently, it is unclear whether hesitancy among Black Canadians has spilled over from attitudes among similar populations in the United States, whether it has arisen organically as a result of the historical and present-day negative experiences of Black people in Canada, or whether it is a combination of both factors. In Canada, Black people have reduced physical and mental health outcomes compared to their White counterparts, which has been widely attributed to the pervasive effects of systemic anti-Black racism (Abdillahi and Shaw 2020). As a result, it is certainly feasible that hesitancy in Canada could be related to the specific Black Canadian experience. In either case,

this pattern strongly suggests that mistrust and trauma, not merely misunderstanding, play a role in the decision whether or not to be vaccinated.

Rebuilding Trust Through Prioritization

A somewhat complex example of the influence of historical mistrust on attitudes toward vaccination is Indigenous peoples in Canada. As previously mentioned, Statistics Canada data shows that Indigenous individuals have significantly higher levels of COVID-19 vaccine hesitancy than the general population, although they are still more confident in the vaccine than Black Canadians and multiple other minority populations. This observation is also supported by quantitative survey research conducted by Ogilvie et al (2021). Yet, as of July 2021, rates of vaccine coverage among Indigenous and non-Indigenous seniors were nearly equal, and were significantly higher in Indigenous adults aged 18-59 compared to their non-Indigenous counterparts. This begs the question, why was hesitancy initially reported to be so low, and how did that eventually translate to high vaccination rates?

One article from March 2021 proposed that COVID-19 vaccine hesitancy among Indigenous people can be traced back to “well-documented experiences of medical abuse and experimentation” (Mosby and Swidrovich 2021). Conversely, Dr. Veldon Coburn, assistant professor of Indigenous studies at the University of Ottawa, argued that there is no causal link between colonial legacies and present-day vaccine hesitancy, stating that “the historic events that were bad and unethical didn’t have … the effect that’s being claimed and maybe it’s just naive good intentions but it doesn’t stand up” (Alhmidi 2021). In the absence of any empirical data on the factors affecting vaccine hesitancy and/or acceptance among First Nations, Metis, and Inuit populations, it is impossible to determine which of these viewpoints is correct in the context of the COVID-19 pandemic. However, data from before the pandemic suggests that mistrust does play a role in the decision to receive (or not receive) other vaccines — for example, qualitative research on HPV vaccine uptake among Indigenous communities in

Alberta identified “mistrust in healthcare systems” as a key theme during group interviews (Henderson et al 2018).

If mistrust is indeed a primary driving factor of vaccine hesitancy, then any solutions to vaccine hesitancy must seek to rebuild trust. With this in mind, from the very beginning of the vaccine rollout in Canada, a concerted effort was made to prioritize Indigenous communities due to their heightened rates of COVID-19 transmission, overall lower health outcomes, and historical legacies of colonial abuse. In British Columbia, for example, remote and isolated Indigenous communities were provided with the vaccine in the very first phase of the rollout, and Indigenous people over the age of 65 were offered the vaccine approximately 2-3 months before non-Indigenous people in the same age group (who were not in long-term care facilities) (Labbe and Strandberg 2021). In Ontario, pop-up Indigenous vaccine clinics such as Tkaronto Indigenous Vaccine Access were run by Indigenous community organizations in partnership with local hospitals such as Sunnybrook Health Sciences Centre (Beattie 2021).

Of course, the prioritization approach was not without its issues — in the remote community of Bella Coola, British Columbia, more than 200 doses of the COVID-19 vaccine were inexplicably revoked after a “communications breakdown” between the Nuxalk First Nation and a medical health officer who was sent to administer vaccines in the area in January 2020 (Sterritt 2021a). A new shipment of vaccines arrived in Bella Coola a month later, this time delivered by the First Nations Health Authority rather than Vancouver Coastal Health, and Nuxalk leaders expressed that trust in the vaccine administration had been lost as a result of the incident (Sterritt 2021b).

Another problem that arose with prioritization was that some Indigenous people feared that they were being used as “guinea pigs” to test the vaccine before it was more widely distributed (Fleguel 2021). Similar complications have emerged among Black communities in Canada, as multiple tweets identified in the analysis by Griffith et al (2021) expressed a specific concern that Black healthcare workers in the US were subject to “forced participation in medical

experiments” because of their prioritization in the American vaccine rollout. These incidents highlight the need for clear communication and collaborative approaches when prioritizing marginalized and at-risk communities in the vaccine rollout. And of course, it is important to remember that the process of rebuilding trust after decades and even centuries of abuse will most certainly be lengthy and complex — but it is a necessary step to improving not only vaccine acceptance and uptake, but health outcomes across the board.

VI. Downstream Approaches to Combatting Vaccine Hesitancy

In addition to mitigating the systemic factors that lead to vaccine hesitancy among racialized populations, it is also crucial to employ “downstream” interventions to reduce vaccine hesitancy in the here and now.

Combatting the Spread of Vaccine Misinformation/Disinformation

Since the early days of the COVID-19 pandemic, the rapid proliferation of vaccine misinformation and disinformation[1] over social media and traditional media has been characterized as a pandemic of its own. In particular, the safety of the vaccine is a common theme in COVID-related misinformation, along with the efficacy of preventative measures and the existence of the virus (Stein et al 2021).

Recent research has found that higher trust in scientific authorities has been correlated with lower susceptibility to COVID-related misinformation (Roozenbeek et al 2020). Considering the “mistrust” framework for vaccine hesitancy that has been explained thus far, it would logically follow that those from historically marginalized and racialized communities would be more susceptible to such misinformation. Sure enough, the same study found that Americans who self-identified as a minority were significantly more susceptible to COVID-19 misinformation

[1] Misinformation refers to incorrect or misleading information without regard to intent, while disinformation refers to false information that is deliberately spread with malicious intent.

than those who did not (Roozenbeek et al 2020)[2]. Furthermore, another study found that conspiracy theories regarding the coronavirus pandemic in the US were more likely to be held by people from disadvantaged ethnocultural backgrounds (Romer et al 2020). As a result, given that minority populations are more likely to be affected by misinformation, combatting the spread of this information over social media and traditional media seems like a logical first step to combatting vaccine hesitancy from a downstream perspective.

Considering the Psychological Factors Influencing Attitudes Toward Vaccination

As previously described, combatting the spread of misinformation in social media and conventional media is undoubtedly an important step to ensure that people have access to accurate and relevant information about the pandemic, and to prevent dangerous conspiracy theories from becoming popular. That being said, simply reducing the spread of false information and countering it with accurate information may not be enough to address the complex psychosocial roots of vaccine hesitancy. Even before the pandemic, it has been argued that conventional vaccine education efforts that seek to "throw facts at the problem" have been largely unsuccessful in changing the minds of individuals who are already vaccine-hesitant. In fact, past research has found that individuals who are already committed to anti-vaccination beliefs will become even *more* opposed to vaccination once they are confronted with evidence that their existing beliefs are factually inaccurate (Goldenberg 2021). As Goldenberg (2021) has explained, this behaviour may be attributed to psychological "identity-protective" mechanisms such as confirmation bias (the undervaluing of information that contradicts one's existing values and beliefs, and the overvaluing of information that seems to uphold these values), cognitive dissonance ("a feeling of conflict between some aspect of our attitudes, behaviors, and beliefs"), and cultural cognition of risk ("the tendency to base one's

[2] Note that Roozenbeek et al (2020) did not specify *ethnic* minority, which could possibly have affected the results.

factual beliefs about risks ... on cultural appraisals of the allegedly risky activity in question … to protect our ties to others"). When presented with information that challenges their deeply entrenched views about the world (for example, the view that the COVID-19 vaccine is unsafe), there is a psychological need to undervalue and/or reject this new information in order to avoid the discomfort and anxiety associated with cognitive dissonance. Thus, while it is certainly important to limit the spread of misleading and false information about COVID-19 and disseminate accurate information to the general public, one must also keep in mind that these efforts alone are unlikely to persuade vaccine-hesitant individuals to change their existing views about the COVID vaccine.

Because identity-protective mechanisms play such a large role in shaping opinions around vaccination, the dichotomy of "pro-vax" vs. "anti-vax" is most likely harmful and ineffective in changing the minds of vaccine-hesitant individuals. While there appears to be little empirical data from North America on perceptions of so-called anti-vaxxers among those who support vaccination, research from Australia prior to COVID found that pro-vaccine Australians were "hostile" and "stigmatizing" toward those who refused vaccination, and that they believed the decision not to receive a vaccine is caused by "character deficits, like being naive or malicious" (Rozbroj et al 2019). In practice, this polarization and stigmatization drives those who are vaccine-hesitant to further reject the evidence supporting vaccination and retreat deeper into communities of like-minded people in an effort to protect their senses of self and identity — which is clearly antithetical to any efforts to reduce hesitancy among these groups.

One solution to this is to emphasize honest and judgement-free dialogue between healthcare providers and vaccine-hesitant individuals. When people who are vaccine-hesitant feel comfortable and safe sharing their thoughts, concerns, and questions about the vaccine, they are often more open to considering information that they would have ordinarily rejected. One technique for holding these discussions is motivational interviewing.

Case Study: Motivational Interviewing

Over the last few years, Dr. Arnaud Gagneur of the University of Sherbrooke has utilized motivational interviewing as a technique for reducing vaccine hesitancy among new parents. Motivational interviewing (MI) was developed for addiction treatment in the 1980s, and is typically used in counselling and psychotherapy to encourage patients to consider their values and motivations to pursue a personal change in a non-judgemental environment (Gagneur et al 2018).

Through the project *PromovaC* (PROMOtion of VAccination in Canada), Dr. Gagneur has utilized MI as an educational tool for new parents in five provinces across Canada who are hesitant to vaccinate their newborn children. In one 15-20 minute session, Dr. Gagneur meets with parents during their postpartum stay in a maternity ward and discusses the options for infant vaccination and the evidence supporting it using "simple, understandable language to encourage discussion and questions from parents rather than providing prescriptive, direct information" (Attwell et al 2019). Early trials of the program conducted in Sherbrooke, Quebec found that the intervention led to a 15% increase in the mothers' intention to vaccinate their child, resulting in an increase of 7% in vaccine coverage of infants at 7 months old (Gagneur et al 2018).

While the use of MI to combat vaccine hesitancy specifically among racialized populations has not yet been documented, the underlying principles guiding this intervention appear to be in line with the guidelines explained in this report thus far. Rather than alienating or shaming people who are vaccine-hesitant, MI allows them to express their concerns in a safe and judgement-free environment, and have their questions answered without being "preached" to. This helps reduce the effects of cultural cognition of risk, as participants are less likely to become defensive and reject the information that they are given. Moreover,

simple language is used during MI sessions, potentially helping to mitigate challenges that some communities may face with finding accessible and accurate information.

Exploring The Role of Culture-Based Vaccine Education Initiatives

In Canada, there is a particularly curious case that could potentially provide insights on improving attitudes toward vaccination among ethnocultural minority groups: that of South Asian Canadians. Outside of Canada, South Asian minority populations seem to follow the general pattern of increased mistrust in governments and health officials leading to higher levels of vaccine hesitancy. For example, recent quantitative research has suggested that Bangladeshi and Pakistani individuals in England are twice as hesitant to receive the COVID-19 vaccine compared to White populations (Razai et al 2021). These levels of hesitancy have been largely attributed to geographic and socioeconomic barriers such as residential segregation, which prevent many Bangladeshi and Pakistani communities in England from having adequate access to healthcare and other resources to improve health outcomes (Razai et al 2021). But despite these concerning numbers overseas, Statistics Canada data from September 2020 to to April 2021 found that 82.5% of South Asian Canadians are very or somewhat willing to receive the COVID-19 vaccine, compared with just 76.9% of the general population (StatCan 2021).

There is currently insufficient empirical research on attitudes toward COVID-19 vaccination among South Asian Canadians to establish a cause for these high levels of vaccine confidence. As such, I am not suggesting that the reason(s) for these numbers can be determined with any certainty, and I strongly emphasize the need for further research on this topic. However, I would propose that one possible reason for these high levels of vaccine acceptance is the influence of *community-based* and *culture-specific* vaccine campaigns in Canada. By this, I am referring to outreach and education campaigns that are founded and led

by community members, with a specific focus on the religious and cultural needs of that particular community.

From an ethical standpoint, it seems preferable to encourage and support groups to shape change within their *own* community, rather than imposing such initiatives on these populations from a governmental level. The latter option is explicitly paternalistic, effectively implying that healthcare systems simply "know what is best" for these populations without considering the specific cultural and religious factors that come into play. Furthermore, this approach makes sense from a psychological standpoint, as seeing other community members as spokespeople for vaccination would help to reduce the impacts of cultural cognition of risk in those who are vaccine-hesitant. Goldenberg (2021) gives the example of a study on HPV vaccine acceptance, in which researchers were able to reduce polarization by creating an environment where participants were exposed to vaccine spokespeople with a variety of different views and backgrounds. As Goldenberg explains, this was effective because "people feel that it is safe to consider evidence with an open mind when they know that a knowledgeable member of their cultural community accepts it" (Goldenberg 2021). Finally, resources and informational materials that are produced and distributed by these groups will likely be more accessible to members of the community (e.g. written in appropriate languages and shared in appropriate places).

Case Study: Sikh Health Foundation

Although the Sikh Health Foundation hasn't focused specifically on vaccine education at this point, their work in COVID-19-related education shows the unique value of community-based cultural organizations. Based in British Columbia, this group seeks to bring COVID-19 information to elders in the Canadian Sikh community through campaigns targeted specifically at gurdwaras (Sikh temples). After observing that many elders were not wearing

masks or social distancing while inside the gurdwara, founder Sukhmeet Singh Sachal assembled a team of volunteers to create posters and infographics in Punjabi and English, guide elders in effective handwashing technique, and distribute masks that can be worn with a turban (Baker 2020). Information about COVID-19 prevention is disseminated in a culturally-relevant manner — for example, using the length of most turbans (6 feet) as a measure of appropriate physical distance (Baker 2020).

On a related note, it has recently been suggested that academic institutions should partner with community cultural organizations to host events and discussions to address questions and concerns among community members about vaccination (Peteet et al 2021). In Canada, the South Asian COVID Task Force and the Black Scientists' Task Force on Vaccine Equity are two such examples that were established during the COVID-19 pandemic. Like community-based and culturally-sensitive outreach initiatives, academic-community partnerships also provide benefits from the perspectives of ethics, psychology, and accessibility. There is currently limited empirical data on the efficacy of these initiatives, but internal surveys have suggested that town hall events conducted by the Black Scientists' Task Force on Vaccine Equity have been effective in lowering rates of vaccine hesitancy among participants (McGillivray 2021).

VII. Key Principles for Public Health Agencies and Policymakers

With all of this in mind, here are five key lessons from the COVID-19 pandemic for Canadian public health agencies and policymakers to consider when designing and supporting efforts to combat vaccine hesitancy among ethnocultural minority groups.

I. Identify and address the roots of systemic mistrust that lead to vaccine hesitancy.

II. Prioritize vaccine outreach efforts for populations that have been historically forgotten and/or maltreated, and ensure that these outreach efforts are highly transparent and culturally-sensitive.

III. Combat the spread of misinformation, but remember that this alone is not likely to change the minds of those who are vaccine-hesitant.

IV. Emphasize empathy, non-judgement, and free dialogue in conversations with vaccine-hesitant individuals.

V. Support existing culture-based vaccine outreach and education initiatives.

VIII. Conclusion

As Canada eventually moves toward the end of the COVID-19 pandemic, these five lessons can be used to guide future vaccination campaigns aimed at ethnocultural minority communities. Throughout all stages of the vaccine outreach process, it is crucial to remember why hesitancy is present among these populations in the first place — it is not simply an issue of knowledge, but rather, it is an issue of trust. Thus, downstream solutions such as addressing the spread of misinformation and conspiracy theories, encouraging judgement-free conversation between vaccine-hesitant individuals and their healthcare providers, and supporting community-based vaccine outreach organizations are all important steps in the short-term, but they must be employed in conjunction with upstream solutions such as recognizing the historical and present-day factors that lead to mistrust, and prioritizing marginalized populations in the vaccine distribution process.

As a final note, although some of the factors that have led to mistrust in institutions occurred in the past, systemic racism remains prevalent in healthcare systems across Canada to this day. As a result, the *most* important lesson for improving vaccine acceptance, vaccine uptake, and other health outcomes is to address the disparities and inequities that leave

racialized communities in an especially vulnerable position when pandemics and other public health crises occur.

IX. Acknowledgments

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